



Environment and Climate Change (Fisheries)

Development of an ASEAN General Fisheries Policy Feasibility Study

Final Feasibility Study Report: 19 June 2020



Enhanced Regional EU-ASEAN Dialogue Instrument

E-READI

Disclaimer

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Executive Summary

The 39th Senior Officials' Meeting (SOM) of the ASEAN Ministers on Agriculture and Forestry (AMAF) held on 27-28 August 2018 in Pattaya, Thailand approved the terms of reference for an Ad Hoc Task Force, under the ASEAN Sectoral Working Group on Fisheries (ASWGFi), to conduct a feasibility study on the development of an ASEAN General Fisheries Policy (AGFP). Following the directive from SOM-AMAF, the ASEAN Secretariat (ASEC) sought support from The Enhanced Regional EU-ASEAN Dialogue Instrument (E-READI)¹ for completion of the feasibility study. To this end, E-READI hired two international consultants² to prepare a feasibility study for consideration by the Ad Hoc Task Force.

Work to prepare this feasibility study was undertaken between May 2019 and June 2020, in line with terms of reference for the consultants which were approved by the Ad Hoc Task Force. The consultants ensured as much participation and input from AMS, ASEC and the EU as possible, through regional meetings, visits by the consultants to all AMS³, completion of questionnaires by AMS providing both data and views, and email communication. The feasibility study is also informed by a wide range of secondary information and literature which was reviewed by the consultants, and by a series of policy briefs which were prepared by the consultants on a range of EU policies, other regional policies and international instruments, of potential relevance to the development of an AGFP. The technical approach to the feasibility study was guided by best practice in completing assessment of policy reform, most notably as laid out in the EU Better Regulation Guidelines⁴ and the requirements for conducting impact assessments.

The feasibility study is structured into a number of sections, which logically follow each other.

A description of the current situation and identification of problems which an AGFP should seek to address, provides an analytical, succinct overview of the economic, social and biological state of the ASEAN fisheries and aquaculture sectors. It provides both data and a description of the current key challenges and problems, separately for inland fisheries, marine fisheries, aquaculture, and processing. The fisheries sector in different AMS is diverse in terms of its characteristics. Nevertheless, despite differences, the fisheries sector in AMS and its constituent parts (inland, marine, aquaculture, processing) also shares many characteristics. Consultations completed as part of this study show that many problems faced are common and shared across multiple AMS. This suggests that regional policy may be helpful in addressing these shared issues.

The institutional, political and legal framework for developing regional policy on fisheries provides for regional cooperation on fisheries issues at the ASEAN level, primarily under the ASEAN Economic Community (one of three main Communities or pillars) and the AMAF. Decisions related to fisheries issues reached in SOM-AMAF must be made by consensus (meaning they are supported by all AMS), however are not legally binding on AMS. Outside of ASEAN institutional arrangements, AMS also engage with many international and regional organisations, conventions, and treaties, with membership/accession requiring and facilitating cooperation on fisheries/aquaculture issues. A review of all existing regional policy documents and frameworks agreed at ASEAN level, and international and regional instruments to which AMS are a party, highlights that there are already a large number of policies and agreements at regional level. These policies are reflected in a multitude of different policy documents, and cover almost all of the policy areas considered by the Ad Hoc Task Force and consultants as

¹ E-READI is an EU-funded development cooperation programme that facilitates dialogue forums between the EU and ASEAN-READI

² Heiko Seilert and Graeme Macfadyen

³ Between August and October 2019

⁴ https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

being potentially suitable for inclusion in an AGFP and which are considered in the feasibility study. While existing policy documents tend to cover specific policy issues, the ASEAN-SEAFDEC⁵ Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 is worth highlighting. While not formally titled a 'policy', this document can be considered as one and is more comprehensive than other policy documents in covering a wide range of policy areas in a single document. The document is currently being updated, with a Resolution and Plan of Action to 2030 expected to be adopted by the Ministers of ASEAN-SEAFDEC member countries. The region's existing policies, initiatives and resolutions serve as the starting point for the definition of policy options which are subjected to assessment in the feasibility study.

In considering why ASEAN might wish to act to develop an AGFP, three key drivers and justification for action are:

1. the current problems facing the fisheries and aquaculture sector in AMS, which policy if successfully implemented could help to solve.
2. the institutional mandate of ASEAN as provided for in the 1967 ASEAN Declaration, The ASEAN Charter which entered into force in 2008, and the ASEAN Economic Community Blueprint 2025.
3. lessons learned from regional policy initiatives and international instruments in other regions/sectors, as documented in the ten briefs prepared by the consultants, about the added value of action at a regional level. Taken together, experience from these regional policies suggests that significant benefits can result from regional policy action.

Any future AGFP would need to have clear objectives. These would be articulated during the process to develop the AGFP if a decision is taken by the Ad Hoc Task Force to proceed with its development. However, the feasibility study proposes and uses the following:

The general objective of an AGFP:

'Sustainable resource management and sectoral development of marine and inland capture fisheries and aquaculture in ASEAN Member States, to improve food security, facilitate poverty alleviation, and improve livelihoods of ASEAN people dependent on the harvesting, farming, processing, and marketing of fish and fishery products'

The specific objectives of an AGFP, which would contribute to the general objective, are:

1. rebuild depleted fish stocks.
2. manage environmental and climate change risks from and to the sector.
3. build human skills and capacities of those working in the sector and those responsible for its management.
4. enhance trade of fish and fishery products.
5. increase value addition and innovation in the sector.
6. enhance research, and improve the availability, reliability and completeness of data and information required for sectoral management.
7. combat illegal fishing and illegal fishing-related activities in the sector and increase a culture of compliance.
8. reduce bio-security risks in aquaculture and trade.
9. improve the safety and social protection of workers in the sector.

⁵ SEAFDEC has effectively become the fisheries technical arm of ASEAN and the ASWGFi, and played a key role in facilitating The Resolution and Plan of Action.

Different options related to the content and arrangement of policy could potentially serve to address the problems facing the sector and to achieve the objectives. The feasibility study considers four options⁶.

- Option 1: (Baseline): no policy change, relying on existing policy frameworks/documents (but with full implementation).
- Option 2: New policy in the form of an AGFP to cover only those regional policy issues currently absent from existing regional policy documents.
- Option 3: New policy in the form of an AGFP covering all existing and expanded regional policy issues, consolidated into one policy document/statement.
- Option 4: Policy covering regional and national issues, consolidated into one policy statement.

Option 4 is not fully analysed for its impacts and is discarded at an early stage in the assessment of the options. Consultations completed with AMS revealed a strong, consistent and over-riding view that an AGFP should only focus on regional policy/action and should not encroach on issues that are only of national concern. This was principally because of the importance to AMS of issues of sovereignty and the lack of legal mandate for ASEAN to assume 'competency' for national sectoral issues.

Options 1-3 all represent variations of policy which cover to different extent and in different ways the following policy topics:

1. sustainable marine fisheries resources management
2. sustainable inland fisheries resources management
3. sustainable management of aquaculture
4. combatting IUU fishing
5. fisheries research and science
6. food safety and better nutrition
7. international trade
8. animal health and biosecurity
9. fisheries data collection and sharing
10. protection of habitats, marine mammals and endangered threatened and protected (ETP) species
11. support for small-scale fisheries⁷
12. disaster risk prevention and management and climate change adaptation
13. labour and working conditions
14. fisheries subsidies
15. marine debris

Items 1-12 are assessed as being already well covered at regional level given the policy documents already agreed, and their contents.

Under Option 1 there would be no attempt at an ASEAN level to expand the coverage of regional policy to new policy areas or topics under different areas that are not already covered

⁶ In all cases the options assume that policy is implemented in order to be able to assess effectiveness of the options in supporting the objectives.

⁷ Throughout this study references to 'small scale fisheries' mean both small scale fisheries and small scale aquaculture

by existing policy documents (items 1-12). However, the baseline assumes that all existing policy would be fully implemented.

Under Option 2, a specific regional policy would be prepared to address the gaps in current policy at regional level (items 13-15 from the list above). The policy would therefore include key sections on labour and working conditions, fisheries subsidies, and marine debris. Under Option 2, the AGFP would make reference in the introduction to all other relevant policies already in existence, as well as the objectives and principles of the AGFP as earlier articulated, and then provide policy on the three areas above, being those that are poorly covered at present.

Under Option 3 a consolidated and new AGFP would be developed which would refer to and supersede/over-ride all existing regional policy documents, but which would also cover policy areas not currently addressed at regional level. The AGFP would thus include policy statements on all of items 1-15 above. The detail of the text on the different areas that are already covered by existing policy would either be drawn from and be coherent with existing policy as already articulated, or specifically amended based on discussion, sufficient justification and agreement.

The feasibility study compares the different options using multi-criteria analysis (MCA) to explore the balance between benefits and costs of the different options, assessing all the relevant advantages and disadvantages of the policy options against the status quo (i.e. existing policy and existing levels of implementation of that policy). MCA allows for an objective comparison of the options against common criteria. This methodology was proposed and agreed for use during the assignment given the impracticality of quantifying the costs and benefits of different options in monetised form.

The criteria to which the different policy options are subjected are as follows:

- Effectiveness – the extent to which options would achieve the general and specific objectives (which are defined based on the problems i.e. what would a AGFP be trying to achieve/solve).
- Efficiency – the costs versus the environmental, social, and economic benefits, and considering administrative burden, from changes that might result from policy change.
- Coherence – with other national and regional policy, and with international best practice and obligations.
- Acceptability – in terms of AMS support.
- Added value – what would be the additional value resulting from action at regional/ASEAN level, compared to what could reasonably have been expected from AMS acting at national level.

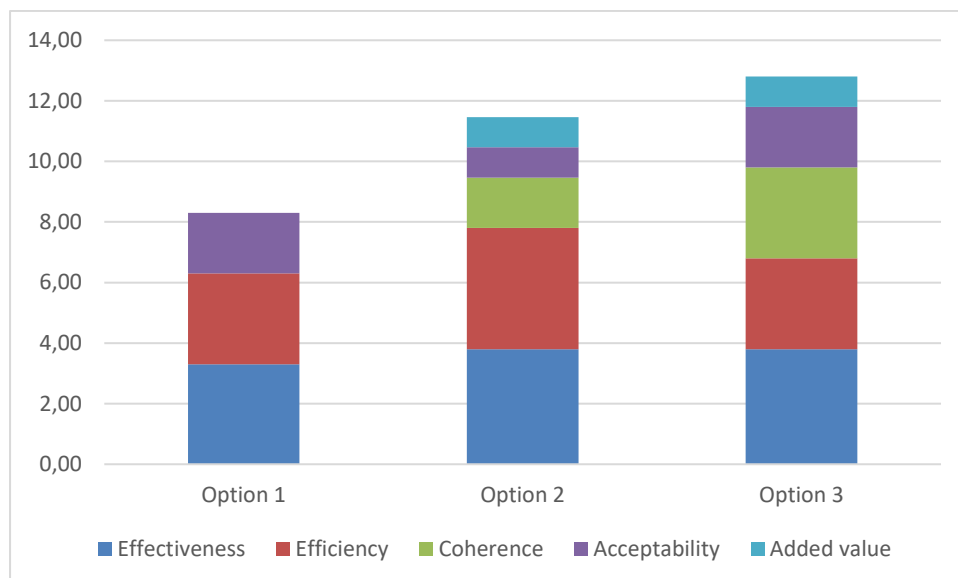
Under each criterion, indicators/sub-criteria have been defined. Performance of Options 1-3 are scored against all criteria/indicators, by comparing them against the status quo. This allows for scores to be attributed to the options across all criteria.

The scoring is based on the scale below.

Performance score	Legend
0	Does not improve and/or worsens the situation compared to the status quo
1	Small improvements compared to the status quo
2	Moderate improvements compared to the status quo
3	Large improvements compared to the status quo
4	Very large improvements compared to the status quo

The main text of the feasibility study provides a detailed assessment of performance of each Option against each evaluation criterion. The scores from the MCA are combined across the different evaluation criteria for the three Options and presented in the Figure below.

Summary comparison scores for Options 1, 2 and 3, across all criteria in the multi-criteria analysis



Source: consultant analysis. Note maximum possible score per Option is 20 (4 for each of the five evaluation criteria).

Key conclusions from the summary comparison scores are:

- Option 1 (no AGFP but full implementation of existing regional policy) would not make any improvements over the status quo (existing policy, often poorly implemented) for the evaluation criteria of coherence or added value, whereas both Option 2 and 3 would. However, when considering the criteria of effectiveness (in achieving objectives, which in turn are specified to address the key problems identified), and efficiency (the balance of costs and resulting environmental economic and social benefits, and considering administrative burden), Option 1, 2 and 3 all perform well without large differences in scores between the three options. This suggests that **improvements in the implementation of existing policy may be more important than the specification of new regional policy in the form of an AGFP. This is perhaps the single most important conclusion to be drawn from the MCA.**
- The acceptability of Option 2 is low, because the AGFP under this option would include two major policy areas (subsidies and labour/working conditions) from a total of three newly expanded policy topics, which most AMS feel are not suitable for inclusion in regional policy. **The low acceptability score could thus represent a ‘deal-breaker’ for Option 2.**
- Option 3 (a consolidated and new AGFP would be developed to supersede/over-ride all existing regional policy documents, but which would also cover policy areas not currently addressed well at regional level) has the highest combined score for the five evaluation criteria. **Purely based on the MCA, the preferred option is thus Option 3.** Given that many fisheries issues are regional issues, increased regional fisheries policy under one consolidated umbrella in the form a comprehensive AGFP could in the long run be greatly beneficial for the ASEAN member countries in fostering and demonstrating regional cooperation, harmonising standards and approaches, and ensuring a level playing field between AMS.

-
- Option 3 scores better than Option 2 on acceptability and coherence, but could itself be problematic given:
 - i) the AGFP under this option to supersede all other existing policy frameworks which could be problematic and cause confusion, perhaps most notably in relation to determining the status and value of the ASEAN-SEAFDEC Resolution and Plan of Action to 2030 which is currently in draft form; and
 - ii) the significant amount of work, and cost, that could be involved in developing and agreeing (by consensus) an AGFP.
 - Added value scores of all three options are low, not because there is little added value of action at the regional level, but because the MCA compares the options against the status quo. At present there are already many policy documents agreed at regional level (especially the ASEAN-SEAFDEC Resolution and Plan of Action) covering most of the topics which the Ad Hoc Task Force and consultants have considered as being potentially suitable for inclusion in an AGFP.

It should also be noted that the MCA has not specifically incorporated an assessment of potential impetus that could be created towards effective implementation of policy that might be generated by having an AGFP. **Under Option 3 with a comprehensive AGFP, the process to develop such a policy, and the agreed policy itself, could provide fresh impetus for improved implementation.** Even under Option 2, just having an AGFP covering a few policy areas could represent the basis on which future regional policy developments could be attached, with future iterations of the policy being used to expand the range of topics covered in an AGFP, also resulting in improved implementation of policy on the areas included.

On the other hand, **without changes to the oversight and monitoring of policy implementation, and improved levels of implementation, both Options 2 and 3 run the risk of considerable amounts of work, time and costs** associated with developing and agreeing an AGFP, which could in many ways end up being very similar to and duplicating other policy documents, most notably the ASEAN-SEAFDEC Resolution and Plan of Action to 2030, **without bringing about much positive change in terms of addressing the key problems and issues facing the sector.**

Given the findings of this study and the conclusions drawn from them as stated above, the consultants don't consider it appropriate to make a firm recommendation as to which of the three policy options should be pursued. That is a decision for the Ad Hoc Task Force to take based on the content of this feasibility study, as well as political considerations.

The decision by the Ad Hoc Task Force should however be made recognising the institutional setting in the region and the ASEAN mandate. While the policy briefs prepared by the consultants as part of this assignment highlighted the benefits of regional policy, much regional policy already has already been specified and agreed through cooperation at the ASEAN level. The success of policy in some other regions, such as the Common Fisheries Policy in EU, may be less a result of regional cooperation to develop and agree policy per se, and more the result of:

1. the legal arrangements which empower EU institutions to require the EU Member States to implement regional policy.
2. a well-resourced institution in the form of the European Commission which is empowered to monitor the implementation of policy.
3. funding mechanisms being in place at a regional level which can be accessed by Member States to support the implementation of policy.

Should the Ad Hoc Task Force decide to recommend either Option 2 or Option 3 the proposed next steps are:

-
1. The Ad Hoc Task Force note and forward the findings and recommendations of the Feasibility Study to ASWGFi, so it may consider either
 - a. extending the mandate of the existing Ad Hoc Task Force to consider options in the report, or
 - b. establishing a new task force if a decision is made to proceed with the preparation of the AGFP.
 2. The newly mandated Task Force could, if the ASWGFi decides to proceed with Option 2 or Option 3, decide on the mechanisms and resources required for development of the AGFP. These could include inputs and resources made by ASEC, SEAFDEC, AMS, and/or consultants (national/international). Terms of reference for the development of the AGFP would be agreed on the basis of consensus.
 3. A timeframe of two years be allowed for the preparation, and agreement by AMAF of the AGFP if the Ad Hoc Task Force decides to move forward with Option 2. A four-year timeframe would be allowed if Option 3 is approved (due to the increased complexity and procedural steps that would be involved with developing a fully comprehensive AGFP that would supersede existing policy documents).
 4. Relevant stakeholders including private sector and civil society organisations, to be determined by the Ad Hoc Task Force could be appropriately consulted during the process to develop an AGFP, in accordance with the Rules of Procedure for Private Sector Engagement under the ASEAN Economic Community.
 5. The agreement of the AGFP to be on the basis of consensus.

Once the AGFP is developed and agreed, ASEC and the ASEAN Sectoral Working Group on Fisheries (ASWGFi) should be made responsible for the supervision and evaluation of the implementation of the AGFP every 2 years, with the content of the AGFP evaluated, reviewed and updated every 5 years.

Even if the Ad Hoc Task Force decides not to pursue either of Options 2 or 3, the feasibility study highlights the potential need for, and benefits of, improved monitoring at a regional level of the implementation of existing fisheries policies. This could be done through broadening and at the same time strengthening the already established monitoring mechanism under the ASEAN-SEAFDEC Resolution and Plan of Action or by establishing a new monitoring mechanism under ASEAN.

Furthermore, it is suggested to strengthen ASEAN's fisheries capabilities through improved resourcing not only for the above monitoring of fisheries policy implementation, but also to facilitate harmonisation of standards and procedures in fisheries and fisheries related areas, and to support, strengthen or capacitate already established ASEAN mechanisms for data and information exchange on fisheries related issues.

Table of Contents

Executive Summary	ii
1. Background to the Feasibility Study of an ASEAN General Fisheries Policy (AGFP)	1
2. Methodology used to complete the Feasibility Study	2
3. Baseline description and problem definition	6
3.1 Inland fisheries	6
3.2 Marine fisheries	9
3.3 Aquaculture	11
3.4 Processing.....	13
3.5 Conclusion.....	14
4. Current institutional, political and legal context.....	15
4.1 Current institutional arrangements for setting fisheries/aquaculture policy, and for fisheries cooperation, in ASEAN.....	15
4.2 Existing fisheries and aquaculture policies in ASEAN	20
5. Why should ASEAN act?.....	37
5.1 Current problems	37
5.2 Institutional mandate	37
5.3 Lessons learned from policy initiatives in other regions and sectors, and the added value of regional action	38
6. Objectives and principles of an AGFP	41
7. What are the available policy options?	43
7.1 Introduction.....	43
7.2 Specification of options	44
8. What are the impacts of the options?	47
8.1 Introduction to the assessment of impacts: methodological considerations.....	47
8.2 Impacts of option 1: baseline with full implementation of existing policy	48
8.3 Impacts of option 2: policy expanded to cover regional issues for which there is currently no regional policy	55
8.4 Impacts of option 3: policy covering all existing and other relevant regional issues, consolidated into one policy document.....	56
9. How do the options compare?.....	57
9.1 Introduction and note on methodology	57
9.2 Effectiveness	57
9.3 Efficiency	65
9.4 Coherence.....	67
9.5 Acceptability	69
9.6 Added Value.....	72
10. Conclusions and thoughts on a preferred option	74
11. Recommendations on next steps	77

Annex 1: Questionnaire	79
Annex 2: Policy Briefings	99
1.EU Common Fisheries Policy	99
2.EU European Maritime and Fisheries Fund	103
3.EU Common Market Organisation	108
4.EU Data Collection Framework	112
5.International fisheries instruments	118
6. FAO Policy Guidance Note: Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture	123
7.Caribbean Community Common Fisheries Policy	126
8. MRC Fisheries Management and Development Strategy	130
9.ASEAN/SEAFDEC Resolution and Plan of Action	133
10.ASEAN Food Safety Policy	137
Annex 3: Bibliography	141
Annex 4: Policy analysis	147
Introduction.....	147
Policy documents reviewed	148
Policy content by main policy area	149
Policy implied by international treaties and agreements and regional and subregional fisheries bodies which AMS are a party to	235
Annex 5: Views of AMS on regional policy issues/actions of importance	253
Annex 6 – Assessing impacts: case study on evolution of the East Atlantic Bluefin Tuna fishery	275
Introduction.....	275
Effects of a strengthened control framework on the BFT fishery	276
Environmental impacts: stock trajectory	278
Economic impacts: fishing vessels economic performances	279
Social impacts: onboard employment and wages	281
Cost-benefit of control	281
Overall Conclusion	282

Tables and figures

Table 1 : Policy briefs prepared to inform the development of an AGFP	3
Table 2 : Country visits completed by the consultants	3
Table 3: Data on inland fisheries in AMS (2018)	6
Table 4: Data on marine fisheries in AMS (2018)	9
Table 5: Data on aquaculture in AMS (2018)	11
Table 6 : Ministries responsible for setting fisheries policy in AMS, and the associated Departments responsible for implementation of policy	15
Table 7 : AMS membership of international organisations, instruments, agreements and treaties of relevance to fisheries/aquaculture.....	18
Table 8 : SWOT of existing institutional arrangements for the setting of fisheries sector policy and for cooperation at the ASEAN level.....	20
Table 9 : Number of policy documents, international & regional agreements and treaties as well as regional and international organisations addressing the identified policy areas.....	21
Table 10 : Policy areas, related policy documents, agreements treaties and regional & international organisations, the respective policy topics and issues addressed as well as those not well addressed.....	23
Table 11 : SWOT of existing regional fisheries and aquaculture sector policy	36
Table 12 : Extent to which existing environmental problems are already addressed by existing regional policy	49
Table 13 : Extent to which existing economic problems are already addressed by existing regional policy	50
Table 14 : Extent to which existing social problems are already addressed by existing regional policy	52
Table 15: Comparison of the effectiveness of Option 1, 2 and 3.....	59
Table 16: Comparison of the efficiency of Option 1, 2 and 3 compared to the status quo	66
Table 17: Comparison of the coherence of Option 1, 2 and 3 compared to the status quo ..	68
Table 18 : AMS views on appropriateness of including different policy areas in an AGFP ...	70
Table 19: Comparison of the acceptability of Option 1, 2 and 3 compared to the status quo	71
Table 20: Comparison of the added value of Option 1, 2 and 3 compared to the status quo	73
Table 21 : Policy area and reference to specific policy topics covering the policy area.	188
Table 22: Policy topics identified by AMS in the completed questionnaire. Highlighted are areas with five or more AMS in support of the respective policy topic.	253
Table 23: Main EU fishing fleet segments targeting BFT in the Mediterranean.....	279
Table 24: Cost-benefit estimate of control of the BFT fishery.....	282
Figure 1: Work Plan for the AGFP Feasibility Study	5
Figure 2 : Common problems for inland fisheries in AMS	8
Figure 3 : Common problems for marine fisheries in AMS	10
Figure 4 : Common problems for the aquaculture sector in AMS.....	13
Figure 5 : Common problems for the processing sector in AMS	14
Figure 6: Effectiveness of Options 1, 2 and 2	65
Figure 7: Efficiency of Options 1, 2 and 2	67

Figure 8: Coherence of Options 1, 2 and 2	69
Figure 9 : Average scores for AMS views on appropriateness of including different policy areas in an AGFP.....	70
Figure 10: Acceptability of Options 1, 2 and 3	72
Figure 11: Added value of Options 1, 2 and 2.....	73
Figure 12: Summary comparison scores for Options 1, 2 and 3, across all criteria in the multi-criteria analysis	74
Figure 13: EFCA compliance risk-assessment for the BFT fishery	276
Figure 14: Real EU catches of BFT compared to EU BFT quota	276
Figure 15: Real total catches of BFT by all flags	277
Figure 16: BFT stock status indicators	278
Figure 17: Evolution of the BFT TAC and of the BFT EU quota.....	278
Figure 18: Evolution of cumulated income, GVA and GRP for EU fishing segments targeting BFT in the Mediterranean	280
Figure 19: Evolution of the GVA to income and GRP to income ratios for the EU fishing fleet segments targeting BFT in the Mediterranean.....	280
Figure 20: Employment on EU fleet segments targeting BFT	281

Acronyms

AFCF	ASEAN Fisheries Consultative Forum
AGFP	ASEAN General Fisheries Policy
AHTF	Ad Hoc Task Force
AMAF	ASEAN Ministers on Agriculture and Forestry
AMS	ASEAN Member States
APFIC	Asia-Pacific Fisheries Commission
ASEAN	Association of Southeast Asian Nations
ASEC	ASEAN Secretariat
ASWGFi	ASEAN Sectoral Working Group on Fisheries
CBD	Convention on Biological Diversity
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CMM	Conservation and management measure
E-READI	E-READI (Enhanced Regional EU-ASEAN Dialogue Instrument)
ETP	endangered threatened and protected (species)
EU	European Union
FAO	Food and Agriculture Organisation (of the United Nations)
FAOCA	FAO Compliance Agreement
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ILO	International Labour Organisation
IOTC	Indian Ocean Tuna Commission
MCA	Multi-Criteria Analysis
MRC	Mekong River Commission
MS	Member States
NACA	Network of Aquaculture Centers in Asia-Pacific
OIE	World Organisation for Animal Health
RPOA-IUU	Regional Plan of Action to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing
RTC	Regional Technical Consultation
SEAFDEC	South East Asian Fisheries Development Centre
SIOFA	South Indian Ocean Fisheries Agreement
SOM-AMAF	Senior Officials Meeting ASEAN Ministers on Agriculture and Forestry
ToR	Terms of Reference
UNCLOS	United Nations Convention on the Law of the Sea
UNFSA	United Nations Fish Stocks Agreement
WCPFC	Western Central Pacific Fisheries Commission
WTO	World Trade Organisation

1. Background to the Feasibility Study of an ASEAN General Fisheries Policy (AGFP)

The 38th ASEAN Ministers on Agriculture and Forestry (AMAF) Meeting held on 6 October 2016 in Singapore encouraged ASEAN Member States (AMS) to develop the “Common ASEAN Fisheries Policy” in order to strengthen collective efforts for sustainable and responsible fisheries and food security towards the unification of ASEAN Community and tasked the ASEAN Secretariat to seek support from international organizations.

A Regional Technical Consultation (RTC) on the Development of an ASEAN Common Fisheries Policy (ACFP) was organized by Department of Fisheries-Thailand on 27-28 March 2017 in Bangkok, Thailand.

The 9th Meeting of the ASEAN Fisheries Consultative Forum (AFCF) held on 15-16 May 2017 noted the report of the RTC on the Development of an ASEAN Common Fisheries Policy. The Meeting also expressed support on Malaysia’s suggestion to form an Ad Hoc Task Force to conduct an in-depth and holistic study on the need to have an ASEAN Common Fisheries Policy and requested ASEAN Secretariat to draft the ToR of the Ad Hoc Task Force for submission to 25th ASEAN Sectoral Working Group on Fisheries (ASWGFi) Meeting.

The 25th ASWGFi Meeting held on 17-19 May 2017 in Singapore agreed to propose to SOM-AMAF the formation of an Ad Hoc Task Force under ASWGFi to conduct a feasibility study on the development of AGFP and to submit the draft ToR of the Ad Hoc Task Force for consideration of the Special SOM-38thAMAF.

The Special SOM-38th AMAF Meeting held on 14-15 August 2017 in Singapore tasked the ASWGFi to revise the draft TOR and submit it to SOM-AMAF for consideration.

The 26th ASWGFi Meeting held on 9-12 May 2018 in Bangkok, Thailand agreed to submit the final draft ToR of the Ad Hoc Task Force to Conduct a Feasibility Study on the Development of an ASEAN General Fisheries Policy to SOM-AMAF for consideration and adoption.

The Special SOM-39th AMAF Meeting held on 27-28 August 2018 in Pattaya, Thailand approved the ToR of the Ad Hoc Task Force to conduct a Feasibility Study on the development of the ASEAN General Fisheries Policy, and tasked the ASEAN Secretariat in coordination with the Task Force to work with E-READI to develop the feasibility study.

Following the directive from SOM-AMAF, the ASEAN Secretariat developed the Concept Proposal on the Development of ASEAN General Fisheries Policy Feasibility Study, which was submitted to E-READI for support, and approved.

In May 2019 GIZ hired two international consultants⁸ to conduct the ASEAN General Fisheries Policy (AGFP) Feasibility Study.

⁸ Heiko Seilert and Graeme Macfadyen

2. Methodology used to complete the Feasibility Study

Overall approach

The overall approach to complete this study was to ensure as much participation and input from AMS as possible. This was ensured through regional meetings, country visits by the consultants, and email communications.

Additionally, the technical approach was guided by best practice in completing assessment of policy reform, most notably as laid out in the EU Better Regulation Guidelines⁹ and the requirements for conducting impact assessments.

A **phased approach** was taken to the completion of the feasibility study, over the period May 2019 to June 2020, with three main phases as follows:

1. Inception phase (May to June 2019)
2. Data collection and policy briefing phase (July to October 2019)
3. Analysis and report writing phase (November 2019 to June 2020)

The **methodological approach and outputs for the inception phase** (completed on schedule by the end of June 2019) were as follows:

1. An Inception Note was prepared by the consultants and provided to ASEAN Member States on 16th May. The inception note outlined the methodological approach to be taken in completing the feasibility study.
2. The consultants participated in an inception workshop in Bangkok, Thailand, on 22 May at which a presentation of the inception note was given outlining the proposed approach to the feasibility study and requesting clarification from AMS on a number of issues critical to its completion. AMS feedback provided direction to the consultants.
3. An amended/updated inception note based on agreement at the inception meeting was finalised by the consultants 10th June 2019 and represented the agreed methodology for completion of the study.
4. The consultants then developed a questionnaire to be used as the basis for data collection from AMS during consultations (see Annex 1: Questionnaire). The questionnaire was sent to all AMS prior to visits made by the consultants (see below).

The **methodological approach and outputs for the data collection and policy briefing phase** (completed on schedule by the end of October 2019) were as follows:

1. A series of 10 policy briefings (see Table 1) were prepared by the consultants on a range of EU policies, other regional policies and international instruments of potential relevance to the development of a AGFP. A standardised format was used across all policy briefs to introduce the policy, consider the impacts, and draw conclusions about any lessons learned and implications for a potential AGFP. The purpose of these briefings was to inform the AMS about other regional policy initiatives in fisheries and other sectors, so that AMS views about a AGFP might be informed by the lessons learned from these other regional policy initiatives. Draft versions of the policy briefs were amended based on feedback from AMS and the EU, laid out by a graphic designer, and finalised for

⁹ https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en and <https://ec.europa.eu/info/sites/info/files/better-regulation-guidelines-impact-assessment.pdf>

publication. Word versions of the text of the policy briefs are provided in Annex 2. Laid-out policy briefs with photos etc are available as pdf.

Table 1 : Policy briefs prepared to inform the development of an AGFP

Policy Brief Number	Policy Brief Title
1	The EU Common Fisheries Policy
2	The European Maritime and Fisheries Fund
3	The EU common organisation of the market in fishery products
4	The EU data collection framework
5	International fisheries-related instruments
6	FAO policy guidance on strengthening sector policies for better food security and nutrition results
7	The Caribbean Community Common Fisheries Policy
8	The Mekong River Commission's Basin-Wide Fisheries Management and Development Strategy 2018 – 2022
9	Resolution and Plan of Action of Sustainable Fisheries for Food Security for the ASEAN towards 2020
10	ASEAN Food Safety Policy

2. Secondary and web-based sources were accessed by the consultants to obtain reports and data, especially with regards to ASEAN and national policy documents. A bibliography is provided in Annex 3: Bibliography
3. The consultants completed visits to all ten AMS. These visits were used to:
 - brief stakeholders about the possible AGFP and the work of the feasibility study;
 - collect data related to inland fisheries, marine fisheries, aquaculture, and the processing sector;
 - collect additional policy documents;
 - discuss the views of stakeholders about a possible AGFP; and
 - validate and complete the questionnaires which had been sent to all AMS prior to the visits.

The dates of visits to AMS (completed by either one or both of the consultants) are shown in the table below. Typically, the consultants used their time in each AMS to conduct one-to-one or small meetings with sections/divisions with Fisheries Departments, as well as to hold a larger meeting with other agencies/Ministries. In some cases, private sector representatives were also met.

Table 2 : Country visits completed by the consultants

Country	Dates of Visit
Thailand	13-16 th August 2019
Myanmar	25-30 th August 2019
Indonesia	2-6 th September 2019
Lao PDR	11-13 th September 2019
Cambodia	9-11 th September 2019
Malaysia	17-19 th September 2019
Brunei Darrusalam	17-19 th September 2019
Singapore	24-25 th September 2019
Vietnam	1-3 rd October 2019
Philippines	10-11 th October 2019

-
4. At the end of the data collection and policy briefing phase, the consultants prepared a progress report, which was submitted to ASEC at the end of October 2019, detailing the progress made at that point.

The [methodological approach and outputs for the analysis and report writing phase](#) were as follows:

1. Data collected through the questionnaires was consolidated and analysed by the consultants.
2. Existing national and regional policy frameworks that had been collected were reviewed by the consultants for their coherence/common areas and differences. This allowed for benchmarking and gap analysis.
3. The views of AMS captured in their questionnaire responses, and given to the consultants during the country visits, were consolidated and analysed by the consultants. These views related to: possible policy content and scope; arrangements for implementation; and the potential relevance and acceptability of a potential AGFP.
4. Sections 1-8 of the draft feasibility study report were first prepared by the consultants and submitted to ASEC in March 2020 and circulated by ASEC to AMS and the Ad Hoc Task Force. Due to the coronavirus outbreak early in 2020, a technical workshop which had been planned to discuss the report had to be cancelled, so AMS and the EU were provided the opportunity to provide comments and feedback in writing to the consultants. ASEC organised the process to obtain feedback from AMS for provision to the consultants, and this feedback was important to confirm/finalise the policy options to be subjected to the impact assessment as part of the feasibility study.
5. Feedback to the consultants on Section 1-8 of the text was then used to make necessary changes and improvements to Sections 1-8 of the feasibility study report, and to prepare sections 9-11 based on the agreed policy options. A revised complete draft of this report was prepared by the consultants and submitted to ASEC in May 2020, circulated by ASEC to AMS/Ad Hoc Task Force, and discussed at a one-day virtual regional technical consultation workshop on 27th May 2020.
6. Based on additional feedback and suggestions from AMS, this final version of the feasibility study was prepared by the consultants.

The above activities and outputs are presented in summary form in the [workplan and timeline for the feasibility study presented graphically below](#).

3. Baseline description and problem definition

This section provides an analytical, succinct overview of the economic, social and biological state of the ASEAN fisheries and aquaculture sectors. It provides both data and a description of the current key challenges and problems, separately for inland fisheries, marine fisheries, aquaculture, and processing. The text on current problems is important as it is used as the basis for specifying objectives of policy reform. It does not however mean that everything is in crisis in AMS. It is well recognized by the authors that many positive steps are being taken in the region on a very wide range of issues, for example to better combat illegal unreported and unregulated fishing, to manage and where necessary rebuild fish stocks through the development of fisheries management plans, to conduct science and research, etc.

Information in this section is sourced primarily from questionnaires completed by AMS as part of this study, and supplemented where useful by information in SEAFDEC's 2017 publication 'Southeast Asian State of Fisheries and Aquaculture 2017' (SEASOFIA) and other relevant secondary sources. Data contained in SEAFDEC's publication pertains to 2014, so the data provided in the tables below are sourced by the consultants from AMS, and as generally relate to 2018, provide the most up-to-date portrayal of the state of the sector available at the present time¹⁰.

3.1 Inland fisheries

Based on data provided by AMS in questionnaire responses (in almost all cases for 2018), the following table shows key data on inland fisheries for AMS.

Table 3: Data on inland fisheries in AMS (2018)

	Total	Average	Range
Volume of inland fisheries landings (tonnes) ¹¹	3 395 995	424 499	<10 000 – 1 594 970
Value of inland fisheries landings (US\$) ¹²	6.81 billion	851 million	<0.5 million – 2.9 billion
Average value of inland fisheries landings (US\$/tonne)	-	2 206	1 061 – 4 289
Average annual inland fisheries sector earnings per person (US\$) ¹³	-	1 743	472 – 3 438
Average annual inland fisheries sector earnings as a proportion of average national earnings ¹⁴ per person (%)	-	23%	13 – 53%
Proportion of national GDP from inland fisheries (%)	-	n/a ¹⁵	c.a. 0% - 5%
Volume of inland fisheries exports (tonnes) ¹⁶	40 107	6 685	8 – 14 512

¹⁰ All data provided by AMS in local currencies have been converted to US\$ (using mid-year exchange rates from www.oand.com)

¹¹ No data for Brunei Darussalam.

¹² No data for Brunei Darussalam. Values for Myanmar and Viet Nam based on average values per tonne from other countries

¹³ Data only available for Cambodia, Indonesia, Lao PDR and Malaysia

¹⁴ From <https://www.worlddata.info/average-income.php> (average income calculated using gross national income and population)

¹⁵ Not provided as too few AMS provided data for average to be meaningful

¹⁶ Includes data for Cambodia, Indonesia, Lao PDR, Myanmar, Philippines

	Total	Average	Range
Value of inland fisheries exports (US\$) ¹⁷	157 million	26.2 million	c.a. 0 – 72 560 000
Average value of inland fisheries exports (US\$/tonne)	-	4 381	2 981 – 6 466
Number of inland fishers ¹⁸	2 539 277	362 754	3 148 – 1 226 382
Average number of crew per vessel ¹⁹	-	1.6	c.a. 1 – 2.5
Size of inland areas that are protected (km ²) ²⁰	2 434	608	30 – 2 191

Source: consultant compilation from AMS questionnaires. Notes: All data exclude Singapore, which has no inland fisheries

The table above, and the underlying country-specific data, highlight that:

- The size of the inland fisheries sector in volume and value terms varies enormously across AMS. Myanmar dominates regional inland fisheries production (1.6 million tonnes) accounting for 47% of AMS production in volume terms and 52% in value terms, with Indonesia (19% of regional production volumes) and Cambodia (16% of regional production volumes) also important.
- Cambodia's inland fisheries production is unusual compared to other AMS in that it is higher than its marine capture fisheries production (the only AMS for which this is the case) and represents 82% of total capture fisheries production. 100% of capture fisheries production in Lao PDR is of course from inland fisheries given that it is not a coastal country.
- The average value of inland fisheries production is relatively consistent across AMS (typically ranging between US\$1 000 – US\$ 2 000 per tonne).
- The inland fisheries sector contributes a surprisingly high proportion of national GDP in some countries – in excess of 2% in Lao PDR and Myanmar, and as much as 5% in Cambodia.
- Average earnings by those working in the inland fisheries sector are below national average earnings.
- Only a very small proportion of total inland fisheries production (<2%) is exported, emphasising the important role of inland fisheries production in supplying domestic nutrition and food security.
- Main export markets for the small volumes that are exported are quite varied with inland fisheries destined for other regional markets (Thailand, Viet Nam, and China), but also to the Middle East, North America, and Europe.
- The average of inland fisheries exports is around 100% higher than the first sale production value, indicating a level of value-addition for inland fisheries products.
- Inland fisheries operations are very small-scale in nature (with vessels being used on average by just 1-2 people).

In considering current challenges and problems, analysis of AMS questionnaire responses highlight the following issues as being common to many AMS (see Figure 2).

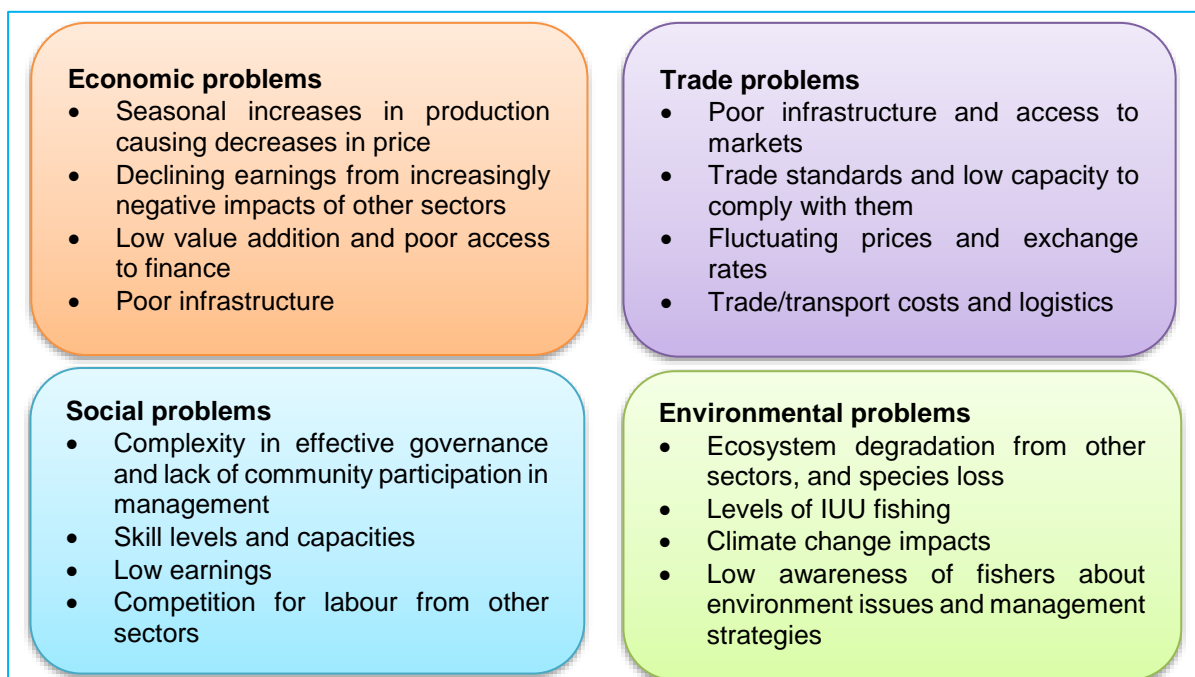
¹⁷ Includes data for Cambodia, Indonesia, Lao PDR, Myanmar, Philippines

¹⁸ No data for Brunei Darussalam, Singapore, Viet Nam

¹⁹ Based on data for Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar

²⁰ Includes data for Cambodia, Lao PDR, Malaysia, and Thailand

Figure 2 : Common problems for inland fisheries in AMS



Other key points raised in SEASOFIA 2017 informing a baseline description and characterisation of the inland fisheries sector include:

- inland fisheries provide the primary source of protein for many people in the region.
- most fish catch is small in size with high species diversity.
- inland fisheries are characterised by being highly seasonal in nature.
- most of those engaged in inland fishing activities do so on a part-time or seasonal basis, and also have other occupations contributing to household incomes.
- reliable information on inland fisheries is often lacking, with consumption surveys suggesting that actual production is far higher than official statistics on production suggest.
- inland fisheries production has shown an increasing trend from 1.36 million tonnes in 2000 to just over 3 million tonnes in 2014, valued at US\$ 3.7 billion.
- A key challenge facing inland fisheries is the rapid growth of human activities, which impacts the inland-water environment including fish habitats, fish migration, water quantity and quality, and inland fishery resources.

3.2 Marine fisheries

Based on data provided by AMS in questionnaire responses (in almost all cases for 2018), the following table shows key data on marine fisheries for AMS.

Table 4: Data on marine fisheries in AMS (2018)

	Total	Average	Range
Volume of marine fisheries landings (tonnes)	17 445 745	1 744 475	1 310 – 6 628 199
Value of marine fisheries landings (US\$) ²¹	35.65 billion	3.57 billion	8.9 million – 16.88 billion
Average value of marine fisheries landings (US\$/tonne)	-	2 653	1 051 – 6 831
Average annual marine fisheries sector earnings per person (US\$) ²²	-	3 403	1 015 – 7 040
Average annual marine fisheries sector earnings as a proportion of average national earnings ²³ per person (%) ²⁴	-	38%	16 – 67%
Proportion of national GDP from marine fisheries (%) ²⁵	-	1.0%	c.a. 0 – 4.3%
Volume of marine fisheries exports (tonnes) ²⁶	3 797 264	421 918	1 053 – 1 354 727
Value of marine fisheries exports (US\$) ²⁷	12.45 billion	1.38 billion	909 970 – 5 198 602 989
Average value of marine fisheries exports (US\$/tonne) ²⁸	-	3 045	864 – 4 782
Number of marine fishers	3 946 528	394 653	69 – 1 350 174
Number of marine fishing vessels	1 241 509	124 151	34 – 571 647
Average number of crew per vessel	-	7	2 - 29
Size of marine areas that are protected (km ²) ²⁹	310 019	38 752	1 – 180 000

Source: consultant compilation from AMS questionnaires. Notes: All data excludes Lao PDR as a land-locked country.

The table above, and the underlying country-specific data, highlight that:

- Marine capture fisheries landings at the regional level dwarf those of inland fisheries, accounting for around 90% of the combined total in volume terms.
- Production volumes are dominated by Indonesia (38% of the total for AMS), Myanmar (18%) Vietnam (21%), and Thailand (9%).

²¹ Myanmar value based on volume multiplied by average value per tonne for all other countries

²² Includes data for Cambodia, Indonesia, Malaysia and Thailand

²³ From <https://www.worlddata.info/average-income.php> (average income calculated using gross national income and population)

²⁴ Includes data for Cambodia, Indonesia, Malaysia and Thailand

²⁵ Includes data for Cambodia, Myanmar, Thailand, Vietnam

²⁶ Excludes Singapore as local landings are for domestic consumption only. Vietnam volume estimated based on value of exports, and average value of exports for all other countries

²⁷ Excludes Singapore

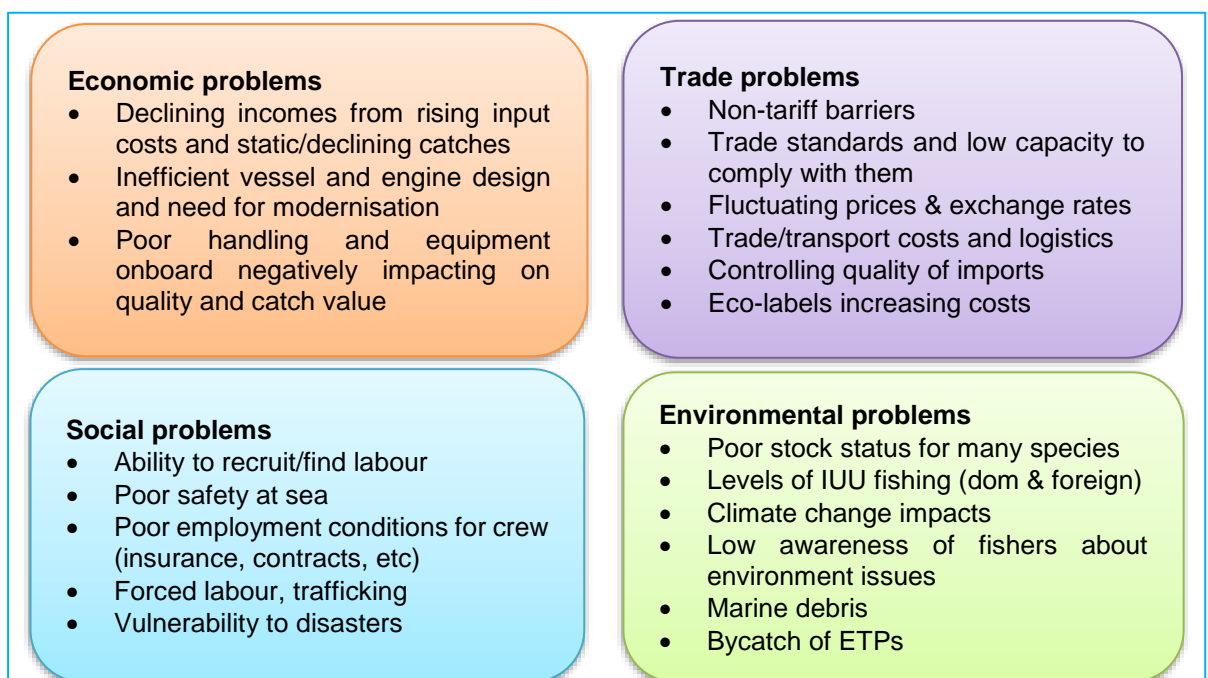
²⁸ Excludes Singapore and Vietnam

²⁹ Excludes Myanmar and Singapore

- The average value of marine fisheries production is both higher and more variable than for inland fisheries across AMS (typically ranging between US\$1 500 – US\$ 2 500 per tonne, but with Singapore having a value per tonne of over US\$ 6 000).
- In all AMS average earnings by those working in the marine fisheries sector are below national average earnings.
- The contribution of marine fisheries to national GDP is generally small and around 1%, but for some countries (e.g. Myanmar, 4.3%) the sector is nevertheless important.
- Relatively large volumes of marine fish are exported by AMS (representing 22% of the volume of production – but noting that exports may include imports for processing and export. Imports for processing and re-export in Thailand’s tuna canning sector are of particular note. Vietnam, Indonesia and Myanmar, and to a lesser extent Malaysia, are also important exporters in terms of total AMS fish exports.
- Main export markets are very varied with marine fisheries products destined for other regional markets (mainly in Thailand, Viet Nam, China and Japan), but also to Europe, North America, and the Middle East.
- Marine fisheries generate a very significant number of jobs for most AMS, with an average of around 7 persons working on each vessel, but with the sector being characterised by a very wide range in size of vessels in most AMS from very small 1-2 person inshore vessels, to large industrial vessels employing many people.

In considering current challenges and problems, analysis of AMS questionnaire responses highlight the following issues as being common to many AMS (see Figure 3).

Figure 3 : Common problems for marine fisheries in AMS



Other key points raised in SEASOFIA 2017 informing a baseline description and characterisation of the marine capture fisheries sector include:

- Increases over 2010-2014 of both the volume and value of marine fisheries landings, but with values increasing at a faster rate in percentage terms (perhaps driven by rising unit prices as a result of increasing purchasing power in many AMS).

- A very wide and diverse range of species being caught, with catches comprised of more than 203 species and/or species groups. These species include 163 finfishes, 18 crustaceans, 19 molluscs, and 3 other aquatic invertebrates.
- In value terms, tunas, small pelagic fishes (e.g. scads, mackerel, anchovies, sardines), crustaceans and molluscs, demersal fish, and seaweeds are all important species groups. Much of the tuna are exported, with greater proportions of catch of other species being for local/domestic markets.
- Insufficient information on stock identification and shared stocks of many species hamper efforts to promote sustainable management.
- Many stocks are considered as over-exploited.
- Bycatches of ETPs are a significant problem.
- The need to manage/reduce fishing capacity and IUU fishing as major issues requiring action in the future. Other areas requiring action include: introducing co-management and the ecosystems-based approach to fisheries management, adapting and mitigating the impacts of climate change, and improving labour conditions.

3.3 Aquaculture

Based on data provided by AMS in questionnaire responses (in almost all cases for 2018), the following table shows key data on the aquaculture sector for AMS.

Table 5: Data on aquaculture in AMS (2018)

	Total	Average	Range
Volume of aquaculture production (tonnes)	25 050 335	2 505 034	1 248 – 15 679 273
Value of aquaculture production (US\$) ³⁰	29.42 billion	2.94 billion	9.9 million – 13.6 billion
Average value of aquaculture production (US\$/tonne) ³¹	-	2 966	863 – 7 955
Average annual aquaculture sector earnings per person (US\$) ³²	-	4 873	590 – 11 461
Average annual aquaculture sector earnings as a proportion of average national earnings ³³ per person (%) ³⁴	-	64%	8.9% - 113%
Proportion of national GDP from aquaculture production (%) ³⁵	-	1.2%	c.a. 0 – 3.5%
Volume of aquaculture exports (tonnes) ³⁶	2 004 278	222 698	42 - 1 232 652
Value of aquaculture exports (US\$) ³⁷	9.83 billion	1.40 billion	4.6 million – 5.98 billion

³⁰ Myanmar value based on volume multiplied by average value for all other AMS

³¹ Excludes Myanmar

³² Includes data for Brunei Darussalam, Cambodia, Indonesia, Lao PDR and Malaysia

³³ From <https://www.worlddata.info/average-income.php> (average income calculated using gross national income and population)

³⁴ Excludes Singapore

³⁵ Includes data for Brunei Darussalam, Cambodia, Lao PDR, Myanmar, Thailand, Vietnam

³⁶ Excludes Philippines, Singapore (most of Singapore's aquaculture products are for domestic consumption) and Lao PDR. Vietnam volume estimated based on export value and average value of exports for other AMS

³⁷ Excludes Cambodia, Lao PDR, Philippines and Singapore

Average value of aquaculture exports (US\$/tonne) ³⁸	-	4 849	1 398 – 8 375
Number of fish farmers ³⁹	6 081 952	608 195	426 – 3 million
Area designated/used for aquaculture (km ²) ⁴⁰	12 663	2 111	5 – 12 012

Source: consultant compilation from AMS questionnaires

The table above, and the underlying country-specific data, highlight that:

- The value of aquaculture production by AMS rivals that of marine capture fisheries production.
- Dominant producers are Indonesia (63% of production volumes and 46% of values) and Viet Nam (17% of production volumes and 20% of values), but all AMS have an aquaculture sector of some sort.
- The average value of aquaculture production is on a par with the value of inland production and lower than for marine capture fisheries production, and varies considerably between AMS due to their different focus on different species.
- The average earnings by those working in the aquaculture sector are generally higher than for those working in inland and marine capture fishing, and in some cases (e.g. Cambodia, Malaysia) may exceed national average earnings at least in formal/larger aquaculture operations.
- Contributions of the sector to national GDP vary considerably but are highest in percentage terms in Cambodia (3.5%).
- The total proportion of aquaculture production being exported varies enormously across AMS, with zero or close to zero from Cambodia, Singapore and Lao, up to as much as 49% for Brunei Darussalam, 30% for Viet Nam, 23% for Thailand and 18% for Malaysia.
- Main export markets are very varied with aquaculture products destined for other regional markets (mainly in Thailand, Viet Nam, China and Japan), but also to Europe, North America, and the Middle East.
- The aquaculture sector generates a very significant number of jobs for most AMS.

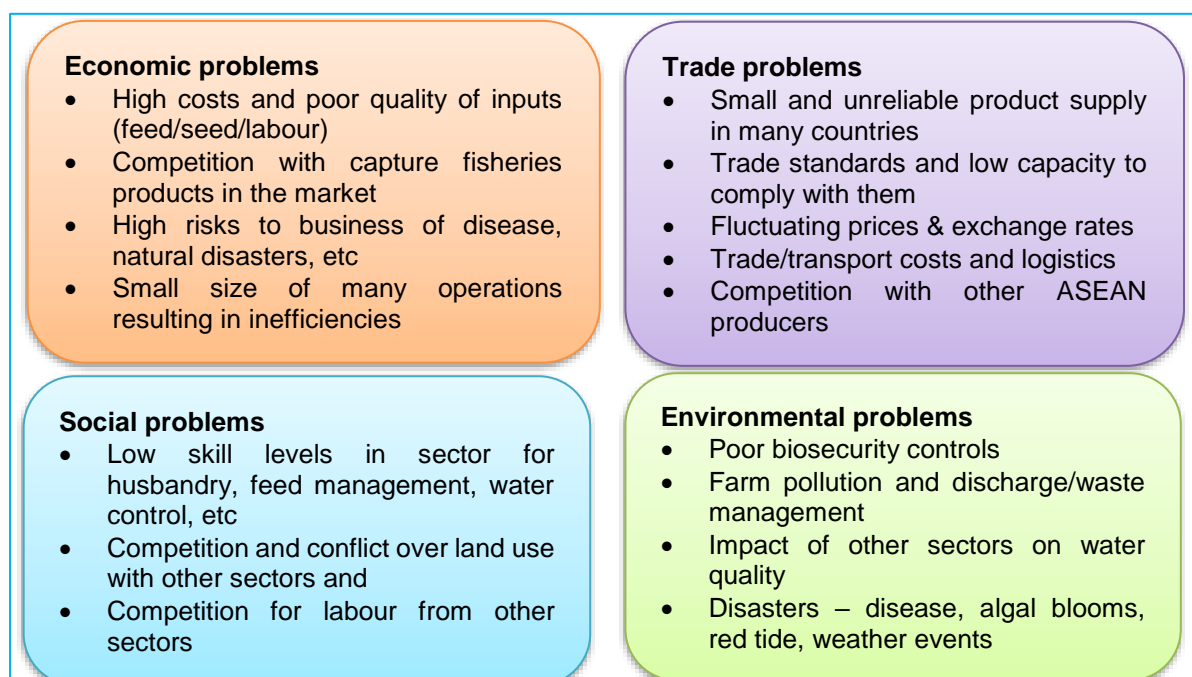
In considering current challenges and problems, analysis of AMS questionnaire responses highlight the following issues as being common to many AMS (see Figure 4).

³⁸ Includes data for Brunei Darussalam, Indonesia, Malaysia, Myanmar and Thailand

³⁹ Viet Nam figure estimated in questionnaire (no official data)

⁴⁰ Excludes Lao PDR, Myanmar, Thailand and Viet Nam

Figure 4 : Common problems for the aquaculture sector in AMS



Other key points raised in SEASOFIA 2017 informing a baseline description and characterization of the aquaculture sector include:

- Most aquaculture employment is part-time in nature.
- There has been huge and rapid growth in aquaculture production over the last 15-20 years.
- Production takes the form of mariculture, brackishwater culture, and freshwater culture. Mariculture volumes account for more than 50% of total production with Indonesia the dominant mariculture producer, while Vietnam is the largest producer of freshwater production. The Lower Mekong Basin is the most important environment for freshwater aquaculture in the region.
- After seaweed which is by far the largest in volume terms, tilapia, catfish milkfish and shrimp are all important in both volume and value terms.
- Key requirements for the future are to control and prevent disease, reduce the dependence of aquaculture on fishmeal, and improving the quality of broodstock.

3.4 Processing

Data requested of AMS were generally not available/provided as part of questionnaire responses, meaning that presenting a table of data across AMS would not be meaningful. This, and the partial data that were provided, highlight that.

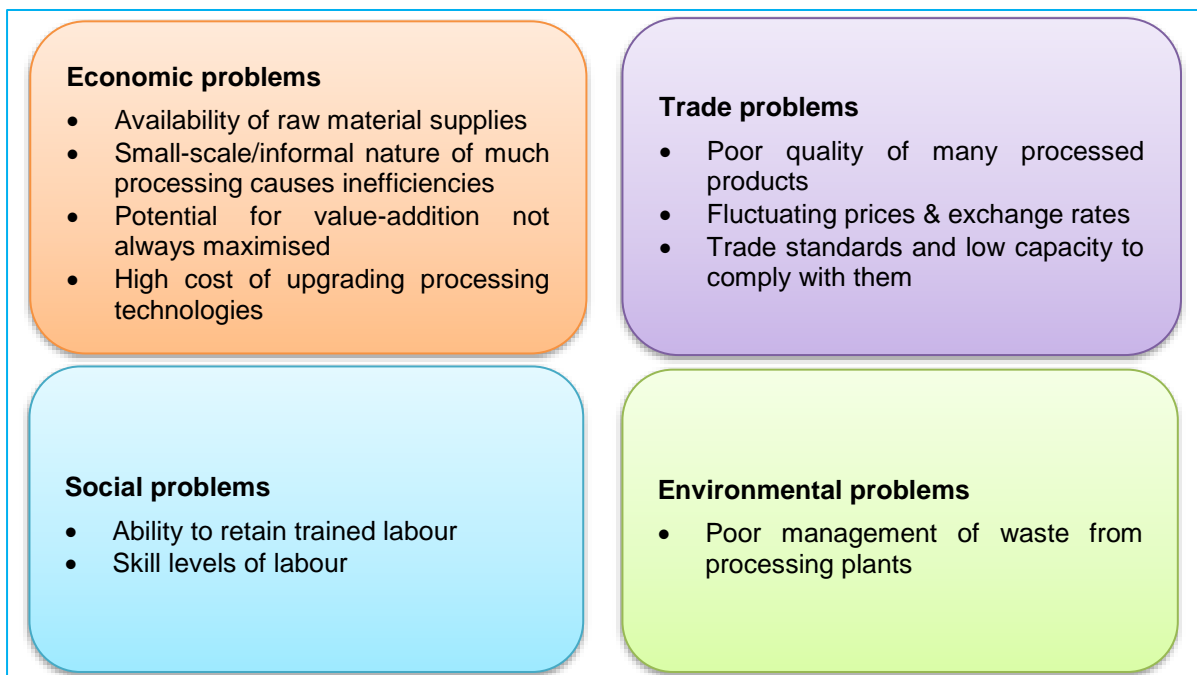
- Data on the processing sector is often lacking in AMS, especially on the informal processing sector.
- The informal processing sector may represent an important share of total processing sector revenues and contribute significantly to total processing sector employment⁴¹.

⁴¹ Note also that this is not the case for all countries. Singapore for example has no informal processing sector.

- Many processing establishments cater for the domestic market and are not certified for export.
- Women typically represent between 70-90% of those employed in the processing sector in most AMS.

In considering current challenges and problems, analysis of AMS questionnaire responses highlight the following issues as being common to many AMS (see Figure 5).

Figure 5 : Common problems for the processing sector in AMS



Other key points raised in SEASOFIA 2017, especially with regards to trade in fisheries products to/from the region, include:

- SE Asia plays a key role in supplying the global market for fish and fisheries products, based on a wide variety of products and product forms (e.g. frozen, fresh, dried, salted, etc). Exports from the region account for around 15% of global exports in both volume and value terms (2014).
- Thailand and Viet Nam are both in the top five global exporters in value terms.
- There is a need for improvements in traceability throughout the value chain.

3.5 Conclusion

The fisheries sector in different AMS is diverse in terms of its characteristics, with different dependencies and relative importance of inland fisheries, marine fisheries, aquaculture, and processing. Average figures for different indicators presented in this section, hide a wide range of country-specific differences. Nevertheless, despite these differences, the fisheries sector in AMS, and its constituent parts (inland, marine, aquaculture, processing) also shares many characteristics. And importantly, consultations completed as part of this study show that many problems faced are common and shared across multiple AMS. This suggests that regional policy may be helpful in addressing these shared issues.

4. Current institutional, political and legal context

4.1 Current institutional arrangements for setting fisheries/aquaculture policy, and for fisheries cooperation, in ASEAN

Specification of fisheries and aquaculture policy in AMS is a national competency, with relevant Ministries in each AMS having the mandate to specify sectoral policy in their own country. Responsibility for implementation of policy typically then rests with Fisheries Departments. The table below shows the relevant Ministries and Departments in the AMS.

Table 6 : Ministries responsible for setting fisheries policy in AMS, and the associated Departments responsible for implementation of policy

ASEAN Member State	Key Ministry setting fisheries and aquaculture policy	Key Department for implementation fisheries and aquaculture policy
Brunei Darrusalam	Ministry of Industry and Primary Resources	Department of Fisheries
Cambodia	Ministry of Agriculture Fisheries and Forestry	Fisheries Administration
Indonesia	Ministry of Marine Affairs and Fisheries	Ministry Departments
Lao PDR	Ministry of Agriculture and Forestry	Department of Livestock and Fisheries
Malaysia	Ministry of Agriculture and Agro-based Industry	Department of Fisheries
Myanmar	Ministry of Agriculture, Livestock and Irrigation	Department of Fisheries
Philippines	Department of Agriculture	Bureau of Fisheries and Aquatic Resources
Singapore	Ministry of the Environment and Water Resources	Singapore Food Agency
Thailand	Ministry of Agriculture and Cooperatives	Department of Fisheries
Vietnam	Ministry of Agriculture and Rural Development	Directorate of Fisheries

It is important to recognise that the Ministries shown in the table above are responsible for some, but not all the policy areas which the Ad Hoc Task Force and consultants suggested should be considered for inclusion in a possible AGFP, or which the progress report for this feasibility study identified. The Ministries shown above are typically responsible for setting policy on the following topics considered of potential importance by the Ad Hoc Task Force and consultants:

1. inland fisheries resources management
2. marine fisheries resources management
3. aquaculture
4. IUU fishing
5. fisheries research and science
6. fisheries data collection
7. fisheries trade
8. fisheries subsidies
9. small-scale fisheries

Policy on other topics of relevance to fisheries/aquaculture raised by the Ad Hoc Task Force and consultants as potentially being important for inclusion in an AGFP, are typically the responsibility of other Ministries as follows:

10. food safety and better nutrition – Ministries of Health
11. labour and working conditions – Ministries of Labour or Industry
12. marine debris
13. protection of marine mammals and endangered threatened and protected (ETP) species – Ministries of Environment
14. aquatic animal health – Ministries of Agriculture
15. disaster and climate change management – Ministries Environment

At the ASEAN level, regional cooperation on fisheries issues largely falls under the ASEAN Economic Community (one of three main Communities or pillars) and the ASEAN Ministerial Meeting on Agriculture and Forestry (AMAF). The Ministerial Understanding on ASEAN Cooperation in Food, Agriculture and Forestry signed in October 1993 in Bandar Seri Begawan underpins ASEAN cooperation in food, agriculture and forestry. The Senior Officers Meeting (SOM-AMAF) is the main ASEAN body that oversees overall ASEAN cooperation in food and agriculture, with the guidance of the ASEAN Ministers on Agriculture and Forestry (AMAF). Key issues and ASEAN institutional arrangements in relation to fisheries and aquaculture are:

- Decisions related to fisheries issues reached in SOM-AMAF must be made by consensus, and are not legally binding on AMS given that ASEAN has no legal competency over fisheries-related issues⁴².
- The ASEAN Sectoral Working Group on Fisheries (ASWGFi) oversees the implementation of fisheries and aquaculture sector cooperation.
- The ASEAN Secretariat (ASEC) acts as the overall coordinator and provides necessary assistance for cooperation programmes and projects in collaboration with the ASWGFi, national focal points and relevant institutions.
- ASEC, a Food, Agriculture and Forestry Division, has limited staff and only a small number of dedicated fisheries sector staff. Most ASEAN programmes and projects are therefore implemented and monitored under the ASWGFi, where cooperation is facilitated through a focal point in each AMS.
- ASEAN and ASEC does not have at its disposal dedicated and reliable funds planned in advance which can be allocated to AMS or to regional projects to develop fisheries/aquaculture sector policy or to support its implementation in different AMS⁴³. However, ASEAN has different fields of cooperation among AMS, and with partners

⁴² This is very different to the situation in the European Union where the EU has exclusive competence in the conservation of marine biological resources, and where related decisions/policy/legislation agreed by the European Parliament (the directly elected legislative body of the European Union) and the Council of the EU (the institution representing the member states' governments) are binding on EU Member States (MS). In the EU the European Commission (akin to ASEC in terms of the institutional structure in ASEAN, but better resourced) serves as a key institution to monitor and ensure that policy decisions are put into practice, as well supporting cooperation amongst EU MS. See Annex 2 policy briefing on the EU Common Fisheries Policy for more information).

⁴³ Again, the situation is very different in the EU, where the European Commission manages and implements a multi-annual spending programme in support of the preparation of policy reform, and the implementation of policy in EU MS (see Annex 2 policy briefing on the European Maritime and Fisheries Fund for more information).

and international and regional organisations, can access funds to be utilized by AMS to support regional projects.

Noting the above, cooperation with various ministries and ASEAN-related bodies overseeing issues relevant to fisheries/aquaculture such as biosecurity and food safety, labour and environment could be facilitated.

Outside of ASEAN institutional arrangements, AMS also engage with many international and regional organisations, conventions, and treaties, with membership/accession requiring and facilitating cooperation on fisheries/aquaculture issues. The Table below highlights that there are many organisations and instruments of relevance to the fisheries/aquaculture sector and shows AMS involvement. Accession to or membership of many of those listed in the table entails either a legal obligation to adhere to various requirements, policy or management arrangements, or even if not legally binding, agreement with policy statements and decisions.

Table 7 : AMS membership of international organisations, instruments, agreements and treaties of relevance to fisheries/aquaculture

	Brunei	Cambodia	Indonesia	Lao PDR	Malaysia	Myanmar	Philippines	Singapore	Thailand	Viet Nam
United Nations Convention on the Law of the Sea (UNCLOS)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Convention on Biological Diversity (CBD)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
World Organisation for Animal Health (OIE)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CODEX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
United Nations Fish Stocks Agreement (UNFSA)	No	No (in process)	Yes	No	No	No	Yes	No	Yes	Yes
Port States Measures Agreement (PSMA)	No	Yes	Yes	n/r	No	Yes	Yes	No	Yes	Yes
FAO Compliance Agreement (FAOCA)	No	No	No	No	No	No	Yes	No	No (in process)	No
Indian Ocean Tuna Commission (IOTC)	n/r	n/r	Yes	n/r	Yes	No	Yes	n/r	Yes	n/r
Western Central Pacific Fisheries Commission (WCPFC)	No	No	Yes	n/r	No	n/r	Yes	n/r	Yes	Yes
Mekong River Commission (MRC)	n/r	Yes	n/r	Yes	No	n/r	n/r	n/r	Yes	n/r
South East Asian Fisheries Development Centre (SEAFDEC)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Network of Aquaculture Centres in Asia-Pacific (NACA)	No	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes
Regional Plan of Action to Promote Responsible Fishing Practices including Combating Illegal, Unreported and Unregulated Fishing (RPOA-IUU)	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes
Asia-Pacific Fisheries Commission (APFIC)	No	Yes	Yes	No	Yes	Yes	Yes	No	Yes	Yes
South Indian Ocean Fisheries Agreement (SIOFA)	n/r	n/r	No	n/r	No	No	n/r	n/r	Yes	n/r
International Labour Organisation (ILO)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ILO Work in Fishing Convention C188	No	No	No	No	No	No	No	No	Yes	No

Source: AMS questionnaires and organisation websites

n/r = not relevant

not included: Commission for the Conservation of Southern Bluefin Tuna (CCSBT), Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), Coral Triangle Initiative

Viet Nam a Cooperating Non-member of WCPFC

The specific role of the South East Asian Fisheries Development Center (SEAFDEC) in supporting cooperation and policy development on fisheries issues is worth highlighting. SEAFDEC is an autonomous inter-governmental body established in 1967. Its member countries are all of the AMS, plus Japan. The Center operates through a Secretariat located in Thailand and has five technical departments: Training Department; Marine Fisheries Research Department; Aquaculture Department; Marine Fishery Resources Development and Management Department; and Inland Fishery Resources Development and Management Department. Since 1998, technical cooperation between ASEAN and SEAFDEC towards sustainable fisheries development has been initiated under the ASEAN-SEAFDEC Fisheries Consultative Group Mechanism (FCG) Framework; and the promotion of sustainable fisheries development through this mechanism is well accredited within the ASEAN. To assure that the efforts of ASEAN and SEAFDEC in tackling a number of challenges that have impacts on the development and management of the fisheries sector are sustained, and in support of the various activities for the benefit of member countries, the ASEAN-SEAFDEC Strategic Partnership (ASSP) was formalized on 2 November 2007. ASSP was envisaged to enhance closer cooperation between ASEAN and SEAFDEC and its member countries, paving the new phase of ASEAN-SEAFDEC collaboration in achieving long term common goals towards collective regional development and management of sustainable fisheries. SEAFDEC has over many years acted to support cooperation amongst AMS through hosting meetings, conducting research, and acting as the implementing agency for fisheries and aquaculture projects of a regional nature. SEAFDEC has become the fisheries technical arm of ASEAN and the ASWGFi for activities and programmes that fall under the ASEAN-SEAFDEC cooperation. The Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020, were prepared by the ASEAN-SEAFDEC Member Countries in collaboration with ASEAN and SEAFDEC, and adopted by the Ministers of ASEAN-SEAFDEC member countries⁴⁴.

The Resolution and Plan read like a policy document, with specific sections providing statements of intent with regards to:

- Planning and information
- Fisheries management
- Marine fisheries
- Inland fisheries
- Aquaculture
- Optimal utilisation of fish and fishery products
- Fish trade
- Regional and international policy formulation

SEAFDEC also plays a role in monitoring and reporting on implementation of the Resolution and Plan of Action, based on questionnaires provided by its members. However, the extent to which countries implement the policy statements in the Resolution and Plan of Action, and provide completed questionnaires to SEAFDEC to allow for robust reporting on implementation, is not comprehensive.

In considering the above arrangements for policy development and cooperation, strengths, weaknesses, opportunities and threats of the existing institutional arrangements are shown in the table below.

⁴⁴ A revised document, to 2030, is currently under preparation with a draft document to be reviewed at the next SEAFDEC Council Meeting in 2020. See note at start of section 7.

Table 8 : SWOT of existing institutional arrangements for the setting of fisheries sector policy and for cooperation at the ASEAN level

Strengths

- Consensus nature of policy-making at regional level means decisions adopted are supported by all AMS
- AMS retain sovereignty of policy making
- Supportive role of SEAFDEC as the fisheries technical arm of ASEAN provides extra capacity in the fisheries/aquaculture domain at regional level

Weaknesses

- Consensus nature of policy-making at regional level makes adoption of decisions more difficult
- Non-binding nature of policies adopted at ASEAN level reduces likelihood of implementation
- Weak institutional capacity of ASEC limits its role to support policy development and monitor its implementation
- Confusion over roles and responsibilities of ASEC and SEAFDEC
- AMS don't implement regionally agreed policies

Opportunities

- Build capacity of ASEC for improved fisheries sector technical support to AMS
- Further build capacity of SEAFDEC for improved fisheries sector technical support to AMS
- AMS to ensure improved implementation of regionally agreed policy
- AMS to provide more complete information to allow for improved monitoring of policy implementation

Threats

- Long time could be required to reach consensus at regional level on policy issues
- 'Unambitious' policy at regional level could result from consensus nature of decision-making
- Any future regional policy could be poorly implemented

4.2 Existing fisheries and aquaculture policies in ASEAN

In this section, existing regional policies are mapped against topics of potential relevance for inclusion in an AGFP, including brief comment on their contents. These are complemented with policies for AMS resulting from their membership in or ratification of regional and international organisations, agreements and treaties. This analysis serves to highlight where policy on specific issues is either covered or lacking at the regional level.

Regional policy documents were collected from the internet taking into account policy documents suggested by the Ad Hoc Task Force and consultants, and supplemented by documents highlighted by AMS during the country visits. Agreements and basic texts from regional and international bodies and organisations of relevance were assessed, and RFMO conservation and management measures (CMMs) were reviewed. Further details about the methodology employed and additional contents of the policy documents reviewed, are presented in Annex 4. The list of policy documents is therefore as comprehensive as was possible for the consultants to assemble, but may not include absolutely all relevant policy documents.

Based on the outcome of the country visits, the policy areas suggested by the Ad Hoc Task Force and consultants were complemented with two additional policy areas: i) 'Disaster and Climate Change Management' and ii) 'Aquatic Animal Health and Biosecurity'. In addition the word 'habitats' was added to the policy area of 'Protection of Marine Mammals and ETP Species'.

In Table 9 below the policy areas were ranked based on the number of policy documents addressing them (noting that document numbers do not include individual CMMs of relevant RFMOs, of which there are many related to sustainable marine resource management, research and science, and data, for tuna and tuna-like species). This was done by grouping the various identified policy issues into policy topics which were listed under the respective policy area. 'Food Safety and Better Nutrition' is the most referenced policy area being covered in 12 documents, followed by 'Aquaculture (11 documents), and then 'International Trade', 'IUU Fishing', and 'Disaster and Climate Change Management', and 'Sustainable Marine Fisheries Resources Management', each with 8 documents. At the bottom end of this list and being the least well covered in regional policy documents are 'Fisheries Subsidies', 'Marine Debris' and 'Sector Funding'. Sector Funding refers to financial support for the implementation of the policy and has no reference in any regional policy document.

Table 9 : Number of policy documents, international & regional agreements and treaties as well as regional and international organisations addressing the identified policy areas.

Policy area	No. of Policy documents addressing this policy area	Agreements and organisations addressing this policy area
Food Safety and Better Nutrition	12	OIE, SEAFDEC
Aquaculture	11	NACA, MRC, SEAFDEC
International Trade	8	SEAFDEC, CITES, OIE, CODEX, NACA
IUU Fishing	8	UNCLOS, UNFSA, FAOCA, PSMA, IOTC, WCPFC, SEAFDEC
Disaster and Climate Change Management	8	MRC, SEAFDEC
Sustainable Marine Fisheries Resources Management	8	UNCLOS, UNFSA, IOTC, WCPFC, SIOFA, SEAFDEC
Aquatic Animal Health and Biosecurity	7	OIE, SEAFDEC
Strategic Research and Science Direction	6	UNCLOS, UNFSA, IOTC, WCPFC, MRC, NACA, SEAFDEC
Labor and Working Conditions	5	SEAFDEC
Protection of Marine Habitats, Mammals and ETP Species	4	UNCLOS, CITES, CBD, IOTC, WCPFC, MRC (inland), SEAFDEC
Sustainable Inland Fisheries Resources Management	4	MRC, SEAFDEC
Fisheries Data Collection and Sharing	4	UNCLOS, UNFSA, IOTC, WCPFC, SIOFA, MRC, NACA, SEAFDEC
Special Support for Small-scale Fisheries	4	SEAFDEC
Marine Debris	4	UNCLOS, WCPFC, SEAFDEC
Fisheries Subsidies	2	SEAFDEC

Table 10 presents the identified policy areas, related policy documents covering policy topics under the respective policy area, as well as existing agreements, treaties and regional / international organisations covering the policy area or parts of the policy area. The last/right-

hand column of the table presents some policy issues/actions that are NOT well covered by regional policy documents at the present time, but which were suggested by AMS as being important policy issues/actions. The policy topics capacity building / training and data / research / technology exchange at a regional level are not included in the table, as they appear in almost all policy documents and in all policy areas.

Annex 4 provides a more complete analysis of all of the policy issues/actions (grouped in policy topics under each policy area) that AMS suggested in their questionnaire responses are of potential importance/benefit.

Table 10 : Policy areas, related policy documents, agreements treaties and regional & international organisations, the respective policy topics and issues addressed as well as those not well addressed.

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
Sustainable Inland Fisheries Resources Management	<p>Regional policy documents</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • MRC 	<ul style="list-style-type: none"> - Inland fisheries governance - Inland fisheries legal and policy framework - Inland fisheries planning - Inland fisheries management - Ecosystem approach in inland fisheries management - Inland fisheries co-management - Regional management initiatives for inland fisheries - Inland fisheries utilization - Restocking in inland waterbodies - Monitoring of structures (dams) on migrating fish species in inland water bodies - Inland fisheries food security <p>MRC</p> <p>Transboundary fisheries management</p>	<ul style="list-style-type: none"> - Managing land-based activities affecting inland fisheries
Sustainable Marine Fisheries Resources Management	<p>Regional policy documents</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products</p> <p>SEAFDEC. 2017a. ASEAN Regional Plan of Action for the</p>	<ul style="list-style-type: none"> - Marine fisheries governance - Marine fisheries planning - Research in marine fisheries - Marine fisheries management - Managing marine fishing capacity - Ecosystem approach in marine fisheries management - Co-management approach in marine fisheries 	<ul style="list-style-type: none"> - Fisheries certification - Operationalize fisheries management institutions and identify fisheries management areas (national, transboundary, regional)

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<p>Management of Fishing Capacity (RPOA-Capacity), Southeast Asian Fisheries Development Center. Bangkok, Thailand, 34 pp.</p> <p>SEAFDEC, 2017b. Regional Guidelines on Traceability System for Aquaculture Products in the ASEAN Region</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC, Regional Plan of Action on Sustainable Utilization of Neritic Tunas in the ASEAN Region be added in Regional policy documents</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • UNCLOS • UNFSA • IOTC • WCPFC • SIOFA • FAO Compliance Agreement 	<ul style="list-style-type: none"> - Regional initiatives for marine fisheries - Port state measures in marine fisheries - Marine fisheries utilization - Bycatch in marine fisheries - Marine resources rehabilitation - Marine fisheries resource enhancement - Marine fisheries food security - Cross cutting policy areas, i.e. training, conflict mitigation, technology transfer, regional cooperation - Integration of fisheries with habitat management <p>UNCLOS:</p> <p>Fishing rights and obligations in the EEZ and high seas</p> <p>UNFSA</p> <p>Management of straddling and highly migratory fish stocks</p> <p>IOTC</p> <p>Tuna fisheries management</p> <p>WCPFC</p> <p>Fisheries management measures for tuna and tuna like species</p> <p>SIOFA</p> <p>Management of non-tuna fishery resources in the South Indian Ocean</p>	
Aquaculture	Regional policy documents	<ul style="list-style-type: none"> - Cooperation of Member countries on responsible aquaculture practices 	Developing, entering and accessing various markets for

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>ASEAN. 2015d. Guidelines on ASEAN Good Aquaculture Practices (ASEAN GAqP) for Food Fish</p> <p>ASEAN, 2015g. Template on the Arrangement of the Equivalence of Fishery Products Inspection and Certification Systems</p> <p>ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025);</p> <p>Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020;</p> <p>The ASEAN Guidelines for Standard Operating Procedures for Responsible Movement of the Live Aquatic Animals;</p> <p>The ASEAN Guidelines for the use of chemical in aquaculture and measures to eliminate the use of harmful chemical.</p> <p>(while not a policy document agreed at regional level, note also FAO, Technical guidelines on Aquaculture Certification)</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • MRC 	<ul style="list-style-type: none"> - Capacity building in aquaculture governance - Aquaculture policies - Aquaculture planning / management - Aquaculture food safety - Aquaculture animal health and welfare - Aquaculture environmental Integrity - Impact mitigation of aquaculture on the environment and biodiversity - Socio-economic aspects in aquaculture - Aquaculture food security <p>MRC</p> <p>Inland water aquaculture development</p> <p>NACA</p> <p>Aquaculture development for the improvement of income and employment, taking gender issues into account</p>	<p>aquaculture products produced in the region</p>

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<ul style="list-style-type: none"> • NACA 		
IUU Fishing	<p>Regional policy documents</p> <p>[ASEAN], 2007 Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region</p> <p>ASEAN, 2015c. ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into The Supply Chain</p> <p>ASEAN, 2017c. ASEAN Catch Documentation Scheme for Marine Capture Fisheries</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • UNCLOS • UNFSA • PSMA • IOTC • WCPFC 	<ul style="list-style-type: none"> - Catalogue on regional artisanal and industrial fishing activities, fish stock status, trade and markets - Defining IUU fishing activities - Develop national plans to reduce over capacity in fisheries - Regional cooperation on IUU fishing - The role of regional organisations in IUU fishing - Fishing capacity management - Regional cooperation on MCS - Cooperation with flag states operating in the region - Port state measures - Catch documentation scheme - Trade analyses - Improving governance in IUU fishing - Regulating transshipment - Preventing poaching in the EEZ of ASEAN Member States - Controlling the trade of live fish, reef fish and ETP species <p>UNCLOS High Seas conservation measures</p> <p>UNFSA Compliance and enforcement by flag states</p> <p>PSMA</p>	

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<ul style="list-style-type: none"> • FAO Compliance Agreement <p>Note also SIOFA: non tunas fishing resources management and conservation measures FAO: IPOA-IUU</p>	Compliance and enforcement of port- and flag states IOTC Tuna fishing vessel management WCPFC Fishing vessel management	
Food Safety and Better Nutrition	<p>Regional policy documents</p> <p>ASEAN, 2015a. Statement of ASEAN Ministers on Agriculture and Forestry on Food Security and Nutrition</p> <p>ASEAN, 2015e. Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020</p> <p>ASEAN, 2015f. Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025)</p> <p>ASEAN, 21016b. ASEAN Food Safety Policy</p> <p>ASEAN, 2017a. ASEAN Regional Guidelines on Food Security and Nutrition Policy</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products</p> <p>SEAFDEC, 2017b. Regional Guidelines on Traceability System for Aquaculture Products in the ASEAN Region</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p>	<ul style="list-style-type: none"> - Capacity building - Improve food safety policies - Research - Establish a risk management system - Fish quality - Promote agro-biodiversity - Improve supply chain handling - Traceability - Technologies to improve fish quality - Strengthen inter-sectoral collaboration - Forming multi-stakeholder partnerships - Guidelines on food security and nutrition - Promote traditional production methods <p>OIE</p> <p>Traceability</p> <p>Animal welfare promotion</p>	<ul style="list-style-type: none"> - Collaboration on laboratory testing - Monitoring regional policy implementation

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<p>ASEAN Guidelines for the use of Chemicals in Aquaculture and Measures to Eliminate the use of Harmful Chemicals</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • OIE 		
International Trade	<p>Regional policy documents</p> <p>ASEAN, 2014. ASEAN Integrated Food Security (Aifs) Framework And Strategic Plan Of Action On Food Security in the ASEAN Region (SPA-FS) 2015-2020</p> <p>ASEAN, 2015e. Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020</p> <p>ASEAN, 2015f. Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025)</p> <p>ASEAN, 2015g. Template on the Arrangement of the Equivalence of Fishery Products Inspection and Certification Systems</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • CITES • OIE 	<ul style="list-style-type: none"> - Mechanisms to overcome trade barriers - Small producer and SME support to access international trade - Product branding - Strengthen ASEAN approaches on international and regional trade issues - Standardization of inspection and certification systems to facilitate trade - Stakeholder engagement in trade related issues <p>CITES International trade controls of ETP species</p> <p>OIE Health Standards for international trade</p> <p>CODEX Health standards for regional / international trade</p> <p>NACA Increased foreign exchange earnings</p>	<ul style="list-style-type: none"> - ASEAN standards - ASEAN trade agreements

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<ul style="list-style-type: none"> • CODEX • NACA 		
Labor and Working Conditions	<p>Regional policy documents</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>ILO: work in fishing convention (C188)</p>	<ul style="list-style-type: none"> - Labor issues governance - Capacity development of stakeholders in labor issues - Safety at sea - Inter-agency cooperation at national, sub-regional and regional level on labor issues 	<ul style="list-style-type: none"> - Regulations and minimum standards for migrant workers - Inspections of working conditions - Repatriation protocols for migrant workers - Regulations for vessel operators violating rights of crew members
Strategic Research and Science Direction	<p>Regional policy documents</p> <p>ASEAN, 2014. ASEAN Integrated Food Security (Aifs) Framework And Strategic Plan Of Action On Food Security in the ASEAN Region (SPA-FS) 2015-2020</p> <p>ASEAN, 2017d. Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020)</p> <p>ASEAN, 2017e. ASEAN Plus Three Cooperation Strategy on Food, Agriculture and Forestry (APTCS) 2016-2025</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p>	<ul style="list-style-type: none"> - Capacity enhancement - Research Investment requirements - Private sector participation in research - Research on balancing increased production with conservation objectives - Regional partnerships in research - Research on improving extension services - Integrate gender issues in research - Research on new technologies - Research on impact of fishing activities on the ecosystem and aquatic animals 	<ul style="list-style-type: none"> - Establishing and operationalizing regional research facilities - research on invasive species

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • UNCLOS • UNFSA • IOTC • WCPFC • MRC • NACA 	<ul style="list-style-type: none"> - Research on alternatives for fish meal in fish feed - Risk assessment on the use of GMO products in fisheries and aquaculture - Research on assessing the impact of climate change on aquaculture - Research on underutilized fisheries resources - Research in support of fisheries management - Research on inland fisheries <p>UNCLOS</p> <p>Best scientific evidence in fisheries management in the EEZ and high seas</p> <p>UNFSA</p> <p>Regional research exchange on straddling and highly migratory fish species</p> <p>IOTC</p> <p>Scientific data and research utilization and exchange</p> <p>WCPFC</p> <p>Tuna and tuna like fish species research</p> <p>MRC</p> <p>Fisheries and fish friendly irrigation and agriculture</p> <p>NACA</p> <p>Research on diversified aquaculture farm production</p>	

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
Fisheries Data Collection and Sharing	<p>Regional policy documents</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • UNCLOS • UNFSA • IOTC • WCPFC • MRC • NACA • FAO • SEAFDEC 	<p>- Strengthen the national capacity to collect, analyze and share fisheries data</p> <p>- Establish and enhance regional fisheries information systems</p> <p>- Community / stakeholder participation in fisheries data collection and analyses</p> <p>UNCLOS</p> <p>Scientific data exchange</p> <p>UNFSA</p> <p>Research data exchange on straddling and highly migratory fish stocks</p> <p>IOTC</p> <p>Fisheries data collection on tuna and tuna like species</p> <p>WCPFC</p> <p>Electronic data collection on fishing vessels</p> <p>MRC</p> <p>Monitoring of environmental, socio-economic, food safety and food security-, labor-, gender- and livelihood- issues</p> <p>NACA</p> <p>Research data exchange and technical cooperation</p>	
Fisheries Subsidies	<p>Regional policy documents</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p>	<p>- Impact assessment of government subsidies</p> <p>- Financial incentives in aquaculture development</p> <p>- Financial incentives in aquaculture/fisheries development</p>	<p>- Guidelines for the use of subsidies</p> <p>- Capacity building on WTO issues, negotiation skills</p>

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
			- Eliminating subsidies that contribute to IUU fishing
Marine Debris	<p>Regional policy documents</p> <p>ASEAN, 2015. Standard Operating Procedures for Responsible Movement of Live Aquatic Animals for ASEAN</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • UNCLOS • WCPFC • IMO Marpol Annex V • United Nations Environment Assembly (UNEA) 	<p>- Increased governance on the issue of marine debris</p> <p>- Establish the legal framework to address marine pollution and dumping</p> <p>- Marine debris management</p> <p>- Research on fish vessel discharges</p> <p>UNCLOS</p> <p>Enforcement with respect to pollution by dumping</p> <p>WCPFC</p> <p>Measures reducing marine pollution</p>	<p>- RPOA on waste management</p> <p>- Guidelines on handling oil spills</p> <p>- Fish product contamination with microplastic</p> <p>- Fishing gear labelling</p>
Protection of Marine Habitats, Mammals and ETP Species	<p>Regional policy documents</p> <p>ASEAN, 1997. Memorandum of Understanding on ASEAN Sea Turtle Conservation and Protection</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p>	<p>- Species protection</p> <p>- Fisheries objectives in MPAs</p> <p>UNCLOS</p> <p>Protection of marine mammals</p> <p>CITES</p> <p>Protection of ETP species through trade regulations</p> <p>CBD</p>	<p>- establishing a network of MPAs in ASEAN</p>

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • UNCLoS • CITES • CBD • IOTC • WCPFC • MRC 	<p>Protecting and managing biological diversity and protected areas, nationally, regionally and internationally</p> <p>IOTC Conservation measures of ETP species</p> <p>WCPFC Conservation measures for ETP species</p> <p>MRC Conservation of inland key habitats</p>	
Special Support for Small-scale Fisheries	<p>Regional policy documents</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>SEAFDEC, 2010. Regional Guidelines for the Promotion of “One Village, One Fisheries Product” (FOVOP) in the ASEAN Region. Southeast Asian Fisheries Development Center, 31 pp</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Note also the FAO Voluntary guidelines for securing sustainable SSF in the context of food security and poverty eradication (but not a regional policy document)</p>	<ul style="list-style-type: none"> - Policies in support of the small-scale fisheries sector - Livelihood improvement for the small-scale fisheries sector - Capacity development - Financial incentives for the small-scale fisheries sector - Model framework of creating economic incentives 	<ul style="list-style-type: none"> - defining small-scale fisheries - human rights issues in small-scale fisheries
Aquatic Animal Health and Biosecurity	<p>Regional policy documents</p> <p>ASEAN, 2015. Standard Operating Procedures for Responsible Movement of Live Aquatic Animals for ASEAN</p> <p>ASEAN, 2013. Guidelines for the Use of Chemicals in Aquaculture and Measures to Eliminate the Use of Harmful Chemicals</p>	<ul style="list-style-type: none"> - Capacity development in aquatic animal health and biosecurity - National disease control - Regional disease control 	<ul style="list-style-type: none"> - Biosecurity standards - Harmonization of measures to address biosecurity

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<p>ASEAN, 2016a. ASEAN Regional Strategy on Anti-Microbial Resistance Communication and Advocacy</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p> <p>ASEAN – OIE, 2011. Memorandum of Understanding Between Members of The Association of Southeast Asian Nations (ASEAN) and The World Organisation For Animal Health (OIE)</p> <p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • OIE 	<ul style="list-style-type: none"> - Monitoring and mitigation of negative impacts - Regional & global animal health exchange - Research in aquatic animal health and biosecurity - Production of healthy high-quality seed in aquaculture - Operational tools for transboundary controls of aquatic animal health <p>OIE</p> <p>Collect, analyse and disseminate the national animal disease situation</p>	
Disaster and Climate Change Management	<p>Regional policy documents</p> <p>ASEAN, 2015e. Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020</p> <p>ASEAN, 2015f. Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025)</p> <p>ASEAN, 2017e. ASEAN Plus Three Cooperation Strategy on Food, Agriculture and Forestry (APTCS) 2016-2025</p> <p>ASEAN, 2018. ASEAN Multi-Sectoral Framework for Climate Change: Agriculture and Forestry Towards Food and Nutrition Security and Achievement of SDGs (Proposed Integrated Framework for AFCC Component 4)</p> <p>ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020</p> <p>ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020</p>	<ul style="list-style-type: none"> - Improved governance on disaster and climate change management - Capacity development in disaster and climate change mitigation - Policies to mitigate the impact of disasters and climate change Research on disaster and climate change - Cooperation on improved mechanisms & technologies to mitigate the impact of disasters and climate change - Regional exchange on climate change and related food security issues - Financial support for climate change initiatives <p>MRC</p>	

Policy area	Regional policy documents, agreements, treaties and regional & international organisations covering policy area	Policy issues addressed	Policy issues not well addressed
	<p>SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.</p> <p>Agreements, Treaties and regional and international Organisations:</p> <ul style="list-style-type: none"> • MRC 	<p>Water development and adaptation of fisheries to climate change</p>	

In conclusion, a SWOT analysis is provided below of regional policy.

Table 11 : SWOT of existing regional fisheries and aquaculture sector policy

<p>Strengths</p> <ul style="list-style-type: none"> • A very large number of policies have been adopted at the ASEAN level providing policy across a wide range of fisheries and aquaculture issues • AMS membership in various international organisations and ratification of regional and international agreements and treaties provides for additional policy direction, given the objectives of those bodies/agreements, and the agreements over management measures at RFMO level 	<p>Weaknesses</p> <ul style="list-style-type: none"> • The existing suite of policy frameworks at regional level does not well cover all possible policy topics⁴⁵. • Because not all AMS have signed all relevant treaties and agreements the views among AMS on specific fisheries policy areas differs. • Fisheries/aquaculture policy is scattered in many different policy documents.
<p>Opportunities</p> <ul style="list-style-type: none"> • Inclusion of policy areas and topics not currently addressed in new regional policy documents • Enhanced coordination and monitoring and both regional and national levels to ensure implementation of existing regional policy (and translation of regional policy into national policy and where appropriate national legislation). 	<p>Threats</p> <ul style="list-style-type: none"> • Failure to implement existing (or new) regional policy and to adequately monitor and evaluate implementation. • Difficulty of agreeing new regional policy due to the need for consensus

⁴⁵ Not well covered are: disaster mitigation in fisheries and aquaculture, biosecurity standards and harmonized measures to address biosecurity threats, defining small-scale fisheries and addressing human rights issues in small-scale fisheries, establishing a network of MPAs in ASEAN, regional ballast water tank management, assess and mitigate fish and fish product contamination with microplastic, guidelines on the use of subsidies in fisheries, including assessing and removing the impact of subsidies on IUU fishing activities, promoting regional research on fisheries law enforcement and the impact of invasive species, the need for ASEAN specific standards to support trade and ASEAN trade agreements, regulations and protocols to address migrant worker issue, joint border inspections, the monitoring of regional policy implementation, facilitating AMS market access to the ASEAN market for aquaculture products, fisheries certification, establish and operationalize fisheries research and management institutions, and identify fisheries management areas and managing land based activities affecting inland fisheries

5. Why should ASEAN act?

The motivation and ability for ASEAN to act to establish a policy framework for fisheries and aquaculture is based on three main factors:

- i. the current problems facing the fisheries and aquaculture sector in AMS
- ii. the institutional mandate of ASEAN
- iii. lessons learned from policy initiatives in other regions/sectors about the added value of action at a regional level

5.1 Current problems

Section 3 of this report presented a baseline description, and provided a strong evidence base in the form of secondary information and the views of those involved in the sector in the region (government and private sector), that marine capture fisheries, inland capture fisheries, aquaculture, and the processing sector all face significant problems. These problems relate to a wide range of environmental, economic, social and trade factors, some of which are specific to individual AMS but many of which are common across many countries. The existence of these problems shows that current sectoral policy, either at national and/or regional level, is thus either insufficient, poorly implemented, or a combination of both.

In the absence of action by ASEAN and AMS, the problems described earlier are likely continue.

5.2 Institutional mandate

ASEAN does not have a legal mandate to require AMS to adopt any specific policy at either national or regional level and policies adopted at ASEAN-level must be agreed by consensus through appropriate ASEAN institutional organs. However, the 1967 ASEAN Declaration⁴⁶ states that the aims and purposes of ASEAN include '*to accelerate the economic growth, social progress and cultural development in the region through joint endeavours...*' and '*To promote active collaboration and mutual assistance on matters of common interest in the economic, social, cultural, technical, scientific and administrative fields*'.

The ASEAN Charter⁴⁷, which entered into force in 2008, and which has in effect has become a legally binding agreement among the 10 ASEAN Member States, also provides a solid basis for action given the stated purposes in the Charter. In particular Article 1.9 states that one of the purposes of ASEAN is '*To promote sustainable development so as to ensure the protection of the region's environment, the sustainability of its natural resources, the preservation of its cultural heritage and the high quality of life of its peoples*'.

The ASEAN Economic Community Council, established through Article 9 of the Charter, and its ASEAN Economic Community Blueprint 2025⁴⁸ also provide the basis for action. Section B8 of the Blueprint, states that '*ASEAN recognises the importance of sustainable economic development as an integral part of the region's growth strategy. Protection of the environment and natural resources supports economic growth and vice versa*', while section C5 includes the strategic measures for food, agriculture and forestry to: '*i. Increase crop, livestock, and fishery/aquaculture production; ii. Enhance trade facilitation and remove barriers to trade to foster competitiveness and economic integration; iii. Enable sustainable production and equitable distribution; iv. Increase resilience to climate change, natural disasters and other shocks...*'

⁴⁶ <https://asean.org/the-asean-declaration-bangkok-declaration-bangkok-8-august-1967/>

⁴⁷ <https://asean.org/asean/asean-charter/charter-of-the-association-of-southeast-asian-nations/>

⁴⁸ ASEAN, 2015. ASEAN Economic Community Blueprint 2025 Jakarta: ASEAN Secretariat, November 2015

5.3 Lessons learned from policy initiatives in other regions and sectors, and the added value of regional action

Annex 2: Policy Briefings profiles regional policies and international instruments in the form of policy briefs, and for each one provides:

- An introduction to the policy
- A description of the policy content
- The impacts of the policy
- A conclusion
- Some implications of each policy for ASEAN and AMS, and the development of an AGFP

Some of the main lessons learned from these policy initiatives suggesting that regional policy action by ASEAN would be beneficial⁴⁹, are provided below.

The EU Common Fisheries Policy (CFP)

- The EU CFP has brought fisheries management under an agreed international legal framework allowing for the peaceful and orderly settlement of disputes, the assignment of rights over fisheries resources, and the development of common rules for fishing.
- This has allowed orderly policy development. The EU CFP has brought about continued and sustained improvements since 1987 of benefit to the catching sector, aquaculture producers, processors, and consumers.
- These improvements have been possible because of a strong science-based underpinning decision-making, and policy updating (based on impact assessments and evaluations), and because of increasingly effective implementation.
- The benefits of regional action, of wide stakeholder involvement in decision-making, of reducing fleet capacity, and of exploiting stocks at maximum sustainable yield levels based on scientific assessment and advice, suggest that such approaches could also generate benefits for ASEAN Member States.

The European Maritime and Fisheries Fund (EMFF)

- The EMFF successfully contributes to supporting the CFP.
- Funding provided from the EU budget comes with conditionalities, which relate to respecting the rules of the CFP, and reporting on the implementation and results of MS operational programmes in a regular and standardized format to allow for common monitoring and evaluation of the Fund. While ASEAN itself does not have a budget to support a regional programme of financial support for a future possible ASEAN general fisheries policy, the EMFF and its implementation demonstrates how successful implementation of fisheries policy could benefit from supporting and enabling finance. In particular, experience in the EU shows that it is necessary to have an adequately funded and equitably administered method for providing financial support for fleet restructuring and decommissioning when excess fishing vessel capacity needs to be removed in order to increase yields.

⁴⁹ Other important conclusions and lessons learned from these policy briefs are considered in later sections of this feasibility study report, and provided in Annex 2.

The EU common organisation of the market (CMO) in fishery products

- The CMO makes an important contribution to the objectives of the CFP, and shows how, even for an issue for which there is no inherent 'competency/mandate' at regional level, action at a regional level can serve to generate significant benefits for a wide variety of stakeholders that would not be possible if left to individual countries.
- The added value of action at the EU-level on areas related to the organisation of the sector, consumer information, marketing standards, and market intelligence has enabled benefits and impacts that would not have been possible if EU Member States had been left to act on their own.
- The CMO allows the full potential of the internal market to be exploited, through the harmonization of goals, and provides for fair competition based on transparent and uniform rules, including on uniform characteristics required for products sold in the EU market. At the same time, CMO rules ensure that all EU consumers are empowered to make informed purchasing choices.

The EU data collection framework (DCF)

- The DCF enables standardized data to be made available at MS-level, and which can be aggregated to the EU as whole. The data generated are widely used and found beneficial to inform scientific, management and policy decision-making, and to track trends in sector performance. The EU data are also fundamental in supporting the formulation of scientific advice for fisheries management in several RFMOs, and to facilitate ecosystem-based analysis and policy development

International fisheries-related instruments (IFIs)

- There have been significant benefits for countries and for sustainable resource management more generally of IFIs.

FAO policy guidance on strengthening sector policies for better food security and nutrition results

- The guidance note was prepared in 2016 and published only towards the end of 2016. Little is known about its current use by decision makers.

The Caribbean Community Common Fisheries Policy (CCCFP)

- Despite its slow start, the CCCFP is meeting its objective by rendering action that leads to the sustainable utilization of the fisheries resources and by increasing an awareness of the importance of fish and fishing at the regional level by recognizing marine fish and aquaculture officially as priority commodities by the Council for Trade and Economic Development

The Mekong River Commission's Basin-Wide Fisheries Management and Development Strategy 2018 – 2022

- The development of the BFMS 2018-2022 itself contributed to enhanced levels of consultation between the countries involved, and a shared understanding about priority needs and the potential benefits of common action on key issues.
- The specified policies and proposed actions should serve to foster environmentally sound and socially acceptable fisheries development in the lower Mekong River Basin, employing a multi-sectoral approach.

Resolution and Plan of Action of Sustainable Fisheries for Food Security for the ASEAN towards 2020

- The first review of the implementation of the Resolution and Plan of Action was conducted in 2015 and concluded that a number of programs and activities had been effectively implemented in the AMS in line with the Resolution and Plan of Action. The second review in 2019 is ongoing with initial results suggesting good progress has been made in implementing programs and activities by most AMS. However, limitations in the methodology to review the implementation of the Resolution and Plan of Action, and the scope/detail in the review reports, prevents any robust assessment of their impacts on AMS.
- The Resolution and Plan have increased awareness for the need of regional cooperation in the areas of sustainable fisheries management and aquaculture development and has proven to be of value by covering a broad range of fisheries related policy issues.

ASEAN Food Safety Policy

- While work on the ASEAN Food Safety Regulatory Framework agreement continues, the ASEAN Food Safety Policy has already enhanced regional collaboration and better understanding between AMS on differences in their national food safety assuring systems, institutional arrangements and standards, thus contributing to the ASEAN integrated market.

Taken together, experience from these regional policies and international instruments, suggests that significant benefits can result from regional policy action.

Finally, it can be observed that there may be some added value of action by ASEAN on fisheries/aquaculture policy, because as noted in Section 4 of this report while there are already a large number of policy documents and frameworks covering a wide range of topics, there are also some policy areas not well spelled out. These gaps may imply a need/benefit for ASEAN to act, subject to agreement by AMS, if the areas concerned cannot be addressed at national level.

6. Objectives and principles of an AGFP

Any future AGFP would need to have clearly articulated general and specific objectives. These would be articulated during the process to develop the AGFP, if a decision is taken by the Ad Hoc Task Force to proceed with its development. However, the feasibility study needs to ‘make a first stab’ at articulating these objectives, as the assessment of different policy options (presented later in Sections 8 and 9) needs to include an assessment of the effectiveness of the different options in supporting stated objectives.

The ‘draft’ objectives of an AGFP stated below are those articulated by the consultants for the purposes of the feasibility study, and flow from and are intended to directly address the problems identified in Section 3 above. If achieved they would serve to alleviate/remove the current problems.

The **general objective** of an AGFP is specified as follows:

‘Sustainable resource management and sectoral development of marine and inland capture fisheries and aquaculture in ASEAN Member States, to improve food security, facilitate poverty alleviation, and improve livelihoods of ASEAN people dependent on the harvesting, farming, processing, and marketing of fish and fishery products’.

The **specific objectives** of an AGFP, which would contribute to the general objective, are specified as follows:

1. rebuild depleted fish stocks
2. manage environmental and climate change risks from and to the sector
3. build human skills and capacities of those working in the sector and those responsible for its management
4. enhance trade of fish and fishery products
5. increase value addition and innovation in the sector
6. enhance research, and improve the availability, reliability and completeness of data and information required for sectoral management
7. combat illegal fishing and illegal fishing-related activities in the sector and increase a culture of compliance
8. reduce bio-security risks in aquaculture and trade
9. improve the safety and social protection of workers in the sector.

In addition to the objectives stated above, underlying **principles** of an AGFP are articulated as follows:

- respect for each country’s national sovereignty.
- a focus on general fisheries issues that are common to AMS.
- the need to build upon (rather than duplicate) existing ASEAN policy frameworks, particularly the ASEAN Charter, Blueprints and other ASEAN frameworks, existing regional fisheries policy frameworks, and existing regional and sub-regional cooperation and dialogues.
- its voluntary nature.
- consideration of the differing capacity and level of fisheries development in AMSs.

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- recognition of the specificity of fisheries of the region, including small-scale fishers and fish farmers.
 - the need to use scientific data and information for the development of management recommendations, and to adopt a precautionary approach where scientific data and information are not available.
 - it should reflect and support the ASEAN spirit of cordiality, mutual respect and cooperation.

7. What are the available policy options?

7.1 Introduction

Different policy options are considered that could potentially serve to address the problems identified in Section 3 and to achieve the objectives set in Section 6. They need to be articulated in sufficient detail in this section to be able to serve as the basis for the assessment of impacts and comparison of options in Sections 8 and 9.

Key issues for the feasibility study when considering the options available are the need to recognise that:

1. Many of the current problems facing the sector are not necessarily the result of a *lack of policy*, but rather a *lack of implementation* of existing policy. As Section 4 showed, of 15 policy topics proposed, many are already covered by existing policy strategies, frameworks, and documents.
2. Current policy for the sector is contained in a multitude of different policy documents.

This feasibility study thus incorporates the need to: i) distinguish between the impacts of implementation of existing policy and the potential impacts of revised/expanded policy; and ii) consider the impacts and benefits (or lack thereof) of consolidating existing policy (and its potential expansion into other areas) in one policy framework (and what this would mean for existing policy documents/frameworks).

In order to rigorously assess changes compared to the current status quo, four policy options are considered. All four options assume that policy is fully implemented.

- Option 1: (Baseline): no policy change, relying on existing policy frameworks/documents (but with full implementation).
- Option 2: New policy in the form of an AGFP to cover only those regional policy issues currently absent from existing regional policy documents.
- Option 3: New policy in the form of an AGFP covering all existing and expanded regional policy issues, consolidated into one policy document/statement.
- Option 4: Policy covering regional and national issues, consolidated into one policy statement.

Option 4 is not fully analysed for its impacts. Consultations completed with AMS revealed a strong, consistent and over-riding view that an AGFP should only focus on regional policy/action and should not encroach on issues that are only of national concern. This was principally because of the importance to AMS of issues of sovereignty and the lack of legal mandate for ASEAN to assume 'competency' for national sectoral issues, but also because of the wide range of different situations in different AMS meaning that it would be inappropriate to develop a single policy covering all issues for all AMS. Given the opposition by AMS to an AGFP that encroaches on national issues having no regional bearing⁵⁰, and the fact that an AGFP will have to be agreed by consensus, there is no likelihood of AMS agreeing an AGFP that covers nationally specific issues. Consequently there is therefore no merit in fully

⁵⁰ As reflected in the principles of the AGFP specified in the ToR of the Ad Hoc Task Force

analysing the impacts of this option, and Option 4 is thus not considered further in this feasibility study.

7.2 Specification of options

Option 1: Baseline - no policy change (but full implementation of existing policy)

Under this option, there would be no attempt at an ASEAN level to expand the coverage of regional policy to new policy areas or topics under different areas that are not already covered by existing policy documents. However, the baseline assumes that all existing policy would be fully implemented, to allow the feasibility study to determine the net impacts of any change to the policy environment resulting from Options 2 and 3.

Policy for the sector related to regional issues would remain scattered between different policy documents. However, policy would cover and be relatively comprehensive for the following areas:

- sustainable marine fisheries resources management
- sustainable inland fisheries resources management
- sustainable management of aquaculture
- combatting IUU fishing
- fisheries research and science (tuna)
- food safety and better nutrition
- research and science
- international trade
- animal health and biosecurity
- fisheries data collection and sharing
- protection of habitats, marine mammals and endangered threatened and protected (ETP) species
- support for small-scale fisheries
- disaster risk prevention and management and climate change adaptation⁵¹

However, even within the areas above that are generally well covered at present by policy documents/statements, some specific issues under each area would remain poorly specified.

Other main policy areas would remain less well or only poorly covered and would include:

- labour and working conditions

⁵¹ This option includes climate change adaptation as being relatively well covered by policy given sufficient inclusion in the 4th Draft of the ASEAN-SEAFDEC Resolution and Plan of Action for ASEAN Region Towards 2030, and the assumption that this 4th Draft will finally be approved by AMS Ministers. There are 11 mentions of 'climate' for example in the 4th draft.

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- marine debris⁵²
 - fisheries subsidies⁵³

Option 2: New AGFP to cover only regional issues for which there is currently no regional policy.

Under this option, a specific regional policy would be prepared to address the gaps in current policy at regional level. The policy would therefore include key sections on those policy areas in Option 1 that are not, or not well, covered at present. The specific detail of policy content would be developed as part of the development of the AGFP (if this option is taken forward), but some ideas of possible content are provided below. The AGFP would include sections on:

- labour and working conditions. Policy could cover issues such as:
 - contracts
 - social security provision
 - age-related issues
 - freedom of association
 - non-discrimination
 - forms of recruitment and payments
 - ratification of relevant ILO Conventions
- fisheries subsidies. Policy could cover issues such as:
 - adherence to any WTO agreement on subsidies and the prevention/removal of certain types of subsidies due to their negative impacts (especially on fishing capacity and thus stock status)
 - exemptions to general policy on subsidy preventions, and specification of 'good' forms of subsidy that might generally be supported.
- marine debris: policy could cover issues such as:
 - awareness raising
 - fishing gear marking (preventative)
 - onshore collection of old gears (preventative)
 - spatial management to reduce gear conflicts which can lead to gear losses (preventative)
 - use of bio-degradable gear (mitigating)
 - reporting of gear losses (curative)
 - recycling (ex-post)

Under option 2, the AGFP would make reference in the introduction to all other relevant policies already in existence, as well as the objectives and principles of the AGFP as earlier

⁵² Marine debris is mentioned only very briefly in the 4th Draft of the ASEAN-SEAFDEC Resolution and Plan of Action for ASEAN Region Towards 2030 (Assess and manage the impacts of aquatic pollution and marine debris, including abandoned, lost, or otherwise discarded fishing gear (ALDFG) and microplastics/microbeads, on fisheries and aquaculture.

⁵³ The 4th draft of the of the ASEAN-SEAFDEC Resolution and Plan of Action for ASEAN Region Towards 2030 only includes a single statement about the need to 'Assess the possible impacts of subsidies on fisheries, particularly on the special requirements and the needs of small-scale fisheries in the region'.

articulated, and then provide policy on the three areas above, being those that are poorly covered at present.

Option 3: New AGFP covering all existing and relevant regional issues, consolidated into one policy document

Under this option, a consolidated and new AGFP would be developed which would refer to and supersede/over-ride all existing regional policy documents, but which would also cover policy areas not currently addressed at regional level. The AGFP would thus include all the following issues, with specification of policy sub-issues on each topic:

- sustainable marine fisheries resources management
- sustainable inland fisheries resources management
- sustainable management of aquaculture
- combatting IUU fishing
- fisheries research and science
- food safety and better nutrition
- international trade
- animal health and biosecurity
- fisheries data collection and sharing
- protection of habitats, marine mammals and endangered threatened and protected (ETP) species
- support for small-scale fisheries
- disaster risk prevention and management and climate change adaptation
- labour and working conditions
- fisheries subsidies
- marine debris

The detail of the text on the different areas that are already covered by existing policy would either be drawn from and be coherent with existing policy as already articulated, or specifically amended based on discussion, sufficient justification and agreement.

8. What are the impacts of the options?

8.1 Introduction to the assessment of impacts: methodological considerations

Impacts when considering the objectives

Throughout this section, impacts of the different options are considered in terms of the contribution towards the general objective (GO) and specific objectives (SOs) as defined earlier (see Section 6).

As a reminder they are as follows:

The general objective (GO) of an AGFP is specified as follows:

'Sustainable resource management and sectoral development of marine and inland capture fisheries and aquaculture in ASEAN Member States, to improve food security, facilitate poverty alleviation, and improve livelihoods of ASEAN people dependent on the harvesting, farming, processing, and marketing of fish and fishery products'

The specific objectives (SOs) of an AGFP, which would contribute to the general objective, are specified as follows:

1. rebuild depleted fish stocks
2. manage environmental and climate change risks from and to the sector
3. build human skills and capacities of those working in the sector and those responsible for its management
4. enhance trade of fish and fishery products
5. increase value addition, earnings, and innovation in the sector
6. enhance research, and improve the availability, reliability and completeness of data and information required for sectoral management
7. combat illegal fishing and illegal fishing-related activities in the sector and increase a culture of compliance
8. reduce bio-security risks in aquaculture and trade
9. improve the safety and social protection of workers in the sector.

In this section, where impacts relate to the GO or the SOs, reference to them is made to provide a link between the assessment of impacts and the later comparison of the options in Section 9.

Considering impacts against the 'status quo'

Typically for an impact assessment of a policy or regulatory change, potential policy options are assessed for their impacts against the status quo. In this case, the status quo involves a situation in which there is much existing policy, but with weak implementation. Option 1 as specified is defined as the 'baseline' i.e. no policy change, but with full implementation through appropriate implementation strategies (which is currently not the case). Even the baseline/option 1 would thus result in changes/impacts compared to the status quo. The description of impacts for Option 1/baseline below thus considers the key environmental, economic and social impacts of full implementation of existing policy. The assessment of impacts of the proposed policy changes under option 2 and option 3 are then considered in comparison to Option 1. The text below for the fully implemented Option 1/baseline also considers the associated administrative burden.

Attribution vs. contribution of impacts, and the role of other variables

When assessing the impacts of the proposed policy options, it is critical to keep in mind that many other factors influence indicators of performance. Externalities in the form of climate change and natural stock fluctuations for example impact on environmental performance, while macro-economic variables impact on economic and social performance and indicators.

This means that it is difficult to quantify the impacts of the options on environmental, economic and social indicators, even if it is indisputable that good policy contributes to positive impacts. It also means that it is not possible to clearly *attribute* the impact to the policy options. Discussion below should be considered in terms of the impacts of each policy option in *contributing* to impacts *i.e.* any benefits of the proposed policy options should not be overstated. Discussion is thus presented more qualitatively as to how the options might impact on environmental, economic and social domains, and contribute to the GO and SOs.

The question of timeframe

When assessing impacts, consideration is given over the short (1-2 years), medium (within a period of five years) and long term (five+ years).

8.2 Impacts of option 1: baseline with full implementation of existing policy

Option 1 is the current policy framework *i.e.* no policy change, *but with full implementation of existing policy*. This is because it is not appropriate to describe and compare the impacts of the existing policy framework under incomplete implementation, with options for expanded/new policy frameworks under an assumption of full implementation.

Option 1/baseline - environmental impacts

The table below shows the environmental problems listed in Figure 2 to Figure 5 and how well they are covered and would be addressed without a need to amend existing policy at all, but rather just by ensuring that existing policy is implemented through appropriate management strategies and related actions. The extent to which existing policy covers the identified problems as stated in the table below is subjective but based on the consultants' review of the existing policy frameworks.

Table 12 : Extent to which existing environmental problems are already addressed by existing regional policy

Existing problem	How well does existing policy address the problem ⁵⁴
Ecosystem degradation from other sectors, and species loss (inland fisheries)	A little (ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020, MRC)
Levels of IUU fishing (marine and inland fisheries)	Very (ASEAN 2007, ASEAN 2015c, ASEAN 2017c, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2016, ASEAN-SEAFDEC 2020)
Climate change impacts (marine and inland fisheries)	Very (ASEAN 2015e, ASEAN 2015f, ASEAN 2018, ASEAN-SEAFDEC 2020)
Low awareness of fishers about environment issues and management strategies (marine and inland fisheries)	Very (ASEAN-SEAFDEC 2011a, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2016, ASEAN-SEAFDEC 2020)
Unsustainable fishing practices leading to poor stock status for many species (marine and inland fisheries)	Very (ASEAN-SEAFDEC 2011a&b, ASEAN-SEAFDEC 2016, SEAFDEC 2017a, ASEAN-SEAFDEC 2020,), but more for marine than inland
Marine debris	A little (ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)
Bycatch of ETPs (marine and inland fisheries)	Very (ASEAN, 1997, ASEAN-SEAFDEC 2011b)
Poor biosecurity controls (aquaculture)	Very (ASEAN 2015, ASEAN 2013, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)
Farm pollution and discharge/waste management (aquaculture)	Very (ASEAN 2015d, ASEAN 2015g, ASEAN-SEAFDEC 2011a, ASEAN-SEAFDEC 2020)
Impact of other sectors on water quality (aquaculture)	A little (ASEAN-SEAFDEC 2011a, ASEAN. 2015d, ASEAN-SEAFDEC 2020)
Disasters – disease, algal blooms, red tide, weather events (aquaculture)	Very (ASEAN 2017e, ASEAN 2018, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)

Source: consultants' assessment. Scoring: Very, A little, Not at all

Considering the table above and the policy issues already addressed in regional policies as identified earlier in Table 10, the baseline with implementation of existing policy would result in significant environmental improvements given the extensive coverage by existing policy at regional level of environmental issues.

- Environmental problems in marine and inland fisheries in the form of over-exploitation of stocks and unsustainable fishing practices would be reduced with fish stock recovery over the medium- to long-term, along with reduced impacts on ETP species and

⁵⁴ Most important documents cited only

habitats, if existing policies focussing on research, reducing IUU fishing, improving management practices, and enhancing awareness by fishers about environment issues and management strategies, were implemented.

- The current negative impacts of the aquaculture sector on the environment in terms of aquatic animal health and biosecurity would also be addressed/reduced through existing policies if associated strategies were developed and implemented, and these impacts could occur quickly and in the short- to medium-term.
- Improved food safety through the implementation of existing regional policy would serve to enhance consumer protection, and implementation of policy could also have positive impacts in the short- to medium-term.

These impacts would mean positive contributions to the General Objective (sustainable resource management), and Specific Objectives 1, 6, 7 and 8.

However, under the baseline, some environment-related problems would continue to occur given insufficient policy focus on them, namely:

- Negative impacts of marine debris from and on the fisheries and aquaculture sectors i.e. limited contribution to Specific Objective 2.
- Negative environmental impacts from other sectors on fisheries and aquaculture.

Option 1/baseline – economic impacts

The table below shows the economic problems listed in Figure 2 to Figure 5 and how well they are covered and would be addressed without a need to amend existing policy at all, but rather just by ensuring that existing policy is implemented. The extent to which existing policy covers the identified problems as stated in the table below is subjective but based on the consultants' review of the policy frameworks.

Table 13 : Extent to which existing economic problems are already addressed by existing regional policy

Existing problem	Extent to which existing policy addresses the problem
Seasonal increases in production causing decreases in price (inland fisheries)	A little (ASEAN 2015e, ASEAN 2015f, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)
Declining earnings from increasingly negative impacts of other sectors, rising input costs and static/declining catches (marine and inland fisheries)	A little (ASEAN 2015e, ASEAN 2015f, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)
Low earnings (inland)	Not at all ⁵⁵
Poor access to finance (marine and inland fisheries)	A little (ASEAN-SEAFDEC 2011b)
Poor infrastructure (marine and inland fisheries)	A little (ASEAN 2015a, ASEAN 2017d)
Inefficient vessel and engine design and need for modernization (marine fisheries)	A little (ASEAN-SEAFDEC 2011b)
Poor handling and equipment onboard negatively impacting on quality and catch value (marine and inland fisheries)	A little (ASEAN 2015a, ASEAN-SEAFDEC 2016)

⁵⁵ In terms of specific policy, but environmental policies if implemented would increase incomes through stock recovery

High costs and poor quality of inputs (aquaculture)	A little (ASEAN 2015d, ASEAN-SEAFDEC 2011b)
Competition with capture fisheries products in the market (aquaculture)	Not at all ⁵⁶
High risks to business of disease, natural disasters (aquaculture)	Very ⁵⁷ (ASEAN 2015, ASEAN 2013, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)
Small size of many operations resulting in inefficiencies (aquaculture and processing)	Not at all
Availability of raw material supplies (processing)	Not at all
Potential for value-addition not always maximized and poor quality of products (whole value chain)	Very (ASEAN 2015a, ASEAN 21016b, ASEAN-SEAFDEC 2011a, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2016, ASEAN-SEAFDEC 2020)
High cost of upgrading technologies (processing)	Not at all
Trade standards and low capacity to comply with them, trade/transport costs/logistics, and non-tariff barriers (all sectors)	Very (ASEAN 2015g, ASEAN-SEAFDEC 2011b)

Source: consultants' assessment. Scoring: Very, A little, Not at all

Considering the table above and the policy issues already addressed in regional policy as identified earlier in Table 10, the baseline with implementation of existing policy would result in some economic improvements:

- Perhaps most importantly, implementation of environmental and sustainable management policies under the baseline would serve to address many of the economic problems listed in the table above as a result of improved stock status and therefore catches and incomes for fishermen. However, as noted above, these benefits might only be realised in the medium- to long-term as stocks recover.
- Many trade-related problems would be addressed through existing policies, potentially serving to increase current export values (US\$ 157 million from inland fisheries, US\$ 12.5 billion from marine fisheries, and US\$ 9.8 billion from aquaculture).
- Negative economic impacts on the fisheries and aquaculture sector of climate change impacts and disasters would be addressed, given existing policy for the sector on climate change adaptation.

These impacts would mean positive contributions to the General Objective and Specific Objectives 2 and 4.

However, specific and potentially beneficial economic policies to address some economic problems and failings in the fisheries and aquaculture sector would remain poorly articulated, given a stronger emphasis on environmental rather than economic policy pertaining to the sector. As a result:

- Value chain performance would continue to be compromised by a failure of policy to sufficiently address the need for cost reductions, production efficiencies, mechanisms for price enhancements, value-chain upgrading, reducing business risks, and increasing access to finance. The baseline would thus make only minimal contributions to Specific Objective 5.

⁵⁶ Traceability for fisheries and aquaculture products is the only thing addressed in regional policies

⁵⁷ Policies to assess and mitigate the risks for aquaculture production are in place. Policies that deal with the impact on an aquaculture businesses are not in place.

- There would be an associated failure to maximise the economic and financial benefits to/of the sector. Current values of production (US\$ 6.8bn from inland fisheries, US\$35.7 bn from marine fisheries, and US\$ 29.4 bn from aquaculture) would increase less than they might otherwise do in real terms in the coming years, and be driven mainly by the environmental improvements rather than by specific economic policies thus taking longer to materialise.
- Sector wages/earnings would be likely to remain lower than average national earnings but might increase slightly (due to environmental improvements) contributing a little to the General Objective (poverty alleviation).
- Contributions by the sector to GDP would remain limited in most AMS but might increase in the longer term slightly due to environmental improvements contributing to the General objective (livelihoods).

Option 1/baseline – social impacts

The table below shows the social problems listed in Figure 2 to Figure 5 and how well they are covered and would be addressed without a need to amend existing policy at all, but rather just by ensuring that existing policy is implemented through appropriate management and related actions. The extent to which existing policy covers the identified problems as stated in the table below is subjective, but based on the consultants' review of the policy frameworks.

Table 14 : Extent to which existing social problems are already addressed by existing regional policy

Existing problem	Extent to which existing policy addresses the problem
Complexity in effective governance and lack of community participation in management (marine and inland)	Very (ASEAN-SEAFDEC 2011a, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)
Skill levels and capacities (all sectors)	Very Capacity building for government officials and stakeholders alike is requested in almost all policy documents
Competition for labour from other sectors and ability to recruit/find labour (all sectors)	A little (very little) (ASEAN-SEAFDEC 2011b)
Poor safety at sea (marine)	A little (ASEAN-SEAFDEC 2011b)
Poor employment conditions (insurance, contracts, etc) (marine and inland)	A little (ASEAN-SEAFDEC 2011a, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)
Forced labour, trafficking (marine)	A little (ASEAN-SEAFDEC 2016)
Vulnerability to disasters (all sectors)	Very (ASEAN 2018, ASEAN-SEAFDEC 2011a, ASEAN-SEAFDEC 2011b, ASEAN-SEAFDEC 2020)

Source: consultants' assessment. Scoring: Very, A little, Not at all

Considering the table above and the policy issues already addressed in regional policy as identified earlier in Table 10, the baseline with implementation of existing policy could be expected to result in some social improvements:

- These would most noticeably be related to capacity developments and upskilling of those in both the private and government sectors (Specific Objective 3), as existing

policy is comprehensive in focussing on these needs. These impacts could potentially materialise quickly over the short- to medium-term.

- Furthermore, environmental improvements discussed above would result in increased stock status and catches (in the medium- to longer-term), thereby resulting in social benefits in the form of increased food security and nutrition (supporting the General Objective and being further supported by existing policies on application of processing technologies and reductions in post-harvest losses).
- The impacts of improved management of fisheries could also have a beneficial impact on labour creation in the sector (currently estimated at 4 million in marine fisheries and 2.5 million in inland fisheries), but these positive impacts are not assured as improved management of fisheries for increased sustainability could require reductions in fishing effort and capacity with negative impacts on employment (at least in the short term as stocks recover).
- The negative social impacts of climate change would be mitigated (Specific Objective 2).

Despite these positive social impacts under the baseline and implementation of existing policy, some social problems would continue to occur given insufficient specification in existing policy.

- Most notably, the negative impacts of insufficient policy on working conditions and forced labour, and to some extent safety standards, would result in continued job insecurity, social hardship, levels of forced labour and trafficking, and risks of injury to some (but not all) those working in the sector (meaning the baseline would not contribute significantly to Specific Objective 9).
- These negative social impacts on those employed could also have negative economic impacts on businesses in the sector given recent/increasing concern internationally about the rights and conditions of those working in the fisheries sector, which could increasingly result in some seafood buyers and consumers refusing to purchase fish from countries where such issues are considered widespread.

Option 1/baseline – administrative burden

It is not within the scope of this feasibility study to assess quantitatively the impacts on the administrative burden of full implementation of the current policy framework, or indeed realistic or meaningful to attempt to do so. This is because:

- i) there are uncertainties about the strategies that different AMS would use to implement policy and thus the associated costs, and some policies could be interpreted and thus applied differently by AMS.
- ii) AMS have different cost structures, and fully understanding these and associated unit costs would be a hugely time-consuming task and not one within the scope of work for the feasibility study.
- iii) there are insufficient data on current administrative costs of sectoral management against which increases would have to be measured.

However, it is possible to state that the administrative burden under the baseline with implementation of the current policy framework would significantly increase.

Increases would be felt most noticeably by government administrations in AMS and would be associated with the costs involved in fulfilling all existing policy commitments through appropriate implementation strategies. Increased staff, operational costs and fixed costs could be required for the implementation of existing policy and the issues already addressed (as highlighted earlier in Table 10). Some examples (not comprehensive) of related costs are those associated with:

-
- development and implementation of improved inland and marine fisheries management strategies e.g.
 - better engagement with stakeholders as part of co-management.
 - developing fisheries management plans.
 - increases in monitoring control and surveillance to combat IUU fishing.
 - fleet capacity reduction programmes, for example through buy-back schemes.
 - improving data collection and sharing.
 - conducting the research necessary to understand stock status, develop new technologies for all sub-sectors (marine, inland, aquaculture) and at all stages of the value chain, assess the impacts of fishing on ecosystems, improve economic performance, etc.
 - inspections and quality control checks on aquaculture production and processing establishments.
 - Climate change prevention and adaptation strategies.
 - capacity developments (of both public and private sectors).

Current limited implementation of many existing policies may be due not just to practical and technical challenges in implementation, but also in part due to the potential costs that would be involved. The failure to provide sufficient budgets/costs for fisheries administrations reflects the lack/failure of policy related to funding for sectoral management, and insufficient appreciation of the net benefits (in environmental, economic and social terms) that can be generated through implementation of good policy.

Administrative burden for the private sector would be also expected to increase, as implementation of existing policy would entail costs, for example as associated with:

- increased reporting of data.
- more engagement with government in co-management of resources.
- costs associated with technological improvements.

Administrative burden on ASEC would not be expected to change as the baseline policy frameworks imply no special or additional role for ASEC in the implementation of policy over and above its current functions and mandate.

Summary of Option 1/baseline impacts

In summary, the impacts of the baseline with full implementation of existing policies would be considerable. Existing policy frameworks cover a multitude of areas, and in many cases are extensive in scope. Reflecting on the problems identified in Section 3 and summarised in Figure 2 to Figure 5, implementation of *existing* policy through the subsequent adoption of related strategies and actions would serve to solve many of the current problems facing the sector.

Existing policy if implemented would result in considerable positive environmental impacts. However these may take some time to materialise based on stock recovery, and some environmental problems would remain, with insufficient preparation for climate change adaptation, negative impacts from the fish processing sector on the environment, and negative impacts of marine debris from the fisheries and aquaculture sectors.

Two areas however where policies are not so well articulated relate to improving economic performance (although existing policy covers the issues of enhancing trade and adding value), and labour conditions in the sector. This means that while there would be positive economic and social impacts associated with implementation of environmental and management policies these impacts would take longer to occur and largely be reliant on stock recovery.

It should also be noted that the administrative burden (especially to government agencies) of the baseline would be considerable.

Estimating baseline impacts quantitatively is not possible given data availability and the scope of this assignment. However, Annex 6 – Assessing impacts: case study on evolution of the East Atlantic Bluefin Tuna fishery, provides an interesting case study from work underpinning recent reform of EU policy related to fisheries control. It shows in quantitative terms how good policy and improving fisheries management (specifically fisheries control in this instance for the bluefin tuna fisheries in Europe) can generate positive environmental and economic impacts, but notes that such impacts may come at a short-term social cost in terms of employment (even though the wages of individuals/crew rise through improved management). The case study also shows how at a societal level, the administrative burden of increased costs of control are outweighed by the positive economic benefits that result.

While acknowledging the case study is from Europe not Asia, it nevertheless serves to demonstrate in quantitative terms that good policy and its implementation, as would be expected under the baseline (with full implementation), can create positive impacts. There is every reason to suppose that implementation of existing policy in AMS would also create many positive impacts.

8.3 Impacts of option 2: policy expanded to cover regional issues for which there is currently no regional policy

Option 2 provides for an AGFP covering three policy domains that are not/not well covered by existing policy frameworks, notably: i) labour and working conditions, ii) fisheries subsidies, and iii) marine debris from the fisheries/aquaculture sector.

Environmental impacts of this option compared to the Baseline/Option 1 would be as follows:

- specific policy on reducing marine debris (see Section 7 earlier for some ideas of the types of issues that might be covered by the policy) from the fisheries and aquaculture sector would serve to reduce the negative environmental impacts of the sector, particularly in terms of abandoned/lost fishing gear and plastics from the sector ending up in the marine environment. While the sector is only one of many contributing to marine debris and plastic in the ocean, its impacts are nevertheless important and should be reduced. Option 2 would thus serve to reduce ‘ghost fishing’ from abandoned/lost gear, negative interactions/impacts of marine debris with ETP species, navigational hazards, and the presence of micro-plastics in the ecosystem.
- carefully targeted ‘good’ subsidies could be used to help the private sector shift to less environmentally damaging fishing technologies (for example modified gears with lower benthic impacts), or to fund buy-back schemes thereby reducing fishing capacity and thus improving stock status. Specific policy preventing some types of subsidies (e.g. fuel, engine and vessel replacement) could also reduce the negative impacts of subsidies on fishing capacity and overfishing.

Economic impacts of Option 2, compared to the Baseline/Option 1, would be:

- positive economic impacts on individuals/businesses advantaged by specific subsidy policy, and conversely negative impacts on any for whom subsidies might be reduced/removed.

Social impacts of Option 2, compared to the Baseline/Option 1, would be:

- enhanced employment conditions resulting from policy on labour and working conditions. Such impacts might be expected to benefit those working in more formalised sectors and on larger vessels, rather than those in the small-scale sector.

Administrative burden associated with Option 2 would relate to the costs associated with the implementation strategies for the three policy domains, but which are not knowable/quantifiable at this time. They would depend on the specific policy content agreed

at regional level, and what such agreement might mean for public institutions, and the private sector.

However, in broad terms it is likely that the implications on administrative burden of policy on labour and working conditions may have a bigger impact for the private sector than for public institutions.

Policy on marine debris could have administrative burden costs for both public and private sector parties given a potential for policy to require action on prevention, mitigation and clean-up by both parties.

Administrative burden of improved policy on subsidies might be expected to result in net cost savings for public sector administrations, on the assumption that subsidy reform might be expected to phase out certain subsidies given their distorting affect on fishing capacity and effort and thus their negative impacts on stock sustainability. However, in the short-term costs to administrations might be associated with programmes buy-out fishing capacity e.g. payment for decommissioning schemes.

Finally, option 2 would involve some costs for AMS administrations in developing and agreeing the AGFP itself, associated with regional ASEAN-level meetings. Given the limited scope of the AGFP under Option 2 and the three policy issues it would cover, these costs are not expected to be significant.

8.4 Impacts of option 3: policy covering all existing and other relevant regional issues, consolidated into one policy document

Option 3 would represent a combination of existing policy content under Option 1, and additional policy content under Option 2, but with the AGFP covering all issues, rather than just the three additional policy domains under Option 2.

It would not mean additional policy on any policy topics, rather just a re-organisation and grouping of all policy into one completely comprehensive AGFP.

The net environmental, economic and social impacts of Option 3 compared the Baseline/Option 1, would therefore be expected to be broadly identical to the impacts described above under Option 2.

However under Option 3 the administrative burden could be significantly increased in the short-term given the costs that would be associated with proposing and agreeing an AGFP that was coherent with and superseded all existing policy documents i.e. during the development phase AMS and ASEC would bear costs associated with the process to develop the AGFP⁵⁸. In the longer-term the administrative burden might also be expected to increase for ASEC and AMS associated with increased regional monitoring of AMS implementation of a fully comprehensive AGFP – it might be expected that given all the work necessary to agree a fully comprehensive AGFP, AMS might agree that enhanced monitoring of the implementation of such a new and improved AGFP would be sensible. This enhanced monitoring might involve for example the provision of annual reports by AMS, in an agreed and specified format, on progress in the actions required to implement different aspects of policy, with country reports being reviewed/approved by ASEC or SEAFDEC and formally published to increase transparency and accountability.

⁵⁸ It is not possible for the consultants to estimate these costs as part of the feasibility study. Additional work would be required to articulate the steps and associated costs of developing an AGFP under option 3, based on the direction/guidance of the task force over the terms of reference.

9. How do the options compare?

9.1 Introduction and note on methodology

The text below compares the different options using multi-criteria analysis (MCA) to explore the balance between benefits and costs of the different options, assessing all the relevant advantages and disadvantages of the policy options against the status quo. This allows for an objective comparison of the options against common criteria.

MCA is a methodology used to compare and assess different policy options when it is not possible or practical to assess costs and benefits in monetized form⁵⁹.

The criteria to which the different policy options are subjected are as follows:

- Effectiveness – the extent to which options would achieve the general and specific objectives (which are defined in the Section 6 based on the problem statement i.e. what would a AGFP be trying to achieve/solve).
- Efficiency – the costs versus the environmental, social, and economic benefits, and considering administrative burden, from changes that might result from policy change.
- Coherence – with other national and regional policy, and with international best practice and obligations.
- Acceptability – in terms of AMS support.
- Added value – what would be the additional value resulting from action at regional/ASEAN level, compared to what could reasonably have been expected from AMS acting at national level.

Under each criterion, indicators/sub-criteria have been defined. Performance of the three Options are scored against all criteria/indicators, by comparing them against the status quo. This allows for scores to be attributed to the options across all criteria, so that the feasibility study can make a recommendation about the preferred option (see Section 10).

The scoring is based on the scale below.

Performance score	Legend
0	Does not improve and/or worsens the situation compared to the status quo
1	Small improvements compared to the status quo
2	Moderate improvements compared to the status quo
3	Large improvements compared to the status quo
4	Very large improvements compared to the status quo

9.2 Effectiveness

Effectiveness⁶⁰ considers how successful the Option, or action, would be in achieving or progressing towards the stated objectives.

The problem definition as earlier discussed (Section 3) led to the articulation of a General Objective (GO) and 9 Specific Objectives (SOs) of an AGFP.

The **general objective** of an AGFP is specified as follows:

⁵⁹ https://ec.europa.eu/info/law/law-making-process/planning-and-proposing-law/better-regulation-why-and-how/better-regulation-guidelines-and-toolbox_en

⁶⁰ https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-47_en_0.pdf

'Sustainable resource management and sectoral development of marine and inland capture fisheries and aquaculture in ASEAN Member States, to improve food security, facilitate poverty alleviation, and improve livelihoods of ASEAN people dependent on the harvesting, farming, processing, and marketing of fish and fishery products'.

The **specific objectives** of an AGFP, which would contribute to the general objective, are to:

1. rebuild depleted fish stocks
2. manage environmental and climate change risks from and to the sector
3. build human skills and capacities of those working in the sector and those responsible for its management
4. enhance trade of fish and fishery products
5. increase value addition, earnings, and innovation in the sector
6. enhance research, and improve the availability, reliability and completeness of data and information required for sectoral management
7. combat illegal fishing and illegal fishing-related activities in the sector and increase a culture of compliance
8. reduce bio-security risks in aquaculture and trade
9. improve the safety and social protection of workers in the sector.

The effectiveness of Option 1 (the fully implemented baseline) and Option 2 and 3 in meeting these objectives are compared in the table below (Table 15). The table and its scoring has been completed, and is justified, based on the assessment of impacts presented in Section 8 which articulated how different impacts of the options contributed to the GO and individual SOs.

Table 15: Comparison of the effectiveness of Option 1, 2 and 3

See overleaf.

Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level	Policy Option 3 – AGFP covering all issues (well covered already and not well covered)
	Performance score	Performance score	Performance score
GO: Sustainable resource management and sectoral development of marine and inland capture fisheries and aquaculture in ASEAN Member States, to improve food security, facilitate poverty alleviation, and improve livelihoods of ASEAN people dependent on the harvesting, farming, processing, and marketing of fish and fishery products'	3	4	4
	Given extensive policy statements and documents at regional level pertaining to sustainable resource management, sectoral development, food security, poverty alleviation, and improved livelihoods – and the need for those ambitions as stated in policy to impact positively on the catching, farming, processing and marketing sectors - full implementation of existing policy would largely achieve the stated GO and would make a significant positive impact compared to the status quo. The positive impacts would be achieved through implementing existing policy rather than the addition of any new policy. However, a small number of policy issues e.g. marine debris, subsidies, labour conditions in the fisheries sector would remain poorly defined preventing full achievement of the GO.	The definition of a dedicated AGFP covering those few issues not already well-covered (marine debris, subsidies, labour conditions) and implementation of that policy, coupled with the implementation of existing policy, would ensure that all major issues requiring policy statements would be covered in one form or another. The AGFP, being focussed on a few specific issues, would better support the GO than Option 1, as the impact of the fisheries sector on the marine environment through fisheries-related marine debris would be reduced, 'bad' subsidies would be phased out reducing negative impacts on fishing capacity and stock status, and livelihoods would be improved through an enhanced policy framework on labour and working conditions. This would result in significant positive change compared to the status quo.	The impacts of this option would be identical to option 2, as under option 3 there would be no new additional policy over and above option 2, rather the AGFP could encompass all existing policy (as per option 1) and the new policy items in the AGFP in option 2. Option 3 would thus result in significant positive changes compared to the status quo.
SO1: rebuild depleted fish stocks	3	4	4
	Extensive existing policy on the need for sustainable resource management of both inland and marine fisheries, and on increasing awareness of fisheries about the need for management, when implemented would serve to rebuild depleted fish stocks, and to manage and exploit them at sustainable levels. Changes compared to the status quo would be large when/if existing policies were implemented. However, the lack of policy addressing the negative impacts of some fisheries subsidies, and the need to use it for fishing capacity reduction programmes or positive impacts (e.g. more sustainable fishing gears, buy-back schemes, etc) would mean it would take longer to achieve the SO.	The AGFP under this option would not include policy content related to sustainable resource management, as such objectives and the need to rebuild stocks are already contained in existing policy documents. However the impacts of this option would be even greater than under Option 1 and would fully achieve the SO given the inclusion in the AGFP of policy on the use of 'positive' subsidies only. This would result in large improvements compared to the status quo.	The impacts of this option would be identical to option 2, as under option 3 there would be no new additional policy over and above option 2, rather the AGFP could encompass all existing policy (as per option 1) and the new policy items in the AGFP in option 2.

Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level	Policy Option 3 – AGFP covering all issues (well covered already and not well covered)
	Performance score	Performance score	Performance score
SO2: manage environmental and climate change risks from and to the sector	3 Existing policy if implemented would serve to prepare the sector for climate change impacts and to adapt to it, as well as to mitigate the contributions from the sector to climate change. It would also ensure that the negative impacts of the aquaculture sector on the environment were reduced through improved farm management practices and bio-security controls and reduced farm pollution. It would further ensure that the impacts of fisheries on ETPs were minimised. However, the impacts of the sector on the marine environment in terms of marine debris and plastics in the oceans would not be well addressed. Changes compared to the status quo would thus be large, but not maximised.	4 The inclusion in the AGFP of policy on reducing marine debris from the fisheries and aquaculture sector would serve to reduce abandoned/lost fishing gear and plastics from the sector ending up in the marine environment. Option 2 would thus serve to reduce 'ghost fishing' from abandoned/lost gear, negative interactions/impacts of marine debris with ETP species, navigational hazards, and the presence of micro-plastics in the ecosystem. Coupled with implementation of other existing policy outside of the AGFP, changes compared to the status quo would be significant.	4 The impacts of this option would be identical to option 2, as under option 3 there would be no new additional policy over and above option 2, rather the AGFP could encompass all existing policy (as per option 1) and the new policy items in the AGFP in option 2.
SO3: build human skills and capacities of those working in the sector and those responsible for its management	4 Implementation of existing policy under this option would result in large changes compared to the status quo, given extensive policy content already covering the need to build human capacities.	4 The AGFP would not include any policy on human capacities over and above that already existing. Impacts of this option, and implementation of existing policy, would thus be as for option 1.	4 As for option 1 and 2.
SO4: enhance trade of fish and fishery products	4 Implementation of existing policy under this option would result in large changes compared to the status quo, given extensive policy content already covering the need to enhance trade and quality of fish and fishery products.	4 The AGFP would not include any policy over and above that already existing. Impacts of this option, and implementation of existing policy, would thus be as for option 1.	4 As for option 1 and 2.
	2	2	2

Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level	Policy Option 3 – AGFP covering all issues (well covered already and not well covered)
	Performance score	Performance score	Performance score
SO5: increase value addition, earnings, and innovation in the sector	This SO would be partly achieved through positive environmental impacts e.g. SO1, feeding through into improved economic performance. Other positive changes would result from the implementation of policy on value addition and innovation. However, the strong focus in general of policy on environmental issues rather than having a specific economic focus, would compromise full achievement of this SO. Changes compared to the status quo would thus be moderate, owing to the failure of policy to specifically and adequately address a number of problems and issues such as access to finance, rising input costs, and the need for value chain upgrading.	The AGFP would not include any policy over and above that already existing. Impacts of this option, and implementation of existing policy, would thus be as for option 1.	As for option 1 and 2.
SO6: enhance research, and improve the availability, reliability and completeness of data and information required for sectoral management	4	4	4
	Policy on the need for research and data is already extensive. Implementation of existing policy under option 1 would thus result in large changes, of a positive nature, compared to the status quo.	The AGFP would not include any policy over and above that already existing. Impacts of this option, and implementation of existing policy, would thus be as for option 1.	As for option 1 and 2.
SO7: combat illegal fishing and illegal fishing-related activities in the sector and increase a culture of compliance	4	4	4
	Policy on the need to combat IUU fishing is already extensive. Implementation of existing policy under option 1 would thus result in large changes, of a positive nature, compared to the status quo.	The AGFP would not include any policy over and above that already existing. Impacts of this option, and implementation of existing policy, would thus be as for option 1.	As for option 1 and 2.
SO8: reduce bio-security risks in aquaculture and trade	4	4	4
	Policy on the need for improved bio-security in aquaculture and trade is already extensive. Implementation of existing policy under option 1 would thus result in large changes, of a positive nature, compared to the status quo.	The AGFP would not include any policy over and above that already existing. Impacts of this option, and implementation of existing policy, would thus be as for option 1.	As for option 1 and 2.

Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level	Policy Option 3 – AGFP covering all issues (well covered already and not well covered)
	Performance score	Performance score	Performance score
SO9: improve the safety and social protection of workers in the sector	2	4	4
	This SO would be partly achieved with the implementation of existing policy related to improving the safety of workers in the sector. However, Most notably, the negative impacts of insufficient policy on working conditions and forced labour, would result in continued job insecurity, social hardship, levels of forced labour and trafficking, and risks of injury to some (but not all) those working in the sector. Changes compared to the status quo would thus only be moderate.	Option 2 would introduce specific policy on workers rights and protections in the form of requirements for contracts, social security provision, freedom of association, non-discrimination, forms of recruitment and payments, and ratification of relevant ILO Conventions. Changes compared to the status quo would thus be large.	As for option 2.

Source: consultant analysis

The figure below (Figure 6) summarizes the scoring of the different options against the effectiveness criterion. As the figure shows, all three options make contributions to the general objective, but Option 2 and Option 3 both make a greater contribution than Option 1.

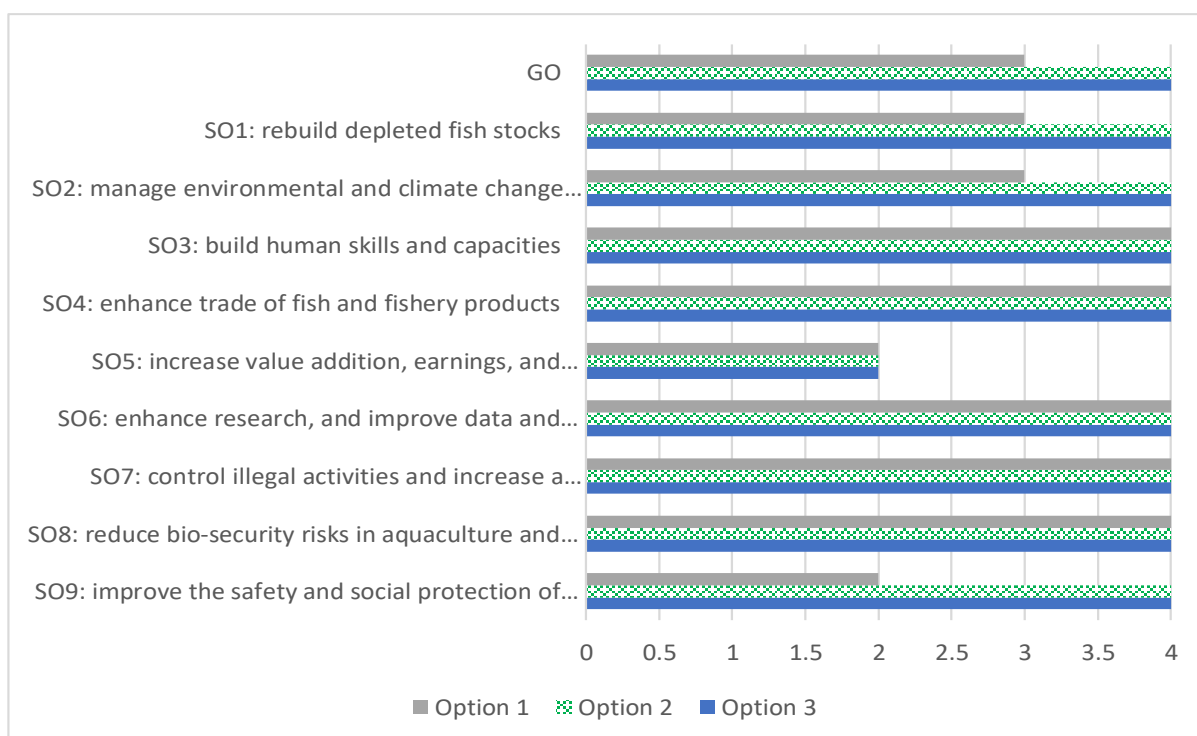
All three options would also make contributions to all 9 specific objectives (SOs). However, while all three Options would bring about large changes compared to the status quo in support of specific objective 3, 4, 6, 7, and 8, only Option 2 and 3 would bring about large changes in support of specific objective 1, 2, and 9. Option 1, with implementation of existing policy but a lack of its expansion to cover policy areas not well covered, would mean that its impact on specific objective 1, 2 and 9 would be more limited for these objectives than Options 2 and 3.

Option 2 and Option 3 are thus both more effective than Option 1, and are equally effective given that the policy content under the two options would be similar, but just with policy either arranged in one overall and comprehensive AGFP (Option 3), or with policy divided between existing policy and a new AGFP covering those policies currently not well covered at regional level (Option 2).

Two striking findings from the analysis are:

1. Specific objective 5 is the one objective that would not be optimally supported by any of the options because of a continuing weakness in coverage of economic policy related to the sector as opposed to a more traditional environmental focus. This suggests that the Ad Hoc Task Force may wish to consider the need for expanding/developing policy with a more economic focus than was suggested to the consultants.
2. All options are effective, and Option 1 has an average score across all objectives of 3.3 (out of 4) which is high and only slightly less than Options 2 and 3 which both have average scores of 3.8. This highlights that at present under the status quo, it is less a lack of policy which is compromising fulfilment of objectives and resulting in current problems in the sector, but rather a failure to implement existing policy that is of greater concern.

Figure 6: Effectiveness of Options 1, 2 and 2



Source: consultant analysis

9.3 Efficiency

Efficiency (or cost effectiveness) considers the relationship between the resources used [i.e. costs] and the changes generated [i.e. benefits] (which may be positive or negative)⁶¹.

In considering benefits, the assessment of impacts presented in Section 8 showed that considerable environmental, economic and social benefits would be realised from full implementation of existing regional policy frameworks under Option 1. The benefits of Option 1 would be great compared to the status quo (in which existing policy is often only poorly implemented), due to the fact that 12 of the 15 policy areas considered by the Ad Hoc Task Force and consultants as being of potential importance in supporting environmental, economic and social benefits, are already well covered by regional policy documents/statements. While the benefits from implementing some aspects of policy may take some time to materialize due to the speed of fish stock recovery and the need for more sustainable exploitation of resources to feed through into economic and social benefits, the benefits of implementing other aspects of existing policy could be felt rapidly.

The change in benefits between Option 1 and both Options 2 and 3 would be relatively small, as would relate only to the additional benefits associated with the additional policy areas better covered and implemented under Options 2 and 3, namely marine debris, subsidies, and labour/working conditions (only 3 of the 15 policy areas considered by the Ad Hoc Task Force and consultants as being of potential importance).

With regards to costs, full implementation of existing policy under Option 1 would certainly result in increased costs for AMS administrations, as discussed in Section 8 when considering

⁶¹ http://ec.europa.eu/smart-regulation/guidelines/docs/br_toolbox_en.pdf

the 'administrative burden' of full implementation of existing policy. These costs could relate to staffing, operations, and investments but are not quantifiable⁶².

Under Option 2 and 3, additional/marginal costs to AMS associated with implementation of the three additional policy areas would probably be small given the relatively small expansion of only three policy areas covered. While some costs might be involved for AMS with implementing policy on marine debris, overall cost savings could be realised if policy on the use of subsidies resulted in the phasing out of subsidy programmes in those AMS that have them, while costs of implementing policy on improved labour/working conditions would be more likely to fall on the private sector than on administrations. There would also be some small costs for AMS administrations involved with the process to agree an AGFP under Option 2, which would not be involved under Option 1.

Under Option 3 these policy development costs might however be considerably increased given the increased work that would have to go into agreeing an AGFP by consensus between all AMS. This process would not be straightforward and would involve having to agree which aspects of all existing policy documents should be included in a new comprehensive AGFP, and whether/how that AGFP should supersede other policy frameworks. Multiple meetings could be envisaged at ASEAN-level along with considerable costs of the analytical and drafting work. In addition, longer-term costs of Option 3 might also be expected to increase compared to Option 2 for ASEC and AMS - given all the work necessary to agree a fully comprehensive AGFP, AMS might agree that enhanced monitoring of the implementation of such a new and comprehensive AGFP would be sensible. This could imply an upscaling of staff and budget for fisheries expertise in ASEC, as well as more reporting obligations for AMS on implementation of a new and fully comprehensive AGFP.

In comparing benefits against costs, a comparison cannot be made in monetary terms to allow for a cost benefit analysis. However, when taken 'in the round', the comparison of benefits versus costs for all three Options compared to the status quo, suggests that costs would be 'proportionate' to the benefits achieved, and cost-effective with considerable benefits outweighing the costs. Based on the above discussion, Table 16 below provides a score to compare Options 1, 2 and 3 with the status quo for the efficiency criterion.

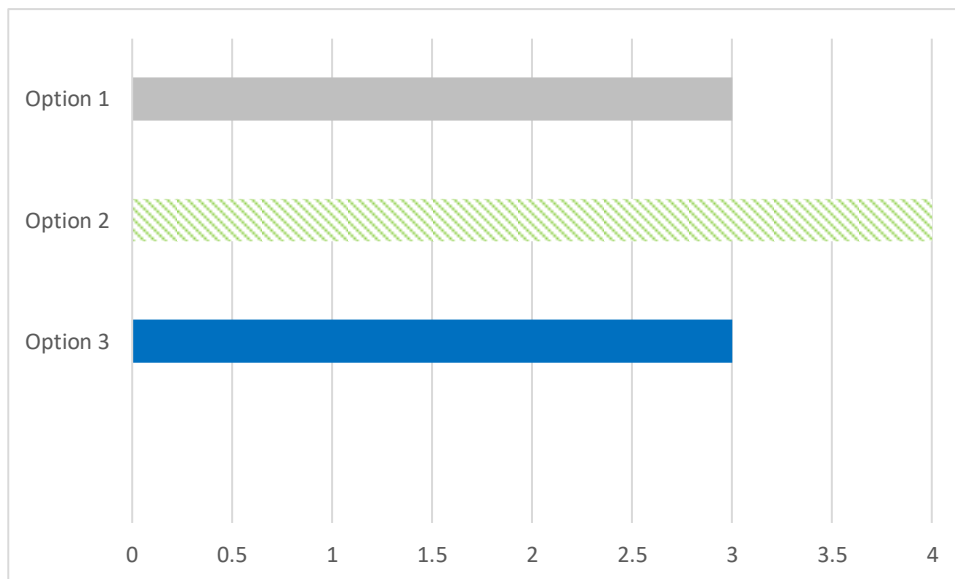
Table 16: Comparison of the efficiency of Option 1, 2 and 3 compared to the status quo

Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level	Policy Option 3 – AGFP covering all issues (well covered already and not well covered)
	Performance score	Performance score	Performance score
Benefits vs costs	3	4	3
	Large benefits and costs associated with full implementation of existing policy, but benefits expected to significantly outweigh costs.	Benefits expected to be significant and to outweigh costs. Marginal increase in costs compared to the status quo and option 1 would be less than the marginal increases in benefits	Benefits of implementation of comprehensive AGFP expected to be significant and to outweigh costs. Benefits identical to option 2, but costs increased compared to option 2 due to costs associated with developing and monitoring a fully comprehensive AGFP.

Source: consultant analysis

⁶² Due to different cost structures in AMS, different implementation strategies that would be used to implement policy, and problems with data availability, fully costing the implementing of existing policy is outside the scope and remit of this study.

Figure 7: Efficiency of Options 1, 2 and 2



Source: consultant analysis

9.4 Coherence

The assessment of coherence involves looking at how well or not different actions work together⁶³. The table below (Table 17) compares the three options for their coherence with:

1. National fisheries policies in AMS.
2. Wider ASEAN policy and its institutional mandate.
3. International best practice and obligations.

⁶³ https://ec.europa.eu/info/sites/info/files/file_import/better-regulation-toolbox-47_en_0.pdf

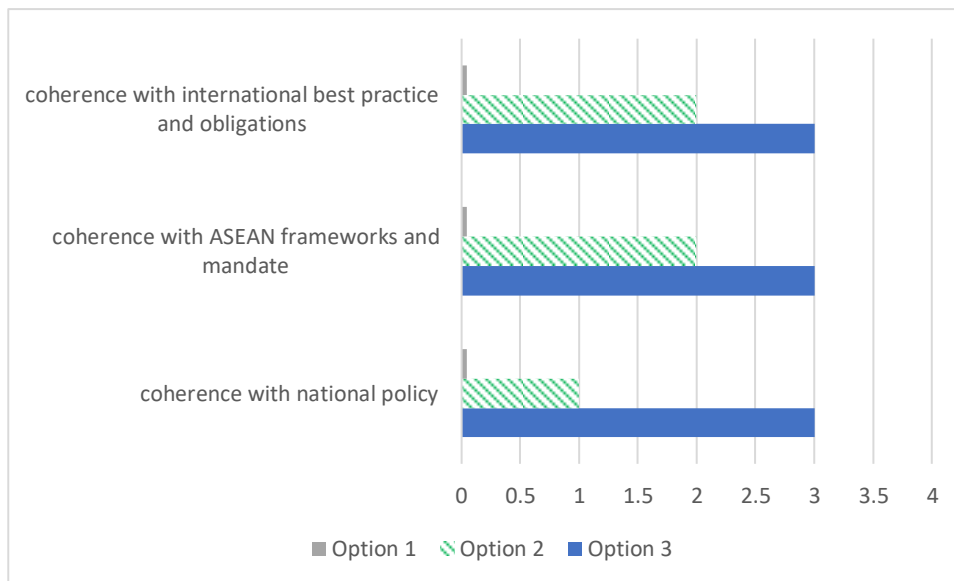
Table 17: Comparison of the coherence of Option 1, 2 and 3 compared to the status quo

Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level	Policy Option 3 – AGFP covering all issues (well covered already and not well covered)
	Performance score	Performance score	Performance score
Coherence with national policies	0 No improvements in coherence as no policy amendments (just improvements in implementation).	1 While national policies in AMS have not been reviewed in detail, this option is expected to make some small improvements in coherence of regional policy with national policy in AMS on environment, financial support and labour rights (correspondingly through the focus of the AGFP on marine debris, subsidies, and labour/working conditions). Changes would only be small given that 12 of 15 key policy areas are already well covered by policy at regional level	3 Option 3 provides the opportunity to harmonise existing policies at national and regional level.
Coherence with ASEAN frameworks and mandate	0 No improvements in coherence as no policy amendments (just improvements in implementation).	2 The 3 new additional policy areas contained within an AGFP that are not currently well covered at regional level would result in moderate improvements in coherence with the principles of the 1967 ASEAN Declaration, the ASEAN Charter, and the ASEAN Economic Community Blueprint, as well as with the Social Community objectives through the focus on labour/working conditions. – see earlier text in Section 5.2	3 Option 3 would present fisheries policy in a common ASEAN-wide language and allow for small amendments in regional policy throughout the development process to improve coherence between and with other ASEAN policy
Coherence with international best practice and obligations	0 No improvements in coherence as no policy amendments (just improvements in implementation).	2 The 3 new additional policy areas contained within an AGFP that are not currently well covered at regional level would result in moderate increased coherence with action at international level being taken on marine debris (MARPOL Annex V and the 2018 Honolulu Strategy), subsidies (as per ongoing WTO negotiations on fisheries subsidies), and labour/working conditions in the fisheries sector (e.g. ILO Convention C188)	3 Option 3 would allow for a newly and comprehensive AGFP to include content and language on policy topics that are better aligned with international best practice and obligations

Source: consultant analysis

The figure below (Figure 8) shows that Option 3 supports the greatest improved coherence. Option 1 makes no change on the status quo as no additional policy is specified under this option (just enforcement of existing policy).

Figure 8: Coherence of Options 1, 2 and 2



Source: consultant analysis

9.5 Acceptability

Acceptability considers the level of support from stakeholders to the different options.

The consultants have analysed AMS responses in questionnaires as to the views about how appropriate it would be for policy at the regional level, potentially as contained in an AGFP, to include different policy areas. This analysis is presented below as background information to the scoring of options (which follows). The analysis has been completed by coding and scoring AMS responses as follows: 'very appropriate' = 4, 'moderately appropriate' = 3, 'a little appropriate' = 2, 'not appropriate' = 1.

The analysis shows the level of support for different policy areas, ranked, with those areas with most support listed first in the table. The results show that there is strong support by AMS to ensure that regional policy/AGFP covers most policy issues, but with food safety, labour and working conditions, and fisheries subsidies being considered as the least important to include (principally due to these issues already being covered by other policy documents or institutional mandates⁶⁴). These three policy areas, along with 'support for small scale fisheries', 'funding', and 'marine mammals and marine ETPs' show the widest range of scores/support with some AMS being very supportive and others not at all. 'Fisheries science and research' is the policy area which gained most universally strong support for inclusion in an AGFP by AMS. The 'range' is an important variable to consider given that any future AGFP would need to be agreed by consensus.

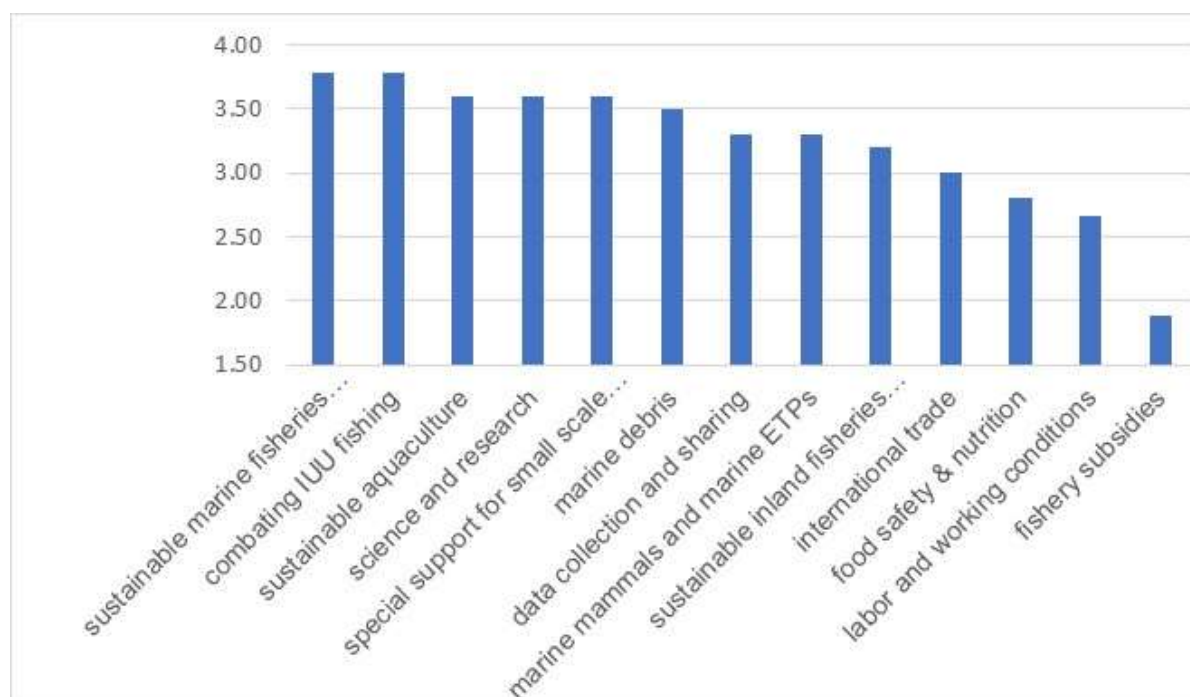
⁶⁴ Working conditions falling under the mandate of ILO, and subsidies under WTO

Table 18 : AMS views on appropriateness of including different policy areas in an AGFP

How appropriate do you think it would be for an AGFP to include policy statements/content on	Average	Total	Range	Mode
sustainable marine fisheries resource management	3.78	34	2-4	4
combating IUU fishing	3.78	34	2-4	4
sustainable aquaculture	3.60	36	2-4	4
fisheries science and research	3.60	36	3-4	4
special support for small scale fisheries	3.60	36	1-4	4
marine debris	3.50	35	2-4	4
data collection and sharing	3.30	33	2-4	3
marine mammals and marine ETP species	3.30	33	1-4	4
sustainable inland fisheries resource management	3.20	32	2-4	3 + 4
international trade	3.00	30	2-4	3
food safety & nutrition	2.80	28	1-4	4
labour and working conditions	2.67	24	1-4	4
fishery subsidies	1.89	17	1-4	1

Source: consultant analysis of AMS questionnaires. Notes: the 'range' shows which scores were relevant for each policy area by at least 1 AMS. The mode shows the most common score for each policy area across all AMS that provided an answer. Not all AMS provided answers to every question in the questionnaire.

Figure 9 : Average scores for AMS views on appropriateness of including different policy areas in an AGFP



Source: consultant analysis of AMS questionnaires. Note: maximum possible score is 4.

Consultations with AMS completed by the consultants suggested that almost all AMS were supportive in general terms of the principle/idea of having an AGFP in some form or other.

Notable from the findings presented above however, and especially pertinent when scoring the acceptability criterion for the three options, is that two of the three new policy areas that would be added to regional policy under Option 2 (and also included in Option 3) are the policy issues which AMS feel are least appropriate to be included in a regional policy of all the possible policy areas. The main reasons for this, as stated in questionnaire responses and as revealed during discussions/consultants were that: i) labour issues are felt by many AMS to be more an area of national concern/mandate and not typically under the mandate of Fisheries Ministries, and ii) subsidies are dealt with at WTO-level, and so any WTO agreement on fisheries subsidies agreement reached would be applicable to all AMS so would not require additional policy at regional level.

Option 1 is assessed as having higher acceptability than Option 2, but nevertheless a low score, as while most AMS are supportive of an AGFP they could also live with Option 1 whereby the current policy framework remains but with better enforcement.

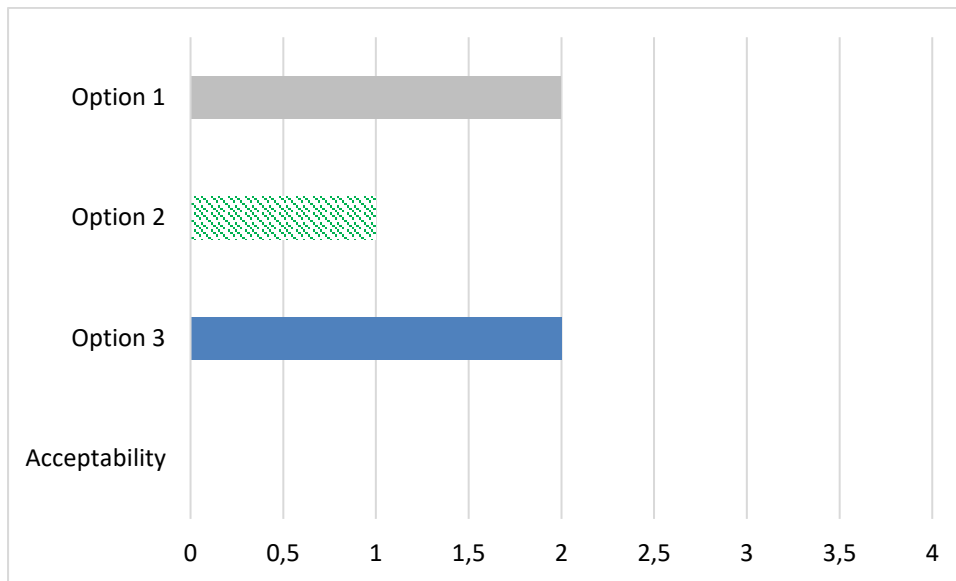
Option 3 is also assessed as having a relatively low acceptability score because an all-encompassing AGFP is considered by some AMS as being a step too far at the current time, could create confusion over the status of existing regional policy, and could be complex and costly to develop and agree.

Table 19: Comparison of the acceptability of Option 1, 2 and 3 compared to the status quo

Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level	Policy Option 3 – AGFP covering all issues (well covered already and not well covered)
	Performance score	Performance score	Performance score
Acceptability	2	1	2
	Given the existence of other regional policy frameworks already in place, which if implemented would result in positive impacts, some AMS are ambivalent about the need to proceed with development of an AGFP and so this option would have a degree of acceptability. However most AMS indicated a willingness/interest in an AGFP in some form, and in most of the policy areas being included.	Option demonstrating some positive change in acceptability by virtue of having some form of AGFP, an idea which is supported by most AMS, and because of stakeholder support for marine debris to be included/added to regional policy. However, less/little support for 2 of the 3 policy issues (working conditions and subsidies) to be addressed within regional policy, critically undermining acceptability.	AMS are mostly not very supportive of a fully comprehensive AGFP pulling together all existing and new policy areas into one AGFP, than an AGFP focussing only on those issues not well covered at present. This may be due to the potential difficulty of agreeing a comprehensive policy by consensus, the time/work involved, and what it would mean for all other existing regional policy documents. However most AMS also consider the majority of policy topics as suitable for inclusion in an AGFP. So this option shows improvements in acceptability compared to the status quo and Option 2.

Source: consultant analysis

Figure 10: Acceptability of Options 1, 2 and 3



Source: consultant analysis

9.6 Added Value

The added value criterion considers what would be the additional value resulting from action at regional/ASEAN level, compared to what could reasonably have been expected from AMS acting at national level.

For Option 1, there would be no change compared to the status quo as no new regional policy would be added, just implementation of existing policy, so Option 1 represents no change.

For Option 2, while AMS could certainly address marine debris and labour conditions at a national level, it can be argued that there would be some small additional value in doing so instead through regional policy.

The benefits of regional policy could be in the form of demonstrating internationally that the issues are considered serious and are being addressed at a regional level, and in providing an impetus for finding strategies to implement policy at a regional level. Despite the views expressed by some AMS that labour issues are a national one, there are considerable levels of migration in fishing labour between countries (especially in some countries and some fleet types), and internationally concern over labour issues in fishing fleets as expressed in news articles/items is often focussed on 'Asian' countries, so the issue can be considered of regional significance. Likewise, effectively combating the problem of marine debris from the fishing sector on the marine environment and from other sources on the fisheries sector, may be better done at regional rather than national level. However in the view of the consultants, there would be little added value of subsidies being addressed through regional policy, rather than at a national level as individual AMS need to be free to tailor any subsidy programmes to their own needs, and as already noted in the section on acceptability, broader rules pertaining to subsidies may be laid down at the WTO level.

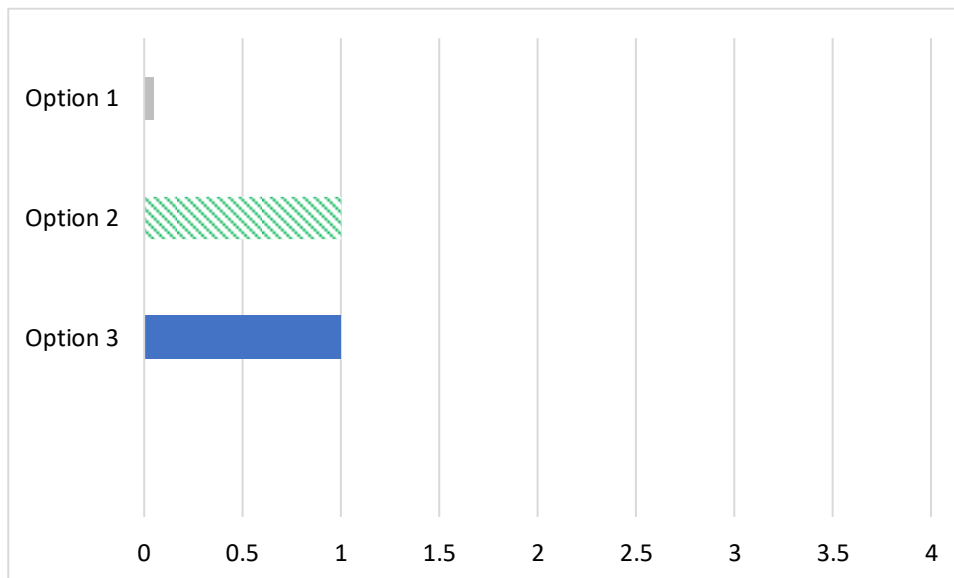
For Option 3 changes compared to the status quo in terms of added value would be the same as under Option 2, given that policy content would be the same

Table 20: Comparison of the added value of Option 1, 2 and 3 compared to the status quo

Criteria	Criteria	Option 1 / fully implemented existing policy	Policy Option 2 – AGFP covering only issues not well covered already at regional level
	Performance score	Performance score	Performance score
Added value	0	1	1
	No change to status quo and no new policy areas added at regional level, just enforcement of existing policy	Small improvements/added value in having regional policy on marine debris and labour conditions, although none through regional policy on subsidies	Same as for Option 2

Source: consultant analysis

Figure 11: Added value of Options 1, 2 and 2



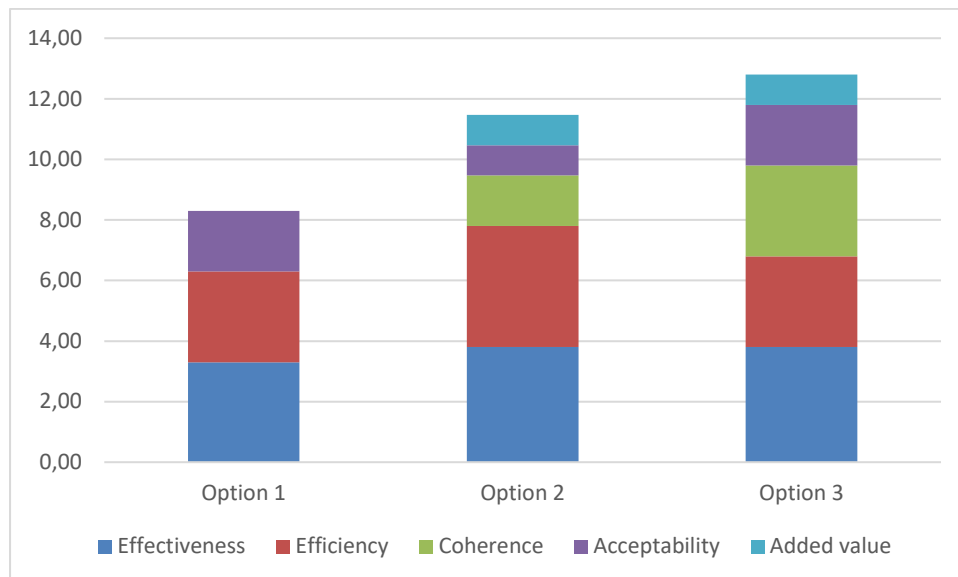
Source: consultant analysis

The next section of this report, provides a conclusion drawn from the discussion above on the different evaluation criteria.

10. Conclusions and thoughts on a preferred option

The scores from the MCA presented in the preceding section are combined across the different evaluation criteria for the three Options and presented in Figure 12 below.

Figure 12: Summary comparison scores for Options 1, 2 and 3, across all criteria in the multi-criteria analysis



Source: consultant analysis. Note maximum possible score per Option is 20 (4 for each of the five evaluation criteria).

Key conclusions from the summary comparison scores are as follows:

- Option 1 (no AGFP but full implementation of existing regional policy) would not make any improvements over the status quo (existing policy, often poorly implemented) for the evaluation criteria of coherence or added value, whereas both Option 2 and 3 would. However, when considering the criteria of effectiveness (in achieving objectives, which in turn are specified to address the key problems identified), and efficiency (the balance of costs and resulting environmental economic and social benefits, and considering administrative burden), Option 1, 2 and 3 all perform well without huge differences in scores between the three options. This suggests that **improvements in the implementation of existing policy may be more important than the specification of new regional policy in the form of an AGFP**. This is perhaps the single most important conclusion to be drawn from the MCA.
- Option 3 (a consolidated and new AGFP would be developed to supersede/over-ride all existing regional policy documents, but which would also cover policy areas not currently addressed at regional level) has the highest combined score for the five evaluation criteria. **Purely based on the MCA, the preferred option is thus Option 3**. Given that many fisheries issues are regional issues, increased regional fisheries policy under one consolidated umbrella in the form a comprehensive AGFP could in the long run be greatly beneficial for the ASEAN member countries in fostering and demonstrating regional cooperation, harmonising standards and approaches, and ensuring a level playing field between AMS.
- The acceptability of Option 2 is low, because the AGFP under this option would include two major policy areas (subsidies and labour/working conditions) from a total of three newly expanded policy topics, which most AMS feel are not suitable for inclusion in regional policy. The low acceptability score could thus represent a 'deal-breaker' for this option.

-
- Option 3 scores better than Option 2 on acceptability and coherence, but could itself be problematic given:
 - i) the AGFP under this option would supersede all other existing policy frameworks (including the ASEAN-SEAFDEC Resolution and Plan of Action to 2030 which is currently in draft form) which could be problematic and cause confusion; and
 - ii) the potentially significant amount of work, and cost, that could be involved in developing and agreeing (by consensus) an AGFP.
 - Added value scores of all three options are low, not because there is little added value of action at the regional level, but because the MCA compares the options against the status quo. At present there are already many policy documents agreed at regional level (especially the ASEAN-SEAFDEC Resolution and Plan of Action) covering most of the topics which the Ad Hoc Task Force and consultants have considered as being potentially suitable for inclusion in an AGFP.

It should also be noted that the MCA has not specifically incorporated an assessment of potential impetus that could be created towards effective implementation of policy that might be generated by having an AGFP. **Under Option 3 with a comprehensive AGFP, the process to develop such a policy, and the agreed policy itself, could provide fresh impetus for improved implementation.** Even under Option 2, just having an AGFP covering a few policy areas could represent the basis on which future regional policy developments could be attached, with future iterations of the policy being used to expand the range of topics covered in an AGFP, also resulting in improved implementation of policy on the areas included.

On the other hand, **without changes to the oversight and monitoring of policy implementation, both Options 2 and 3 run the risk of considerable amounts of work, time and costs** associated with developing and agreeing an AGFP, which could in many ways end up being very similar to and duplicating other policy documents, most notably the ASEAN-SEAFDEC Resolution and Plan of Action to 2030, **without bringing about much positive change in terms of addressing the key problems and issues facing the sector.**

Given the findings of this study and the conclusions drawn from them as stated above, the consultants don't consider it appropriate to make a firm recommendation as to which of the three policy options should be pursued. That is a decision for the Ad Hoc Task Force to take based on the content of this feasibility study, as well as political considerations.

The decision by the Ad Hoc Task Force should however be made recognising the institutional setting in the region and the ASEAN mandate as discussed earlier in this report. While the policy briefs prepared by the consultants as part of this assignment highlighted the benefits of regional policy, much regional policy already has already been specified and agreed through cooperation at the ASEAN level. The success of policy in some other regions, such as the Common Fisheries Policy in EU, may be less a product of regional cooperation to develop and agree policy per se, and more the result of:

1. the legal arrangements which empower EU institutions to require the EU Member States to implement regional policy.
2. a well-resourced institution in the form of the European Commission which is empowered to monitor the implementation of policy.
3. funding mechanisms being in place at a regional level which can be accessed by Member States to support the implementation of policy.

While thus not making a firm recommendation to the Ad Hoc Task Force on whether to proceed with the development of an AGFP (under Option 2 and 3), the consultants would advise against proceeding with the development of an AGFP just because the Ad Hoc Task Force has been asked to consider the feasibility of one. Even if it is decided not to proceed with an AGFP, this feasibility study will have been useful in highlighting the potential need for

improved implementation of existing regional policy by AMS, and improved resourcing of ASEAN for the monitoring of policy implementation (as discussed further in the next, and last section of this report). This feasibility study will also have been useful in sharing lessons about policy development and implementation through the preparation of the policy briefs.

11. Recommendations on next steps

In this final section, recommendations to the Ad Hoc Task Force are made about the next steps to develop an AGFP, assuming that it decides to proceed with either Option 2 or 3. In this regard it is noted both that: i) it was not the job of the consultants based on their terms of reference to prepare a draft of any future policy document, just to complete the feasibility study; and ii) the development of an AGFP would need to follow standard ASEAN-processes for agreement over regional policy.

If the Ad Hoc Task Force decides to recommend either Option 2 or Option 3, the proposed next steps could be as follows:

1. The AHTF note and forward the findings and recommendations of the Feasibility Study to ASWGFi, so it may consider either

- **extending the mandate of the existing Ad Hoc Task Force to consider options in the report, or**
- **establishing a new task force if a decision is made to proceed with the preparation of the AGFP.**

2. The newly mandated Task Force could, if the ASWGFi decides to proceed with Option 2 or Option 3, then decide on the mechanisms and resources required for development of the AGFP. These could include inputs and resources made by consultants, ASEC, SEAFDEC, and AMS. Terms of reference for the development of the AGFP would be agreed on the basis of consensus by the Task Force. Funding would need to be identified. (In their responses to the consultants' questionnaire, the AMS displayed a range of responses about who should be involved with and lead the process to develop an AGFP should one be developed. Suggestions included mostly typically the use of international and national consultants, but also the close involvement of/with ASEC and potentially SEAFDEC.)

3. A timeframe of two years would be allowed for the preparation, and agreement by AMAF of the AGFP if the Ad Hoc Task Force decides to move forward with Option 2. A four-year timeframe would be allowed if Option 3 is approved (due to the increased complexity and procedural steps that would be involved with developing a fully comprehensive AGFP that would supersede existing policy documents). (The timeframe for the preparation of an AGFP was estimated by the AMS between 1 year and 10 years (one AMS suggested 1 year, 3 AMS suggested 2 years, one AMS 2-3 years, 2 AMS 3 years, and one AMS suggested 10 years). However at the time these estimations were made, the different options for the AGFP were not developed and the significant differences in the proposed timeframes are largely the result of a different understanding by AMS of the scope of the AGFP.)

4. Preparation of the AGFP would include consultation with relevant stakeholders including private sector and civil society organisations, to be determined by the Ad Hoc Task Force, in accordance with the Rules of Procedure for Private Sector Engagement under the ASEAN Economic Community.

5. Agreement over the AGFP would be on the basis of consensus. (A draft AGFP would be developed based on a series of technical meetings at national and regional level, as defined in the terms of reference for the preparation of the AGFP. The resulting draft AGFP would be submitted to the ASWGFi, then for approval by SOM, and finally to AMAF for approval during an ASEAN summit.)

The AMS had various suggestions for the consultants about how to conduct monitoring and evaluation (M&E) activities for an AGFP. It is suggested that.

1. **ASEC and the ASWGFi are made responsible for reporting on the implementation of the AGFP every 2 years.** (AMS are supportive of the need to establish a specific mechanism to monitor implementation of the AGFP. The resulting monitoring report should be submitted to the SOM and AMAF for endorsement.)
2. **The AGFP should be evaluated and if necessary updated every 5 years.** (As with every policy document, the AGFP should be revised and updated periodically to reflect changes in international and regional developments, and so that policy is in line with the wishes of the AMS. Six AMS suggested regular updates every 5 years, two AMS suggested updates every 5-10 years, and one AMS proposed updates every 2-3 years.)

Finally, while not related specifically to the next steps associated with developing an AGFP, the consultants make some additional recommendations based on the work to complete this feasibility study.

There is an increasing trend towards regional policy and management of fisheries, based on the benefits that can be realised through regional collaboration and action to tackle shared issues and problems. At the same time, and as noted earlier in this report, there is already a plethora of regional policy in place at ASEAN-level, covering many fisheries and aquaculture policy topics. As highlighted in section 10, improving the implementation of existing policy may be as much a benefit to AMS in addressing problems currently facing the sector as agreeing new policy. Therefore, even if the Ad Hoc Task Force decides not to pursue Option 2 or Option 3 and to develop an AGFP, there is an apparent need to:

1. **Better monitor the implementation of existing fisheries policies.** This could be done through broadening and at the same time strengthening the already established monitoring mechanism under the ASEAN-SEAFDEC Resolution and Plan of Action or by establishing a new monitoring mechanism under ASEAN.
2. **Strengthen ASEAN's fisheries capacity through improved resourcing** not only for the above monitoring of fisheries policy implementation, but also to facilitate harmonisation of standards and procedures in fisheries and fisheries related areas, and to support or enable already established ASEAN mechanisms for data and information exchange on fisheries related issues.

Annex 1: Questionnaire

Introduction

The purpose of this questionnaire is to collect information, data and views from ASEAN Member States (AMS) that will feed into and be used in the Feasibility Study for the ASEAN General Fisheries Policy (AGFP). The questionnaire incorporates inputs from the Technical Consultation in March 2017 and the considerations of the Ad Hoc Task Force (AHTF) at the Inception Meeting in May 2019. The structure of the questionnaire follows the agreed structure presented in Annex 4 of the Inception Note prepared by the consultants.

The questionnaire will inform an overview of the current status of the fisheries sector in each country, and a review of national fisheries policies. The questionnaire covers issues related to inland and marine capture fisheries and aquaculture, fish processing and trade, and environmental, economic and social issues. Furthermore, the questionnaire aims to collect AMS views on possible policy areas/topics to be included in the AGFP. The final section in the questionnaire explores AMS views about 'next steps' if the feasibility study finds that a AGFP should be developed and AMS agree to this.

We would respectfully request that you complete and return this questionnaire to the two consultants (with both in cc: heiko_seilert@yahoo.com, and graeme@consult-poseidon.com) by the end of July 2019, or at least one week before the consultants are due to visit your country for consultations.

If you have any questions about how to complete the questionnaire, please feel free to email either of the consultants.

Please provide your answers in word in this file.

Correspondent contacts

Kindly provide the following contact details from the responsible person in the AMS for completing the questionnaire.

Country: _____

Name of the Focal Point: _____

Focal Point contact email: _____

If the questionnaire was not completed by the Focal Point, please provide the following for the responsible person:

Name: _____

Position _____

Institution: _____

Contact email: _____

Contact phone: _____

1. Requested data and documentation

Kindly fill out the below tables to provide an overview on the current status of your fisheries / aquaculture sectors. Provide data only for the most recent year available. The questions are divided into four key areas: inland fisheries; marine fisheries; aquaculture (both marine and inland aquaculture); and processing. For each area questions relate to four issues: economics, trade, social, and environmental. Your answers will help to identify areas where there could be a need for potential action.

In the last column of each table please provide the trend for the respective information, i.e. are the numbers over the last five years going up, down, or more or less unchanged.

Please be careful to ensure value figures are provided in national currency (or specify if in US\$), and provide full numbers i.e. 1,000,000 (not 1 million).

If data are not available, please insert 'not available' as your answer.

1.1 Inland fisheries

Economic

Questions	Answer here	Year for which data are provided	5-year trend: Please state below in each row if the trend is 'Up', 'Down', or 'Unchanged'
Volume of inland fisheries landings (tonnes)	e.g. 10,000	e.g. 2018	e.g. Unchanged
Value of inland fisheries landings (national currency):			
Average annual income / typical income of a fisher or crew member in inland fisheries (national currency):			
Average annual national wage for all economic sectors (national currency):			
Proportion of the national GDP derived from inland fisheries (%):			
Please describe the main economic challenges and problems facing inland fishers in your country, <u>providing as much detail as you can</u> . Issues may relate to skills/capacity, costs of finance, access to inputs, seasonality, low profitability/earnings, declining catch rates, getting product to market, infrastructure, or any other issues.			

Trade

Questions	Answer here	Year of data provided	5-year trend: Please state below in each row if the trend is 'Up', 'Down', or 'Unchanged'
Volume of inland fisheries exports (tonnes, processed weight)			
Value of inland fisheries exports (national currency):			
List the top 3 importers of your inland fisheries exports in the rows			

below, and provide the total value exported to each country for the most recent year in the column (Answer here) to the right:			
1.			
2.			
3.			
Please describe the main challenges and problems facing inland fishers in your country in trading products overseas, <u>providing as much detail as you can</u> . These may relate to trade barriers/tariffs, customs arrangements, quality/import requirements, payment terms, or any other issues.			

Social

Question	Answer here	Year of data provided
Number of fishers working / employed in the inland fishery:		
Total number of boats used in the inland fishery sector:		
Average number of crew members per boat:		
Please describe the main social challenges and problems facing inland fishers in your country <u>providing as much detail as you can</u> . These may relate to marginalization, safety, use/lack of contracts, or any other issues.		

Environmental

Question	Answer here
Number of protected areas, including fish sanctuaries, protected wetlands, and other inland waterbody areas protected by a fisheries, environmental or any other legal framework:	
Total area covered by these protected areas (in square kilometers):	
Please describe the main environmental challenges and problems facing inland fishers in your country <u>providing as much detail as you can</u> . These may relate to declining stocks, bycatches, pollution, destruction of critical habitats, or any other issues.	

1.2 Marine Fisheries

Economic

Questions	Answer here	Year for which data are provided	5-year trend: Please state in each row if the trend is 'Up', 'Down', or 'Unchanged'
Volume of marine landings (tonnes):			
Value of marine landings (national currency):			
Average income / typical income of a fisher or crew member in marine fisheries (national currency):			
Proportion of the national GDP derived from marine fisheries (%):			
Please describe the main economic challenges and problems facing marine fishers in your country <u>providing as much detail as you can</u> . Issues may relate to skills/capacity, costs of finance, access to inputs, seasonality, low profitability/earnings, declining catch rates, getting product to market, infrastructure, or any other issues.			

Trade

Questions	Answer here	Year of data provided	5-year trend: Please state in each row if the trend is 'Up', 'Down', or 'Unchanged'
Volume of marine fisheries exports (tonnes, processed weight):			
Value of marine fisheries exports (national currency):			
List the top 3 importers of your marine fisheries exports in the rows below and provide the total value exported to each country for the most recent year in the column (Answer here) to the right:			
1.			
2.			

3.			
Please describe the main challenges and problems facing marine fishers in your country in trading products overseas, providing as much detail as you can. These may relate to trade barriers/tariffs, customs arrangements, quality/import requirements, payment terms, or any other issues.			

Social

Question	Answer here	Year of data provided
Number of fishers working / employed in marine fisheries:		
Total number of boats used in the marine fisheries sector:		
Average number of crew members per boat:		
Please describe the main social challenges and problems facing marine fishers in your country <u>providing as much detail as you can</u> . These may relate to marginalization, safety, use/lack of contracts, or any other issues.		

Environmental

Question	Answer here
Number of marine protected areas, including fish sanctuaries, protected wetlands, and other waterbody areas protected by a fishery, environmental or any other legal framework:	
Total area covered by these protected areas (in square kilometers):	
Please describe the main environmental challenges and problems facing marine fishers in your country <u>providing as much detail as you can</u> . These may relate to declining stocks, bycatches, pollution, destruction of critical habitats, or any other issues.	

1.3 Aquaculture

Economic

Questions	Answer here	Year for which data are provided	5-year trend: Please state in each row if the trend is 'Up', 'Down', or 'Unchanged'

Volume of aquaculture production (tonnes):			
Value of aquaculture production (national currency):			
Average income / typical income of an aquaculture farmer / employee (in national currency):			
Portion of the national GDP derived from aquaculture production (%):			
Please describe the main economic challenges and problems facing aquaculture in your country, <u>providing as much detail as you can</u> . Issues may relate to skills/capacity, costs of finance, access to inputs, seasonality, low profitability/earnings, getting product to market, infrastructure, or any other issues.			

Trade

Questions	Answer here	Year for which data are provided	5-year trend: Please state in each row if the trend is 'Up', 'Down', or 'Unchanged'
Volume of aquaculture exports (tonnes, processed weight):			
Value of aquaculture produce exports (in national currency):			
List the top 3 importers of your aquaculture exports and provide the total value exported to each country for the most recent year in the column (Answer here) to the right:			
1.			
2.			
3.			
Please describe the main challenges and problems facing aquaculture in your country in trading products overseas, <u>providing as much detail as you can</u> . These may relate to trade barriers/tariffs, customs arrangements, quality/import			

requirements, payment terms, or any other issues.	
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Social

Question	Answer here	Year of data provided
Number of workers / employees working in and in support of aquaculture:		
Total number of aquaculture establishments:		
Average number of workers / employees in an aquaculture establishment:		
Please describe the main social challenges and problems facing aquaculture in your country <u>providing as much detail as you can</u> . These may relate to marginalization, safety, use/lack of contracts, or any other issues.		

Environmental

Question	Answer here
Do you have specific designated areas for aquaculture production or aquaculture, total number of areas:	
Total size of the identified or designated areas for aquaculture production:	
Please describe the main environmental challenges and problems facing aquaculture in your country <u>providing as much detail as you can</u> . These may relate to, access to land or inputs, pollution, destruction of critical habitats, or any other issues.	

1.4 Processing sector

Question	Answer here	Year for which data are provided	5-year trend: Please state below in each row if the trend is 'Up', 'Down', or 'Unchanged'
How many registered/formal processing establishments are there i.e. registered companies			

with significant investments in buildings/infrastructure			
How many processing establishments are certified to export products			
What is the total number of people employed in the formal processing sector			
What is the total number of people employed in the more informal processing sector			
What is the total number of women employed in the formal processing sector			
What is the total number of women employed in the more informal processing sector			
Please describe the main issues affecting the fish processing sector <u>providing as much detail as you can</u> . These may relate to access to skilled workers, processing inputs, capital for investments, government regulations affecting development, or any other issues			

In addition to your answers above, please could you assemble all data you think may be useful/relevant for the consultants prior to their visits, so that data can be provided during the first meeting during the consultants' visit.

2. Policy documents

Please provide the following policy documents to the consultants, preferably when you return this questionnaire:

1. Formal policy documents, like the most recent "National Fisheries Policy" or the "National Aquaculture Policy" but also national policies from other government offices that might be relevant for fisheries or affect fisheries, like policies related to food safety (Health), international relations (Foreign Affairs), and fisheries control (incl. Navy or Coastguard);
2. Legislation, that may partly inform policy or partly may be policy, both primary acts as well as secondary regulations;
3. Informal Ministerial Statements, decrees, administrative orders, etc. that reflect and can be considered as government policy.

3. AMS views on policy content

This section asks for your views about the potential AGFP, its scope and content. Views about levels of support for the inclusion of different policy areas will be classified so they can be scored, and average scores generated across all AMS for the inclusion of different areas. For example, the views of the AMS about how appropriate it would be to include a policy topic in the AGFP will be turned into numeric values, with 'very' = 4, 'moderately' = 3, 'a little' = 2, and 'not at all' = 1.

Please coordinate with the respective fisheries agency units when answering the technical questions below to secure the views of the technical experts in charge of the specific question and to allow their technical expertise to be fully reflected in the answers of this questionnaire.

General views

Before answering questions about specific policy areas that could be included in a AGFP, please provide some comment and your thoughts about how appropriate in general terms it is to have a AGFP. You may wish to refer to shared/common issues, differences between countries, issues of sovereignty, potential benefits of such a policy, potential challenges of implementing such a policy, etc. Please provide as much information as you can:

Answer here:

Furthermore, we seek your advice whether

1. the AGFP should be covering things that can or should be addressed at regional level i.e. regional policy, for example policies for the management of regionally shared stocks, like tuna species, or policies for the development of standards for regional trade of fish and fish products, including broodstock, seeds, feed, drugs and chemicals for aquaculture production; or

2. should the AGFP commit countries to doing things at the national level as well, thus requesting AMS to translate the AGFP into national policies and resulting action at national level?

Answer here:

Sustainable inland fisheries resources management

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on sustainable inland fisheries resources management	Very appropriate	
	Moderately appropriate	
	A little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to inland fisheries where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as shared watershed management, management of dam water flows, impacts on migratory species, the introduction of non-native species and the protection of breeding grounds, etc:	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Sustainable marine fisheries resources management

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on sustainable marine fisheries resources management?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to marine fisheries where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as development of regional management plans for shared stocks, certification of regional fisheries by environmental/eco-labels, etc (note that there are specific sections below on science/research, data collection, and on IUU fishing):	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Sustainable aquaculture

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on sustainable aquaculture?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas	Justification / explanation
---	-----------------------------

related to aquaculture where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as regional action to ensure bio-security (preventative and after disease outbreaks), regional research on selective breeding and genetic modification, harmonized traceability standards, etc:	
1.	
2.	
3.	
4.	
5.	

Illegal, Unreported and Unregulated (IUU) fishing

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on combating IUU fishing?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to combatting IUU fishing where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as harmonization of sanctions for different offences at regional level, sharing of intelligence between AMS, joint patrols, etc:	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Food safety and improved nutritional value

Policy	Grade	Put an X in one of the boxes below
	Very appropriate	

How appropriate do you think it would be for a AGFP to include regional policy statements/content on food safety and improved nutritional value?	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to food safety where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as harmonized food safety standards at a regional level, joint investments in regional laboratories, regional harmonization of laboratory testing, etc:	Justification / explanation
	1.
	2.
	3.
	4.
	5.

International trade

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on international trade?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to trade where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as regional action on market	Justification / explanation

promotion in overseas markets, harmonized export procedures, standardized and streamlined customs arrangements within AMS to facilitate intra-ASEAN trade, etc:	
1.	
2.	
3.	
4.	
5.	

Labour and working conditions in fisheries and aquaculture

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on labor and working conditions in fisheries and aquaculture?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to labour conditions where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as a set of regional minimum standards of employment in the fishing sector that exceeds those in ILO conventions, programmes to facilitate migrant workers in the fisheries sector between AMS, regionally consistent processes for dealing with and repatriating fishermen found infringing rules in other AMS etc:	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Science and research

Policy	Grade	Put an X in one of the boxes below

How appropriate do you think it would be for a AGFP to include regional policy statements/content on science and research in fisheries and aquaculture?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to science and research where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as exchange programmes for fisheries scientists, regional research programmes on shared/migratory stocks, joint investment in regional research facilities, research of regional benefit on: i) fish processing technologies; fishing gear developments; iii) on aquaculture developments in feed composition, selective breeding, genetic modification, etc:	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Data collection and data sharing

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on data collection and data sharing?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to data collection and sharing	Justification / explanation
--	-----------------------------

where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as a collection and publication of a minimum set of regional data on the economic, social and environmental status of the sector, standardized definitions at the regional level for data collection and exchanges for joint management decisions, etc:	
1.	
2.	
3.	
4.	
5.	

Fishery subsidies

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on fishery subsidies?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to subsidies where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as regional action in the form of technical assistance support to ensure compliance with WTO rules on subsidies currently being negotiated, regional collaboration on approaches to WTO negotiations, etc:	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Marine debris, i.e. abandoned, lost and discarded fishing gears

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on marine debris, i.e. abandoned, lost and discarded fishing gears?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to marine debris where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as a regional approach to minimizing waste at sea from fishing vessels in terms of both prevention (through regulation, communication to avoid gear conflicts), and clean-up etc:	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Endangered threatened and protected (ETP) species

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on marine mammals and marine endangered species?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to ETPs where you think <u>regional action</u> could be beneficial. Please provide some	Justification / explanation

justification/explanation in the right-hand column. You may wish to highlight and comment on things such as a set of harmonized regional standards and regulations for minimizing interactions of the fishing sector with endangered, threatened and protected species, etc:	
1.	
2.	
3.	
4.	
5.	

Funding

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on funding?	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to funding where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as a regional fisheries fund available for certain purposes of regional benefit, regional collaboration to access funding at the regional level from donors, etc:	Justification / explanation
1.	
2.	
3.	
4.	
5.	

Special support for small scale fisheries

Policy	Grade	Put an X in one of the boxes below
How appropriate do you think it would be for a AGFP to include regional policy statements/content on special	Very appropriate	
	Moderately appropriate	
	Little appropriate	
	Not at all appropriate	

support for small scale fisheries?		
Please justify/explain your answer below. Answer here:		

Please provide below up to five topics, issues, actions, or areas related to small scale fisheries where you think <u>regional action</u> could be beneficial. Please provide some justification/explanation in the right-hand column. You may wish to highlight and comment on things such as a harmonized approach to small scale fisheries management, efforts to standardize a definition of small-scale fisheries at the ASEAN level, etc:	Justification / explanation
	1.
	2.
	3.
	4.
	5.

4. Existing engagement by AMS at an international level

This section explores AMS views about different mechanisms for how the AGFP should be developed on completion of the feasibility study, if a decision is taken to proceed with its development.

Has your country signed any of the below international Treaties / Agreements?		
Treaty / Agreement	Yes	No
United Nations Convention on the Law of the Sea (UNCLOS)?		
UN Fish Stock Agreement (UNFSA)		
FAO Compliance Agreement (FAOCA)		
FAO Agreement on Port State Measures (APSM)		
Other (pls specify and add rows as necessary)		
What motivated your country to sign the above treaties / agreements? Answer here:		
What did you expect from signing the above treaties / agreements? Answer here:		

Is your country a member in any of the following regional bodies?		
Regional Body	Yes	No
Indian Ocean Tuna Commission (IOTC)		
Western Central Pacific Fisheries Commission (WCPFC)		
Mekong River Commission (MRC)		
Southeast Asia Fisheries Development Commission (SEAFDEC)		
Other (please specify and add rows as appropriate)		
What motivated your country to join the above regional bodies? Answer here:		
What benefits do you get or do you expect to receive from being member in the above regional bodies? Answer here:		

As a member of ASEAN, you may have specific expectations on the AGFP. Can you describe your expectations and how an AGFP might help your country? Answer here:

5. Next steps if the Feasibility Study recommends a AGFP

If the feasibility study presented in June 2020 shows overall benefits of a AGFP, and AMS agree to proceed with its developments, what are your thoughts on the following issues:

What would be the timeframe for its development? Answer here:
Who should lead/drive the drafting process (e.g. AHTF, consultants, other)? Answer here:
What would be the formal processes for agreeing the final content? Answer here:
To what extent should Ministries work on AGFP policy content alone, and to what extent should national stakeholders (e.g. private sector, civil society, etc) be included? Answer here:
What would be the processes for the formal launching of the policy? Answer here:
Which would be the frequency with which a AGFP might need to be updated?

Answer here:

Which processes for monitoring and evaluating do you foresee during the implementation of the AGFP? Answer here:

Annex 2: Policy Briefings

For easy access to individual fully laid out and branded please click on the respective links:

1. [European Union Common Fisheries Policy](#)
2. [The European Maritime and Fisheries Fund](#)
3. [The EU common organisation of the market in fishery products](#)
4. [The EU data collection framework](#)
5. [International fisheries-related instruments](#)
6. [FAO policy guidance on strengthening sector policies for better food security and nutrition results](#)
7. [The Caribbean Community Common Fisheries Policy](#)
8. [The Mekong River Commission's Basin-Wide Fisheries Management and Development Strategy 2018-2022](#)
9. [Resolution and Plan of Action of Sustainable Fisheries for Food Security for the ASEAN towards 2020](#)
10. [ASEAN Food Safety Policy](#)

1. EU Common Fisheries Policy

Section 1: Introduction to European Union Common Fisheries Policy

The European Union (EU) Common Fisheries Policy (CFP) is a set of rules for the conservation of marine biological resources and the management of fisheries and fleets exploiting them. In addition, in relation to markets and financial support, the CFP covers fresh water biological resources, aquaculture, and the processing and marketing of fisheries and aquaculture products. The CFP was developed in the late 1970s and has been through a series of updates, the most recent of which took effect on 1 January 2014. The policy, as reflected in REGULATION (EU) No 1380/2013 was adopted by the European Parliament (the directly elected legislative body of the European Union) and the Council of the EU (the institution representing the member states' governments).

The CFP covers fishing activities in EU waters, and the activities of EU fleets operating in the waters of third countries. It applies to all Member States (MS) of the European Union.

The principal objective of the CFP is to ensure that fishing and aquaculture activities are environmentally sustainable in the long-term and are managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies. Through a precautionary and ecosystems-based approach, the objective is for all fish stocks to be exploited at sustainable levels based on maximum sustainable yield (MSY) by 2020 at the latest. Other objectives of the CFP include: the collection of scientific data; eliminating discards through a landing obligation; conditions for economically viable and competitive fish catching and processing sectors; matching fleet capacity with fish resource availability; developing sustainable aquaculture; a fair standard of living for those who depend on fishing activities; ensuring a level-playing field for fisheries and aquaculture products marketed in the EU; promoting coastal fishing activities taking into account socio- economic aspects and coherence with environmental legislation.

Section 2: Content of the EU CFP

Following from these objectives, the CFP has a number of main policy areas and approaches as follows:

Sustainable fisheries management. In the North-East Atlantic and adjacent waters (North Sea, Baltic Sea, Skagerrak, Kattegat, West of Scotland Sea, Irish Sea and Celtic Sea) Total Allowable Catches (TACs) are set for the main commercial species in EU waters based on

scientific advice. TACs for individual species are divided into quotas and distributed among the EU MS based on pre-defined shares of the stocks for each Member State. Quota available to MS and their fishing industries can be transferred. All vessels must be licensed to fish, and there are compulsory maximum fleet capacity ceilings and national schemes in place for the EU Member States for the purpose of managing and adjusting fishing capacity. In addition, a range of technical measures (e.g. gear restrictions, closed areas and seasons) are in place.

The EU has exclusive competence in the conservation of marine biological resources under the CFP (with the Union sharing competences for other components of the CFP with MS). However, the CFP gives MS the chance to play an active role in designing fisheries conservation measures (so-called regionalisation), and prescriptive top-down decisions have been replaced by results-based management with more input from the bottom up. Fisheries are increasingly managed by multi-annual plans combining different management tools, and industry and MS join together in Advisory Councils to make regionally specific management recommendations, within the general framework of rules and principles applying across the EU. Regionally based management recommendations are subject to approval by the European Commission (the EU institution responsible for proposing legislation, implementing decisions, upholding the EU treaties, and managing the day-to-day business of the EU), with EU legislation turning them into law.

Fisheries controls. To ensure that the rules of the CFP are followed in practice, a control system has been designed to: monitor that only the allowed quantities of fish are landed and combat illegal fishing; allow data collection for managing fishing opportunities; clarify the respective roles of EU countries and the Commission; ensure harmonized application of rules and sanctions across the EU; enable tracing and checking of fisheries products throughout the supply chain, from net to plate. A dedicated Control Regulation provides the legal basis, and is currently under review to modernise, strengthen and simplify the EU fisheries control system and to increase fisheries controls. Changes are likely to improve sharing of data on controls, and that all vessels irrespective of size fall under reporting and monitoring obligations. A European Fisheries Control Agency, based in Vigo in Spain helps to organize coordination and cooperation between national control and inspection agencies in the areas of data collection, training, and joint deployment plans, so that the rules of the CFP are respected and applied effectively.

IUU fishing. EU policy on combatting Illegal Unregulated and Unreported (IUU) fishing is embodied in the EU IUU regulation that entered into force on 1 January 2010. It concerns EU Member States and non-EU countries alike and applies to all vessels that commercially exploit fisheries resources destined for the EU market. It requires countries wishing to export to EU MS to have in place catch certification schemes and to issue catch certificates to verify that fish entering the EU market is not coming from IUU sources, so that only marine fisheries products validated as legal by the competent flag state or exporting state can be imported to or exported from the EU.

Aquaculture. The CFP articulates that aquaculture should contribute to the preservation of the food production potential on a sustainable basis throughout the Union so as to guarantee long-term food security, including food supplies, as well as growth and employment for Union citizens, and to contribute to meeting the growing world demand for aquatic food. A set of Strategic Guidelines from 2013 presents common priorities and general objectives at EU level, with four priority areas: reducing administrative burden; improving access to space and water; increasing competitiveness; and exploiting competitive advantages due to high quality, health and environmental standards. Based on the guidelines, the Commission and EU countries collaborate to help increase the sector's production and competitiveness. EU countries set up multiannual plans to promote aquaculture, and an Aquaculture Advisory Council (a stakeholder-led organisation) provides the European institutions and the MS with recommendations and advice on issues related to the sustainable development of the sector.

International dimension. Outside of the EU, the EU represents its MS in Regional Fisheries Management Organisation (RFMOs) and supports decision-making by RFMOs in support of

sustainability. To ensure sustainable fishing by EU vessels in the waters of other countries outside of the EU, fishing under Sustainable Fisheries Partnership Agreements (SFPAs) ensures that EU vessels are only allowed to target surplus resources i.e. resources that are not over-exploited, and the partner country is not willing to fish or not capable of fishing. There is a dedicated Regulation on the sustainable management of the EU's external fishing fleet.

Common organisation of the markets, and the European Maritime and Fisheries Fund (EMFF) Market organisation and the EMFF are addressed in separate dedicated policy briefs.

Section 3: Impacts of the EU CFP

In terms of the key environmental objective of the CFP of sustainable fisheries and the number of stocks overfished or fished within F_{MSY} by year, in the North-East Atlantic and adjacent waters, the number and proportion of stocks fished in accordance with the CFP F_{MSY} objective has been increasing steadily over recent years, around 60% of stocks which have scientific assessments are exploited within sustainable levels, TACs are increasingly being set in line with MSY advice, and average biomass increased by 35% between 2003 and 2015. However, in the Mediterranean where TACs are not used, overfishing of most stocks is the norm and average biomass declined by 20% between 2003 and 2014. These data show that while there have been improvements in the environmental status of stocks in recent years, and some specific actions in the Mediterranean in recent years towards tackling overfishing, there remain significant regional differences, and further room for improvement.

For the past 22 years, the EU fishing fleet capacity has successfully been reduced to better match capacity with resource availability. Fleet capacity has declined in terms of both tonnage and engine power, in recent years at an average rate of around 2% p.a. in terms of vessel numbers, kW and GT. Despite accession of more States to the EU, the number of EU vessels in 2017 was 83,117 which was 20,717 fewer than in 1996. These changes both support the improved environmental performance but also allow for improved environmental performance to feed through into improved economic performance for the EU fishing fleet. Revenues have increased slowly but steadily over the last decade, but other economic indicators such as gross value added and profits have shown a marked improvement. Net profit as a proportion of fishing income for example increased steadily from 6% in 2009 to 11% in 2015. In 2016 the EU fleet registered record-high net profits of EUR 1.35 billion, up from EUR 789 million in 2015, as a result of a combination of higher average fish prices, continued low fuel prices, improved status of some important stocks, and technological advances. But as with environmental performance, economic performance is generally better in the North Sea, North-East Atlantic and Baltic than for those fleets fishing in the Mediterranean and Black Sea. The economic situation of certain small-scale coastal fleets, in particular in the Mediterranean, continues to be of concern, in contrast with the overall improvement in the EU large-scale and distant-water fleets.

In terms of the social impacts of the CFP, the numbers of people employed in fishing has decreased on average by 9% since 2008. This was to be expected given the need to reduce fleet capacity and vessel numbers to achieve the CFP MSY objective. On the other hand, and correspondingly, average wages for fishing crew (in most areas apart from the Mediterranean) have benefitted as a result and have increased in line with increased economic performance.

Other positive impacts of the EU CFP include a processing sector that is generally profitable with an annual turnover of around EUR 28 billion, a stable aquaculture sector that is important in some MS (especially the UK, France, Spain, Greece, and Italy), active engagement by the EU in supporting sustainability at the international level through its engagement with RFMOs, and increased organisation and coordination of the sector within the EU - in 2017 there were 218 producer organisations across 18 EU Member States working to make their production sustainable and efficiently market their products, there are now 10 advisory councils for different regions/issues, there are increased levels of data sharing between MS, and increasingly EU MS are working together on joint control operations.

In addition, a key achievement of the CFP since its inception has been the avoidance of conflict, fixing agreed sharing of fisheries resources among the Member States, and allowing the development of conservation rules applicable to all. Such rules can in principle also be developed on a regional basis. Where the CFP integration goes even deeper is in the adoption of a common, rules-based dispute settlement procedure through the European Court of Justice, financial support for the development and adjustment of the fisheries sector, and market-based interventions which would be difficult to implement in the absence of common agreement and rules.

Section 4: Conclusion

The EU CFP is comprehensive in terms of its coverage of different issues. It has brought about continued and sustained improvements over the past 10-15 years of benefit to the catching sector, aquaculture producers, processors, and consumers. These improvements have been possible because of periodic amendments/changes in policy content (based on impact assessments and evaluations), and because of increasingly effective implementation. Some competencies (like marine conservation) rest at the EU level, with others (such as aquaculture development) remaining at the MS level.

Section 5: Implications of the EU CFP for the ASEAN countries

The policy context for fisheries in the EU and the ASEAN region are different, in that the EU has exclusive competence in the conservation of marine biological resources, while ASEAN does not, and fisheries conservation and management remains the competency of the sovereign ASEAN Member States. Nevertheless, the EU CFP has become increasingly devolved, with fisheries management decision-making taking place at a regional level. The benefits of regional action, of wide stakeholder involvement in decision-making, of reducing fleet capacity, and of exploiting stocks at sustainable levels based on scientific assessment and advice, suggest that such approaches could also generate benefits for ASEAN Member States.

Successive updates of the EU CFP highlight that policy should not remain static, but that policy should be updated periodically to reflect needs and priorities, and to improve policy based on lessons learned. The use of evaluation and impact assessments to inform decisions about policy changes, shows the importance of using an evidence-based and transparent process for introducing policy change. Also shown to be important are funds to support the implementation of policy.

Regional policy can be an affective way of avoiding conflict between States and of developing common conservation rules applicable to all.

Additional reading and useful sources of information

The legal text of the CFP can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1547133726973&uri=CELEX:32013R1380>

Facts and figures on the CFP (2018) can be found here: https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/pcp_en.pdf

Information about the different components of the CPF can be found here: https://ec.europa.eu/fisheries/cfp_en

The EU aquaculture strategic guidelines can be found here: https://ec.europa.eu/fisheries/cfp/aquaculture_en

2.EU European Maritime and Fisheries Fund

Section 1: Introduction to the European Maritime and Fisheries Fund (EMFF)

The European Maritime and Fisheries Fund (EMFF) is the fund to support the EU's integrated maritime and fisheries policies. It is one of five European Structural and Investment (ESI) Funds which complement each other and seek to promote a growth and job-based economic, social and territorial cohesion in Europe. All five funds are subject to The Common Provisions Regulation ((EU) No 1303/2013) which defines a common set of rules and includes provisions concerning conditionality, programming, performance review, financial management, arrangements for monitoring, reporting, evaluation and eligibility rules.

The EMFF is part of the multi-annual financial framework of the EU budget and covers the budget period 2014 – 2020. It was jointly approved by the European Parliament (the directly elected legislative body of the European Union) and the Council of the EU (the institution representing the member states' governments) in the form of REGULATION (EU) No 508/2014. The EMFF follows earlier funds of EUR 4.3 billion provided through the European Fisheries Fund (EFF) for the period 2007 – 2013, and before that the Financial Instrument for Fisheries Guidance (FIFG) for the period 1994-2006 (under the FIFG, fleet overcapacity was addressed through multi-annual guidance programmes but in 2002 these were replaced by the EU's vessel entry/exit scheme).

With a total funding allocation from the EU budget of EUR 6.4 billion, the objectives of the EMFF are to:

- i) promote competitive, environmentally sustainable, economically viable and socially responsible fisheries and aquaculture
- ii) foster the implementation of the CFP (see separate policy brief)
- iii) promote a balanced and inclusive territorial development of fisheries and aquaculture areas
- iv) foster the development and implementation of the EU's integrated Maritime Policy (IMP) in a manner complementary to cohesion policy and to the CFP. The Fund is also intended to contribute to the Europe 2020 strategy and to smart, sustainable and inclusive growth.

In terms of its scope it covers marine capture fisheries, inland capture fisheries, aquaculture, processing, marketing, and conservation. It is available to all EU Member States (MS).

The existing multi-annual framework will be replaced by a new one from 2021-2027, and for the next long-term EU budget the European Commission (the EU institution responsible for proposing legislation, implementing decisions, upholding the EU treaties, and managing the day-to-day business of the EU) is proposing €6.14 billion for European fisheries and the maritime economy. The future EMFF will continue to support the European fisheries sector towards more sustainable fishing practices, but with a particular focus on supporting small-scale fishermen, a sustainable blue economy, strengthening international ocean governance, protecting marine ecosystems, and climate change mitigation and adaptation. These objectives are consistent with the Sustainable Development Goals (namely SDG 14) and with the commitments agreed under the Paris Agreement. New features of the future fund will include: i) simplification and a wider choice for MS, who will now be able to target support to their strategic priorities instead of having to choose from a 'menu' of eligible actions; ii) better alignment with other European Union funds; and iii) a better targeting of support to the achievement of the CFP.

Section 2: Content of the EMFF

EUR 647 million (11% of the EUR 6.4 billion) of the current EMFF is under the direct management of the European Commission. Funds under direct management are used to

support EU-wide objectives in maritime and coastal affairs such as: international governance; cooperation through exchange of information and best practices; public information and support to networking platforms; marine knowledge; and maritime spatial planning.

The balance of funds (EUR 5.75 billion) is under shared management between the European Commission and the MS. Each MS is allocated a proportion of the budget based on objective indicators, e.g. the length of the coastline, the size of its fishing industry, and the extent of commitments in data collection and fisheries control and enforcement. The Fund is used to co-finance projects along with national funding from MS governments and the private sector beneficiaries. Spain has the greatest share (20% of EU funds under shared management), followed by France (10%), Italy and Poland (both 9%) and Portugal (7%).

Planned use of funds falls under five main categories:

- EUR 4.34 billion (from the EU budget i.e. excluding national co-financing) is allocated for sustainable fisheries, for making fisheries and aquaculture more sustainable and profitable. Typical projects relate to things such as innovation, investments onboard vessels, adding value, market promotion, training, diversification, support for start-up/new fishermen, health and safety, some types of infrastructure, vessel scrapping, reducing discards, protection and restoration of marine biodiversity and ecosystems, and improvements in energy efficiency.
- EUR 580 million is planned for control and enforcement (for projects related to things such as new control technologies, data sharing, training of control personnel, and the modernization and purchase of patrol vessels, aircrafts and helicopters).
- EUR 520 million is for data collection (principally as required by the data collection regulation – see separate policy brief).
- EUR 192.5 million is planned as compensation for the EU's outermost regions (areas geographically very distant from the European continent).
- EUR 71 is planned for the blue economy/integrated maritime planning (IMP).

Some types of projects/operations are expressed prohibited, namely: i) operations increasing the fishing capacity of a vessel or equipment increasing the ability of a vessel to find fish; ii) the construction of new fishing vessels or the importation of fishing vessels; iii) the temporary or permanent cessation of fishing activities, unless otherwise provided for in the Regulation; iv) exploratory fishing; v) the transfer of ownership of a business; and vi) direct restocking, unless explicitly provided for as a conservation measure by a Union legal act or in the case of experimental restocking.

In terms of implementation of the EMFF, each country draws up an operational programme saying how it intends to spend the money, based on its own needs and priorities. Once the Commission approves this programme, it is up to the national authorities to decide which projects will be funded following applications made by potential beneficiaries/operators based on the relevant application procedures in the different MS. The managing authority in each MS is responsible for checking the eligibility of the proposed projects and whether they meet the relevant MS selection criteria and investment priorities. Monitoring Committees at MS level are established for the follow-up of the operational programmes. The EMFF managing authorities in each MS also have to prepare and submit an Annual Implementation Report each year, which is subject to a specific acceptance procedure by the European Commission.

Certain conditions must be in place ex-ante before the funds are disbursed (for instance, sufficient administrative capacity to deliver on fisheries control and data collection, submission of a report on the balance of the fleet, and the submission of a multi-annual national plan for sustainable aquaculture) to ensure that investments can be made in the most effective manner. A common set of indicators is agreed within the regulations. Progress towards the achievement of objectives is monitored and measured against a set of milestones to the common indicators agreed as part of a performance framework contained in the operational programmes. Access to funds is also conditional on compliance by MS and operators with the

objectives, rules and targets of the CFP, which means that: i) fishermen who have committed serious infringements cannot receive any support from the Fund; and ii) the European Commission may interrupt or suspend payments to MS that do not comply with their obligations in terms of control and data collection. Member States must also publish a list of project/operations supported under the EMFF along with the amount of EU contribution for each operation.

Implementation of the EMFF under shared management is assisted by two support units based in Brussels. One, the FARNET support unit assists with Community-Led Local Development (CLLD) under the EMFF which has the aim of helping local communities tackle the multiple challenges faced by coastal communities across the EU. The other, is the Fisheries and Aquaculture Monitoring and Evaluation (FAME) support unit, with FAME supporting a Common Monitoring and Evaluation System (CMES). Within the CMES there are three types of common indicators addressing different levels of objectives and serving different purposes:

- Context indicators are linked to the wider objectives of the EMFF in terms of support for the CFP and IMP, and reflect the situation at the beginning of the programming period.
- Result indicators are variables that measure the gross effects of the EMFF interventions on specific dimensions targeted by a policy action. The effect to be measured and the target refer to the operational programme intervention only. They are based on information from beneficiaries and/or MAs, and report on changes in absolute or relative terms.
- Output indicators are the direct products of activities implemented under the operational programmes that are intended to contribute to results. In most cases they are expressed as the number of operations co-financed by the EMFF.

Data on operations/projects are fed by MS into a database referred to as 'Infosys' which is a central reporting system to gather consistent and comparable cumulative data about what is happening at the operational level and the results achieved; no such tool is available for any other ESI Funds.

Other implementation arrangements include an EMFF Committee that delivers opinions on draft implementing acts, and an EMFF Expert Group (comprised of MS representatives) to provide advice and expertise to the Commission on the preparation of legislative proposals and policy initiatives, the preparation of delegated acts, and the implementation of EU legislation.

The multi-annual financial framework of the EMFF (as with the EFF before it) is subject to mid-term and ex-post evaluations, and MS are required to conduct evaluations of their operational programmes at different stages (guidance on how to do so has been provided by the FAME support unit), so that lessons can be learned and used to inform future funding programmes.

Section 3: Impacts of the EMFF

The EMFF has so far been successful in supporting over 34,000 projects/operations.

Uptake of EMFF expenditure by MS however was slow in the first few years of the EMFF partly because the EMFF Regulation was not approved until May 2014, and partly due to delays in the preparation and approval of MS operational programmes. In addition, expecting meaningful impacts of EMFF funding to overall CFP or IMP objectives to be visible at this stage is unrealistic given both the time-lag for the impacts of specific projects feeding through into changes in context indicators, and the fact that EMFF support is only one tool in support of CFP and IMP policies.

Nevertheless, impacts can best be expected to reflect total EMFF payments to beneficiaries in different MS (i.e. eligible payments for completed projects), although commitments made to date by MS managing authorities to beneficiaries based on approved applications provide a

strong indication of how the impacts of the EMFF are likely to unfold in the future. By July 2019 payments to beneficiaries had totaled EUR 1.1 billion (18.9% of the shared management budget) with commitments standing at EUR 2.4 billion (41.8% of the shared management budget). Commitments and payments for projects/operations in the Atlantic sea basin have been the greatest at 39.7% of total commitments and 45.1% of total payments, followed by the Mediterranean, the Baltic, the North Sea, the Black Sea, and landlocked areas, in that order.

In terms of contributions to the different CFP objectives, recent analysis by the FAME support unit (July 2019) suggests that by the end of 2018 most funding in absolute terms (commitments and payments) had been used to support the CFP objectives of: i) 'Exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the maximum sustainable yield; Fisheries activities avoid the degradation of the marine environment' (CFP Article 2(2,3)); ii) 'Provide conditions for economically viable and competitive fishing capture and processing industry and land-based fishing-related activity' (CFP Article 2(5 c)); and iii) 'Promote the development of sustainable aquaculture activities' (CFP Article 2(5 e)).

With regards to the four EMFF objectives (listed in the introduction), 84% of all operations at the end of 2018 had been related to the objective of 'promoting competitive, environmentally sustainable, economically viable and socially responsible fisheries and aquaculture' (508/2014 Art. 5(a)).

Other evidence (partly quantitative and also anecdotal and qualitative) of positive impacts of EMFF support for beneficiary projects is provided in 'stories of the month' which are published on the European Commission website and/or highlighted in the DG MARE monthly e-newsletter. Some videos presenting the impacts of specific projects have also been prepared.

Section 4: Conclusion

The EMFF has been designed primarily to support the CFP, but also the IMP. Its underlying regulation identifies areas of funding that can be expected to contribute to the objectives of those policies. While EU MS have flexibility to plan funding allocations to areas based on need/priorities, some types of projects are specifically prohibited. Funding provided from the EU budget comes with conditionalities, which relate to respecting the rules of the CFP, and reporting on the implementation and results of MS operational programmes in a regular and standardized format to allow for common monitoring and evaluation of the Fund. Technical support to MS in implementation of the EMFF and in its monitoring and evaluation, has proved beneficial. The Fund in its current form represents an evolution in the approach taken by the EU to provide financial support to the MS that has evolved over many years, with multi-annual financial planning cycles being adapted to meet emerging needs and to ensure that lessons from the past are incorporated into current/future support.

Section 5: Implications of the EMFF for the ASEAN countries

While ASEAN itself does not have a budget to support a regional programme of financial support for a future possible ASEAN general fisheries policy, the EMFF and its implementation demonstrates how successful implementation of fisheries policy could benefit from supporting and enabling finance. If such finance was to be provided, lessons from the EMFF suggest that certain conditionalities should be imposed on the use of funds, that reporting on the benefits/impacts of funding would be important at beneficiary and sector level, and that funding programmes should be carefully and periodically monitored and evaluated. Both the EMFF, and ongoing negotiations within the World Trade Organisation on subsidies rules, suggest that some funding might need to be expressly prohibited, namely funding which contributes to increasing fishing capacity, or that provides support to vessels fishing overfished stocks or which have been identified as engaged in illegal unreported or unregulated fishing.

Additional reading and useful sources of information

The legal text for the EMFF can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0508&from=EN>

EU MS operational programmes can be found here: <https://ec.europa.eu/fisheries/cfp/emff/country-files>

More about FAME and the support unit can be found here: https://ec.europa.eu/fisheries/cfp/emff/fame_en

EMFF 'stories of the month' published on the European Commission website and/or highlighted in the DG MARE monthly e-newsletter can be found here: https://ec.europa.eu/maritimeaffairs/e-newsletter_en).

Videos presenting the impacts of specific projects can be found here: https://www.youtube.com/watch?v=E3_og7XgKGY

https://www.youtube.com/watch?v=jNE72V3IU_o

https://www.youtube.com/watch?v=-xqRkIA_l9g

https://www.youtube.com/watch?v=E-iZ8wN_G3o

https://www.youtube.com/watch?v=mA2nmaQeU_0).

3. EU Common Market Organisation

Section 1: Introduction to the EU common organisation of the market in fishery products

The Common Organisation of the Markets (CMO) is the European Union (EU) policy for managing the market in fishery and aquaculture products and is one of the pillars of the EU's Common Fisheries Policy (CFP) – see separate policy brief. The changing context since the introduction of the CMO in 1970 (through Regulation (EEC) No. 2142/70) both in terms of production (decrease of marine resources and strong development of aquaculture, etc.) and trade (reduction of barriers to trade, multilateral trade agreements, etc.) have resulted in several reforms and modifications of the CMO. The main current legal basis for the CMO is Regulation (EU) No 1379/2013, was agreed by the European Parliament (the directly elected legislative body of the European Union) and the Council of the EU (the institution representing the member states' governments) in December 2013, but there are a number of important supporting implementing regulations (see sources of information at the end of this policy brief).

Organisation of the market is not an exclusive competency conferred to the European Union under the Treaty on the European Union. However, under the principle of subsidiarity, the EU can act in areas which do not fall within its exclusive competence, if the objectives of the proposed action cannot be sufficiently achieved by the EU Member States (MS) themselves.

The CMO applies to all fishery and aquaculture products listed in Annex I of the Regulation (EU) No 1379/2013, which are marketed in the Union.

The CMO objectives are specified in the CFP Regulation (Regulation (EU) No 1380/2013), namely to:

- contribute to the achievement of the CFP objectives, and in particular to the sustainable exploitation of living marine biological resources.
- enable the fishery and aquaculture industry to apply the CFP at the appropriate level.
- strengthen the competitiveness of the Union fishery and aquaculture industry, in particular producers.
- improve the transparency and stability of the markets, in particular as regards economic knowledge and understanding of the Union markets for fishery and aquaculture products along the supply chain, ensure that the distribution of added value along the sector's supply chain is more balanced, improve consumer information and raise awareness, by means of notification and labelling that provides comprehensible information.
- contribute to ensuring a level–playing field for all products marketed in the Union.
- contribute to ensuring that consumers have a diverse supply of fishery and aquaculture products.
- provide the consumer with verifiable and accurate information regarding the origin of the product and its mode of production, in particular through marking and labelling.

Section 2: Content of the EU CMO

The CMO has four main areas of focus.

Organisation of the Sector. Producer organisations (POs) are established as key players in the sector. They are officially recognised by EU MS and report to the European Commission and are set up by fishery or aquaculture producers. They are in charge of the day-to-day management of fisheries. They play an essential role in running the CFP and the CMO as they guide producers towards sustainable fishing and aquaculture, in particular by collectively managing the activities of their members, helping them match supplies with market demands, and supporting them in creating added value. They can take measures to channel the supply and marketing of their members' products, and promote them through certification schemes,

quality seals, geographical designations and so on. They can also promote vocational training, the use of information technology, and work towards reducing the environmental impact of the fishing or aquaculture activities of their members.

Additionally, associations of producer organisations (APOs) can also be approved by national authorities and have a dual purpose: they play the same role as POs, and they also coordinate the activities of their member organisations. Furthermore, 'inter-branch organisations' bring together fish producers, processors and marketers to deploy measures benefiting the sector as a whole; their aim is to improve the coordination of marketing activities and to develop measures of interest for the whole sector.

These professional organisations are eligible for support through the EMFF (see separate policy brief) for their creation, for the preparation and implementation of production and marketing plans which provide the basis for the collective management of their activities, and as EMFF beneficiaries for specific marketing projects which may be approved by the MS managing authorities.

Marketing standards are intended to help to ensure a transparent internal market that supplies high-quality products. Common marketing standards lay down uniform characteristics for fishery products sold in the EU, are applied in accordance with conservation measures. Three specific regulations cover standards for fresh and chilled fishery products of 47 species⁶⁵ (Council Regulation (EC) 2406/96), preserved tuna and bonito (Council Regulation (EC) 1536/92), and preserved sardines and sardine-like products (Re Council Regulation (EC) 2136/89). Marketing standards apply to the species and products included under these regulations that are traded within the EU internal market, including imports from third countries. Marketing standards relating to fishery products have been set out in EU law since the first Regulation establishing a common market organisation in the sector in 1970, and have formed an integral part of the CMO for fishery and aquaculture products ever since. The standards can relate to the quality, size (in particular corresponding to minimum landing sizes for some species), freshness, weight, packing, presentation or labelling of the products.

Fish products intended for human consumption for which common marketing standards are specified can only be marketed in the EU if they comply with the standards. Fishery products that are landed and which do not comply with common marketing standards (as well as those that do), can be used for purposes other than direct human consumption, including fish meal, fish oil, pet food, food additives, pharmaceuticals or cosmetics.

Consumer information. Rules on consumer information establish what information must be provided to the consumer or mass caterer who buys fishery and aquaculture products. These requirements complement general EU rules on the provision of food information to consumers, i.e. those of Regulation (EU) No 1169/2011). All products under CN codes 0301-0307⁶⁶ i.e. fish, molluscs, crustaceans (and seaweeds/algae) in fresh, chilled, frozen or preserved form, must have labelling that specifies the following: commercial and scientific name of the species, the production method, the area where the product was caught or farmed and the category of fishing gear used in capture of fisheries, whether the product has been defrosted, and the date of minimum durability (i.e. the 'best before' or 'use by' date). A Quick Response (QR) code can be used to provide part or all of the relevant information. Additional information can also be added on a voluntary basis such as the date of catch or landing, information on environmental, social or ethical matters, production techniques and nutritional content, but must be verifiable. Where products are not packed, the relevant information can be provided on materials such as billboards or posters.

⁶⁵ Standards on freshness is specified separately for main groups of species (e.g. whitefish, cephalopods, and crustaceans, etc)

⁶⁶ Member States can exempt small quantities of products sold directly from fishing vessels to consumers from the requirements

Market intelligence. The European Commission has established the European Market Observatory for Fishery and Aquaculture Products (EUMOFA), as a market intelligence tool on the EU fisheries and aquaculture sector. EUMOFA uses data that are collected from EU countries, Norway, Iceland and from EU institutions, to publish weekly prices (first sale, retail and imports), monthly trends on the volume and value of species marketed, consolidated yearly data by species and MS. The tool provides for a range of services, all of which are free to users:

- an overview of the EU market for fisheries and aquaculture products.
- country profiles which provide an analysis of the fisheries and aquaculture supply chain in each MS.
- species profiles which provide main market information and data along the supply chain for the most important species for the EU market.
- downloadable data.
- studies and reports related to monthly highlights, a yearly picture of the EU market, price structure along the supply chain for key species/products.

Section 3: Impacts of the EU CMO

The impacts of the CMO relate to the four main focus areas presented above.

In terms of **organisation of the sector**, the CMO (and EMFF support) strengthens the role of producers who are responsible for ensuring the sustainable exploitation of natural resources and who are equipped with and supported by instruments to better market their products. Today, more than 200 producer organisations exist in the European Union.

A recent evaluation (currently in press) of **marketing standards** found that the overall impact of EU marketing standards on the market for fishery and aquaculture products is limited by their narrow scope in terms of products covered, but noted that:

- EU marketing standards have contributed to define common quality criteria and a common language for the main species of fresh fish landed in the EU and for the main traded processed products within the EU and from third countries, which would not have been possible if left to national competencies.
- the quality of landed fish has improved since the entry into force of the marketing standards for a variety of technical and economic reasons and that EU marketing standards made some indirect contribution to these improvements, as the grading done under EU marketing standards has favoured the rewarding of quality (based on size and freshness) with better prices.
- the marketing standards for fresh products have contributed to establishing a level-playing field for producers and buyers (irrespective of scale and location) as they set minimum information for first-hand buyers and facilitate remote purchasing. The harmonisation of the quality criteria between EU and non-EU products for tuna and sardines has had a particular impact on the level-playing field between EU and imported canned products given the large share of the EU market for these products that is imported.
- the marketing standards for preserved products helped to prevent low-priced low-quality products from entering the market and reducing prices.

Consumer information allows consumers to make informed purchasing choices. Consumers receive more and better information on the products sold on the EU market, which, regardless of their origin, must comply with the same rules. It is now possible to have a better understanding of how the EU market functions.

EUMOFA contributes to market transparency and efficiency, and is of use/benefit to producers, processors, importers, retailers, consumers, markets' analysts and policy makers.

It enables direct monitoring of volumes, values and prices of fisheries and aquaculture products, from the first sale to the retail stage, including imports and exports. A recent interim evaluation of the direct management component of the EMFF (used to finance the running of the EUMOFA), concluded that it delivers most of the commitments on market intelligence defined in the CMO regulation, contributes to most EU commitments on market transparency, and compares favourably with other Commission-led observatories on accessibility and content. Feedback from EUMOFA users show that it is used by a very wide range of user groups (private sector, administrations, academics, consultants, etc) for various purposes (business decision-making, research, monitoring, formulating policy) and that ratings for EUMOFA services are generally good.

Section 4: Conclusion

The EU's policy for the common organisation of the market for fisheries and aquaculture products has evolved over a period of almost 50 years. It now focusses on core areas related to the organisation of the sector, consumer information, marketing standards, and market intelligence. The added value of action at the EU-level has enabled benefits and impacts that would not have been possible if EU MS had been left to act on their own. The CMO makes an important contribution to the objectives of the CFP.

Section 5: Implications of the EU CMO for the ASEAN countries

The EU CMO has important implications for ASEAN countries and the establishment of a possible ASEAN general fisheries policy. It shows how, even for an issue for which there is no inherent 'competency/mandate' at regional level, action at a regional level can serve to generate significant benefits to a wide variety of stakeholders that would not be possible if left to individual countries. Organisation of the market can help to ensure a level playing field for producers, ensure quality and informed decision-making for consumers, and enhance transparency. The EU CMO experience suggests that involving professional representative organisations in the organisation of the ASEAN market, alongside governments and ASEAN, would be highly beneficial for the transparent and efficient functioning of that market.

Additional reading and useful sources of information

Regulation (EU) No 1379/2013 of the European Parliament and of the Council of 11 December 2013 on the common organisation of the markets in fishery and aquaculture products, can be found here (along with other supporting Commission implementing regulations): <https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1424680663995&uri=CELEX:32013R1379>

A guidance document on the implementation of Chapter II "Professional Organisations" of Regulation (EU) No 1379/2013 can be found here: https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/guidance-document-on-implementation-of-professional-organisations_en.pdf

The European Commission has published a pocket guide to the EU's new fish and aquaculture consumer labels which can be found here: https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/eu-new-fish-and-aquaculture-consumer-labels-pocket-guide_en.pdf

The EUMOFA website is available here: www.eumofa.eu

4.EU Data Collection Framework

Section 1: Introduction to European Union Data Collection Framework (DCF)

Since 2000, an EU framework for the collection and management of fisheries data has been in place, with EU fisheries management relying on data collected, managed and supplied by EU Member States (MS) under a Data Collection Framework (DCF). The DCF is a multiannual basis for the collection of fisheries dependent and independent data, biological, environmental, economic and social data. Rules about data collection are set at the EU level and are legally binding.

The most recent legal basis is Regulation (EU) 2017/1004, which requires the collection, management and use of data, and reflects the EU's policy on data collection in support of the EU's Common Fisheries Policy (CFP - see separate policy brief). The Regulation was approved by the European Parliament (the directly elected legislative body of the European Union) and the Council of the EU (the institution representing the EU Member States' governments) in May 2017. Regulation 2017/1004 is complemented by: i) Commission Delegated Decision (EU) 2019/910 which sets out the details as part of the multiannual Union programme for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sector; and ii) Commission Implementing Decision (EU) 2019/909 establishing the list of mandatory research surveys and thresholds for the purposes of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors.

The EU CFP itself states that EU MS should manage data and make them available to end-users, including bodies designated by the European Commission (the EU institution responsible for proposing legislation, implementing decisions, upholding the EU treaties, and managing the day-to-day business of the EU). It also clarifies, along with Regulation (EU) No 508/2014 on the European Maritime and Fisheries Fund (EMFF) – see separate policy brief, that the acquisition and management of such data are eligible for funding through the EMFF. However, failure by a Member State to collect and/or to provide data in a timely manner to end-users can result in a proportionate suspension or interruption of financial assistance to that MS from the EMFF. The EMFF Regulation requires all EU MS to submit annual work plans for data collection to the Commission for approval, by 31 October each year preceding the year to which the work plan applies.

The DCF is intended to contribute towards reaching the objectives of the CFP, which include, inter alia, the sustainable exploitation of commercially exploited species in line with the MSY approach, and be coherent with the Union environmental legislation in particular the achievement of good environmental status in the marine environment. More specifically, the objectives of the DCF are to enable the assessment of: i) the state of exploited marine biological resources; ii) the level of fishing and the impact that fishing activities have on the marine biological resources and on the marine ecosystems; and iii) the socio-economic performance of the fisheries, aquaculture and processing sectors within and outside EU waters.

The key principles for data collection are: accuracy; reliability and timeliness; avoidance of duplication through coordination; safe storage in database systems; availability of data; compliance with laws on personal data protection; access for the European Commission, for the purpose of verification of the existence and quality of the data; and availability to bodies with a research or management interest of the relevant data and the respective methodologies by which they are obtained.

Section 2: Content of the EU DCF

The Commission Delegated Decision (EU) 2019/910 of 13 March 2019 adopting a multiannual Union programme for the period 2020-2021⁶⁷, specifies in detail the data requirements to which EU MS must adhere, listing the specific biological, environmental, economic and social data to be collected. Commission Implementing Decision (EU) 2019/909 of 18 February 2019 establishes the list of mandatory research surveys and thresholds for the purposes of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors and its contents. (These two Decisions form part of the EU MAP)

National coordination of the collection and management of data is ensured through the designation in each EU MS of a national correspondent who, amongst other tasks/responsibilities, organizes an annual national coordination meeting, while MS also coordinate their data collection activities where appropriate with other MS in the same region. Additionally, Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system, specifies requirements related to data collection on catch reporting, monitoring and control.

Commission Implementing Decision (EU) 2016/1701 of 19 August 2016 provides the detailed rules on the format and content of MS work plans for data collection in the fisheries and aquaculture sectors, with these workplans having to articulate the quality assurance and control of data, and the temporal and spatial distribution and the frequency by which data must be collected. It also provides guidance on the need for workplans to detail the source, procedures and methods to collect and process data.

Some examples (not comprehensive) of the main topics on which data are collected by MS under the DCF are as follows⁶⁸:

Fishery dependent information

- Catches: weight and value for main commercial species, all by vessel length, gear, and location (rectangle and supra-region)
- Effort: sea days, fishing days, kilowatt (kW) days at sea, gross ton (GT) days at sea, all by vessel length, gear, and location (ICES or GFCM⁶⁹ rectangle and FAO⁷⁰ supra-region)
- Capacity:GT, kW, vessel numbers, vessel age, vessel lengths
- Incidental bycatches and discards of specific species

Biological data

- Research surveys and biological data for key species generating: age, weight and length frequency; mean-weight and age distribution; sex-ratio, maturity and fecundity
- For recreational fisheries: annual volume (numbers and weights or length) of catches and releases for key species and/or the species identified as needed for fisheries management purposes

Fleet economics. By fleet segment and Member State

⁶⁷ This replaced Commission Implementing Decision (EU) 2016/1251 of 12 July 2016 adopting a multiannual Union programme for the period 2017-2019

⁶⁸ Obligations for the collection of data on fish processing have recently been changed to avoid overlap with data provided to Eurostat (the statistical office of the European Union), and data on the processing industry may be collected on a voluntary base but is not now compulsory

⁶⁹ ICES = International Council for the Exploration of the Sea. GFCM = General Fisheries Commission for the Mediterranean

⁷⁰ Fisheries and Agriculture Organisation (of the United Nations)

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- Catches: by weight and value
 - Capacity: av vessel age and length, vessel numbers, engine power, vessel tonnage
 - Effort: days at sea, energy consumption, fishing days, GT days, kW days, length of nets, maximum days at sea, number of trips/hooks/nets/traps, soak time of nets
 - Employment: total and full-time equivalent
 - Income: value of landings, income from leasing fishing rights, direct income subsidies, other
 - Costs: depreciation, energy, personnel, repair and maintenance, fishing rights costs, other
 - Capital: investments, historical and replacement asset value

Aquaculture

- Number of enterprises: by size in terms of employee numbers
- Income: sales revenue (by species, and by aquaculture types/segment), subsidies, other income
- Costs: personnel, variable/operational costs (energy, raw materials, repair and maintenance, other), capital/fixed costs (depreciation, financial), other costs
- Capital value: value of assets
- Investments and debt
- Sales volume: by species and aquaculture type/segment
- Employment: number and by gender

Every year, EU MS are required to submit to the European Commission a report on the execution of their national data collection programmes and to make the report publicly available. The EU's Scientific, Technical and Economic Committee for Fisheries (STECF) holds meetings to evaluate them and based on those evaluations the Commission approves the reports. Upon end user requests, MS make available data collected under the DCF. The EUs Joint Research Centre (JRC) makes available the necessary data to the working groups of the STECF, that are dedicated to scientific advice.

The most recent STECF evaluation of the 2018 annual reports for data collection and data transmission issues, highlights that overall most MS achieved a satisfactory performance for most of the different annual report sections. This evaluation also highlights areas that need further improvement, that MS are invited to address in their Work Plan submission of the subsequent year. Part of the annual evaluation, deals with data transmission issues, which are reported by end users to the European Commission. There has been a substantial decrease in the number of data transmission issues in recent years, compared to the past, thanks to the close cooperation between end users and Member States and to the improvement and standardization of the methodology used.

Section 3: Impacts of the EU DCF

The datasets provided are extremely useful to a variety of users. Based on analysis by STECF they form the basis for scientific opinions and recommendations formulated in STECF reports. Biological data are also used by ICES, the GFCM and other RFMOs, and over the years the number of commercial stocks for which advice on Total Allowable Catch is made possible by data provided through the DCF has risen significantly to more than 70% of commercial stocks. Data are also widely used by consultants conducting evaluations on behalf of the Commission on aspects of fisheries policy, regulations, and EU expenditure.

The Commission uses the advice/opinion/data and evaluation outputs to make proposals to the Council of the European Union and the European Parliament on policy. The most

significant and important impact of the DCF is therefore the availability of (generally good) data at MS and EU-level to inform policy-making and management decisions.

At a more 'output' level, the DCF results in the generation of data that are used to prepare reports published by ICES providing stock advice. STECF also produces reports, with the associated detailed data tables also made publicly available for download by interested users. These reports provide information and data in a standardized and comparable manner across EU MS, and which can therefore be aggregated, about the biological, economic and social status of the EU's fisheries sector. STECF reports provide data collected through the DCF and are used to generate useful indicators of performance. Thus, the DCF enables:

- ICES stock assessment reports for more than 150 stocks.
- An annual economic report by STECF on the EU fishing fleet, with data presented by MS and fleet type on fleet capacity and structure, employment and average wages, fishing effort and fuel consumption, landings, landed prices by species, revenues and costs, capital values and investments, labour and capital productivity, energy use. Performance indicators are provided of gross and net profit, and gross value added (GVA), GVA to revenue, gross profit margin, and net profit margin.
- An biannual economic report by STECF of the EU aquaculture sector, with data by MS on number of enterprises, sales volumes and values, employment, average wages, gross value added, earnings before interest and tax, return on investment, labour productivity, and capital productivity.
- A social report by STECF every three years on the EU catching sector, with data presented by MS on employment by gender, age, nationality, scale of fishery.
- A biannual economic report on the EU processing sector, with data by MS on income, expenditure, capital costs, capital values, economic performance (GVA, earnings before interest and tax, net profit), and productivity and performance indicators (labour and capital productivity, GVA margin, net profit margin, and return on investment).
- A 2018 report on fisheries dependent information, providing maps of spatial fishing effort and landings for main gear types and fishing zones, and data on unwanted catches.

Section 4: Conclusion

Collection of data under the DCF comes at a significant cost, but funding support for data collection is provided to EU MS from the EU budget based on certain conditionalities specified in the EMFF Regulation. Clear guidance on definitions, templates, and data transmission have all been important in improving the quality of data collected over time. Important factors are regionalization (Regional Coordination Groups), the end-user driven approach ('collect what is needed'), and the move towards compatible data storage and exchange systems in the form of regional databases. The capacity of all MS to fully comply with data collection requirements is variable, depending on a number of factors, such as: national or fisheries specificities, the existing national expertise, whether end user needs are well defined etc. The scope of data collected is significant and relates to fish stocks and marine habitats, the catching sector (both large and small scale), the aquaculture sector, and to a small extent recreational fisheries. The DCF enables standardized data to be made available at MS-level, and which can be aggregated to the EU as whole. The data generated are widely used and found beneficial to inform scientific, management and policy decision-making, and to track trends in sector performance. The EU data are also fundamental in supporting the formulation of scientific advice for fisheries management in several RFMOs.

Section 5: Implications of the EU DCF for the ASEAN countries

The EU DCF highlights the benefits of a standardized framework for the collection of data across multiple countries, where those countries have shared fisheries policy and management needs and interests and shared stocks. These benefits apply both to the individual countries involved, and at a more regional or EU level. If there is to be a potential need/willingness for regional decision-making on fisheries and aquaculture issues by ASEAN countries, and given the shared nature of many stocks in the region, establishing a standardized system for the collection and use of a minimum set of data in ASEAN member states could be beneficial/important. The positive experiences in the EU, and the balance of capture fisheries and aquaculture in the ASEAN region, suggest that the scope of data collection could usefully include biological, economic and social data and relate to at least the catching and aquaculture sectors, as well as potentially to the downstream processing sector. Recognizing the potential cost implications and technical implications of introducing such a framework for data collection in ASEAN countries, it is likely that sustainable funding mechanisms would need to be identified, along with an appropriate institutional infrastructure for data collection and management, and that technical capacity support would be necessary for some countries.

Additional reading and useful sources of information

The Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy can be found here: <https://eur-lex.europa.eu/eli/reg/2017/1004/oj>

Information on the COMMISSION IMPLEMENTING DECISION (EU) 2016/1701 of 19 August 2016 laying down rules on the format for the submission of work plans for data collection in the fisheries and aquaculture sectors can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016D1701&from=EN>

The Commission Delegated Decision (EU) 2019/910, which sets out the details adopting the multiannual Union programme for data collection can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2019:145:TOC>

Commission Implementing Decision (EU) 2019/909 of 18 February 2019 establishing the list of mandatory research surveys and thresholds for the purposes of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors can be found here: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32019D0909>

The legal text of Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system can be found here: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32009R1224>

The JRC website is <https://datacollection.jrc.ec.europa.eu/> and provides

- latest news in relation to data calls, deadlines, variable definitions, disaggregation levels and uploading procedures
- national work plans and annual reports prepared by the MS
- access to the uploading facilities and data dissemination platforms for the STECF experts and the general public
- coverage reports on the data provided by the MS in response of the data calls managed by JRC
- DCF technical documents, guidelines, templates, data-related definitions, and legislation.
- Reports of relevant regional groups (RCGs, PGECON, LM)

STECF reports can be found here: <https://stecf.jrc.ec.europa.eu/reports> and include a paper describing the process of scientific advice.⁷¹

ICES reports can be found here: <http://www.ices.dk/Pages/default.aspx>

⁷¹ E.g. Collection and dissemination of fisheries data in support of the EU Common Fisheries Policy. Hendrik Dörner^{1,*}, John Casey¹, Natacha Carvalho¹, Dimitrios Damalas², Norman Graham³, Jordi Guillen¹, Steven J. Holmes¹, Fabrizio Natale⁴, Giacomo C. Osio¹, Hans-Joachim Rätz⁵, Cristina Ribeiro⁶, Paraskevas Vasilakopoulos¹, ETHICS IN SCIENCE AND ENVIRONMENTAL POLITICS Ethics Sci Environ Polit, Vol. 18: 15–25, 2018

5. International fisheries instruments

Section 1: Introduction to international fisheries-related instruments

This policy brief is slightly different in orientation to other briefs in this series, as it focusses not a single specific policy, but rather on a number of international fisheries-related instruments (IFIs).

All of the IFIs profiled are international in scope. The table below lists the main IFIs, their principal objectives, and their dates.

Instrument	Main objectives/focus	Date
United Nations Convention on the Law of the Sea (UNCLOS)	To regulate all aspects of the resources of the sea and uses of the ocean	Adoption 1982. Entry into force 1994
FAO Code of Conduct for Responsible Fisheries (CCRF)	To set international standards of behaviour for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystem and biodiversity	Adopted 1995
The UN Fish Stocks Agreement (UNFSA)	To ensure the long-term conservation and sustainable use of straddling and highly migratory fish stocks within the framework of UNCLOS	Adopted 1995. Entry into force 2001
The Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas (The Compliance Agreement / CA)	To enhance the role of flag States and ensure that a State strengthens its control over its vessels to ensure compliance with international conservation and management measures	Approved 1993. Entry into force 2003
The Agreement on Port State Measures (PSMA)	To prevent, deter and eliminate illegal, unregulated and unreported (IUU) fishing by preventing vessels engaged in IUU fishing from using ports and landing their catches, thereby ensuring the long-term conservation and sustainable use of living marine resources and marine ecosystems	Approved 2009. Entry into force 2016
Work in Fishing Convention (C.188)	To ensure that fishers have decent conditions of work on board fishing vessels with regard to minimum requirements for work on board; conditions of service; accommodation and food; occupational safety and health protection; medical care and social security	Adopted 2007. Entry into force 2017

Section 2: Content of the international fisheries-related instruments

UNCLOS. UNCLOS is the international legal foundation for the use, exploitation, administration and management of the sea and its resources. The key features and content relate to navigational rights, territorial sea limits, economic jurisdiction, legal status of

resources on the seabed beyond the limits of national jurisdiction, passage of ships through narrow straits, conservation and management of living marine resources, protection of the marine environment, a marine research regime, and a binding procedure for settlement of disputes between States.

Code of Conduct for Responsible Fisheries (CCRF). The Code is voluntary, global in scope, and is directed toward FAO member and non-member countries, fishing entities, and sub-regional, regional and global organizations, whether governmental or non-governmental. The Code sets out principles and international standards of behavior for responsible practices with a view to ensuring the effective conservation, management and development of living aquatic resources, with due respect for the ecosystem and biodiversity. Different sections of the Code cover: fisheries management, fishing operations, aquaculture, integration of fisheries into coastal management, post-harvest processing practices and trade, and fisheries research. FAO has produced a series of Technical Guidelines for Responsible Fisheries to assist the international community in taking the necessary practical steps to implement the provisions of the Code. A variety of supporting instruments have also been established within the framework of the Code. These instruments include four International Plan of Action (IPOA) which are voluntary instruments that apply to all States and entities and to all fisheries on issues relating to seabirds (IPOA-seabirds), sharks (IPOA-sharks), fishing capacity (IPOA-capacity) and IUU fishing (IPOA-IUU), and two strategies which are also voluntary instruments relevant to all States and entities aimed at improving the knowledge and understanding of capture fisheries and aquaculture.

UN Fish Stocks Agreement (FSA)⁷². The FSA focusses on straddling and highly migratory fish stocks. It elaborates on the fundamental principle, established in UNCLOS, that States should cooperate to ensure conservation and promote the objective of the optimum utilization of fisheries resources both within and beyond the exclusive economic zone. It requires states to: i) adopt a precautionary approach to conservation and management; ii) without prejudice to their sovereign rights, seek to agree conservation and management measures (and which are compatible with national measures); iii) pursue cooperation either directly or through appropriate sub-regional or regional fisheries management organizations or arrangements; iv) collect and provide relevant information and cooperate in scientific research. It also specifies various duties of flag and port states with regards to compliance and enforcement with conservation and management measures, and contains a dispute resolution mechanism.

Compliance Agreement (CA). The CA focusses on the high seas. It notes the special responsibility of flag states to ensure that none of their vessels are fishing on the high seas unless authorized, and that they can effectively exercise their responsibilities to ensure that their vessels comply with international measures. The CA also seeks to prevent the 're-flagging' of vessels fishing on the high seas under the flags of States that are unable or unwilling to enforce international fisheries conservation and management measures. The maintenance of records of fishing vessels, international cooperation, and enforcement are covered extensively by the provisions of the Agreement.

Port State Measures Agreement (PSMA). The Agreement on Port State Measures specifically targets illegal, unreported and unregulated (IUU) fishing. It lays down a minimum set of standard measures for Parties to apply when foreign vessels seek entry into their ports or while they are in their ports. Its measures include proper detection and investigation of IUU fishing, as well as follow-up actions, reporting and notification. Key provisions of the PSMA relate to the need for port states to: designate ports for entry; request information before vessels enter their ports; determine whether vessels should be allowed to enter based on that information; deny the use of ports to foreign vessels in certain situations; agree on minimum levels of inspections in ports; conduct inspections; provide written reports

⁷² Full title is 'The Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks'.

of inspections; transmit inspection reports to flag states; exchange information with relevant parties; train inspectors; and take action after inspections if infringements are detected. The Agreement also places requirements on parties in their role as flag states, largely in relation to cooperation with port states.

Work in Fishing Convention. Convention No. 188 sets out binding requirements to address the main issues concerning work on board fishing vessels. The content of the Convention elaborates responsibilities for vessel owners, for skippers, and for crew, and covers issues such as: the minimum age to work onboard a fishing vessel; suitable medical status of those onboard; manning and hours of rest; requirements to maintain a crew list; work agreements/contracts; repatriation; recruitment; payment; accommodation and food; medical care and social security provisions; and compliance and enforcement of the Convention.

Section 3: Impacts of international fisheries-related instruments

The impacts of the IFIs are considered separately below. Drawing direct causal links between them and impacts is difficult, but collectively and indirectly they contribute to the state of fisheries and aquaculture globally, for example as reflected in the FAO's bi-annual publications *State of World Fisheries and Aquaculture*⁷³.

UNCLOS. One hundred and sixty-eight countries have ratified or acceded to UNCLOS. As the basis for rules over jurisdiction of maritime waters, the principle impact of UNCLOS has been to provide an environment for states that is more conducive to, and incentivizes, management of the areas within their jurisdiction than would otherwise be the case. The dispute mechanism to resolve conflicts over territorial claims has served to provide an independent and objective basis on which to resolve disputes through a fair process without the need for military action.

CCRF. The main impact of the Code is its role as a reference framework for national and international efforts, including in the formulation of policies and other legal and institutional frameworks and instruments, to ensure sustainable fishing and production of aquatic living resources in harmony with the environment. Implementation of the Code, and the extent to which it is contributing to its objectives is assessed every two years through questionnaires submitted to FAO and reported on to FAO's Committee on Fisheries (COFI)⁷⁴. The supporting IPOAs have been used by many countries to develop national plans of action to address issues related to IUU fishing, incidental catches of seabirds, shark catches, and fleet capacity. Countries have been most interested in developing NPOAs on IUU fishing, as opposed to those on seabirds, sharks, or capacity: More than 60 countries have developed and approved a NPOA-IUU, using the IPOA-IUU and its supporting guidance to benchmark national performance and identify necessary actions to combat IUU fishing. Other countries are known to be developing a NPOA-IUU.

UNFSA. Ninety countries have ratified/acceded to the FSA. The FSA requires meetings of the parties to review implementation, with the first review conference in 2006 and resumed review conferences held in 2010 and 2016⁷⁵. The FSA marked a major step forward in the development of a comprehensive legal regime for the long-term conservation and sustainable use of straddling and highly migratory fish stocks. In particular, the Agreement has contributed to the conservation and management of the world's fisheries for these stocks by:

- strengthening the role of regional fisheries management organizations (RFMOs) and arrangements, and encouraging some to be established since the Agreement came into force.

⁷³ Bi-annual SOFIA reports can be found here: <http://www.fao.org/fishery/soFia/en>

⁷⁴ The 2018 document to COFI detailing the state of implementation of the Code can be found here: <http://www.fao.org/3/MX205EN/mx205en.pdf>

⁷⁵ The Secretary General's report can be found here: https://www.un.org/Depts/los/convention_agreements/review_conf_fish_stocks.htm

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- ensuring effective mechanisms for compliance and enforcement of international conservation and management measures.
 - setting out the role and purpose of regional fisheries management organizations and arrangements, including by offering definitions of their functions.
 - establishing general principles, such as the precautionary and ecosystem approaches for the conservation and management of straddling fish stocks and highly migratory fish stocks in all regions around the world.
 - requiring conservation and management measures to be adopted based on the best scientific evidence available and for States to be more cautious when information is uncertain, unreliable or inadequate.
 - strengthening the responsibility of flag States over fishing vessels flying their flag on the high seas.
 - requiring compatibility between conservation and management measures adopted for areas under national jurisdiction and those established in the adjacent high seas, to ensure conservation and management of fish stocks in their entirety.
 - providing mechanisms for the peaceful settlement of disputes between States Parties

A large number of States have incorporated the provisions of the FSA into their fisheries laws and regulations. And at the regional level, several RFMOs have conducted performance reviews of their functions and mandates using the relevant provisions of the Agreement as a benchmark.

Compliance Agreement: Forty-two countries (including the EU representing its Member States) have deposited their instruments of acceptance. The CA has supported a strengthening of control by flag states over their vessels, and clarity over their responsibilities when vessels are fishing on the high seas. It has encouraged countries to maintain records of fishing vessels, and to increase levels of international cooperation and exchange of information.

PSMA. There are 61 parties to the PSMA (as at August 2019) including the EU as one Party representing its 28 Member States. The PSMA requires meetings of the parties to report on developments in implementation, and the second meeting took place in June 2019. The requirements of the Agreement on port and flag states as discussed earlier, are being put in place (to varying degrees) by Parties to the Agreement and by regional fisheries bodies (at least six regional fisheries bodies have adopted conservation and management measures concerning port State measures, with five of the six having also established the mechanisms to monitor compliance). A number of regional fisheries bodies with developing country parties have also developed capacity building initiatives and materials to support the implementation of their conservation and management measures related to the Agreement⁷⁶. Implementation of the PSMA should ensure that fish caught from IUU fishing is blocked from reaching national and international markets, thereby reducing the incentive for perpetrators to continue to operate..

Work in Fishing Convention. Only 14 countries have so far ratified the Convention (as at August 2019). This, along with its recent entry into force, suggest that the impacts of the Convention are likely to have been limited so far. However, the Convention provides a framework to improving working conditions for those in the fishing sector that could have positive impacts in the future of further ratifications occur and parties to the Convention implement its provisions.

⁷⁶ The report of the meeting can be found here: <http://www.fao.org/port-state-measures/meetings/meetings-parties/second-mop-documents/en/>

Section 4: Conclusion

There are a number of international fisheries-related instruments which have been agreed and/or entered into force over the past 25 years. The CCRF is voluntary in nature, but others are legally binding once countries become a Party to them, and all (except for the ILO Work in Fishing Convention) have as an objective sustainable management of fisheries resources. Despite the obvious benefits for countries and for sustainable resource management more generally of these instruments, it is striking that not more countries have ratified them. This may be because of the obligations that ratification/adoption implies, and the challenges of implementation. Many of the IFIs recognise the specific challenges of implementation for developing countries, and in some cases provide funding mechanisms to aid with implementation. Even in cases where the IFIs don't themselves provide funding arrangements, there has been a wide range of support from international and bilateral donors for implementation of the provisions of the IFIs for developing countries that have become party to them.

Section 5: Implications of international fisheries-related instruments for the ASEAN countries

ASEAN members should seek to fully implement the provisions of the IFIs to which they are a Party. In terms of a possible ASEAN general fisheries policy, consideration could be given as to whether such a policy (if developed) could include a general statement about ASEAN countries supporting, becoming parties to, and implementing, these IFIs (supported by appropriate levels of funding, where required from external sources).

Additional reading and useful sources of information

More on UNCLOS can be found here: https://www.un.org/Depts/los/convention_agreements/convention_overview_convention.htm

More about the FAO CCRF can be found here: <http://www.fao.org/fishery/code/en>

More on the UNFSA can be found here: <http://www.fao.org/iuu-fishing/international-framework/un-fish-stocks-agreement/en/>

The four IPOAs in support of the CCRF can be found here: <http://www.fao.org/fishery/code/ipoa/en>

More on the Compliance Agreement can be found here: <http://www.fao.org/iuu-fishing/international-framework/fao-compliance-agreement/en/>

More on the PSMA can be found here: <http://www.fao.org/port-state-measures/en/>

More on the ILO Work in Fishing Convention can be found here: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C188

The Protocol to the 1930 Forced Labour Convention can be found here. While not a fisheries-specific instrument, it has applicability to the fisheries sector given concerns over forced labour in the fishing sector in some countries: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:P029

6. FAO Policy Guidance Note: Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture

Section 1: Introduction to the FAO Policy Guidance Note: Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture

This policy brief is different in focus to others in this series, as it focuses not on reviewing a specific policy and its impacts, but rather on guidance on how to improve policy.

The FAO Policy Guidance Note “Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture”, 2016, is part of the efforts of FAO to support governments and their development partners in creating national and regional policies and an institutional environment that is conducive in achieving food security and improved nutrition.

The guidance note addresses the overarching question of “what changes are needed to existing policies that govern the fisheries and aquaculture sector to have greater impact on food security and nutrition, and how might these changes be achieved?” The document addresses fisheries and aquaculture in parallel and tries, through an array of examples from around the world, to harmonize fisheries and aquaculture policies with food security and nutrition concerns.

The need for this policy guidance document stems from the “governance revolution” in fisheries, reflective of the need to replace a system of largely unsuccessful attempts to manage conditions of access to a state-owned resource through licensing and technical measures, with one based on a combination of participatory local-level management, a variety of market-based instruments, and a set of global principles and codes of conduct.

Section 2: Content of the FAO Policy Guidance Note: Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture

The key messages of the guidance note can be summarized as follows:

1. The policy agenda of the fisheries and aquaculture sector tends to be oriented towards environmental, economic and, to a lesser extent, social interests and undervalues the importance of the sector for food security and nutrition.
2. Where the importance of fish is not reflected in food security, nutrition and public health policies, filling key data and knowledge gaps should be a priority so that necessary policy shifts and investments can be identified to make the sector nutrition-sensitive.
3. Any scoping of the sector’s potential to better contribute to nutrition and food security needs to evaluate the potential of the sector to increase availability of and access to fish, as well as what drives demand.
4. Nutrition-sensitive fisheries and aquaculture policies and interventions face a triple challenge: engaging with the fisheries and aquaculture sector to place food security and nutrition on its agenda; working with the fisheries and aquaculture sector to ensure that fisheries and aquaculture (and food security) interests are included in river basin and marine spatial planning; and ensuring that these issues stay on the agenda in the context of trans-boundary negotiations over resource use and allocation.
5. The lack of a nutrition-sensitive policy focus on capture fisheries and aquaculture represents an untapped opportunity that must be realized to ensure sustainable healthy diets for all.

The guidance note aims to identify trade-offs and synergies between fisheries and aquaculture policy objectives and food security and nutrition objectives, and suggests policy options to build on potential synergies. Decision-makers across the fisheries, economic and social development, and public health sectors at local, national, regional and global levels face the following challenges:

1. How can the fisheries and aquaculture sector further contribute to a nutritious and safe diet among men and women affected by stunting, wasting and micronutrient deficiencies, especially those dependent on fisheries and aquaculture for their livelihoods and those consumers for whom fish is a culturally preferred food, and where alternatives are unavailable?

2. How can the fisheries and aquaculture sector better contribute to securing income and livelihood opportunities for the vulnerable poor, with special attention to women and youth, in the face of competition over resources and increased global demand for fish?

3. How can fish supply, including production and post-harvest utilization, be sustainably increased in the face of limited resources, widespread gender inequalities, environmental impacts, including climate change impacts, and competition over land and water from other users?

4. How can fisheries and aquaculture sustainable supply continue to keep up with population growth and rising consumer demand?

The guidance note illustrates possible policy changes to address the above questions in the form of textboxes giving examples of fisheries policies from all over the world. These examples cover a wide range of issues and include, among many others, conflicts between commercial and small-scale fisheries, policy trade-offs to support the national processing activities, issues surrounding fisheries bycatch, problems arising from population growth particularly in small island states, and policy harmonization at regional and international level and people's participation in policy making,

The guidance note describes a four-step approach to address food security and nutrition in fisheries and aquaculture policies. The initial step is to conduct a situational analysis. This should include an analysis of the existing data at national and international level, like FAO and WHO level. The policy note provides a list of possible indicators to assess the situation at national level as a starting point for this situational analysis.

The second step is the mapping of the fisheries and aquaculture policy landscape. This step identifies and describes main policy measures in the sector that have or could have a positive or negative impact on food security and nutrition. The note continues to describe different countries pursuing different policy objectives, according to the size of their resources, potential for generating macro-economic benefits, the importance of formal and informal employment, and the role fish plays in a nation's diet. The note emphasizes on the links between aquaculture and fisheries policies and also raises the question if policies adequately address the role of women in the fisheries sector.

In the third step the existing policy framework is analysed. The identified relevant policy measures in step 2 are analysed for their impacts on food security and nutrition – both individually and collectively. This step then identifies gaps within and across the identified policy measures in order to yield policy options for enhancing the contribution to food security and nutrition. The described issues range from land right reforms, trade, the role of aquaculture in food security, education and improved fisheries and aquaculture technologies.

The final step is understanding the political economy, starting with a stakeholder analysis and asking questions about the interactions of different stakeholders, influencers and champions and how they support or block policy change and policy implementation. The document concludes by describing global and regional actors and policy processes affecting fisheries policies, research and action.

[Section 3: Impacts of the FAO Policy Guidance Note: Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture](#)

The guidance note was prepared in 2016 and published only towards the end of 2016. Little is known about its current use by decision makers.

Section 4: Conclusion

The FAO Policy Guidance Note “Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture” is not a policy document per se, but rather provides guidance on potential policy changes, and the processes involved in reviewing and amending policy. The guidance note provides a wide range of examples for fisheries policies and their impact on food security and nutrition. The policy processes described, and the examples presented, go beyond food security and nutrition.

Examples in the text boxes of the FAO Policy Guidance Note include marine and inland fisheries as well as aquaculture which are equally important for the ASEAN member countries, for example:

Box 10, The “Surplus-production model for exploited fisheries, illustrating fishery management target-reference points and the implicit trade-offs between them” describes the needed equilibrium between catch (or yield) and fishing effort, so that fishing effort can be regulated to achieve a maximum sustainable yield or other defined related targets.

Box 11, the “Regional organizations with food security objectives” provides examples of regional organisations that have included food security and nutrition objectives in their policy and strategy documents. These regional organizations play an important catalytic function for their members and can promote the sharing of experiences and good practices.

Box 12 provides “Examples of community- and civil-society-led governance reforms in small-scale fisheries” that have improved the benefits for local communities, thereby enhancing food security.

Section 5: Implications of the FAO Policy Guidance Note: Strengthening Sector Policies for Better Food Security and Nutrition Results, Fisheries and Aquaculture for the ASEAN countries

The described four step approach in developing or improving a fisheries policy is very similar to the approach agreed by the Ad Hoc Task Force for the development of a Feasibility Study on the ASEAN General Fisheries Policy (AGFP). Thus, the FAO Policy Guidance Note could also provide guidance in the development of the AGFP.

Additional reading and useful sources of information

The guidance note can be found here: <http://www.fao.org/3/a-i7214e.pdf>

7. Caribbean Community Common Fisheries Policy

Section 1: Introduction to the Caribbean Community Common Fisheries Policy (CCCFP)

The Caribbean Community Common Fisheries Policy (CCCFP) is a policy document of the Caribbean Community, emphasizing on cooperation and collaboration of the Caribbean people, fishermen and governments in conserving, managing and sustainably utilising fisheries and related ecosystems. The CCCFP impacts on the welfare and well-being of Caribbean people, who all benefit from a strong regional fisheries policy. The comprehensive policy was originally drafted as an intergovernmental agreement, but became, through revision and approval by the ministerial meeting of the Council for Trade and Economic Development (COTED), the official regional fisheries policy. It lacks the formal signature of several CARICOM heads of state to be a formal inter-governmental agreement.

Initial preparations for the CCCFP were agreed at the Fourteenth Inter-Sessional Meeting of the Conference of Heads of Government in Trinidad and Tobago on 14-15 February 2003, and the CARICOM secretariat was mandated to start working on the CCCFP. The draft document was prepared through a consultative process involving representatives of Member States and regional experts in fisheries, regional integration, and marine law and policy; as well as other stakeholders, such as representative fisherfolk organisations in the region.

The CCCFP's scope includes: the development and management of fisheries and aquaculture; the conservation, sustainable development and management of fisheries resources and related ecosystems; the production, processing, marketing and trading of fishery and aquaculture products; and the welfare of fishers. It will apply within areas under the jurisdiction of Participating Parties, on board fishing vessels flying the flag of a Participating Party and, subject to the primary jurisdiction of the flag State when fishing takes place on the high seas or the coastal State when fishing takes place in the waters of a Third State, to nationals of Participating Parties.

The CCCFP is fully compliant with international and regional treaties and agreements.

Section 2: Content of the Caribbean Community Common Fisheries Policy (CCCFP)

The vision of the CCCFP is the effective cooperation and collaboration among Participating Parties in the conservation, management and sustainable utilisation of the fisheries resources and related ecosystems in the Caribbean region, to secure the maximum benefits from those resources for the Caribbean peoples and for the Caribbean region as a whole.

Its goals include the protection and preservation of the fisheries resources, building the capacity of fishers, thus creating jobs and increasing the income earned in the sector, strengthening food and nutrition security, the promotion of competitive trade and stable market conditions, and capacitating fisherfolk to actively participate in the management of their resources.

The CCCFP has nine stated objectives.

(1) to promote the sustainable development of fishing and aquaculture industries in the Caribbean region as a means of, inter alia, increasing trade and export earnings, protecting food and nutrition security, assuring supply to Caribbean markets and improving income and employment opportunities.

(2) to develop harmonised measures and operating procedures for sustainable fisheries management, post-harvest practices, fisheries research and fisheries trade and the administration of the fishing industry.

(3) to improve the welfare and livelihoods of fishers and fishing communities.

(4) to prevent, deter and eliminate illegal, unreported and unregulated fishing, including by promoting the establishment and maintenance of effective monitoring, control, and surveillance systems.

(5) to build the institutional capabilities of Participating Parties, inter alia, to conduct research, collect and analyse data, improve networking and collaboration among Participating Parties, formulate and implement policies and make decisions.

(6) to integrate environmental, coastal and marine management considerations into fisheries policy so as to safeguard fisheries and associated ecosystems from anthropogenic threats and to mitigate the impacts of climate change and natural disasters.

(7) to transform the fisheries sector towards being market-oriented, internationally competitive and environmentally-sustainable, based on the highest international standards of quality assurance and sanitary and phytosanitary systems.

(8) to strengthen, upgrade and modernise fisheries legislation.

(9) to facilitate the establishment of a regime for Sanitary and Phytosanitary Measures (SPS) for the fisheries sector.

The CCCFP follows six fundamental principles, which also guide its implementation.

(a) the use of the best available scientific information in fisheries management decision making, taking into consideration traditional knowledge concerning the resources and their habitats as well as environmental, economic and social factors.

(b) application of internationally-recognised standards and approaches, in particular the precautionary approach to fisheries management and the ecosystem approach to fisheries management.

(c) the principle that the level of fishing effort should not exceed that commensurate with the sustainable use of fisheries resources.

(d) the participatory approach, including consideration of the particular rights and special needs of traditional, subsistence, artisanal and small-scale fishers.

(e) principles of good governance, accountability and transparency, including the equitable allocation of rights, obligations, responsibilities and benefits.

(f) the principle of subsidiarity, in particular that the Competent Agency will only perform those tasks which cannot be more effectively achieved by individual Participating Parties.

In addition, a statement by the Ministerial Council noted that: "The Council accepted that international and national norms regarding issues pertaining to gender, youth, and decent work be adhered to, and be incorporated into all CRFM policies, protocols, programmes, and plans."

The CCCFP will be implemented through identified protocols which the Participating Parties are mandated to prepare. These include the (1) identification of the Competent Agency, (2) research on fisheries and associated ecosystems, (3) harmonisation of fisheries legislation, (4) cooperation in monitoring, control and surveillance to combat illegal, unregulated and unreported fishing, (5) establishment of a common fisheries zone, (6) aquaculture, (7) establishment of a regional fisheries management organisation or arrangement, (8) sanitary and phytosanitary measures, (9) data and information sharing, (10) enforcement, (11) settlement of disputes, and (12) any other matter for which protocols are necessary for the implementation.

Section 3: Impacts of the Caribbean Community Common Fisheries Policy (CCCFP)

After an eleven year process the Council for Trade and Economic Development (COTED) meeting of Ministers of Agriculture (in most cases including fisheries) in October 2014 confirmed the CCCFP as the approved policy of the Caribbean Community. This is in line with the Caribbean Court of Justice (CCJ) declaring CARICOM policies, once authorized by COTED, as legally binding for the member countries. Therefore, several heads of states have not signed the Policy to make it a formal inter-agency agreement.

As of 2019 two protocols under the CCCFP have been approved under the Caribbean Community Common Fisheries Policy, i.e. the Protocol on Climate Change Adaptation and Disaster Risk Management in Fisheries and Aquaculture (October 2018) and the Protocol on Securing Sustainable Small-Scale Fisheries for Caribbean Community fisherfolk and societies under the Caribbean Community Common Fisheries Policy (May 2018), based on the FAO Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication.

A third protocol on decent work, gender mainstreaming, and youth had been drafted, but the CRFM Ministerial Council did not approve it; instead the Council issued the following statement: “The Council accepted that international and national norms regarding issues pertaining to gender, youth, and decent work be adhered to, and be incorporated into all CRFM policies, protocols, programmes, and plans.”

Despite its slow start the CCCFP is meeting its objective by rendering action that leads to the sustainable utilization of the fisheries resources and by strengthening the importance of fish and fishing at the regional level by recognizing marine fish and aquaculture officially as priority commodities by COTED.

Section 4: Conclusion

The proposed implementation approach of developing and using protocols reflects a recognition that broad policy statements and principles need to be supported by more practical guidance on how the policies should be implemented. Given the diversity of its member countries and the different economic interests the lesson(s) learned are that promoting regional cooperation and common regulatory systems requires:

Lesson learned

- Understanding of similarities among collaborating partners
- Understanding of differences between collaborating partners
- A known, agreed, mandated framework for collaboration

- Political will at all levels

- Supportive partners including those providing financial support to the process

- A well-stocked financial “larder”

- Time

Comments

- creating an enabling environment to facilitate policy implementation
- creating an enabling environment to facilitate policy implementation
- without a mandate it is difficult to initiate action as many actors are reticent to move into "new" directions without such mandate/directives
- not only the will of politicians, but also overcoming the inertia sometimes observed in public servants, when asked to move away from what has become their "comfort zone" over the years
- funding agencies and development partners have to "buy in" to the implementation paradigms suggested in the policies; often this means that they need to be convinced not to apply the "things" they know about how things work in other regions, since all regions are not the same. What "everyone knows happens" in one part of the developing world does not necessarily apply in other regions; and, thus should not be assumed to be the case
- financial resources must be available and flexible to deal with the (often) rapid changes that can take place in the policy - response environment
- behavioral change requires time, so scope should be narrow if time is short for policy development and implementation. Broader or

comprehensive detailed policies are likely to require more time to develop and implement.

Section 5: Implications of the Caribbean Community Common Fisheries Policy (CCCFP) for the ASEAN countries

The implementation modalities of any regional fisheries policy are as important as its content. Without proper mechanisms and guidance in place to translate identified regional fisheries policy statements into action, any regional policy may remain just a list of good intentions.

Additional reading and useful sources of information

The Agreement can be downloaded here:

http://www.crfm.int/index.php?option=com_k2&view=item&layout=item&id=203&Itemid=350

A PowerPoint presentation on the CCCFP: <https://unctad.org/meetings/en/Presentation/ditc-ted-Belize-28112018-CRFM-Murray.pdf>

8. MRC Fisheries Management and Development Strategy

Section 1: Introduction to the Mekong Basin-Wide Fisheries Management and Development Strategy 2018 - 2022

The Mekong Basin-Wide Fisheries Management and Development Strategy (BFMS) 2018-2022 was finalized in November 2017. Its preparation started under the former MRC Fisheries Programme's Technical Advisory Body for Fisheries Management in the Lower Mekong Basin in the late 2012, and after a restructuring process within the Mekong river Commission (MRC), was finalised by the Expert Subgroup on Fisheries, Environmental Management Division of the MRC Secretariat.

It covers a broad range of fisheries and aquaculture policies for the four lower Mekong river member states of the MRC, namely Lao PDR, Thailand, Cambodia and Vietnam, who agreed in 1995 to promote and coordinate sustainable management and development of water and related resources for the countries' mutual benefit and the people's well-being.

The intention of the BFMS 2018-2022 is to provide an “overarching, regional cooperation framework for basin-wide fisheries management and development”. The BFMS 2018-2022 is, thus, not only a regional policy document, but also a strategy, and to a certain extent an action plan with identified actions and references to secured funding, under an agreed cooperation framework.

The BFMS 2018-2022 is aligned with national inland fisheries development and management strategies, policies and plans, including regional fisheries management issues, in a basin-wide fisheries management and development strategy. It is also coherent and aligned with the MRC Integrated Water Resources Management-based Basin Development Strategy for the Lower Mekong Basin 2016-2020, and the MRC Strategic Plan 2016-2020.

Section 2: Content of the Mekong Basin-Wide Fisheries Management and Development Strategy 2018 - 2022

The BFMS 2018-2022 vision states that “Member Countries collaborate to manage the fisheries of the Mekong Basin in an environmentally non-degrading, technically appropriate, economically viable, and socially acceptable manner.”

The mission statement is “to provide Member Countries, the Environmental Management Division's Expert Subgroup on Fisheries and the MRC Environmental Management Division with a holistic strategic framework for fisheries management of the Lower Mekong Basin”.

The strategic goal of the BFMS 2018-2022 is “to stimulate responsible and sustainable use of fisheries and living aquatic resources in the Lower Mekong Basin”. The goal overrides objectives of economic growth and efficiency if these imply unsustainable resource use for short-term economic or political gain and jeopardise maintenance of livelihoods and food security in the basin.

Its objective is articulated as “basin-wide sustainable fisheries management and development by Member Countries is facilitated and implemented through consensus, dialogue and harmonisation of national sectoral plans”.

Stated outcomes in support of the objective are:

- Member Countries and regional stakeholders agree on key management and development issues identified in the BFMS 2018-2022.
- Key fisheries management and development priority issues are included in the strategic priorities and actions of the MRC IWRM-based Basin Development Strategy.
- The BFMS 2018-2022 is implemented by fisheries and other relevant national line/implementing agencies, with facilitation by the Expert Subgroup on Fisheries and the Environmental Management Division which promote transparent dialogue.

-
- A monitoring and evaluation (M&E) system for implementation is in place and allows periodic adjustment of the BFMS 2018-2022.

The BFMS 2018-2022 refers to the General Principles of the 1995 Mekong Agreement, takes integrated water resource management principles into consideration, and further proposes the precautionary approach of the Code of Conduct for Responsible Fisheries (CCRF) of the Food and Agriculture Organization of the United Nations, which fisheries line agencies (i.e. Departments of Fisheries) of each MRC Member Country have adopted. In addition, it emphasizes stakeholder participation as the principle of primary importance for its formulation, implementation and M&E.

The BFMS 2018-2022 proposes key strategic priorities and actions. These are grouped under (i) monitoring of key indicators, (ii) management-related priorities, promoting proactive regional engagement, and (iii) priorities related to development. Specifically, under

(i) Monitoring of key indicators to document changes in capture fisheries and other sectors it includes

- a) fish diversity, abundance and ecology
- b) socio-economics, livelihoods
- c) food security and nutrition
- d) gender

(ii) in management-related priorities, promoting proactive regional engagement and cooperation it includes

- e) conservation of key habitats;
- f) fisheries enhancement;
- g) fisheries co-management and transboundary fisheries management; and

(iii) in priorities related to water development it includes

- h) fisheries and fish friendly irrigation and agriculture;
- i) aquaculture; and
- j) water development and adaptation of fisheries to climate change.

To implement the BFMS 2018-2022, a five-year Project-Based Action Plan has been developed in order to take up regional and transboundary issues and challenges, as well as to seek funds from Development Partners and other funding sources.

Section 3: Impacts of the Mekong Basin-Wide Fisheries Management and Development Strategy (BFMS) 2018 – 2022

The document is ambitious and requires not only substantial funding for all identified actions but also full ownership by the respective member governments, to translate these regional policies into national policies and incorporate identified actions in their regular budgets.

A draft Project-Based Action Plan has been prepared and is awaiting approval, which is foreseen towards the end of 2019. Once approved the Project-Based Action Plan will be used to raise funds from the MRC Basket Fund and from development partners for implementation starting in 2020.

Particularly the decentralisation of monitoring tasks to the respective national government agencies, and the regular update of regional fisheries databases in combination with the required regional analysis and modelling for the state of the Basin report, will undoubtedly provide insights into the challenges ahead with this regional fisheries policy. However, the development of the BFMS 2018-2022 itself contributed to enhanced levels of consultation

between the countries involved, and a shared understanding about priority needs and the potential benefits of common action on key issues.

Section 4: Conclusion

The BFMS 2018-2022 is a comprehensive and well-structured document, and is a policy document as well as a strategy and, to a certain extent, even an outline for an action plan. The document is considered a living document that will need to be adapted and adjusted in light of new challenges, developments, and their implications.

The specified policies and proposed actions will foster environmentally sound and socially acceptable fisheries development in the lower Mekong River Basin, employing a multi-sectoral approach. However, responsibility for implementation remains with the individual members. Information exchange, the development of basin-wide management recommendations, and the implementation of many of the intended actions are still at a very early stage.

Section 5: Implications of the Mekong Basin-Wide Fisheries Management and Development Strategy (BFMS) 2018 – 2022 for the ASEAN countries

The BFMS 2018-2022 is regional policy document for which the process of development could serve as a model for the development of the AGFP. The authors employed an approach similar to the one that was presented at the Inception Workshop for the development of the AGFP Feasibility Study. Starting at the national level, looking at common as well as regional fisheries interests in national policies and regulative documents of MRC member countries, the authors identified common policies as starting points for the development of the BFMS 2018-2022.

Accepting that the BFMS 2018-2022 is a living document enables adjustments in the document as well as the option to further extend or amend it. Aligning national policies with these regional policies/actions will increase opportunities for enhanced regional cooperation. Fisheries data exchange and joint modelling of the Mekong River Basin are some initial activities that have been identified and similar actions could serve as a starting point for the AGFP.

Additional reading and useful sources of information

The MRC legal text can be found here:

<http://www.mrcmekong.org/assets/Publications/policies/agreement-Apr95.pdf>

MRC Mekong Basin-Wide Fisheries Management and Development Strategy:

<http://www.mrcmekong.org/assets/Publications/BFMS-Feb20-v-Final.pdf>

MRC Strategic Plan 2016-2020:

<http://www.mrcmekong.org/assets/Publications/strategies-workprog/MRC-Strategic-Plan-2016-2020.pdf>

MRC Basin Development Strategy 2016-2020 for the Lower Mekong Basin:

<http://www.mrcmekong.org/assets/Publications/strategies-workprog/MRC-BDP-strategy-complete-final-02.16.pdf>

9.ASEAN/SEAFDEC Resolution and Plan of Action

Section 1: Introduction to Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

The Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 comprises two documents: i) the official Resolution of the ASEAN – SEAFDEC member countries Ministers responsible for fisheries on 17 June 2011 in Bangkok; and ii) the Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 to be used as a guideline to develop programs, projects and activities for the implementation of the Resolution, which was adopted by Senior Officials in Bangkok prior to the Resolution on 16 June 2011.

Recognising the ASEAN-SEAFDEC Strategic Partnership (ASSP), signed in November 2007, with its scope to promote ASEAN interests through active participation and involvement in international fora, a common understanding and position in regional and global fisheries as well as the development and implementation of appropriate regional policies, the Resolution is on the one hand a roadmap for the development of regional fisheries, and on the other hand the declared political will of the ASEAN Member States (AMS) to implement the Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020.

The Resolution and Plan is under-going a process of updating and revision to provide for the period towards 2030 (this policy brief focusses on the version approved towards 2020).

Section 2: Content of the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

The Resolution contains 23 goals addressing an array of fisheries and aquaculture issues, which are summarized as follows. Numbers in brackets refer to the numbered goal in the Resolution:

Food Security and Quality

Under food security and food quality the Resolution addresses a sustained fish supply and improved food security, including improved livelihoods of ASEAN people (1), to reduce losses in the fisheries supply chain (20), and to utilize improved technologies to ensure fish quality and quality management systems (21).

Cooperation

In the area of cooperation goals include the development of strategic partnerships and cooperation among the various stakeholders (2), fostering cooperation among ASEAN Member Countries to combat IUU fishing (8), to encourage responsible aquaculture practices (15), the development of regional initiatives for responsible fisheries management (5), and the promotion of joint ASEAN approaches and positions in international trade (18).

Capacity development

Capacity development-related goals are to strengthen the human capacity of stakeholders (3) as well as the capacity in fisheries governance (4) and an enhanced national capacity to collect and share fisheries data and information to strengthen knowledge and science-based fisheries development and management (10).

Fisheries management

Fisheries management goals include the ecosystem approach and habitat integration in the management process (6) as well as fishing capacity management (7).

Climate change adaptation

Goals are enhancing the resilience of fishing communities to address environmental changes (9), and supporting ASEAN efforts to promote a low carbon development (12).

Inland fisheries

Enhanced awareness for inland fisheries' contribution to food security and sustainable livelihoods (11) as well as promoting inter-agency coordination of multiple uses of freshwater resources (14).

Labor issues

Improvement of the working conditions of people engaged in fisheries activities (13).

Aquaculture

Enhanced awareness for the contribution of aquaculture for food security and sustainable livelihoods (15) and the mitigation of potential impacts of aquaculture on the environment and biodiversity (17).

Trade

Support the competitiveness of the ASEAN fish trade (19).

Commitment to Support the Resolution and Plan of Action

The Resolution requests support for the Plan of Action on Sustainable Fisheries for Food Security (22) and commitment to fully support the Resolution through necessary action and progress reports (23).

The Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 comprises 76 points structured under eight main topics.

Planning and information focusses on the integration of sustainable development in the planning of marine and inland capture fisheries as well as aquaculture, strengthening the capacity to plan as well as the capacity to collect relevant data to achieve the above described goals, information exchange, and the development of simple and practical indicators to measure progress.

Fisheries management covers all aspects of fisheries management, including the review of the existing management framework, the development of fisheries management plans, capacity development and active participation of stakeholders in the fisheries management process, licensing and registration, carbon footprint reduction, conflict resolution, and enforcement.

Marine fisheries management includes the development and implementation of national and regional policies to fight IUU fishing and implement other international fisheries instruments and support regional cooperation on these issues, the conduct of research on the impacts of various gear types and methods, specifically referencing the FAO International Guidelines on Managing By-catch and Reducing Discards, optimizing the use of inshore waters through resource enhancement programs, the management of Marine Protected Areas (MPAs) and other major critical coastal habitats, safety at sea, and assessing the possible impact of government subsidies on fisheries.

Inland fisheries management includes policies in support of sustainable inland fisheries management, campaigns to increase the awareness for the importance of inland fisheries, inter-agency coordination on water use, coordinated planning on the use of rivers, the development of simple indicators to manage inland fisheries and the monitoring the impact of structures that affect the migration of spawning fish.

Aquaculture includes ensuring that national programs and policies on aquaculture address social, economic and environmental aspects of sustainable aquaculture to improve food security, livelihoods, employment and poverty alleviation, developing and implementing ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices, the integration of aquaculture into rural development activities, and research and development (R&D). In terms of the latter the focus is on (a) improving existing genetic resources, (b) assessing the impact of climate change on broodstock management, and (c) the feeding and disease management, promoting the production and distribution of

specific pathogen-free (SPF) and quality seed, applying the concept of aquatic biosecurity, formulating and implementing complementary and supportive policies in support of small-scale farmers and hatchery operators, encouraging good and appropriate employment practices, reducing the risk of negative environmental impacts, enhancing the capabilities in the diagnosis and control of fish diseases within the region, and encouraging Member Countries to take a precautionary approach to safeguard the environment from the acceleration of offshore aquaculture.

Optimal utilization of fish and fishery products includes the introduction and provision of support for the development and application of technologies that optimize the utilization of catches, improvements in fish quality and its safety management, the promotion of the production of and preserve the diversity of traditional fish products, development of traceability systems, strengthening of fish quality and safety management systems, and development of standards and guidelines for fisheries and aquaculture products handling and transportation.

Fish trade includes regional cooperation and the development of standards to harmonise fish trade regionally and increase competitiveness at regional and international markets, engage the private sector to sustain regional trade, support small-scale producers, encourage branding of fish and fish products, encourage the implementation of appropriate international standards and strengthen programs relevant to Sanitary and Phytosanitary (SPS) measures, and strengthen risk assessment and R&D related to the use of Genetically Modified Organism (GMO) products in fisheries and aquaculture.

Regional and international policy formulation requests the increased participation and involvement of Member Countries in international fora and technical committees where fisheries policies of relevance to the ASEAN region are increasingly discussed and agreed upon at the global level.

Section 3: Impacts of the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

Given the diversity of the fishery sectors in AMS, with one landlocked country, countries with some of the biggest delta areas in the world, archipelagic states, and two member countries fishing in the Indian Ocean, finding common ground for the Resolution and Plan of Action was a difficult task. Measuring the impacts of the AMS is also challenging.

The first review of the implementation of the Resolution and Plan of Action was conducted in 2015, based on feedback provided by member countries responding to a questionnaire. The review concluded that a number of programs and activities had been effectively implemented in the AMS in line with the Resolution and Plan of Action. Based on the information provided by member countries, priority was given to the management of marine and inland fisheries, followed by aquaculture. Additionally, the review observed an increased involvement and interaction of key stakeholders in formulating and developing national policies and frameworks.

The second review in 2019 is ongoing. Initial results suggest good progress has been made in implementing programs and activities by most AMS referenced to the Resolution and Plan of Action. The review is also likely to conclude that the methodology for reviewing progress in implementing the Resolution and Plan of Action may need to be reviewed by Member Countries and an evaluation of the impacts should be considered.

Section 4: Conclusion

The Resolution and Plan of Action have extended the views of key stakeholders at national level for the need of proper policy development at national and regional level. This resulted in increased awareness for the need of regional cooperation in the areas of sustainable fisheries management and aquaculture development.

The Resolution as a fisheries policy framework has proven its value by covering a range of fisheries related policy issues which are currently addressed nationally by ASEAN Member Countries.

Section 5: Implications of the Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 for the ASEAN countries

SEAFDEC Secretariat suggests that the Resolution and Plan of Action are envisaged to serve as policy framework and priority actions to support sustainable development of fisheries, while in general AMS perceive the two documents as a declaration of commitment and an implementation plan for the activities identified.

In discussions with AMS, it appears they generally consider the Resolution as too broad to function as an ASEAN General Fisheries Policy. A possible ASEAN General Fisheries Policy (AGFP) requires a more detailed description of regional fisheries policies and will have to take into account the diversity of the fisheries sectors in the AMS. However, the Resolution is a document to be consulted when/if developing a future ASEAN General Fisheries Policy.

The limitations in the methodology to review the implementation of the Resolution and Plan of Action, and the scope/detail in the review reports, prevents any robust assessment of their impacts on AMS. These limitations need to be considered when developing a possible AGFP.

Additional reading and useful sources of information

The Resolution can be found here:

https://www.asean.org/wp-content/uploads/images/archive/AMAF%2033%20Resolution%20Sustainable%20Fisheries_Adopted.pdf

The Plan of Action can be found here:

<https://www.seafdec.org.ph/wp-content/uploads/2011/08/Plan-of-Action-FFP2020adopted-by-MinistersJune1711.pdf>

10.ASEAN Food Safety Policy

Section 1: Introduction to the ASEAN Food Safety Policy

The ASEAN Food Safety Policy was adopted in 2015 by the Ministerial Bodies responsible for health, trade and agriculture as the basis for ASEAN Member States (AMS) to facilitate the free flow of food, enhance protection of consumers' health within ASEAN, and ensure the safety of food. It combines existing ASEAN Principles and Guidelines for National Food Control Systems with an ASEAN-wide approach to establishing an integrated market for food. Agreed principles of the ASEAN Food Safety Policy serve as guidance and facilitate the development of a sustainable and robust food safety regulatory framework within the region.

The ASEAN Food Safety Policy is the overarching regional food safety policy for the ASEAN Food Safety Regulatory Framework (AFSRF), the framework for achieving its objectives.

The objectives of the ASEAN Food Safety Policy are to provide direction to relevant ASEAN Sectoral Bodies and ASEAN Member States with the goal of protecting the health of ASEAN consumers, ensuring fair practices in food trade and facilitating the free movement of safe food products within the region, which includes:

- (a) Establishing and implementing food safety measures;
- (b) Fostering the process of harmonisation of food safety measures and control procedures of ASEAN Member States; and
- (c) Supporting the efforts of ASEAN Member States in strengthening national food control systems.

Section 2: Content of the ASEAN Food Safety Policy

The ASEAN Food Safety Policy addresses all sectors concerned with food safety assurance and control, including agriculture, health, industry and trade. The Policy content comprises 10 core principles. These principles provide guidance and direction for the development and implementation of the initiatives of ASEAN bodies responsible for all aspects of food safety and food safety regulatory systems in ASEAN Member States.

A summary of the principles are as follows:

Principle 1: Integrated 'food chain' approach: In order to ensure the safety of food in ASEAN, it is necessary to consider all aspects of the food production chain as a continuum from and including primary production and the production of animal feed up to and including sale or supply of food to the consumer.

Principle 2: Systematic risk analysis framework: Measures adopted in controlling food safety by ASEAN Member States governing food safety should be based on risk analysis.

Principle 3: Science-based, independent risk assessment process: Food safety risk assessments should be carried out in an independent, objective and transparent manner, using relevant and available scientific information and data.

Principle 4: Primary responsibility of food business operators: Food business operators, at every stage of the food chain, have the primary role and responsibility for ensuring the safety of their food products. The supporting role of national governments, consumers, academics and scientific institutions should be factored in implementation of food safety measures.

Principle 5: Consistency with ASEAN Trade in Goods Agreement (ATIGA) and the World Trade Organization's (WTO's) Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) Agreements: Food import/export requirements of ASEAN Member States shall be consistent with ASEAN Trade in Goods Agreement (ATIGA), as well as with the World Trade Organization's Agreements on Sanitary and Phytosanitary (SPS) Measures and on Technical Barriers to Trade (TBT).

Principle 6: Equivalence and mutual recognition: ASEAN Member States recognise that national food control systems or their components, although designed and structured differently, are capable of meeting the same objective.

Principle 7: Harmonisation with international standards: ASEAN Sectoral Bodies engaged in the harmonisation of standards and requirements for food safety and food control should ensure that these are based on international standards.

Principle 8: Reliable traceability system: A reliable traceability system covering relevant stages of production, processing and distribution of food and feed products should be put in place by ASEAN Member States to enable targeted and swift withdrawals of unsafe food products whenever needed.

Principle 9: Strengthening and harmonisation of regional and national food control systems: All ASEAN Member States will support the development of ASEAN initiatives for enhancing food safety and make every effort to ensure that all national food control systems are at a level of performance, efficiency and effectiveness that is in line with ASEAN Principles and Guidelines for National Food Control Systems as well as other relevant international or ASEAN common food safety requirements.

Principle 10: Transparency: The development and implementation of ASEAN food safety measures will be undertaken in a transparent manner.

The policy lacks any information about its implementation or the monitoring and evaluation of its implementation or impacts. However the policy states that it will be reviewed periodically and updated as required to reflect new developments in ASEAN that have an impact on food safety.

Section 3: Impacts of the ASEAN Food Safety Policy

As ASEAN develops an integrated market for food, the ASEAN Food Safety Policy ensures coordination and establishes a common purpose and approach across the relevant ASEAN Sectoral Ministerial Bodies and their subsidiary bodies.

The ASEAN Food Safety Policy serves as guidance and facilitate the development of a sustainable and robust food safety regulatory framework for the region. ASEAN developed the ASEAN Food Safety Regulatory Framework (AFSRF) in 2016 with clearly defined objectives, scope, approach, principles and an outlined approach for implementation.

The objectives of the AFSRF are

1. to ensure the protection of consumer's health;
2. to facilitate the free flow of safe food within ASEAN by:
 - (i) enhancing harmonisation of sanitary and phytosanitary measures and standards for food;
 - (ii) minimising technical barriers to *intra*-ASEAN trade in food; and
 - (iii) reducing discrepancies of national food control systems among individual ASEAN Member States.

The AFSRF articulates principles, requirements, processes and coordinating mechanisms for the implementation of the ASEAN Food Safety Policy to assure food safety and controls from primary production to consumption. The AFSRF also defines responsibilities of relevant ASEAN subsidiary bodies and authorities in Member States, including principles relating to the need for a scientific basis for food safety, institutional arrangements and procedures required for assuring food safety.

A Task Force, comprising nominated officials from the economic, agriculture and health sectors, was established in 2017 to develop the AFSRF Agreement. The objective of the Agreement is to establish a comprehensive and integrated overall approach to food safety in ASEAN Member States, so as to ensure protection of consumer health and facilitate free flow of safe food in ASEAN. As of January 2019, the TF AFSRF had conducted its 3rd workshop, consulting on the preliminary list of protocols with related sectoral bodies. The draft AFSRF

Agreement defines the responsibilities of Member States and food business operators operating within their territories in ensuring food safety. Separate Protocols would be developed following the entry into force of the AFSRF Agreement. These Protocols would define the obligations and rights of Member States with respect to the implementation of food safety measures and/or associated arrangements that are agreed upon and must be signed by all Member States.

Section 4: Conclusion

Food safety has rightly received a lot of attention from ASEAN member states, and the ASEAN Food Safety Policy addresses these food safety issues throughout the food chain. The Policy contains 10 principles and serves as guidance and to facilitate the development of a sustainable and robust food safety regulatory framework for the region.

To implement the ASEAN Food Safety Policy, the AFSRF was developed. It defines the objectives, scope, approach and principles for implementing the ASEAN Food Safety Policy. Based on the AFSRF, a Task Force was established to translate the AFSRF into the AFSRF Agreement to implement the ASEAN Food Safety Policy. The AFSRF Agreement would include protocols to be developed separately, sketching out actual implementation.

The Food Safety Policy provides guidance and statements that bring together policies that were largely already in place at the national level. As such it reflects a statement of policies issues that were already existing rather than a bold statement of policy that requires much change at the national level.

Section 5: Implications of the ASEAN Food Safety Policy for the ASEAN countries

While work on the AFSRF Agreement continues the ASEAN Food Safety Policy has already enhanced regional collaboration and better understanding between AMS on differences in their national food safety assuring systems, institutional arrangements and standards, thus contributing to the ASEAN integrated market.

Lessons from the development and implementation processes for the ASEAN Food Safety Policy include:

1. Developing and agreeing on the policy took a long time because of the committee process at national and ASEC level followed by the policy decision-making processes.
2. Different levels of standards in AMS resulted in different thinking about how to set the regional standard.
3. While the 10 principles of the Policy were relatively easy to agree, there was a lot of discussion about every sentence when drafting the document due to the required agreement by consensus.
4. In retrospect it might have been good idea to have included a section in the policy document on its implementation, monitoring & evaluation and funding, to provide some direction which would have speeded up implementation processes.

Additional reading and useful sources of information

The ASEAN Food Safety Policy can be found here:

https://asean.org/storage/2012/10/ASEAN-Food-Policy-030516_2.pdf

The ASEAN Food Safety Regulatory Framework (AFSRF) can be found here:

<https://asean.org/storage/2016/08/ASEAN-Food-Safety-Regulatory-Framework.pdf>

The ASEAN Principles and Guidelines for National Food Control Systems can be found here:

https://www.asean.org/wp-content/uploads/images/Community/AEC/Sectoral/Harmonization_of_Standards_and_Technical_Reg

[uirements_in_ASEAN/1%20ASEAN%20Principles%20and%20Guidelines%20for%20National%20Food%20Control%20System%20-%20endorsed%2019th%20PPFWG.pdf](#)

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Annex 4: Policy analysis

Introduction

This Annex provides a summary of the main contents of key regional policy documents of relevance to the fisheries and aquaculture sector. It serves as the basis for analysis presented in Annex 5. Policy content is organised into key policy areas, and under each policy area the content of different regional policy documents is provided in summary form.

To conduct this analysis, several issues needed to be addressed and several observations were made, which are summarized here:

1. The policies listed below were downloaded from the internet. These policies were either found by internet search or through advice provided by the AHTF or AMS during the country visits.

2. Two policy areas, i.e. 'Disaster and Climate Change Management' and 'Aquatic Animal Health and Biosecurity' were added to the policy areas proposed by the AHTF and the word 'Habitats' was added to the policy area of 'Protection of Marine Mammals and ETP Species'.

3. The division of these policies into policy areas is somewhat subjective. Overlapping policies made it necessary to decide in which policy area to place a policy topic, for example the use of data in the policy areas of fisheries data and scientific research. In some cases policy topics are presented in several policy areas.

4. If a policy raised within one policy document covers more than one policy area it has been placed repeatedly under more than one policy area.

5. The following policy issues were mentioned in several policy documents, but are not always listed under the respective AMS policy area.

- Training / capacity building policies at national and regional level
- User conflict mitigation
- technology transfer

These are specific cross cutting policy areas, i.e. training, conflict mitigation, technology transfer, regional cooperation. To simplify the resulting analysis, these policy topics are not always listed in the respective analytical tables.

7. References to funding are covered under subsidies, because the context of funding requested by the AHTF and used in the questionnaire addresses only funding mechanisms for the AGFP.

8. Combatting IUU fishing is part of any comprehensive fisheries management approach. Thus the separation between 'Sustainable Marine Fisheries Resources Management' and 'IUU Fishing' is somewhat artificial which can arguably also be said about the division presented in this chapter.

Policy documents reviewed

The following list of documents were analysed for their content of regional ASEAN policies:

- (1) ASEAN, 2015. Standard Operating Procedures for Responsible Movement of Live Aquatic Animals for ASEAN
- (2) [ASEAN], 2007 Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region
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- (7) ASEAN, 2015c. ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into The Supply Chain
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- (12) ASEAN, 2016a. ASEAN Regional Strategy on Anti-Microbial Resistance Communication and Advocacy
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- (14) ASEAN, 2016c. The ASEAN Food Safety Regulatory Framework (AFSRF)
- (15) ASEAN, 2017a. ASEAN Regional Guidelines on Food Security and Nutrition Policy
- (16) ASEAN, 2017b. Plan of Action (PoA) for the ASEAN Cooperation in Halal Food (2017-2020)
- (17) ASEAN, 2017c. ASEAN Catch Documentation Scheme for Marine Capture Fisheries
- (18) ASEAN, 2017d. Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020)
- (19) ASEAN, 2017e. ASEAN Plus Three Cooperation Strategy on Food, Agriculture and Forestry (APTCS) 2016-2025
- (20) ASEAN, 2018. ASEAN Multi-Sectoral Framework for Climate Change: Agriculture and Forestry Towards Food and Nutrition Security and Achievement of SDGs (Proposed Integrated Framework for AFCC Component 4)
- (21) ASEAN, 2018. ASEAN Tuna Eco-Labeling: Policy Paper on The Establishment of ASEAN Regional Eco-Labeling Scheme
- (22) ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020
- (23) ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

(24) ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products

(25) ASEAN – OIE, 2011. Memorandum of Understanding Between Members of The Association of Southeast Asian Nations (ASEAN) and The World Organisation For Animal Health (OIE)

(26) SEAFDEC, 2010. Regional Guidelines for the Promotion of “One Village, One Fisheries Product” (FOVOP) in the ASEAN Region. Southeast Asian Fisheries Development Center, 31 pp

(27) SEAFDEC, 2015. Reviews of the Implementation of the 2011 ASEAN-SEAFDEC Resolution and Plan of Action on Sustainable Fisheries for Food Security For The ASEAN Region by the ASEAN Member Countries (2011-2014)

(28) SEAFDEC. 2017a. ASEAN Regional Plan of Action for the Management of Fishing Capacity (RPOA-Capacity), Southeast Asian Fisheries Development Center. Bangkok, Thailand, 34 pp.

(29) SEAFDEC, 2017b. Regional Guidelines on Traceability System for Aquaculture Products in the ASEAN Region

(30) SEAFDEC, 2017c. Southeast Asian State of Fisheries and Aquaculture 2017. Southeast Asian Fisheries Development Center, Bangkok, Thailand. 167 pp

(31) SEAFDEC, 2018. Resolution on The Future of SEAFDEC: Vision, Mission, and Strategies Towards 2030

(32) SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

(33) SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

Policy content by main policy area

Policy on sustainable inland fisheries resources management

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

- Sustain the supply of fish and fishery products from the ASEAN region
- Strengthen fisheries governance
- Develop regional initiatives to promote a responsible fisheries management mechanism
- Implement effective management of fisheries through an ecosystem approach to fisheries that integrates habitat and fishery resource management
- Promote better management of fishing capacity and use of responsible fishing technologies and practices, recognising the movement towards replacing the “open access” to fisheries resources with “limited access” through rights-based fisheries
- Enhance the awareness of the contribution that inland fisheries makes to food security and sustainable livelihoods
- Promote inter-agency coordination of multiple uses of freshwater resources

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

A. PLANNING AND INFORMATION

- Integrate the planning of marine capture fisheries, inland capture fisheries and the aquaculture sub-sectors to promote the sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;
- 6. Further develop simple and practical indicators in support of planning and monitoring of sustainable fisheries

B. FISHERIES MANAGEMENT

- 8. Accelerate the development of fisheries management plans based on an ecosystem approach, as a basis for fisheries conservation and management;
- 10. Establish and implement comprehensive policies for an ecosystem approach to fisheries management through effective systems (i) to provide licenses to fish (boats, gear and people); (ii) for community fishing rights/rights-based fisheries; (iii) that provide for the development of supporting legal and institutional frameworks; (iv) encourage and institutional cooperation; and (v) that aid in streamlining co-management;
- 11. Adopt co-management at all levels and with all relevant stakeholders in the process of planning and policy formulation for management, conservation and rehabilitation of habitats and protective geographical features, as well as policy formulation on the use and management of natural and human resources to ensure that climate change responses are integrated into fisheries policy frameworks;
- 13. Enhance and promote the participation of local communities, fisheries associations and other stakeholders in fisheries management and co-management. In addition, communities should take part in fisheries and stock assessments by providing data, local ecological knowledge, and status of the stocks;
- 17. Develop guidelines and enhance the capacity of relevant authorities and communities to collaboratively resolve conflict with other stakeholders and with other competing users of resources;
- 18. Investigate the potential of under-utilized fisheries resources and promote their exploitation in a precautionary manner based upon analysis of the best available scientific information;

INLAND FISHERIES

- 32. Establish and implement comprehensive policies and supporting legal and institutional frameworks for an ecosystem approach to inland fisheries management by integrating fisheries and habitat management that devolves co-management to the local authority and stakeholders, and at the same time strengthens the rights of communities and develops rights-based fisheries;
- 33. Undertake campaigns to promote awareness of the importance of freshwater fisheries for local food security, and the importance of rehabilitating and restoring habitats for migratory freshwater fish, restocking indigenous fish species to enhance productivity and encouraging culture-based freshwater fisheries, where appropriate;
- 34. Develop inter-agency coordination (national/sub-regional) on multiple-use water resources of the wetlands/flood-plains to sustain freshwater fisheries, mitigate conflicts between users and also encourage better coordination to address trans-boundary inland fisheries management issues;
- 35. Ensure the sustainability of inland fisheries by maintaining ecological health of the ecosystem, particularly the inter-connectivity of habitats and the specific

management needs during the dry season. Develop mitigating measures for the adverse impacts on inland fisheries that may be caused by the construction of water infrastructure and alteration of water ways;

- 36. Encourage coordinated planning on the use of inland rivers, water-bodies and flood plains through (i) resource enhancement programs; (ii) inland wetlands and fisheries management programs; (iii) environmental impact assessment studies with regards to structures that might impact on aquatic resources; (iv) the consideration of restocking of locally and/or commercially-important inland fish species; and (v) giving priority to human resources development for the implementation of such programs;
- 37. Formulate guidelines to promote the use of practical and simple indicators for inland/flood-plain fisheries within the national inland fisheries management framework, to facilitate (i) timely local level fisheries management decisions with due respect to the large number of people/farmers that take part in fishing; (ii) dialogue to ensure that the inter-connectivity of fish migration path is kept as a tool for management/conservation measures; and (iii) adaptation to the effects of climate change within catchments;
- 38. Monitor the impact of the structures that might affect migration and spawning of fish through a consultative process that involves collaboration with the regional organizations;

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

5. Further develop regional initiatives to promote a responsible fisheries management mechanism, taking into account the specific social, economic, cultural, ecological, and institutional contexts and diversity of the ASEAN and ASEAN fisheries in the spirit of the realization of the ASEAN Economic Community and the ASEAN Socio-Cultural Community;

6. Implement effective management of fisheries that integrates habitat with fishery resources management, and aims to improve the social and economic benefits of all stakeholders, especially by delegating selected management functions to the local level and promoting co-management as a partnership between government and relevant stakeholders;

7. Promote sound management of fishing capacity and use of responsible fishing technologies and practices, recognizing increasing emphasis on rights-based fisheries; and at the same time, secure the rights and well-being of inland and coastal fisheries communities as well as the ecological well-being;

14. Enhance awareness of the contributions that inland fisheries have on food security and livelihoods, and ensure that the well-being of fishery resources and stakeholders are taken into consideration when undertaking development projects that could impact on the sustainability of inland fisheries;

15. Promote inter-agency coordination of the multiple uses of inland aquatic resources for the development of conservation measures for inland aquatic habitats;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

1. Integrate the planning of marine capture fisheries, inland capture fisheries, and aquaculture subsectors to promote sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;

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4. Establish reference points, and come up with estimated biomass or capacity level to determine the maximum sustainable yield, allowable biological catch, or allowable effort for marine and inland fisheries;
 10. Regularly review, update and strengthen national fisheries policies, legal and institutional frameworks through consultation and engagement of government agencies, the private sector, fishers, civil society, and other relevant stakeholders;
 11. Accelerate the development of fisheries management plans as basis for fisheries conservation and management;
 13. Enhance implementation of comprehensive policies for fisheries management through (i) licensing systems (boats, gear, and people); (ii) rights-based fisheries; (iii) supportive legal and institutional frameworks; (iv) strengthened institutional cooperation; and (v) streamlined co-management;
 14. Strengthen the adoption of fisheries management approaches, e.g. co-management and ecosystem approaches to fisheries management, at all levels with all relevant stakeholders involved in the process of planning and policy formulation for management of natural resources, conservation, rehabilitation of habitats and protective geographical features, and improvement of human well-being;
 21. Enhance the capacity of relevant authorities and communities to collaboratively resolve conflicts on resources utilization;
 35. Promote resource enhancement approaches with appropriate monitoring and evaluation programs, e.g. deployment of appropriate resource enhancement structures, restocking of commercially-important aquatic species, and restoration of degraded habitats, taking into consideration possible socio-ecological impacts;
 40. Establish and implement comprehensive policies and supporting legal and institutional frameworks, and adopt ecosystem approaches to inland fisheries management that devolve co-management responsibilities to the local authorities and stakeholders, strengthen the rights of communities, and promote rights-based fisheries;
 41. Enhance awareness of the importance of inland fisheries for local food security, and the importance of rehabilitating and restoring habitats for migratory inland aquatic animals, restocking indigenous aquatic species to enhance productivity (with monitoring and evaluation of restocking programs) and encouraging culture-based inland fisheries, where appropriate;
 43. Strengthen inter-agency coordination (national/sub-regional) on multiple-use water resources of the wetlands/flood-plains to sustain inland fisheries, mitigate conflicts among users and also encourage better coordination to address transboundary inland fisheries management issues;
 45. Monitor and assess the impacts of the construction/operations of man-made structures that could alter the water ways and affect migration and spawning of aquatic animals, particularly those at risk of overexploitation, and develop mitigating measures and appropriate conservation and management measures for such impacts through consultative processes that may involve collaboration with regional organizations;
 46. Encourage coordinated planning and management on the use of inland water bodies including rivers, floodplains, wetlands, etc. through (i) resource enhancement programs; (ii) inland fisheries management programs; (iii) environmental impact assessment of structures on the aquatic resources; and (iv) restocking of indigenous and/or commercially-important aquatic animals species taking into consideration concerns on genetic diversity; and build/improve the capacity of human resources and institutions in the implementation of such programs;
 47. Formulate guidelines to promote the use of practical and simple indicators for inland/floodplain fisheries within the national inland fisheries management framework, to facilitate (i) timely local level fisheries management decisions with due respect to the large number of people/farmers that take part in fishing; (ii) dialogues to ensure that the inter-

connectivity of fish migration path is kept as a tool for management/conservation measures; and (iii) adaptation to the effects of climate change within water bodies;

Policy on sustainable marine fisheries resources management

ASEAN, 2018. ASEAN Tuna Eco-Labeling: Policy Paper on The Establishment of ASEAN Regional Eco-Labeling Scheme

This is a concept paper on the pros and cons of tuna eco-labelling in ASEAN, which in the end suggests an ASEAN Tuna Eco-Labeling (ATEC) concept which heavily copies from the Marine Stewardship Council eco-label. There is no policy here.

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

- Sustain the supply of fish and fishery products from the ASEAN region
- Strengthen fisheries governance
- Develop regional initiatives to promote a responsible fisheries management mechanism
- Implement effective management of fisheries through an ecosystem approach to fisheries that integrates habitat and fishery resource management
- Promote better management of fishing capacity and use of responsible fishing technologies and practices, recognising the movement towards replacing the “open access” to fisheries resources with “limited access” through rights-based fisheries

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

A. PLANNING AND INFORMATION

- Integrate the planning of marine capture fisheries, inland capture fisheries and the aquaculture sub-sectors to promote the sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;
- 6. Further develop simple and practical indicators in support of planning and monitoring of sustainable fisheries

B. FISHERIES MANAGEMENT

- 8. Accelerate the development of fisheries management plans based on an ecosystem approach, as a basis for fisheries conservation and management;
- 10. Establish and implement comprehensive policies for an ecosystem approach to fisheries management through effective systems (i) to provide licenses to fish (boats, gear and people); (ii) for community fishing rights/rights-based fisheries; (iii) that provide for the development of supporting legal and institutional frameworks; (iv) encourage and institutional cooperation; and (v) that aid in streamlining co-management;
- 11. Adopt co-management at all levels and with all relevant stakeholders in the process of planning and policy formulation for management, conservation and rehabilitation of habitats and protective geographical features, as well as policy formulation on the use and management of natural and human resources to ensure that climate change responses are integrated into fisheries policy frameworks;

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- 13. Enhance and promote the participation of local communities, fisheries associations and other stakeholders in fisheries management and co-management. In addition, communities should take part in fisheries and stock assessments by providing data, local ecological knowledge, and status of the stocks;
 - 17. Develop guidelines and enhance the capacity of relevant authorities and communities to collaboratively resolve conflict with other stakeholders and with other competing users of resources;
 - 18. Investigate the potential of under-utilized fisheries resources and promote their exploitation in a precautionary manner based upon analysis of the best available scientific information;

MARINE FISHERIES

- 24. Build up capacity among Member Countries, including functions for regional and sub-regional cooperation, to effectively meet the requirements of Port State measures and Flag State responsibilities;
- 25. Conduct research on the impacts of various gear types and methods, including light fishing, trawls and push nets, on ecosystems and populations of aquatic animals and also the effects of fishing vessel discharges and waste disposal on marine ecosystems, to promote the use of selective fishing gears and sustainable devices;
- 26. Take reference from the FAO International Guidelines on Managing By-catch and Reducing Discards, where applicable, to identify and find solutions to ASEAN by-catch problems, including the excessive catch of juvenile fish;
- 27. Optimize the use of inshore waters through resource enhancement programs such as promoting the installation of artificial reefs and structures, encouraging coordinated and effective planning for coastal fisheries management programs, undertaking environmental impact assessment studies, restocking of commercially-important fish species, as appropriate, and give priority to human resources development for the implementation of such programs;

ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products

- 5. Managing fishing capacity with a view to balance fishing efforts taking into account the declining status of the fishery resources in the Southeast Asian region, and establishing conservation measures based on scientific evidence;
- 11. Undertaking collective efforts in developing preventive and supportive measures to strengthen rehabilitation of resources and recovery of fish stocks to mitigate the impacts of IUU fishing.

SEAFDEC, 2015. Reviews of the Implementation of the 2011 ASEAN-SEAFDEC Resolution and Plan of Action on Sustainable Fisheries for Food Security For The ASEAN Region by the ASEAN Member Countries (2011-2014)

This document has been produced by the SEAFDEC Secretariat and does not contain any policy statements. It reflects on achievements of ASEAN member countries in implementing the above resolution and plan.

SEAFDEC. 2017a. ASEAN Regional Plan of Action for the Management of Fishing Capacity (RPOA-Capacity), Southeast Asian Fisheries Development Center. Bangkok, Thailand, 34 pp.

- RPOA-Capacity could serve as basis for the AMSs in formulating relevant policies and provide an enabling environment for clear direction and understanding of the need to effectively manage the fishing capacity at national level. It includes
 - A description of what states should do to assess their fishing capacity;
 - The suggestion to prepare an NPOA Capacity to monitor, evaluate, review its effectiveness, including measures to address overcapacity, among others, to identify reference points in fisheries management, zoning and alternative fisheries management measures for small-scale fisheries, fishing fee schemes, and fishing vessel construction and importation control measures;
 - That states should conduct a systematic assessment of the consequences of overcapacity from production and economic perspective together with its impact on major stakeholders at local, national and sub-regional levels;
 - Further details on measures to address overcapacity at various government and stakeholder levels, as well as regional and international considerations and obligations, and
 - The need to cooperate at regional and sub-regional level on aspects of fisheries management.

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

4. Strengthen fisheries governance by evaluating current constraints to ensure comparability and compatibility of the required practices and the operations of fisheries in the AMSs;
5. Further develop regional initiatives to promote a responsible fisheries management mechanism, taking into account the specific social, economic, cultural, ecological, and institutional contexts and diversity of the ASEAN and ASEAN fisheries in the spirit of the realization of the ASEAN Economic Community and the ASEAN Socio-Cultural Community;
6. Implement effective management of fisheries that integrates habitat with fishery resources management, and aims to improve the social and economic benefits of all stakeholders, especially by delegating selected management functions to the local level and promoting co-management as a partnership between government and relevant stakeholders;
7. Promote sound management of fishing capacity and use of responsible fishing technologies and practices, recognizing increasing emphasis on rights-based fisheries; and at the same time, secure the rights and well-being of inland and coastal fisheries communities as well as the ecological well-being;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

1. Integrate the planning of marine capture fisheries, inland capture fisheries, and aquaculture subsectors to promote sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;
4. Establish reference points, and come up with estimated biomass or capacity level to determine the maximum sustainable yield, allowable biological catch, or allowable effort for marine and inland fisheries;

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10. Regularly review, update and strengthen national fisheries policies, legal and institutional frameworks through consultation and engagement of government agencies, the private sector, fishers, civil society, and other relevant stakeholders;
 11. Accelerate the development of fisheries management plans as basis for fisheries conservation and management;
 13. Enhance implementation of comprehensive policies for fisheries management through (i) licensing systems (boats, gear, and people); (ii) rights-based fisheries; (iii) supportive legal and institutional frameworks; (iv) strengthened institutional cooperation; and (v) streamlined co-management;
 14. Strengthen the adoption of fisheries management approaches, e.g. co-management and ecosystem approaches to fisheries management, at all levels with all relevant stakeholders involved in the process of planning and policy formulation for management of natural resources, conservation, rehabilitation of habitats and protective geographical features, and improvement of human well-being;
 21. Enhance the capacity of relevant authorities and communities to collaboratively resolve conflicts on resources utilization;
 34. Mitigate bycatch and discard concerns including excessive catch of juvenile fish by promoting the adoption and implementation of relevant regional and international guidelines, e.g. FAO International Guidelines on Bycatch Management and Reduction of Discards;
 36. Ensure the integration of fisheries with habitats management by applying the concept of fisheries refugia in line with the Regional Guidelines on the Use of Fisheries Refugia for Capture Fisheries Management in Southeast Asia to complement the existing conservation and management measures;
 37. Promote the adoption of different management approaches to sustainably manage major critical coastal habitats, e.g. mangroves, coral reefs and seagrasses; and develop and disseminate information and guidance on the use of appropriate tools and interventions;

Policy on aquaculture

ASEAN. 2015d. Guidelines on ASEAN Good Aquaculture Practices (ASEAN GAqP) for Food Fish

The scope of the ASEAN GAqP (Food Fish) covers practices that are mainly aimed at preventing or minimising the risks in four areas of production, namely food safety, animal health and welfare, environmental integrity and socio-economic aspects associated with aquaculture of Food Fish. The guidelines cover

Under food safety

- aquaculture facility location recommendations
- procedures to avoid feed contamination
- aquaculture inputs are free of prohibited substances
- registered with the competent authority regulations complying farm feed
- veterinary drugs and chemicals for use in aquaculture shall comply with national regulations, as well as international guidelines.
- Water quality suitable for fish production and safe for human consumption
- Brood stock without human health hazards
- Food safety data to be recorded and stored for 2 years

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- Aquaculture facilities designed not to be contaminated from workers, sewage/toilets, domestic animals, machinery oil/fuel and other possible sources
 - Appropriate harvesting and post-harvest handling
 - farm level hygienic practices
 - management and monitoring programmes in bivalve molluscs growing areas

Under Animal Health and welfare

- Aquatic animal health management programmes and movement of aquatic animals and aquatic animal products in accordance with provisions in the OIE Aquatic Animal Health Code
- culture environment should be maintained at all phases of the production cycle adapted to the species, including routine monitoring and species specific management measures
- Responsible use of veterinary medicine
- Careful species selection in polyculture
- Farm workers and managers trained on good aquatic animal health and welfare management practices
- High quality seed from reliable sources
- Record keeping of animal health and movement for traceability purposes

Under Environmental Integrity

- Environmental impact assessments should be conducted
- Regular monitoring of farm environmental quality
- Measures to promote efficient water management and proper management of effluents to reduce impacts on surrounding land, and water resources
- hatchery produced seed should be used; if wild seed is used it should be collected in accordance with national laws
- use of exotic species only after risk assessment of impact on natural environment, biodiversity and ecosystem health
- the use of GMOs only after a science-based risk assessment to address possible risks on a case-by-case basis.
- Responsible Farm infrastructure construction and waste disposal
- Responsible use of chemicals and drugs
- Training of farm workers and managers on environmental management and mitigation of impact to ensure they are aware of their responsibilities in protecting the environments.

Under Socio-economic aspects

- Workers should be treated responsibly and in accordance with national labour rules and regulations and, where appropriate, relevant ILO conventions
- Workers should be provided with decent working conditions for both genders.
- Child labour should not be used in a manner inconsistent with ILO conventions and international standards.
- Farm operators shall demonstrate equal rights on public land and water use for local communities following National Laws and Regulations

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- Farm operators should take measures to minimise potential adverse impacts on the local community during all phases of farm operation.
 - Safe farm work conditions must be ensured at all times in line with the OH&S conventions of the ILO
 - Workers should not be discriminated on the basis of gender.

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

- Enhance the awareness that aquaculture makes to food security and sustainable livelihoods to deliver a responsible increase in aquaculture production that promotes aquaculture for rural development
- Promote cooperation among Member Countries and with international and regional organisations in encouraging responsible aquaculture practices through joint research, technology transfer and human resource development
- Mitigate the potential impacts of aquaculture on the environment and biodiversity including the spread of aquatic animal diseases

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

A. PLANNING AND INFORMATION

- Integrate the planning of marine capture fisheries, inland capture fisheries and the aquaculture sub-sectors to promote the sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;
- 17. Develop guidelines and enhance the capacity of relevant authorities and communities to collaboratively resolve conflict with other stakeholders and with other competing users of resources;

C. AQUACULTURE

- 39. Ensure that national programs and policies on aquaculture address social, economic and environmental aspects of sustainable aquaculture to improve food security, livelihoods, employment and poverty alleviation by (i) providing the mechanisms and enabling environment for good aquaculture practices, efficient markets and fair trade; (ii) strengthening the capacity of small-holder farmers; and (iii) promoting inter-agency collaborations;
- 40. Develop and implement ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices that cover (i) the integration of quality and safety management systems for products with significant trade potential; (ii) the harmonization for chemical use and food safety in aquaculture; (iii) the development of product traceability systems from farm to market; and (iv) harmonization of the quarantine and inspection/sampling procedure and Sanitary and Phytosanitary (SPS) measures for aquaculture products to secure food safety;
- 41. Integrate aquaculture into rural development activities within the context of multiple-use of land and water resources through inter-agency coordination in policy formulation, project planning and implementation, stakeholder consultation, extension services and technology transfer, participate in and provide support to regional initiatives that will assess the role of aquaculture in poverty alleviation for better policy formulation;

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- 42. Implement measures or strategies at national and local level to (i) monitor and regulate aquaculture operations; (ii) prevent over development; and (iii) ensure that activities are carried out in an environment-friendly manner. This also includes effectively enforcing regulations to avoid conflict in the use of common resources and adopting the concept of environmental capacity as a strategy to prevent aquatic pollution brought about by intensification of aquaculture activities;
 - 44. Promote the production and distribution of specific pathogen-free (SPF) and quality seed through the (i) establishment of certified government or private hatcheries as sources of quality seed; (ii) dissemination of new breeding technologies and techniques for the effective distribution and maintenance of genetically improved strains; and (iii) implementation of sound policies that will promote better hatchery management practices, including the responsible collection and use of wild broodstock and seed;
 - 46. Formulate and implement complementary and supportive policies that will (i) build the capacity of small-scale farmers and hatchery operators in adopting simple broodstock and hatchery technologies and innovations; (ii) enhance small-scale farmers and hatchery operators' access to quality broodstock and SPF seeds produced through farmer-friendly broodstock management methods; and (iii) foster strong cooperation between the public and private sectors engaged in development and dissemination of quality broodstock and seed stock;
 - 53. Improve the efficient use of aquatic feeds by strictly regulating the quality of manufactured feed and feed ingredients and support continued research for developing suitable alternative protein sources that will reduce the dependence on fish meal and other fish-based products. This effort will include the consideration of ingredients not derived from wild caught fish, encouraging the culture of species requiring no or low fish meal content in their feed and applying effective feeding management practices, taking into account the need for cultural and social acceptance of alternative feed ingredients;
 - 56. Where applicable, encourage good practices in aquaculture such as the FAO Technical Guidelines on Aquaculture Certification;
 - 57. Encourage Member Countries to take a precautionary approach to safeguard the environment from the acceleration of offshore aquaculture, and to consider developing regional guidelines on responsible marine (inshore to offshore) aquaculture;

ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products

- 4. Enhancing traceability of aquaculture products, through the implementation of all ASEAN GAPs with certification scheme based on regulations of respective countries, and traceability systems that are harmonized with those of major importing countries;

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

16. Strengthen aquaculture governance and implement good aquaculture practices to sustain production for food safety and security, sustainable livelihoods, and rural development;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

1. Integrate the planning of marine capture fisheries, inland capture fisheries, and aquaculture subsectors to promote sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;

48. Ensure that national programs and policies on aquaculture address social, economic, and environmental aspects of sustainable aquaculture to improve food security, livelihoods, and employment, and alleviate poverty by (i) providing the mechanisms and enabling policies for good aquaculture practices, efficient markets and fair trade; (ii) strengthening the capacity of small-holder fish farmers; and (iii) promoting inter-agency collaborations;

49. Develop and implement ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices that cover (i) integration of quality and safety management systems for products with significant trade potentials; (ii) use of chemicals in aquaculture in relation to food safety; (iii) development of product traceability systems from farm to market; and (iv) implementation of quarantine and inspection/ sampling procedures and Sanitary and Phytosanitary (SPS) measures for aquaculture products to ensure food safety;

52. Implement measures or strategies at national and local levels to: (i) monitor and regulate aquaculture operations; (ii) prevent over intensification of aquaculture; and (iii) ensure that activities are carried out in a sustainable manner and that aquatic animal welfare is taken into consideration as appropriate; (iv) effectively enforcing regulations to avoid conflict in the use of common resources; and (v) adopt the concept of environmental carrying capacity including the implementation of good aquaculture practices;

54. Promote the production and distribution of specific pathogen-free (SPF) and specific pathogen resistant (SPR) broodstock and seeds through: (i) establishment of certified government or private hatcheries as sources of quality seed; (ii) dissemination of new breeding technologies and techniques for the effective distribution and maintenance of genetically-improved strains; and (iii) implementation of sound policies that promote better hatchery management practices, including the responsible collection and use of wild broodstock and seed;

56. Formulate and implement complementary and supportive policies that will: (i) build the capacity of fish farmers and hatchery operators in adopting broodstock and hatchery technologies and innovations; (ii) enhance fish farmers and hatchery operators' access to SPF/SPR broodstock and seeds produced through farmer-friendly broodstock management methods; (iii) foster strong cooperation between the public and private sectors engaged in development and dissemination of quality broodstock and seed stock; (iv) strengthen the capacity of fish farmers' groups, e.g. by empowering fish farmers' groups; and (v) promote development of a skilled workforce for the aquaculture industry;

57. Encourage good and appropriate employment practices in accordance with domestic laws and regulations or relevant international instruments;

66. Improve human resource capabilities for responsible aquaculture through: (i) closer public and private sector collaboration in R&D, paying particular attention to the need for advanced skills in biotechnology and assessment of the efficacy and economics of the use of probiotics and immunostimulants including vaccines; and (ii) effective implementation of aquaculture education and extension services;

67. Formulate and implement national policies and strategies that will enable the aquaculture sector to adopt measures to mitigate the potential impacts of climate change and environmental stressors by providing support to R&D on climate change, and other environmental-related issues to increase resilience, strengthening the overall capacity of various stakeholder groups and fostering cooperation within the aquaculture sector and with other sectors, and developing standard procedures for disaster risks reduction in aquaculture;

68. Apply precautionary approach to safeguard the environment from the over-intensification and expansion of inland, coastal and offshore aquaculture;

Policy on IUU fishing

Regional Plan of Action (RPOA) to Promote Responsible Fishing Practices including Combating IUU Fishing in the Region

This RPOA is a voluntary instrument and takes its core principles from already established international fisheries instruments for promoting responsible fishing practices. The objective of this RPOA is to enhance and strengthen the overall level of fisheries management in the region, in order to sustain fisheries resources and the marine environment, and to optimise the benefit of adopting responsible fishing practices. The plan covers

- a proposed joint compilation of artisanal and industrial fishing activities, including the status fish stocks, trade and markets
- encouraging countries in the region
 - to work toward ratification, accession, and/or acceptance and full implementation, of UNCLOS and UNFSA
 - to work towards ratification and/or acceptance of regional fisheries management instruments, where appropriate
 - to work toward acceptance and full implementation of relevant regional and multilateral arrangements, where appropriate
- to work closely and collaboratively with regional organisations to develop conservation and management measures
- to acknowledge the important roles of regional organisations in strengthening fisheries management and conservation in the region
- to work together to improve their data collection systems and to share information about vessels, fishing effort, catch levels, fish landings and sales of fish and fish products
- to develop a regional approach to identify, compile and exchange information on any vessel used or intended for use for the purpose of fishing including support ships, carrier vessels and any other vessels directly involved in such fishing operations in the region on straddling and migratory stocks and across national jurisdictions
- to manage the fishing capacity of their fleets by assessing the status of their fishery resources and fishing fleet capacity
- to introduce management measures to help prevent fishing capacity from exceeding levels that result in harvest rates that impede the ability of fish stocks to reproduce sustainably over the longer term
- to undertake planning to reduce over-capacity without shifting that capacity to other fisheries whose resources may be already fished at the maximum sustainable rate or above that rate, taking into consideration potential socio-economic impacts
- to cooperate to assess, conserve and manage fishery resources where they straddle national boundaries or occur both within EEZs and in an area beyond and adjacent to the EEZ
- to undertake to develop and implement national plans of action to accelerate their efforts to reduce over capacity and eliminate illegal fishing activity where these issues are known to occur

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- to work on the collection, management and sharing of information on fisheries management, and the management of fishing capacity; and
 - to respect traditional, artisanal and small-scale fisheries and providing assistance with the management of these fisheries resources
 - to actively cooperate with relevant flag States and fishing entities operating in the region in ensuring that fishing vessels entitled to fly their flags do not undermine the effectiveness of conservation and management measures, including engagement in or supporting illegal fishing
 - to adopt port State measures, where appropriate, based on the FAO 'Model Scheme on Port State Measures to Combat IUU Fishing
 - to standardise catch and landing documentation throughout the region and implement catch documentation or trade certification schemes for high value product
 - to work with organisations such as INFOFISH to produce regular and timely market reports allowing trade flows to be analysed
 - to check trade discrepancies regarding export of fish and fish product and take appropriate action and, as a minimum, report these discrepancies to the flag State.

ASEAN, 2015c. ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into The Supply Chain

The Guidelines is intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities.

- Defining national IUU fishing activities
- Unauthorised transshipment
- Poaching in the EEZs of other countries
- IUU fishing in the high seas and RFMO areas
- Reiterating responsible fishing practices and methods based on the regional Guidelines for Responsible Fisheries in Southeast Asia Responsible Fishing Operations and the RPOA-IUU
- States are encouraged to
 - Update related laws and regulations as well as system of reporting catch and compiling appropriate logbook information
 - Monitor all fishing vessels by maintaining records and their performance with respect to compliance to their national laws and regulations, including current owners and operators authorized to undertake fishing activities at designated fishing areas
 - Implement, where appropriate, a Vessel Monitoring System (VMS) for all commercial fishing vessels licensed by the respective States
 - Intensify efforts to address IUU fishing, especially destructive fishing (e.g. blast and cyanide fishing) by promoting community-based management approach to prevent, deter and eliminate any violations with support from relevant government agencies and communities
 - Intensify respective surveillance during fishing operations where appropriate, as well as port state control at designated landing ports
- Regulating transshipment and landing of fish/catch across borders
- Preventing poaching in the EEZs of ASEAN Member States

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- take appropriate actions against fishing vessels operating illegally beyond their designated areas, e.g. through flag State measures, port State measures and coastal State measures
 - should cooperate in compiling a list of vessels reported to have been illegally operating (poaching) beyond their respective EEZs, and share this list among the relevant countries
 - should support in regularly updating information for the Regional Fishing Vessels Record (RFVR) endorsed by the Special SOM-34thAMAF.
 - are encouraged to establish mutual bilateral/multilateral agreements among neighboring countries to set terms and conditions (including enforcement, penalties, and other regulations), for permission to fish in each other's fishing areas
 - Controlling Illegal Fishing and Trading Practices of Live Reef Food Fish, Reef-based Ornamentals and Endangered Aquatic Species
 - States should conduct regular inter-and intra-meetings among relevant authorities (including customs departments) and exporting companies for mutual agreements on harvesting practices and data reporting of live reef food fish, reef-based ornamentals, and endangered aquatic species.
 - States should have appropriate mechanisms for the monitoring and data collection of live reef food fish and reef-based ornamentals trades
 - States should ensure that export of endangered aquatic species is avoided, except for research and experimental purposes for which such export should be accompanied by appropriate documents
 - States should encourage participation of small-scale/artisanal fishers, who account for majority of LRFF production, in co-management, and to enhance their awareness of the impacts of illegal fishing and trading of such aquatic species
 - States should consider establishing a network between the LRFF importing and exporting countries, to strengthen LRFFT management at the regional level.
 - Strengthening the Management of Fishing in the High Seas and RFMO Areas
 - Port States should strengthen their respective port state measures including control of port entry, use of port services, requirements for pre-port entry notification and designation of ports for fishing vessels
 - Flag States should implement, where appropriate, observer programs in accordance with relevant national, regional or international regulations with respect to high seas fisheries
 - Flag States should cooperate with the relevant RFMOs in complying with their Catch Document Schemes to prevent the landing of fish and fishery products from IUU fishing in the RFMO areas.

ASEAN, 2017c. ASEAN Catch Documentation Scheme for Marine Capture Fisheries

The document describes the voluntary ASEAN catch documentation scheme, largely following the logic of the EU CDS, with a simplified procedure for small-scale vessels, a list of exempted fish products, and minimum requirements for other CDS to be recognized by AMS. The aim is to enhance traceability thereby preventing Fish from IUU fishing activities to enter the supply chain of AMS.

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

Foster cooperation among ASEAN Member Countries and with international and regional organisations in combating IUU fishing

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

B. FISHERIES MANAGEMENT

- 9. Take measures to prevent unauthorized fishing and eliminate the use of illegal fishing practices by building awareness of their adverse impacts, strengthening law enforcement, developing and promoting responsible and selective fishing gears and practices, enforcing regulations and encouraging alternative means of livelihoods;

MARINE FISHERIES

- 21. Strengthen regional and national policy and legislation to implement measures and activities to combat IUU fishing, including the development and implementation of national plans of action to combat IUU fishing, and promote the awareness and understanding of international and regional instruments and agreements through information dissemination campaigns;
- 22. Establish and strengthen regional and sub-regional coordination on fisheries management and efforts to combat IUU fishing including the development of regional/sub-regional Monitoring, Control and Surveillance (MCS) networks;
- 23. Facilitate consultative dialogue among fisheries legal officers to share, at the sub-regional/regional level, perspectives of the respective legal and regulatory framework in terms of developing MCS-networks and to implement efforts to combating IUU fishing;

ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products

- Strengthening Monitoring, Control and Surveillance (MCS) programs under national laws and regulations for combating IUU fishing and enhancing cooperation among relevant national agencies within the country for effective implementation of laws and regulations for combating IUU fishing;
- 6. Promoting the implementation of port State measures through enhanced inter-agencies and regional cooperation in preventing the landing of fish and fishery products from IUU fishing activities from all foreign fishing vessels, and encouraging the use of the “Regional Fishing Vessels Record (RFVR)”;
- 7. Enhancing regional cooperation in managing trans-boundary fisheries resources through regional, sub-regional, and bilateral arrangements in combating IUU fishing, particularly poaching by fishing vessels, transshipment and transportation of fish and fishery products across borders of respective countries;

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

8. Strengthen cooperation among AMSs and with international and regional organizations in combating IUU fishing and management of fishing capacity to balance available resources;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

12. Implement measures to prevent unauthorized fishing and eliminate illegal fishing practices, e.g. strengthening enforcement of laws and regulations, establishing monitoring control and surveillance (MCS) mechanisms and network, developing and promoting responsible fishing practices, encouraging supplementary livelihood options;

28. Strengthen the implementation of measures and activities to combat IUU fishing by ensuring compliance with national laws and regulations, and with the provisions of relevant international instruments; encourage the development and implementation of national plans of action to combat IUU fishing; promote inter-agency coordination for effective implementation of laws and regulations; and enhance awareness and understanding of applicable international and regional instruments and agreements through information dissemination campaigns;

29. Establish and strengthen regional, sub-regional, and bi-lateral coordination on fisheries management and efforts to combat IUU fishing; and where appropriate promote the establishment of Monitoring, Control and Surveillance (MCS) network through inter-agency coordination and information sharing;

30. Mobilize regional/sub-regional collaboration frameworks and tools for combating IUU fishing, e.g. Regional Plan of Action to Promote Responsible Fishing Practices including Combating Illegal, Unreported and Unregulated Fishing (RPOA-IUU); ASEAN Regional Plan of Action for the Management of Fishing Capacity (RPOA-Capacity); Regional Fishing Vessels Record (RFVR); ASEAN Catch Documentation Scheme (ACDS), and the use of technologies to support monitoring and surveillance of fishing activities, e.g. Vessel Monitoring System (VMS), traceability systems;

31. Support consultative dialogues at regional/sub-regional level among fisheries legal officers to share and exchange information on updated legal and regulatory frameworks in addressing issues in fisheries management;

32. Improve the capacity of relevant national authorities to effectively implement the requirements of port State measures and flag State responsibilities;

[Policy on food safety and better nutrition](#)

ASEAN, 2015a. Statement of ASEAN Ministers on Agriculture and Forestry on Food Security and Nutrition

The ASEAN Ministers on Agriculture and Forestry identified the common position and commit to implement the following key strategies:

- Incorporate nutrition objectives, components, measurable indicators into the design of food and agricultural, trade, food security policies and programmes
- Build institutional capacity through incorporating nutrition in food and nutrition data collection, management and communication and systematic training
- Promote agro-biodiversity for improved nutrition and climate change adaptation, including support the conservation of, access to, and fair and equitable sharing of the benefits arising from the use of genetic resources that can diversify available nutritious foods for consumption and also to adapt to changing climate

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- Improve policy coherence supportive to nutrition with special focus on market expansion and improvement of market access for vulnerable groups through food price policies, trade policies, and agricultural land conversion
 - Implement food security and nutrition awareness and education for farmers, traders and food and agriculture policy-makers, programme planners, including integrating nutrition education in agriculture extension services
 - Improve storage, preservation, transport and distribution technologies and infrastructure to reduce food insecurity, food nutrient loss and waste
 - Establish risk management system and tools to identify social safety nets, especially during crises, build adequate emergency food reserves and relief systems as a buffer to natural and man-made disasters as well as mitigate effects of high food prices and price volatility
 - Undertake research on innovative agricultural technologies focusing on improved production and productivity of non-cereals (pulses, fruits, vegetables, and animal-source foods), reduction of post-harvest losses and food wastage along the entire value chain
 - Strengthening and promoting better inter-sectoral collaboration and coordination mechanisms between ASEAN Sectoral Bodies related to agriculture, health, rural development, education environment, economic, labour, energy, social welfare and others
 - Forming multi-stakeholder partnerships for achieving food security and nutrition, particularly through engaging civil society and farmer organisations in policy dialogues, promoting the role of the private sector in the production of nutritionally enhanced foods and in generating resources or investments in agriculture, engaging training and research institutions in support of research, and human and institutional capacity-building

ASEAN, 2015e. Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020

- Enhance quantity and quality of production with sustainable, „green“ technologies, resource management systems, and minimise pre-and post-harvest losses and waste
- Ensure food security, food safety, better nutrition and equitable distribution

ASEAN, 2015f. Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025)

- Enhance quantity and quality of production with sustainable, 'green' technologies, resource management systems, and minimise pre-and post-harvest losses and waste
- Ensure food security, food safety, better nutrition and equitable distribution

ASEAN, 2016b. ASEAN Food Safety Policy

- Integrated 'Food Chain' Approach
- Systematic Risk Analysis Framework
- Science-based, Independent Risk Assessment Process
- Primary Responsibility of Food Business Operators
- Consistency with ATIGA and WTO's SPS and TBT Agreements

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- Equivalence and Mutual Recognition
 - Harmonisation with International Standards
 - Reliable Traceability System
 - Strengthening and Harmonisation of Regional and National Food Control Systems
 - Transparency

ASEAN, 2016c. The ASEAN Food Safety Regulatory Framework (AFSRF)

The AFSRF shall operationalise the 10 principles of ASEAN Food Safety Policy and define responsibilities of relevant ASEAN subsidiary bodies and authorities in Member States, including principles relating to the need for scientific basis for food safety, institutional arrangements and procedures required for assuring food safety.

The specific requirements for the numerous and diverse aspects of food safety shall be defined in dedicated Protocols appended to the AFSRF. The Protocols shall include the existing initiatives on food safety and shall be developed and adopted as necessary.

ASEAN, 2017a. ASEAN Regional Guidelines on Food Security and Nutrition Policy

The Regional Guidelines serve as general Framework guide for the AMSs as they endeavour to introduce, implement and develop food security and nutrition policies in accordance with the economic context and specific regulations in AMSs. The policy areas covered are:

- Agricultural policies
- Marketing and pricing policies
- Trade policies
- Infrastructure policies
- Poverty alleviation and social sector policies
- Health policies
- Education policies
- Population policies
- Macroeconomic policies.
- Exchange rate policies
- Fiscal policies
- Monetary policies

ASEAN, 2017b. Plan of Action (PoA) for the ASEAN Cooperation in Halal Food (2017-2020)

This is a workplan starting, without introduction, with a table with defined action programmes, activities, sub-activities, responsible ASEAN bodies / lead country, timeline, and output indicators. The structure follows the ASEAN, 2015, Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

Optimise the utilisation of catch from water to market by reducing post-harvest losses and waste to increase fish supply and improve economic returns

Improve technologies and facilities to ensure fish quality assurance and safety management systems

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

D. OPTIMAL UTILIZATION OF FISH AND FISHERY PRODUCTS

- 58. Introduce and provide support for the development and application of technologies that optimize the utilization of catches, reduce post-harvest losses, wastes and discards in commercial and small-scale fisheries and processing operations, through improved processing, facilities and infrastructure development, on-board and on-shore handling, storage, distribution and marketing of fish and fishery products;
- 59. Promote the production of and preserve the diversity of traditional fish products by assisting producers to secure stable supplies of quality raw materials, meet food safety requirements and to improve product identity, nutritive value and marketing. In the process, promote One Village, One Fisheries Product (FOVOP) and other initiatives to promote local fishery products;
- 60. Develop traceability systems, with mechanisms as needed to certify or validate the information, for the whole supply chain, and establish regulations and enforcement schemes in line with international standards. Align Member Countries' inspection systems and incorporate strengthened port inspections in the process as a means to improve inspection systems;
- 61. Strengthen fish quality and safety management systems that support the competitive position of ASEAN fish products in the world markets, including moving towards ISO/IEC 17025 accreditation of national fish inspection laboratories, strengthening capacity and acknowledging the recognized national laboratories, risk analysis and equivalence agreement such as the Mutual Recognition Agreement (MRA) and promote the implementation of the quality and safety management systems among small and medium enterprises in the ASEAN region;
- 62. Encourage relevant control agencies at all levels in applying appropriate legislation and coordinated activities regarding the handling, processing, distribution, storage, marketing, quality and safety of fish and fishery products;
- 66. Develop standards and guidelines for aquaculture products handling and transportation, hygienic vessel design and construction, and include training of fish handling as part of the requirement for issuance of permits at all levels for fish vessel crews, and encourage new workers to enter the industry where needed;

E. FISH TRADE

- 74. Encourage the implementation of appropriate international standards and strengthen programs relevant to Sanitary and Phytosanitary (SPS) measures, Technical Barriers to Trade (TBT) measures, R&D, as well as capacity building and awareness raising on fish trade-related issues, and information dissemination recognizing the different status of development in Member Countries;

ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products

- 3. Enhancing traceability of fish and fishery products from capture fisheries through the implementation of the "ASEAN Guidelines for Preventing the Entry of Fish and

Fishery Products from IUU Fishing Activities into the Supply Chain,” and “ASEAN Catch Documentation Scheme for Marine Capture Fisheries”;

- 8.Regulating the quality and safety of ASEAN fish and fishery products all throughout the supply chain to meet standards and market requirements as well as acceptability by importing countries, and development and promotion of ASEAN seal of excellence/label;

SEAFDEC, 2017b. Regional Guidelines on Traceability System for Aquaculture Products in the ASEAN Region

- Practical advice on what data to collect at what level in the supply chain to ensure traceability of aquaculture products.

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

1. Sustain the supply of fish and fishery products from the ASEAN to improve food security, facilitate poverty alleviation, and improve the livelihoods of ASEAN people dependent on the harvesting, farming and marketing of fish and fishery products, by enhancing the necessary national fisheries policies, legal and institutional frameworks that encourage and support responsible fisheries and aquaculture operations, including small-scale operations as well as providing supplementary livelihood options;

21. Optimize the utilization of catch/harvest by reducing post-harvest losses and wastes to increase fish supply and improve economic returns through promotion of appropriate technologies, facilities and best practices along the supply chain;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

64. Improve the efficient use of aquafeeds by strictly regulating the quality of manufactured feed and feed ingredients, and support continued/applied research for developing suitable alternative protein sources that will reduce the cost and dependence on fish meal and other fish-based products, and subsequently promote regional sharing of information on feed ingredients; encourage the culture of species requiring no or low fish meal content in their feed and application of effective feeding management practices, taking into account the need for cultural and social acceptance of feed ingredients;

71. Promote the production of and preserve the diversity of traditional fish products by assisting producers to secure stable supplies of quality raw materials and meet food safety requirements; and improve product identity, nutritive value and marketing. In the process, promote the identity of and other initiatives on local fishery products;

72. Strengthen fish quality and safety management systems that support the competitive position of ASEAN fish and fishery products in the world markets, including possible adoption of cold chain management standards and moving towards ISO22000 and ISO/IEC 17025 accreditation of national fish inspection laboratories; enhance capacity and acknowledge the recognized national laboratories, risk analysis and equivalence agreement, e.g. the Mutual Recognition Agreement (MRA); and promote the implementation of the quality and safety management systems among small and medium enterprises in the AMSs;

73. Encourage relevant control agencies at all levels to apply appropriate legislation and coordinated activities regarding the handling, processing, distribution, storage, marketing, quality, and safety of fish and fishery products;

74. Promote and conduct training programs and develop training materials to upgrade the technical skills and competencies of personnel in the public and private sectors on fisheries post-harvest technologies, and food quality and safety management systems;

77. Adopt standards and guidelines for handling fish and fishery products, and implement hygienic fish handling onboard fishing vessels and provide training on fish and fishery products handling as part of the requirements for issuance of permits at all levels for fish vessel crews;

84. Assist small-scale producers to comply with standards on safety and quality of fish and fishery products by providing support programs including capacity building;

Policy on international trade

ASEAN, 2014. ASEAN Integrated Food Security (Aifs) Framework And Strategic Plan Of Action On Food Security in the ASEAN Region (SPA-FS) 2015-2020

Goal

The goal if the AIFS framework and SPA-FS 2015-2020 is to ensure long-term food security and nutrition, to improve the livelihoods of farmers in the ASEAN region.

- Trade: Convene a seafood forum to deliberate specifically on technical barriers to seafood trade with a view to promote movement of fish and fish products intended for human consumption

ASEAN, 2015e. Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020

- Enhance trade facilitation, economic integration and market access
- Assist resource constrained small producers and SMEs to improve productivity, technology and product quality, to meet global market standards and increase competitiveness
- Strengthen ASEAN joint approaches on international and regional issues affecting the FAF sector

ASEAN, 2015f. Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025)

- Enhance trade facilitation, economic integration and market access
- Assist resource constrained small producers and SMEs to improve productivity, technology and product quality, to meet global market standards and increase competitiveness
- Strengthen ASEAN joint approaches on international and regional issues affecting the FAF sector

ASEAN, 2015g. Template on the Arrangement of the Equivalence of Fishery Products Inspection and Certification Systems

- This is a draft template allowing to AMS to recognize as equivalent the other Party's fishery products inspection and certification systems governing raw materials, holding, handling, transporting, processing, packaging, and trade in fishery products.

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

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- Promote joint ASEAN approaches and positions in international trade in fish and fishery products indigenous to the region by harmonising the standards, criteria and guidelines and developing mutually-recognised agreements on sustainability and safety management systems
 - Support the competitiveness of the ASEAN fish trade

ASEAN-SEAFDEC, 2011b. Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

E. FISH TRADE

- 67. Strengthen cooperation among Member Countries to implement international standards with regards to trade on fish and fishery products within the ASEAN region;
- 68. Establish regional/ASEAN standards applicable for fishery and aquaculture products that are in line with international requirements and applicable to the region. Harmonize standards, technical regulations and conformity assessment procedures as inputs for the establishment of the ASEAN Policy Guidelines on Standards and Conformance, to increase the competitiveness of fishery products on regional and international markets;
- 69. Strengthen cooperation and mechanisms among Member Countries to work towards common positions that could be reflected in international fish trade related fora, such as World Trade Organization (WTO), Food and Agriculture Organization of the United Nations (FAO), Office International des Epizooties (OIE), Codex Alimentarius Commission, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);
- 70. Engage the private sector (e.g. ASEAN Seafood Federation) in addressing trade-related issues, and in collaborative efforts to promote and sustain regional and international trade;
- 71. Assist small-scale producers to comply with standards on safety and quality of fish and fishery products by providing support programs including training;
- 72. Assist small-scale producers from both capture fishery and aquaculture in securing and maintaining access to markets at the national, regional and international levels, and in the process, develop marketing systems that are not capital intensive and accessible for local producers;
- 73. Encourage and provide guidance to develop/improve branding of fish and fishery products that demonstrate the eco-friendly and socially acceptable nature of ASEAN fish products (e.g. one community one fishery product), including organic standards and coordination of Halal requirements;

F. REGIONAL AND INTERNATIONAL POLICY FORMULATION

- 76. Increase participation and involvement of Member Countries in international fora and technical committees such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Codex Alimentarius Commission, Food and Agriculture Organization of the United Nations (FAO), Office International des Epizooties (OIE), Regional Fisheries Bodies (RFBs), and World Trade Organization (WTO); and promote ASEAN interest, recognizing that fisheries policies of relevance to the ASEAN region are increasingly discussed and agreed upon at the global level.

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

19. Promote joint ASEAN approaches and positions in international trade in fish and fishery products produced in the region, by harmonizing the standards, criteria, and guidelines, and developing mutually recognized agreements on sustainability and food safety management systems;

20. Support the competitiveness of the ASEAN fish trade through the development of procedures and programs that would certify, validate, or otherwise indicate the origin of fish and fishery products to improve product traceability, sustainable fishing practices, and food safety, in accordance with international and national requirements;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

24. Promote fair distribution of benefits gained from both intra-regional and international trade of fish and fishery products among small-scale actors along the whole value chain;

78. Strengthen cooperation among AMSs to implement international standards with regards to trade in fish and fishery products within the ASEAN;

79. Implement regional/ASEAN standards (e.g. ASEAN Good Aquaculture Practices (ASEAN GAqP), ASEAN Shrimp Good Aquaculture Practices (ASEAN Shrimp GAP), and ASEAN Policy Guidelines on Standards and Conformance) applicable for fishery and aquaculture products that are in line with international requirements and applicable to the region; and promote such standards to be acceptable by importing markets;

80. Encourage the implementation of appropriate international standards and strengthen programs relevant to Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) measures, R&D, as well as capacity building and awareness raising on fish trade-related issues;

81. Encourage, as appropriate, the development of national laws, rules and regulations on trading of species in accordance with relevant rules of international law;

82. Strengthen cooperation and mechanisms among AMSs to work towards common positions that could be reflected in international fish trade related fora, e.g. World Trade Organization (WTO), Food and Agriculture Organization of the United Nations (FAO)/COFI Sub-committee on Fish Trade, Office International des Epizooties (OIE), Codex Alimentarius Commission (CAC), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);

83. Engage the private sector (e.g. ASEAN Seafood Federation) in addressing trade-related issues, and in collaborative efforts to promote and sustain regional and international trade;

85. Assist small-scale producers from both capture fisheries and aquaculture in securing and maintaining access to markets at the national, regional and international levels, and in the process, develop marketing systems that are not capital intensive but are accessible for local producers;

86. Apply traceability systems with mechanisms as needed to certify or validate the information for the whole supply chain by harmonizing AMSs' inspection systems in line with international standards and strengthening port inspections process to improve traceability;

87. Encourage and provide guidance to develop/improve branding or eco-labeling of fish and fishery products that demonstrate the eco-friendly and socially acceptable nature of ASEAN products, including organic standards and coordination of Halal requirements;

88. Increase participation and involvement of AMSs in international fora and technical committees, e.g. CITES, CAC, FAO, OIE, Regional Fisheries Bodies (RFBs), and WTO; and promote ASEAN interest, recognizing that fisheries policies of relevance to the ASEAN are increasingly discussed and agreed upon at the global level.

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

- Improve the working conditions of people engaged in fisheries activities

ASEAN-SEAFDEC, 2011b. Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

B. FISHERIES MANAGEMENT

- 12. Strengthen the capacity of fisheries communities and the capability of fisheries-related organizations, NGOs and the private sector to better implement necessary actions towards enabling the communities and local organizations to increase resilience, improve livelihoods, alleviate poverty, adopt alternative livelihoods adapt to climate change in support of achieving sustainable development, and encourage the participation of women and youth groups in the process;
- 16. Encourage good and appropriate employment practices in accordance with domestic laws and regulations;

MARINE FISHERIES

- 30. Strengthen efforts to address safety at sea, including considerations of working conditions and socio-economic development, and ensure that these considerations are addressed by all concerned authorities while improving monitoring and control of the status of conditions, especially on small fishing boats;

C. AQUACULTURE

- 39. Ensure that national programs and policies on aquaculture address social, economic and environmental aspects of sustainable aquaculture to improve food security, livelihoods, employment and poverty alleviation by (i) providing the mechanisms and enabling environment for good aquaculture practices, efficient markets and fair trade; (ii) strengthening the capacity of small-holder farmers; and (iii) promoting inter-agency collaborations;
- 47. Encourage good and appropriate employment practices in accordance with domestic laws and regulation;

D. OPTIMAL UTILIZATION OF FISH AND FISHERY PRODUCTS

- 65. Encourage good and appropriate employment practices in accordance with domestic laws and regulations;

ASEAN-SEAFDEC, 2016. Joint ASEAN-SEAFDEC Declaration on Regional Cooperation for Combating IUU Fishing and Enhancing the Competitiveness of ASEAN Fish and Fishery Products

- Labor 9. Addressing issues on labor (safe, legal and equitable practices) in the fisheries sector in the Southeast Asian region through strengthened cooperation among relevant national agencies within the country as well as establishing regional, sub-regional and bilateral cooperation and collaboration via relevant ASEAN platforms, and helping to support the development and implementation of relevant labor guidelines for the fisheries sector;

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

13. Improve the working conditions of people engaged in fisheries activities, and strengthen measures for safety of fishing vessels taking into consideration the specificity of fisheries of the region;

76. Encourage good and appropriate employment practices in accordance with domestic laws and regulations or relevant international instruments;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

19. Improve the capability of fishing crew and workers in fishing industry, and conduct educational and skills development program for new crew members and workers entering the industry; while also adopt appropriate technologies to optimize number of crew onboard fishing vessels;

20. Promote the implementation of good and appropriate employment practices in accordance with domestic laws and regulations or relevant international instruments;

38. Ensure safety at sea, decent working conditions and implementation of onboard fishing vessels sanitation, including the development of new design for fishing vessels, in compliance with relevant international standards;

Policy on research and science

ASEAN, 2014. ASEAN Integrated Food Security (Aifs) Framework And Strategic Plan Of Action On Food Security in the ASEAN Region (SPA-FS) 2015-2020

Goal

The goal if the AIFS framework and SPA-FS 2015-2020 is to ensure long-term food security and nutrition, to improve the livelihoods of farmers in the ASEAN region.

- Research: Promote research and development in alternative source of fish meal for fish feeds production

ASEAN, 2017d. Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020)

The document is a workplan following identified strategic thrusts in the Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020, including Action Programmes, Activities, Sub-Activities, Responsible ASEAN Bodies/Lead Country, Timeline, and Key Performance Indicators. Action programmes include:

- Identify infrastructure investment requirements to increase production and reduce post-production losses,
- Increase private sector participation in policy discussions, programme and project formulation, research and development (R&D) and provide incentives and foster an enabling environment for public-private partnerships (PPPs) towards enhancing productivity and quality, recognizing that the 'private sector' in the context of FAF must refer not only to larger commercial enterprises but must also include the small-scale farmers, fishermen and SMEs (SPFAF1.3)
- Develop yield and productivity enhancing technologies and best practices that involve land use intensification in a sustainable manner, bearing in mind that expansion of cultivable land rapidly reaches its limits even in the land-abundant AMS.

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- Develop new and appropriate technologies, best practices and management systems to ensure food safety and address health/disease and environmental issues, particularly in the fast-growing aquaculture, livestock and horticulture sub-sectors (SPFAF1.6)
 - Carefully balance production increases with conservation objectives and needs of local communities to develop better management systems to minimize eco-system damage and promote sustainable management of forest and aquatic resources management (SPFAF1.8)
 - Increase investments in collaborative R&D activities, and strengthen existing regional collaboration among AMS and with key international institutes, such as the International Rice Research Institute (IRRI) to generate sustainable technologies and management and harvesting systems, and effective extension/communication systems for technology diffusion (SP-FAF1.9)
 - Regularly review the nature of R&D partnerships and strategic partnerships with concerned organizations to ensure that the research and training agendas are aligned with ASEAN goals (SP-FAF1.11)
 - Identify and document technology success stories and explore new methods of extension including enhanced use of information and communications technology (ICT) and other communication facilities for dissemination of successful technologies and management systems throughout AMS (SPFAF1.12)
 - Standardise and harmonise concepts, methods and presentation of national statistics and strengthen technical capacity of AMS to conduct multicounty studies and undertake accurate situational analysis and planning (SPFAF1.13)
 - Promote nutrition education and consumer awareness of healthy diets, conduct social marketing campaigns and lifestyle change communication programmes to promote physical activity and dietary diversification, including increased consumption of micronutrient-rich foods. (SPFAF 3.7)
 - Increase investment in R&D for technologies and management systems with a focus on resilience to facilitate climate smart/friendly agriculture, land use, and fishery in cooperation with research programmes and networks on the basis of best practices (SP-FAF4.1)
 - Promote good agriculture practices to minimize the negative effects on natural resources such as soil, forest and water and reduce the greenhouse gas emission (SP-FAF4.2)
 - Build competencies, share information, technologies and assistance packages with a focus on small scale producers (SPFAF4.3)
 - Integrate gender issues into climate friendly agriculture, fishery and forestry practices to reduce the higher vulnerability of women to the social and economic impact of natural disasters and climate change. (SPFAF 4.7)
 - Provide access to climate-related financial resources to support climate friendly agriculture (SPFAF4.8)
 - Enhance coordination and develop joint approaches through consultations among AMS and related ASEAN bodies in regional and international for a in order to gain a better hearing for its views and proposals, and to obtain more favourable outcomes in negotiations and agreements affecting FAF sector (SP-FAF6.1)
 - Present ASEAN common position on the issues affecting FAF sector in fora such as Conference of Parties on the United Nations Framework Convention on Climate

Change (UNFCCC), World Trade Organization (WTO), United Nations Forum on Forests (UNFF), World Organization for Animal Health (OIE), International Plant Protection Convention (IPPC), Codex Alimentarius Commission (CODEX), Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and International Tropical Timber Organisation (ITTO) (SPFAF6.2)

ASEAN, 2017e. ASEAN Plus Three Cooperation Strategy on Food, Agriculture and Forestry (APTCS) 2016-2025

Strategic Area 9: Strengthening Collaboration on Research and Development

- Develop new technologies and best practices to improve agricultural productivity, address health/disease and environmental issues, and minimize post-harvest losses in agriculture, livestock and fisheries.

ASEAN-SEAFDEC, 2011b. Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

B. FISHERIES MANAGEMENT

MARINE FISHERIES

- 25. Conduct research on the impacts of various gear types and methods, including light fishing, trawls and push nets, on ecosystems and populations of aquatic animals and also the effects of fishing vessel discharges and waste disposal on marine ecosystems, to promote the use of selective fishing gears and sustainable devices;

E. FISH TRADE

- 75. Strengthen risk assessment and R&D related to the use of Genetically Modified Organism (GMO) products in fisheries and aquaculture, including food safety issues;

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

17. Promote cooperation among AMSs and with international and regional organizations to support the implementation of good aquaculture practices through joint research, technology transfer, and human resource development;

22. Improve and exchange technologies, and enhance facilities to ensure that fish quality assurance and safety management systems are in place and operational, taking into account the importance of traditional fishery products and food security requirements, and promote the development of fishery products as supplementary livelihoods for fisheries communities;

18. Enhance the efficient use of energy by adapting appropriate technologies for fishing gear and fishing vessel design, and fishing operations; and promote the use of alternative energy sources;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

2. Strengthen the capacity to plan for sustainable fisheries in the context of changing socio-economic and ecological environments through the mobilization of the most up-to-date data and information, and the provision of appropriate policy summaries for decision makers;

22. Explore the potential of under-utilized fishery resources through comprehensive fishery resources surveys, and promote their exploitation in a precautionary manner based on analysis of the best available scientific information;

27. Foster cooperation with other countries for the conduct of stock assessment on straddling, transboundary, highly migratory, and shared fishery resources, as appropriate, to serve as inputs for formulating science-based fishery management plan; and strengthen sub-regional and bilateral cooperation including inter-agency cooperation for management of such resources;

33. Intensify research on the impacts of various fishing gear types and methods on the ecosystem and populations of aquatic animals, and develop and promote environment-friendly fishing practices, e.g. low impact and fuel efficient (LIFE) fishing gears/methods;

44. Promote Research and Development (R&D) (*in inland fisheries*) to understand the migration patterns, spawning grounds and seasons, and nursery grounds of important inland aquatic animals; and ensure the sustainability of inland fisheries by maintaining health of the ecosystem, particularly the inter-connectivity of habitats and the specific management needs during the dry season;

51. Explore the use of advanced technologies for marine (inshore and offshore) and inland aquaculture, including the development of full-cycle breeding and aquaculture technologies for selected high-value species;

53. Provide government support for R&D on: (i) improving existing genetic resources; (ii) assessing the impact of climate change on aquaculture; and (iii) improving the feeding and aquatic animal health management;

69. Conduct risk assessment and R&D related to the use of Genetically Modified Organism (GMO) products in aquaculture (e.g. broodstock and aquafeeds) including food safety issues;

70. Strengthen support for the development and application of technologies and best practices that optimize the utilization of catches/farmed products, reduce post-harvest losses and wastes, value-add byproducts and valorize fish waste/trimmings in commercial and small-scale fisheries, aquaculture, and processing operations, through improved processing, facilities and infrastructure development, onboard and onshore handling, and storage, distribution and marketing of fish and fishery products;

[Policy on fisheries data collection and sharing](#)

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

- Fisheries data: Strengthen knowledge/science-based development and management of fisheries through enhancing the national capacity in the collection and sharing of fisheries data and information

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

A. PLANNING AND INFORMATION

- 3. Strengthen national statistical mechanisms for fisheries and aquaculture and the exchange of statistical data and related information. Include other non-routine data and information such as fish consumption surveys as well as mobilizing local and indigenous knowledge with the aim of improving the valuation of fisheries and monitoring their performance, to address the needs of the ecosystem approach to fisheries and adaptation to climate change;
- 4. Enhance regional fishery information systems and mechanisms to facilitate sharing, exchange and compilation of statistics and information that are required at the sub-regional and regional level and apply, where appropriate, regionally

standardized definitions and classifications for statistical data to facilitate regional compilation, analysis and data exchange;

- 5. Coordinate, decentralize and enhance the sharing of relevant statistics and information of fisheries-related statistical data and information between the national fisheries and other authorities including those responsible for food security, environment, trade, aquaculture, water resources, agriculture/forestry, wetlands, migration/employment and rural development;

B. FISHERIES MANAGEMENT

- 13. Enhance and promote the participation of local communities, fisheries associations and other stakeholders in fisheries management and co-management. In addition, communities should take part in fisheries and stock assessments by providing data, local ecological knowledge, and status of the stocks;

C. AQUACULTURE

- 52. Develop regional warning systems on aquatic animal health and diseases to inform other Member Countries of relevant epidemiological events and to raise awareness of new diseases that may pose risks. Build emergency preparedness capacity through rapid and timely responses to reduce potential catastrophic consequences of diseases;

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12. Strengthen knowledge, including local knowledge, and science-based development and management of fisheries by enhancing the national capacity to collect, analyze, and share fisheries data and information;

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3. Strengthen national statistical mechanisms for fisheries and aquaculture including data collection disaggregated at species level, and exchange of statistical data; and include collection/compilation of nonroutine data and information, e.g. from fish consumption surveys, species composition, biological information, as well as local and indigenous knowledge, with the aim of improving the valuation of fisheries including monitoring of their performance;

5. Strengthen the collection of data and information, where relevant, on species under international concern, e.g. sharks and rays, sea turtles, catadromous eels, aquatic mammals, etc., and harmonize/standardize data collection methods among countries in the region;

6. Enhance regional fishery information systems and mechanisms to facilitate sharing, exchange and compilation of statistics and information required at the sub-regional and regional level, and apply where appropriate, regionally standardized definitions and classifications for statistical data to facilitate regional compilation, analysis, and data exchange;

7. Coordinate, decentralize and enhance the sharing of relevant statistics and fisheries-related data and information between the national fisheries and other authorities including those responsible for food security, environment, trade, aquaculture, water resources, agriculture/forestry, wetlands, migration/employment, and rural development;

8. Promote the use of simple and practical indicators that had been developed, for planning, monitoring, and evaluation of fisheries in support of achieving sustainability;

9. Share and exchange information on research findings, good practices, and experiences among countries, including national and regional institutions;

Policy on fisheries subsidies

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

- 31. Assess the possible impact of government subsidies on fisheries, particularly the impact on the special requirements and the needs of small-scale fisheries in the region
- 48. Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance, for the responsible development of aquaculture enterprises and developmental activities that will optimize socio-economic returns and food security;

D. OPTIMAL UTILIZATION OF FISH AND FISHERY PRODUCTS

- 64. Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance for the responsible development of fisheries and aquaculture enterprises and developmental activities that will optimize socio-economic returns and food security;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

39. Assess the possible impacts of subsidies on fisheries, particularly on the special requirements and the needs of small-scale fisheries in the region;

58. Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance, for the responsible development of aquaculture enterprises and developmental activities that optimize economic returns;

75. Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance for the responsible development of fisheries and aquaculture enterprises, and developmental activities that optimize economic returns;

Policy on marine debris

ASEAN-SEAFDEC, 2011b. Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

MARINE FISHERIES

- 25. Conduct research on the impacts of various gear types and methods, including light fishing, trawls and push nets, on ecosystems and populations of aquatic animals and also the effects of fishing vessel discharges and waste disposal on marine ecosystems, to promote the use of selective fishing gears and sustainable devices;

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

11. Increase awareness and support the reduction of impacts of aquatic pollution and marine debris, including abandoned, lost or otherwise discarded fishing gear (ALDFG), and microplastics/microbeads on fisheries and aquaculture;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

26. Assess and manage the impacts of aquatic pollution and marine debris, including abandoned, lost, or otherwise discarded fishing gear (ALDFG) and microplastics/ microbeads, on fisheries and aquaculture;

Policy on protection of habitats, marine mammals and endangered threatened and protected (ETP) species

ASEAN, 1997. Memorandum of Understanding on ASEAN Sea Turtle Conservation and Protection

The objectives of the Memorandum of Understanding on ASEAN Sea Turtle Conservation and Protection are to promote the protection, conservation, replenishing and recovery of sea turtles and of the habitats based on the best available scientific evidence, taking into account the environmental, socio-economic and cultural characteristics of the Parties. It covers the following areas:

- land and maritime area coverage of signing Parties in line with UNCLOS
- protection of sea turtles shall be subjected to existing national laws and regulations of each Party
- Parties should consider harmonizing their existing national laws and regulations
- Parties are to form the Technical Expert Working Group to prepare an ASEAN program and workplan on sea turtle conservation and protection

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

B. FISHERIES MANAGEMENT

MARINE FISHERIES

- 28. Ensure the inclusion of fisheries objectives in the management plans of future Marine Protected Areas (MPAs) and promote the adoption and use of the refugia concept in line with the ASEAN/SEAFDEC Regional Guideline on the use of Fisheries Refugia in Capture Fisheries Management, where appropriate;
- 29. Recognizing the different management approaches that are required, sustainably manage major critical coastal habitats, such as mangroves, coral reefs and sea grasses; and develop and disseminate information and guidance on appropriate tools and interventions;

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

6. Implement effective management of fisheries that integrates habitat with fishery resources management, and aims to improve the social and economic benefits of all stakeholders, especially by delegating selected management functions to the local level and promoting co-management as a partnership between government and relevant stakeholders;

15. Promote inter-agency coordination of the multiple uses of inland aquatic resources for the development of conservation measures for inland aquatic habitats;

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36. Ensure the integration of fisheries with habitats management by applying the concept of fisheries refugia in line with the Regional Guidelines on the Use of Fisheries Refugia for

Capture Fisheries Management in Southeast Asia to complement the existing conservation and management measures;

37. Promote the adoption of different management approaches to sustainably manage major critical coastal habitats, e.g. mangroves, coral reefs and seagrasses; and develop and disseminate information and guidance on the use of appropriate tools and interventions;

[Policy on special support for small scale fisheries](#)

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

B. FISHERIES MANAGEMENT

- 14. Raise awareness of the need to develop financial incentives, especially for small-scale stakeholders and cooperatives, e.g. micro-credit, with national and regional institutional assistance for the responsible development of fisheries enterprises and developmental activities that will optimize socio-economic returns and food security;
- 19. Enhance joint ASEAN programs to better protect the livelihoods of small-scale producers and for a more equitable distributions of benefits gained from both intra and extra regional trade of fish and fishery products;

C. AQUACULTURE

- 46. Formulate and implement complementary and supportive policies that will (i) build the capacity of small-scale farmers and hatchery operators in adopting simple broodstock and hatchery technologies and innovations; (ii) enhance small-scale farmers and hatchery operators' access to quality broodstock and SPF seeds produced through farmer-friendly broodstock management methods; and (iii) foster strong cooperation between the public and private sectors engaged in development and dissemination of quality broodstock and seed stock;

SEAFDEC, 2010. Regional Guidelines for the Promotion of “One Village, One Fisheries Product” (FOVOP) in the ASEAN Region. Southeast Asian Fisheries Development Center, 31 pp

- A common framework for the countries in the region to promote and bring about One Village, One Fisheries Product (FOVOP) project, as a means of creating economic activities in the rural communities for them to carry out alternative and supplemental livelihoods to alleviate poverty and attain sustainable fisheries development and management as well as food security.

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

1. Sustain the supply of fish and fishery products from the ASEAN to improve food security, facilitate poverty alleviation, and improve the livelihoods of ASEAN people dependent on the harvesting, farming and marketing of fish and fishery products, by enhancing the necessary national fisheries policies, legal and institutional frameworks that encourage and support responsible fisheries and aquaculture operations, including small-scale operations as well as providing supplementary livelihood options;

SEAFDEC 2020. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

15. Strengthen the capacity of fisheries communities and the capability of fisheries-related organizations (e.g. by empowering such organizations as appropriate) to implement necessary actions towards increased resilience, improved livelihoods, adoption of supplementary livelihoods, and poverty alleviation, in support of achieving sustainable development with gender integration in the process;

16. Enhance the participation of local communities, fisheries-related organizations, and other stakeholders in fisheries management and in fisheries and stock assessments by providing data, local ecological information, and traditional knowledge on the status of fisheries and stocks;

17. Raise awareness of the need to develop financial incentives, especially for small-scale stakeholders and cooperatives, e.g. micro-credit, with national and regional institutional assistance for the responsible development of fisheries enterprises and developmental activities that optimize economic returns;

23. Encourage the implementation of the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) and promote the collection of sex-disaggregated statistics on fishers and fish workers in the fish value chain;

39. Assess the possible impacts of subsidies on fisheries, particularly on the special requirements and the needs of small-scale fisheries in the region;

50. Integrate aquaculture into rural development activities within the context of multiple-use of land and water resources through inter-agency coordination in policy formulation, project planning and implementation, stakeholder consultation, extension services and technology transfer; and participate in and provide support to regional initiatives that assess the role of aquaculture in poverty alleviation for better policy formulation;

Policy on Aquatic Animal Health and Biosecurity

ASEAN, 2015. Standard Operating Procedures for Responsible Movement of Live Aquatic Animals for ASEAN

The scope of the SOP is to provide general recommendations for a regional control that will reduce the risk of spreading trans-boundary aquatic animal diseases resulting from movement of live aquatic animals. It covers

- Diseases Covered
- Responsibilities of the Competent Authority
- Diagnostic Standards and Capability
- Registration of Importer and Exporter
- Health Certification for Live Aquatic Animals
- Transportation Requirements
- Point of export / point of import requirements
- Quarantine Measures
- Communication requirements
- Risk analysis and risk management

ASEAN, 2013. Guidelines for the Use of Chemicals in Aquaculture and Measures to Eliminate the Use of Harmful Chemicals

This set of guidelines has been developed to help national regulators and stakeholders on managing the diverse use of chemicals and drugs in aquaculture. The purpose of this set of guidelines is to list the major chemicals and other substances commonly used in AMS. This

set of guidelines will also list the banned chemicals that should not be used or practiced by farmers or aquaculturist in all AMS.

- List of chemicals and drugs currently used in each AMS
- Recommendations of the use of each of these chemicals and drugs, including the ban in aquaculture

ASEAN, 2016a. ASEAN Regional Strategy on Anti-Microbial Resistance Communication and Advocacy

- Very rough terms of reference to address the lack of awareness among stakeholders such as government officials, animal health specialists, producers and traders about Antimicrobial resistance (AMR).

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

INLAND FISHERIES

C. AQUACULTURE

- 40. Develop and implement ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices that cover (i) the integration of quality and safety management systems for products with significant trade potential; (ii) the harmonization for chemical use and food safety in aquaculture; (iii) the development of product traceability systems from farm to market; and (iv) harmonization of the quarantine and inspection/sampling procedure and Sanitary and Phytosanitary (SPS) measures for aquaculture products to secure food safety;
- 43. Provide government support for research and development (R&D) on (i) improving existing genetic resources; (ii) assessing the impact of climate change on broodstock management; and (iii) the feeding and disease management of broodstock;
- 44. Promote the production and distribution of specific pathogen-free (SPF) and quality seed through the (i) establishment of certified government or private hatcheries as sources of quality seed; (ii) dissemination of new breeding technologies and techniques for the effective distribution and maintenance of genetically improved strains; and (iii) implementation of sound policies that will promote better hatchery management practices, including the responsible collection and use of wild broodstock and seed;
- 45. Apply the concept of aquatic biosecurity by providing support to (i) research for development of domesticated, genetically improved, specific pathogen-free (SPF) cultured species; and (ii) the small-scale hatchery operators and farmers so as to enhance their access to healthy broodstock and improve their ability to adopt, at the farm level, the established techniques for aquatic animal health care;
- 49. Reduce the risk of negative environmental impacts, loss of biodiversity, and disease transmission by regulating the introduction and transfer of aquatic organisms in accordance with the Regional Guidelines on the Responsible Movement of Live Aquatic Animals and Plants;
- 50. Continue the national efforts to control serious disease outbreaks by providing government support to (i) R&D to improve the ability to handle new and emerging diseases and surveillance of transmission of diseases to wild populations; and (ii) regional initiatives on harmonization of regional disease control standards, disease

reporting and implementation of contingency plans to handle new and emerging diseases;

- 51. Further enhance the capabilities in the diagnosis and control of fish diseases within the region through (i) continued support in development of technology and techniques for disease identification; (ii) promotion of the widespread use of affordable, field-friendly, rapid and standardized diagnostic tests; and (iii) the establishment of regional and inter-regional referral systems, including the designation of reference laboratories and timely access to disease control experts within the region;
- 52. Develop regional warning systems on aquatic animal health and diseases to inform other Member Countries of relevant epidemiological events and to raise awareness of new diseases that may pose risks. Build emergency preparedness capacity through rapid and timely responses to reduce potential catastrophic consequences of diseases;

ASEAN – OIE, 2011. Memorandum of Understanding Between Members of The Association of Southeast Asian Nations (ASEAN) and The World Organisation For Animal Health (OIE)

- Regulates all aspects of the data exchange between the ASEAN Regional Animal Health Information System (ARAHIS) and the World Animal Health Information System (WAHIS)

SEAFDEC 2020. Resolution on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2030, 4th draft.

18. Mitigate the potential impacts of aquaculture on the environment and biodiversity including the spread of pathogens of aquatic animals caused by over-intensification of aquaculture operations, inappropriate implementation of aquatic animal health management, and uncontrolled introduction and movement of aquatic species;

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42. Monitor the impacts, and mitigate the negative impacts of invasive/alien species on the inland ecosystem and biodiversity;

55. Improve aquatic biosecurity by providing support to: (i) research on the development of domesticated, genetically improved, specific pathogen-free (SPF), and specific pathogen-resistant (SPR) aquaculture species; and (ii) small-scale hatchery operators and farmers to access healthy broodstock and improve their ability to adopt, at the farm level, the established techniques for aquatic animal health management;

59. Reduce the risk of negative environmental impacts, loss of biodiversity, and disease transmission by regulating the introduction and movement of aquatic organisms in accordance with relevant regional and international guidelines, e.g. the Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals;

60. Continue national efforts to prevent and control serious disease outbreaks by providing government support to: (i) R&D following standard procedures (e.g. OIE standards) in handling emerging diseases and surveillance of transmission of diseases; and (ii) regional initiatives on harmonization of regional disease control standards, disease reporting, and implementation of contingency plans to handle emerging diseases;

61. Further enhance capabilities in the diagnosis and control of aquatic animal diseases through: (i) continued support in development of technology and techniques for disease identification; (ii) promotion of the widespread use of users friendly, field-friendly, rapid and standardized diagnostic tests; and (iii) establishment of regional and inter-regional referral systems, including the designation of reference laboratories and timely access to fish health experts within the region;

62. Strengthen the implementation of regional warning systems on aquatic animal health and diseases to inform other AMSs of relevant epidemiological events and to raise awareness of emerging pathogens that may pose risks. Build emergency preparedness capacity through rapid and timely responses to reduce potential catastrophic consequences of emerging diseases as highlighted by ASEAN Network of Aquatic Animal Health Centres (ANAAHC);

63. Promote the prudent use of legal antibiotics in aquaculture, and monitor the impacts of Antimicrobial Resistance (AMR) on aquatic animals;

65. Undertake risk assessment of the culture of exotic aquatic species, and establish measures to prevent the escape of high risk species and their possible impacts on the natural ecosystem and biodiversity;

Policy on Disaster and Climate Change Management

ASEAN, 2015e. Strategic Plan of Action on ASEAN Cooperation on Fisheries 2016-2020

- Increase resilience to climate change, natural disasters and other shocks

ASEAN, 2015f. Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry (2016-2025)

- Increase resilience to climate change, natural disasters and other shocks

ASEAN, 2017e. ASEAN Plus Three Cooperation Strategy on Food, Agriculture and Forestry (APTCS) 2016-2025

Strategic Area 4: Climate Change Mitigation and Adaptation

- Forge closer cooperation in the development, transfer and diffusion of climate smart agriculture and aquaculture technologies and best practices.

ASEAN, 2018. ASEAN Multi-Sectoral Framework for Climate Change: Agriculture and Forestry Towards Food and Nutrition Security and Achievement of SDGs (Proposed Integrated Framework for AFCC Component 4)

This is an action plan along 8 identified strategic thrusts:

- Mainstreaming cross-sectoral, collaborative, inclusive approaches and mechanisms to addressing climate-related challenges and opportunities into regional, national, and local policies, programs, plans and investments to contribute to food security and Sustainable Development Goals (SDGs)
- Strengthening the scientific foundation with local knowledge on climate change and food security to improve decision-making at various levels with the participation of civil society and the private sectors
- Facilitating the achievement of Nationally Determined Contributions (NDCs) in the agriculture and forestry sectors
- Advancing integrated climate change mitigation and adaptation responses through landscape approaches to safeguard food and nutrition security, promote sustainable

livelihoods, and improve climate resiliency especially among poor farmers and other vulnerable groups

- Initiating and sustaining comprehensive capacity development of local, national and regional institutions to achieve food and nutrition security and sustainable development in the context of climate change
- Strengthen knowledge management mechanisms to safeguard food and nutrition security amidst changing climate
- Providing and strengthening platforms for developing and advancing ASEAN common interests on issues related to climate change and food security in international for a
- Securing climate change financing to support climate change initiatives supportive of food and nutritional security and sustainable development

ASEAN-SEAFDEC, 2011a. Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020

- Climate change: Enhance resilience of fisheries communities to anticipate and adapt to changes in environmental conditions of inland and coastal waters
- Climate change: Support ASEAN efforts to promote low carbon development by minimising the contribution of the fisheries sector to green-house gas emissions

ASEAN-SEAFDEC, 2011b. Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020

B. FISHERIES MANAGEMENT

- 12. Strengthen the capacity of fisheries communities and the capability of fisheries-related organizations, NGOs and the private sector to better implement necessary actions towards enabling the communities and local organizations to increase resilience, improve livelihoods, alleviate poverty, adopt alternative livelihoods adapt to climate change in support of achieving sustainable development, and encourage the participation of women and youth groups in the process;
- 15. Increase the efficient use of the alternative energy sources and reduce the use of carbon fossil energy by using appropriate fishing gear and fishing boats designs in fishing operations;
- 20. Adjust existing programs to take into consideration the effects of climate change, focusing on the programs for (i) managing fisheries and habitats; (ii) reducing fishing capacity and combating Illegal, Unreported and Unregulated (IUU) fishing; (iii) strengthening local organizations; and (iv) promoting safety at sea and other priority areas. Develop indicators and reporting measures to assess how actions of the programs build resilience to climate change;

C. AQUACULTURE

- 43. Provide government support for research and development (R&D) on (i) improving existing genetic resources; (ii) assessing the impact of climate change on broodstock management; and (iii) the feeding and disease management of broodstock;
- 55. Formulate and implement national policies and strategies that will enable the aquaculture sector to mitigate and/or adapt better to the impacts of climate change. These strategies should include providing support to R&D on climate change, increasing resilience, and strengthening the overall capacity of various stakeholder

groups and fostering cooperation within the aquaculture sector and with other sectors;

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9. Support the efforts to promote low carbon development technologies by minimizing the contribution of the fisheries sector to greenhouse gas emissions, with emphasis on promoting the use of energy-efficient equipment and alternative energy sources;

10. Enhance resilience of fisheries communities in anticipating and adapting to changes in the environments of inland and coastal waters, including those caused by climate change, which could adversely affect communities in their operations of fisheries and aquaculture;

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25. Monitor and assess the perceived impacts of climate change to fisheries and aquaculture; and adjust existing programs to take into consideration the effects of climate change and natural disasters, focusing on the programs for (i) developing appropriate adaptation and mitigation plans; (ii) integrating fisheries and habitats management; (iii) enhancing community resilience through livelihood diversification; (iv) strengthening local organizations; and (v) promoting safety at sea and other priority areas;

The specific regional policy topics (bold) with their respective policy issue (not bold under policy topic) identified under each policy area are presented, whenever possible, in the following order:

1. Governance / capacity building
2. Policy framework establishment
3. Planning
4. Consultation
5. Decision making
6. Formulation
7. Implementation
8. Enforcement
9. Other issues

In addition, the logical flow in the specific policies is from national to regional and then to international issues. The numbers in parentheses in front of each specific policy provides reference to the policy document listed at the beginning of this Annex.

Table 21 : Policy area and reference to specific policy topics covering the policy area.

Policy area		Specific policy topics covering the policy area
Sustainable Fisheries Management	Inland Resources	<p>Inland fisheries governance</p> <ul style="list-style-type: none"> - (22) Strengthen fisheries governance - (23) Develop guidelines and enhance the capacity of relevant authorities and communities to collaboratively resolve conflict with other stakeholders and with other competing users of resources - (23) Develop inter-agency coordination (national/sub-regional) on multiple-use water resources of the wetlands/flood-plains to sustain freshwater fisheries, mitigate conflicts between users and also encourage better coordination to address trans-boundary inland fisheries management issues - (32) Further develop regional initiatives to promote a responsible fisheries management mechanism, taking into account the specific social, economic, cultural, ecological, and institutional contexts and diversity of the ASEAN and ASEAN fisheries - (33) Enhance the capacity of relevant authorities and communities to collaboratively resolve conflicts on resources utilization

- Enhance awareness of the importance of inland fisheries for local food security, and the importance of rehabilitating and restoring habitats for migratory inland aquatic animals, restocking indigenous aquatic species to enhance productivity (with monitoring and evaluation of restocking programs) and encouraging culture-based inland fisheries

- (33) Formulate guidelines to promote the use of practical and simple indicators for inland/floodplain fisheries within the national inland fisheries management framework, to facilitate (i) timely local level fisheries management decisions with due respect to the large number of people/farmers that take part in fishing; (ii) dialogues to ensure that the inter-connectivity of fish migration path is kept as a tool for management/conservation measures; and (iii) adaptation to the effects of climate change within water bodies

Inland fisheries legal and policy framework

- (23) Establish and implement comprehensive policies and supporting legal and institutional frameworks for an ecosystem approach to inland fisheries management by integrating fisheries and habitat management that devolves co-management to the local authority and stakeholders, and at the same time strengthens the rights of communities and develops rights-based fisheries

- (33) Regularly review, update and strengthen national fisheries policies, legal and institutional frameworks through consultation and engagement of government agencies, the private sector, fishers, civil society, and other relevant stakeholders

- (33) Establish and implement comprehensive policies and supporting legal and institutional frameworks, and adopt ecosystem approaches to inland fisheries management that devolve co-management responsibilities to the local authorities and stakeholders

Inland fisheries planning

- (23) Integrate planning of marine capture fisheries, inland capture fisheries and aquaculture sub-sectors to promote the sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture

- (33) Integrate the planning of marine capture fisheries, inland capture fisheries, and aquaculture subsectors to promote sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;

- (33) Accelerate the development of fisheries management plans as basis for fisheries conservation and management;

- (33) Encourage coordinated planning and management on the use of inland water bodies including rivers, floodplains, wetlands, etc. through (i) resource enhancement programs; (ii) inland fisheries management programs; (iii) environmental impact assessment of structures on the aquatic resources; and (iv) restocking of indigenous and/or commercially-important aquatic animals species

Inland fisheries management

- (22) Promote better management of fishing capacity and use of responsible fishing technologies and practices, recognising the movement towards replacing the “open access” to fisheries resources with “limited access” through rights-based fisheries

- (23) Further develop simple and practical indicators in support of planning and monitoring of sustainable fisheries

- (23) Formulate guidelines to promote the use of practical and simple indicators for inland/flood-plain fisheries within the national inland fisheries management framework, to facilitate (i) timely local level fisheries management decisions with due respect to the large number of people/farmers that take part in fishing; (ii) dialogue to ensure that the inter-connectivity of fish migration path is kept as a tool for management/conservation measures; and (iii) adaptation to the effects of climate change within catchments

- (32) Implement effective management of fisheries that integrates habitat with fishery resources management

- (32) Promote sound management of fishing capacity and use of responsible fishing technologies and practices, recognizing increasing emphasis on rights-based fisheries

- (33) Establish reference points, and come up with estimated biomass or capacity level to determine the maximum sustainable yield, allowable biological catch, or allowable effort for marine and inland fisheries;

- (33) Enhance implementation of comprehensive policies for fisheries management through (i) licensing systems (boats, gear, and people); (ii) rights-based fisheries; (iii) supportive legal and institutional frameworks; (iv) strengthened institutional cooperation; and (v) streamlined co-management;

Ecosystem approach in inland fisheries management

- (22) Implement effective management of fisheries through an ecosystem approach to fisheries that integrates habitat and fishery resource management

- (23) Accelerate the development of fisheries management plans based on an ecosystem approach, as a basis for fisheries conservation and management

- (23) Ensure the sustainability of inland fisheries by maintaining ecological health of the ecosystem, particularly the inter-connectivity of habitats and the specific management needs during the dry season. Develop mitigating measures for the adverse impacts on inland fisheries that may be caused by the construction of water infrastructure and alteration of water ways

- (23) Establish and implement comprehensive policies for an ecosystem approach to fisheries management through effective systems

(i) to provide licenses to fish (boats, gear and people)

(ii) for community fishing rights/rights-based fisheries

(iii) that provide for the development of supporting legal and institutional frameworks

(iv) encourage and institutional cooperation and

(v) that aid in streamlining co-management

- (33) Strengthen the adoption of fisheries management approaches, e.g. co-management and ecosystem approaches to fisheries management, at all levels with all relevant stakeholders involved in the process of planning and policy formulation for management of natural resources, conservation, rehabilitation of habitats and protective geographical features, and improvement of human well-being;

Inland fisheries co-management

- (23) Adopt co-management at all levels and with all relevant stakeholders in the process of planning and policy formulation for management, conservation and rehabilitation of habitats and protective geographical features, as well as policy formulation on the use and management of natural and human resources to ensure that climate change responses are integrated into fisheries policy frameworks

- (23) Enhance and promote the participation of local communities, fisheries associations and other stakeholders in fisheries management and co-management. In addition, communities should take part in fisheries and stock assessments by providing data, local ecological knowledge, and status of the stocks

- (33) Strengthen the adoption of fisheries management approaches, e.g. co-management and ecosystem approaches to fisheries management, at all levels with all relevant stakeholders involved in the process of planning and policy formulation for management of natural resources, conservation, rehabilitation of habitats and protective geographical features, and improvement of human well-being;

Regional management initiatives for inland fisheries

- (22) Develop regional initiatives to promote a responsible inland fisheries management mechanisms
- (22) Promote inter-agency coordination of multiple uses of freshwater resources
- (23) Develop inter-agency coordination (national/sub-regional) on multiple-use water resources of the wetlands/flood-plains to sustain freshwater fisheries, mitigate conflicts between users and also encourage better coordination to address trans-boundary inland fisheries management issues
- (32) Promote inter-agency coordination of the multiple uses of inland aquatic resources for the development of conservation measures for inland aquatic habitats
- (33) Strengthen inter-agency coordination (national/sub-regional) on multiple-use water resources of the wetlands/flood-plains to sustain inland fisheries, mitigate conflicts among users and also encourage better coordination to address transboundary inland fisheries management issues;

Inland fisheries utilization

- (23) Investigate the potential of under-utilized fisheries resources and promote their exploitation in a precautionary manner based upon analysis of the best available scientific information

Restocking in inland waterbodies

- (23) Encourage coordinated planning on the use of inland rivers, water-bodies and flood plains through (i) resource enhancement programs; (ii) inland wetlands and fisheries management programs; (iii) environmental impact assessment studies with regards to structures that might impact on aquatic resources; (iv) the consideration of restocking of locally and/or commercially-important inland fish species; and (v) giving priority to human resources development for the implementation of such programs
- (33) Promote resource enhancement approaches with appropriate monitoring and evaluation programs, e.g. deployment of appropriate resource enhancement structures, restocking of commercially-important aquatic species, and restoration of degraded habitats, taking into consideration possible socio-ecological impacts;

Monitoring of structures (dams) on migrating fish species in inland water bodies

- (23) Monitor the impact of the structures that might affect migration and spawning of fish through a consultative process that involves collaboration with the regional organizations

	<ul style="list-style-type: none"> - (33) Monitor and assess the impacts of the construction/operations of man-made structures that could alter the water ways and affect migration and spawning of aquatic animals, particularly those at risk of overexploitation, and develop mitigating measures and appropriate conservation and management measures for such impacts <p>Inland fisheries food security</p> <ul style="list-style-type: none"> - (22) Sustain the supply of fish and fishery products from the ASEAN region - (22) Enhance the awareness of the contribution that inland fisheries make to food security and sustainable livelihoods - (23) Undertake campaigns to promote awareness of the importance of freshwater fisheries for local food security, and the importance of rehabilitating and restoring habitats for migratory freshwater fish, restocking indigenous fish species to enhance productivity and encouraging culture-based freshwater fisheries, where appropriate - (32) Enhance awareness of the contributions that inland fisheries have on food security and livelihoods, and ensure that the well-being of fishery resources and stakeholders
<p>Sustainable Fisheries Management</p> <p style="text-align: center;">Marine Resources</p>	<p>Marine fisheries governance</p> <ul style="list-style-type: none"> - (22) Strengthen fisheries governance - (23) Develop guidelines and enhance the capacity of relevant authorities and communities to collaboratively resolve conflict with other stakeholders and with other competing users of resources; - (32) Strengthen fisheries governance by evaluating current constraints to ensure comparability and compatibility of the required practices and the operations of fisheries in the AMSs - (33) Regularly review, update and strengthen national fisheries policies, legal and institutional frameworks through consultation and engagement of government agencies, the private sector, fishers, civil society, and other relevant stakeholders; - (33) Enhance the capacity of relevant authorities and communities to collaboratively resolve conflicts on resources utilization; <p>Marine fisheries planning</p> <ul style="list-style-type: none"> - (23) Integrate the planning of marine capture fisheries, inland capture fisheries and the aquaculture sub-sectors to promote the sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;

- (23) Further develop simple and practical indicators in support of planning and monitoring of sustainable fisheries

- (33) Integrate the planning of marine capture fisheries, inland capture fisheries, and aquaculture subsectors to promote sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;

Research in marine fisheries

- (23) Conduct research on the impacts of various gear types and methods, including light fishing, trawls and push nets, on ecosystems and populations of aquatic animals and also the effects of fishing vessel discharges and waste disposal on marine ecosystems, to promote the use of selective fishing gears and sustainable devices;

- (33) Establish reference points, and come up with estimated biomass or capacity level to determine the maximum sustainable yield, allowable biological catch, or allowable effort for marine and inland fisheries

Marine fisheries management

- (22) Promote better management of fishing capacity and use of responsible fishing technologies and practices, recognising the movement towards replacing the “open access” to fisheries resources with “limited access” through rights-based fisheries

- (32) Implement effective management of fisheries that integrates habitat with fishery resources management, and aims to improve the social and economic benefits of all stakeholders, especially by delegating selected management functions to the local level and promoting co-management as a partnership between government and relevant stakeholders;

- (33) Accelerate the development of fisheries management plans as basis for fisheries conservation and management;

- (33) Enhance implementation of comprehensive policies for fisheries management through (i) licensing systems (boats, gear, and people); (ii) rights-based fisheries; (iii) supportive legal and institutional frameworks; (iv) strengthened institutional cooperation; and (v) streamlined co-management;

Managing marine fishing capacity

- (24) Managing fishing capacity with a view to balance fishing efforts taking into account the declining status of the fishery resources in the Southeast Asian region, and establishing conservation measures based on scientific evidence;

- (28) RPOA Managing Fishing Capacity includes

- A description of what states should do to assess their fishing capacity;
- The suggestion to prepare an NPOA Capacity to monitor, evaluate, review its effectiveness, including measures to address overcapacity, among others, to identify reference points in fisheries management, zoning and alternative fisheries management measures for small-scale fisheries, fishing fee schemes, and fishing vessel construction and importation control measures;
- That states should conduct a systematic assessment of the consequences of overcapacity from production and economic perspective together with its impact on major stakeholders at local, national and sub-regional levels;
- Further details on measures to address overcapacity at various government and stakeholder levels, as well as regional and international considerations and obligations, and

The need to cooperate at regional and sub-regional level on aspects of fisheries management

- (32) Promote sound management of fishing capacity and use of responsible fishing technologies and practices, recognizing increasing emphasis on rights-based fisheries; and at the same time, secure the rights and well-being of inland and coastal fisheries communities as well as the ecological well-being;

Ecosystem approach in marine fisheries management

- (22) Implement effective management of fisheries through an ecosystem approach to fisheries that integrates habitat and fishery resource management

- (23) Accelerate the development of fisheries management plans based on an ecosystem approach, as a basis for fisheries conservation and management;

- (23) Establish and implement comprehensive policies for an ecosystem approach to fisheries management through effective systems (i) to provide licenses to fish (boats, gear and people); (ii) for community fishing rights/rights-based fisheries; (iii) that provide for the development of supporting legal and institutional frameworks; (iv) encourage and institutional cooperation; and (v) that aid in streamlining co-management

- (33) Strengthen the adoption of fisheries management approaches, e.g. co-management and ecosystem approaches to fisheries management, at all levels with all relevant stakeholders involved in the process of

planning and policy formulation for management of natural resources, conservation, rehabilitation of habitats and protective geographical features, and improvement of human well-being;

Co-management approach in marine fisheries

- (23) Adopt co-management at all levels and with all relevant stakeholders in the process of planning and policy formulation for management, conservation and rehabilitation of habitats and protective geographical features, as well as policy formulation on the use and management of natural and human resources to ensure that climate change responses are integrated into fisheries policy frameworks;

- (23) Enhance and promote the participation of local communities, fisheries associations and other stakeholders in fisheries management and co-management. In addition, communities should take part in fisheries and stock assessments by providing data, local ecological knowledge, and status of the stocks;

- (33) Strengthen the adoption of fisheries management approaches, e.g. co-management and ecosystem approaches to fisheries management, at all levels with all relevant stakeholders involved in the process of planning and policy formulation for management of natural resources, conservation, rehabilitation of habitats and protective geographical features, and improvement of human well-being;

Regional initiatives for marine fisheries

- (22) Develop regional initiatives to promote a responsible fisheries management mechanism

- (32) Further develop regional initiatives to promote a responsible fisheries management mechanism, taking into account the specific social, economic, cultural, ecological, and institutional contexts and diversity of the ASEAN and ASEAN fisheries in the spirit of the realization of the ASEAN Economic Community and the ASEAN Socio-Cultural Community;

- (33) Mitigate bycatch and discard concerns including excessive catch of juvenile fish by promoting the adoption and implementation of relevant regional and international guidelines, e.g. FAO International Guidelines on Bycatch Management and Reduction of Discards;

Port state measures in marine fisheries

- (23) Build up capacity among Member Countries, including functions for regional and sub-regional cooperation, to effectively meet the requirements of Port State measures and Flag State responsibilities;

	<p>Marine fisheries utilization</p> <ul style="list-style-type: none"> - (23) Investigate the potential of under-utilized fisheries resources and promote their exploitation in a precautionary manner based upon analysis of the best available scientific information; <p>Bycatch in marine fisheries</p> <ul style="list-style-type: none"> - (23) Take reference from the FAO International Guidelines on Managing By-catch and Reducing Discards, where applicable, to identify and find solutions to ASEAN by-catch problems, including the excessive catch of juvenile fish; <p>Marine resources rehabilitation</p> <ul style="list-style-type: none"> - (24) Undertaking collective efforts in developing preventive and supportive measures to strengthen rehabilitation of resources and recovery of fish stocks to mitigate the impacts of IUU fishing <p>Marine fisheries resource enhancement</p> <ul style="list-style-type: none"> - (23) Optimize the use of inshore waters through resource enhancement programs such as promoting the installation of artificial reefs and structures, encouraging coordinated and effective planning for coastal fisheries management programs, undertaking environmental impact assessment studies, restocking of commercially-important fish species, as appropriate, and give priority to human resources development for the implementation of such programs <p>Marine fisheries food security</p> <ul style="list-style-type: none"> - (22) Sustain the supply of fish and fishery products from the ASEAN region <p>Integration of fisheries with habitats management</p> <ul style="list-style-type: none"> - (33) Ensure the integration of fisheries with habitats management by applying the concept of fisheries refugia in line with the Regional Guidelines on the Use of Fisheries Refugia for Capture Fisheries Management in Southeast Asia to complement the existing conservation and management measures; - (33) Promote the adoption of different management approaches to sustainably manage major critical coastal habitats, e.g. mangroves, coral reefs and seagrasses; and develop and disseminate information and guidance on the use of appropriate tools and interventions
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Aquaculture	<p>Cooperation of Member countries on responsible aquaculture practices</p> <ul style="list-style-type: none"> - (22) Promote cooperation among Member Countries and with international and regional organisations in encouraging responsible aquaculture practices through joint research, technology transfer and human resource development - (33) Develop and implement ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices that cover (i) integration of quality and safety management systems for products with significant trade potentials; (ii) use of chemicals in aquaculture in relation to food safety; (iii) development of product traceability systems from farm to market; and (iv) implementation of quarantine and inspection/ sampling procedures and Sanitary and Phytosanitary (SPS) measures for aquaculture products to ensure food safety; <p>Capacity building in aquaculture governance</p> <ul style="list-style-type: none"> - (23) Develop guidelines and enhance the capacity of relevant authorities and communities to collaboratively resolve conflict with other stakeholders and with other competing users of resources - (23) Implement measures or strategies at national and local level to (i) monitor and regulate aquaculture operations; (ii) prevent over development; and (iii) ensure that activities are carried out in an environment-friendly manner. This also includes effectively enforcing regulations to avoid conflict in the use of common resources and adopting the concept of environmental capacity as a strategy to prevent aquatic pollution brought about by intensification of aquaculture activities - (32) Strengthen aquaculture governance and implement good aquaculture practices to sustain production for food safety and security, sustainable livelihoods, and rural development - (33) Improve human resource capabilities for responsible aquaculture through: (i) closer public and private sector collaboration in R&D, paying particular attention to the need for advanced skills in biotechnology and assessment of the efficacy and economics of the use of probiotics and immunostimulants including vaccines; and (ii) effective implementation of aquaculture education and extension services; <p>Aquaculture policies</p> <ul style="list-style-type: none"> - (23) Ensure that national programs and policies on aquaculture address social, economic and environmental aspects of sustainable aquaculture to improve food security, livelihoods, employment and poverty alleviation by (i) providing the mechanisms and enabling environment for good aquaculture practices, efficient markets and fair trade; (ii) strengthening the capacity of small-holder farmers; and (iii) promoting inter-agency collaborations
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- (23) Formulate and implement complementary and supportive policies that will (i) build the capacity of small-scale farmers and hatchery operators in adopting simple broodstock and hatchery technologies and innovations; (ii) enhance small-scale farmers and hatchery operators' access to quality broodstock and SPF seeds produced through farmer-friendly broodstock management methods; and (iii) foster strong cooperation between the public and private sectors engaged in development and dissemination of quality broodstock and seed stock
- (33) Ensure that national programs and policies on aquaculture address social, economic, and environmental aspects of sustainable aquaculture to improve food security, livelihoods, and employment, and alleviate poverty by (i) providing the mechanisms and enabling policies for good aquaculture practices, efficient markets and fair trade; (ii) strengthening the capacity of small-holder fish farmers; and (iii) promoting inter-agency collaborations
- (33) Formulate and implement complementary and supportive policies that will: (i) build the capacity of fish farmers and hatchery operators in adopting broodstock and hatchery technologies and innovations; (ii) enhance fish farmers and hatchery operators' access to SPF/SPR broodstock and seeds produced through farmer-friendly broodstock management methods; (iii) foster strong cooperation between the public and private sectors engaged in development and dissemination of quality broodstock and seed stock; (iv) strengthen the capacity of fish farmers' groups, e.g. by empowering fish farmers' groups; and (v) promote development of a skilled workforce for the aquaculture industry;
- Formulate and implement national policies and strategies that will enable the aquaculture sector to adopt measures to mitigate the potential impacts of climate change and environmental stressors by providing support to R&D on climate change, and other environmental-related issues to increase resilience, strengthening the overall capacity of various stakeholder groups and fostering cooperation within the aquaculture sector and with other sectors, and developing standard procedures for disaster risks reduction in aquaculture;

Aquaculture planning / management

- (23) Integrate the planning of marine capture fisheries, inland capture fisheries and the aquaculture sub-sectors to promote the sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture
- (23) Integrate aquaculture into rural development activities within the context of multiple-use of land and water resources through inter-agency coordination in policy formulation, project planning and implementation, stakeholder consultation, extension services and technology transfer, participate in and provide support to regional initiatives that will assess the role of aquaculture in poverty alleviation for better policy formulation
- (23) Implement measures or strategies at national and local level to (i) monitor and regulate aquaculture operations; (ii) prevent over development; and (iii) ensure that activities are carried out in an environment-friendly manner. This also includes effectively enforcing regulations to avoid conflict in the use of common resources and

adopting the concept of environmental capacity as a strategy to prevent aquatic pollution brought about by intensification of aquaculture activities

- (23) Where applicable, encourage good practices in aquaculture such as the FAO Technical Guidelines on Aquaculture Certification

- (23) Encourage Member Countries to take a precautionary approach to safeguard the environment from the acceleration of offshore aquaculture, and to consider developing regional guidelines on responsible marine (inshore to offshore) aquaculture

- (33) Integrate the planning of marine capture fisheries, inland capture fisheries, and aquaculture subsectors to promote sustainable development of the fisheries sector, including harvesting and post-harvest in both capture fisheries and aquaculture;

- (33) Implement measures or strategies at national and local levels to: (i) monitor and regulate aquaculture operations; (ii) prevent over intensification of aquaculture; and (iii) ensure that activities are carried out in a sustainable manner and that aquatic animal welfare is taken into consideration as appropriate; (iv) effectively enforcing regulations to avoid conflict in the use of common resources; and (v) adopt the concept of environmental carrying capacity including the implementation of good aquaculture practices;

- (33) Apply precautionary approach to safeguard the environment from the over-intensification and expansion of inland, coastal and offshore aquaculture;

Aquaculture food safety

- (11) The scope of the ASEAN GAqP (Food Fish) covers
under food safety

- aquaculture facility location recommendations
- procedures to avoid feed contamination
- aquaculture inputs are free of prohibited substances
- registered with the competent authority regulations complying farm feed
- veterinary drugs and chemicals for use in aquaculture shall comply with national regulations, as well as international guidelines.
- Water quality suitable for fish production and safe for human consumption
- Brood stock without human health hazards
- Food safety data to be recorded and stored for 2 years

	<ul style="list-style-type: none"> • Aquaculture facilities designed not to be contaminated from workers, sewage/toilets, domestic animals, machinery oil/fuel and other possible sources • Appropriate harvesting and post-harvest handling • farm level hygienic practices • management and monitoring programmes in bivalve mollusks growing areas <p>- (23) Develop and implement ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices that cover (i) the integration of quality and safety management systems for products with significant trade potential; (ii) the harmonization for chemical use and food safety in aquaculture; (iii) the development of product traceability systems from farm to market; and (iv) harmonization of the quarantine and inspection/sampling procedure and Sanitary and Phytosanitary (SPS) measures for aquaculture products to secure food safety</p> <p>- (23) Improve the efficient use of aquatic feeds by strictly regulating the quality of manufactured feed and feed ingredients and support continued research for developing suitable alternative protein sources that will reduce the dependence on fish meal and other fish-based products. This effort will include the consideration of ingredients not derived from wild caught fish, encouraging the culture of species requiring no or low fish meal content in their feed and applying effective feeding management practices, taking into account the need for cultural and social acceptance of alternative feed ingredients</p> <p>Aquaculture animal health and welfare</p> <p>- (11) The scope of the ASEAN GAqP (Food Fish) covers under animal health and welfare</p> <ul style="list-style-type: none"> • Aquatic animal health management programmes and movement of aquatic animals and aquatic animal products in accordance with provisions in the OIE Aquatic Animal Health Code • culture environment should be maintained at all phases of the production cycle adapted to the species, including routine monitoring and species specific management measures • Responsible use of veterinary medicine • Careful species selection in polyculture • Farm workers and managers trained on good aquatic animal health and welfare management practices • High quality seed from reliable sources • Record keeping of animal health and movement for traceability purposes <p>- (23) Promote the production and distribution of specific pathogen-free (SPF) and quality seed through the (i) establishment of certified government or private hatcheries as sources of quality seed; (ii) dissemination of new</p>
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breeding technologies and techniques for the effective distribution and maintenance of genetically improved strains; and (iii) implementation of sound policies that will promote better hatchery management practices, including the responsible collection and use of wild broodstock and seed

- (24) Enhancing traceability of aquaculture products, through the implementation of all ASEAN GAPs with certification scheme based on regulations of respective countries, and traceability systems that are harmonized with those of major importing countries

- (33) Promote the production and distribution of specific pathogen-free (SPF) and specific pathogen resistant (SPR) broodstock and seeds through: (i) establishment of certified government or private hatcheries as sources of quality seed; (ii) dissemination of new breeding technologies and techniques for the effective distribution and maintenance of genetically-improved strains; and (iii) implementation of sound policies that promote better hatchery management practices, including the responsible collection and use of wild broodstock and seed;

Aquaculture environmental Integrity

- (11) The scope of the ASEAN GAqP (Food Fish) covers under environmental integrity

- Environmental impact assessments should be conducted
- Regular monitoring of farm environmental quality
- Measures to promote efficient water management and proper management of effluents to reduce impacts on surrounding land, and water resources
- hatchery produced seed should be used; if wild seed is used it should be collected in accordance with national laws
- use of exotic species only after risk assessment of impact on natural environment, biodiversity and ecosystem health
- the use of GMOs only after a science-based risk assessment to address possible risks on a case-by-case basis.
- Responsible Farm infrastructure construction and waste disposal
- Responsible use of chemicals and drugs
- Training of farm workers and managers on environmental management and mitigation of impact to ensure they are aware of their responsibilities in protecting the environments

Impact mitigation of aquaculture on the environment and biodiversity

	<p>- (22) Mitigate the potential impacts of aquaculture on the environment and biodiversity including the spread of aquatic animal diseases</p> <p>Socio-economic aspects in aquaculture</p> <p>- (11) The scope of the ASEAN GAqP (Food Fish) covers under socio-economic aspects in aquaculture</p> <ul style="list-style-type: none"> • Workers should be treated responsibly and in accordance with national labour rules and regulations and, where appropriate, relevant ILO conventions • Workers should be provided with decent working conditions for both genders • Child labour should not be used in a manner inconsistent with ILO conventions and international standards • Farm operators shall demonstrate equal rights on public land and water use for local communities following National Laws and Regulations • Farm operators should take measures to minimise potential adverse impacts on the local community during all phases of farm operation • Safe farm work conditions must be ensured at all times in line with the OH&S conventions of the ILO • Workers should not be discriminated on the basis of gender <p>- (33) Encourage good and appropriate employment practices in accordance with domestic laws and regulations or relevant international instruments</p> <p>Aquaculture food security</p> <p>- (22) Enhance the awareness that aquaculture makes to food security and sustainable livelihoods to deliver a responsible increase in aquaculture production that promotes aquaculture for rural development</p>
IUU Fishing	<p>Catalogue on regional artisanal and industrial fishing activities, fish stock statuses, trade and markets</p> <p>(2) The voluntary RPOA plan covers</p> <ul style="list-style-type: none"> • a proposed joint compilation of artisanal and industrial fishing activities, including the status fish stocks, trade and markets <p>Defining IUU fishing activities</p>

- (7) The Guidelines are intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities.

- Defining national IUU fishing activities
- Unauthorised transshipment
- Poaching in the EEZs of other countries
- IUU fishing in the high seas and RFMO areas
- Reiterating responsible fishing practices and methods based on the regional Guidelines for Responsible Fisheries in Southeast Asia Responsible Fishing Operations and the RPOA-IUU

Develop national plans to reduce over capacity in fisheries

(2) The voluntary RPOA plan covers

- to undertake to develop and implement national plans of action to accelerate their efforts to reduce over capacity and eliminate illegal fishing activity where these issues are known to occur

Regional cooperation on IUU fishing

(2) The voluntary RPOA plan covers

- encouraging countries in the region
 - to work toward ratification, accession, and/or acceptance and full implementation, of UNCLOS and UNFSA
 - to work towards ratification and/or acceptance of regional fisheries management instruments, where appropriate
 - to work toward acceptance and full implementation of relevant regional and multilateral arrangements, where appropriate
- to develop a regional approach to identify, compile and exchange information on any vessel used or intended for use for the purpose of fishing including support ships, carrier vessels and any other vessels directly involved in such fishing operations in the region on straddling and migratory stocks and across national jurisdictions
- to cooperate to assess, conserve and manage fishery resources where they straddle national boundaries or occur both within EEZs and in an area beyond and adjacent to the EEZ
- to work on the collection, management and sharing of information on fisheries management, and the management of fishing capacity

- to respect traditional, artisanal and small-scale fisheries and providing assistance with the management of these fisheries resources
- to work together to improve their data collection systems and to share information about vessels, fishing effort, catch levels, fish landings and sales of fish and fish products

- (24) Enhancing regional cooperation in managing trans-boundary fisheries resources through regional, sub-regional, and bilateral arrangements in combating IUU fishing, particularly poaching by fishing vessels, transshipment and transportation of fish and fishery products across borders of respective countries

- (32) Strengthen cooperation among AMSs and with international and regional organizations in combating IUU fishing and management of fishing capacity to balance available resources;

The role of regional organisations in IUU fishing

2) The voluntary RPOA plan covers

- to work closely and collaboratively with regional organisations to develop conservation and management measures
- to acknowledge the important roles of regional organisations in strengthening fisheries management and conservation in the region

- (22) Foster cooperation among ASEAN Member Countries and with international and regional organisations in combating IUU fishing

Fishing capacity management

(2) The voluntary RPOA plan covers

- to manage the fishing capacity of their fleets by assessing the status of their fishery resources and fishing fleet capacity
- to introduce management measures to help prevent fishing capacity from exceeding levels that result in harvest rates that impede the ability of fish stocks to reproduce sustainably over the longer term
- to undertake planning to reduce over-capacity without shifting that capacity to other fisheries whose resources may be already fished at the maximum sustainable rate or above that rate, taking into consideration potential socio-economic impacts

Regional cooperation on MCS

- (23) Establish and strengthen regional and sub-regional coordination on fisheries management and efforts to combat IUU fishing including the development of regional/sub-regional Monitoring, Control and Surveillance (MCS) networks
- (23) Facilitate consultative dialogue among fisheries legal officers to share, at the sub-regional/regional level, perspectives of the respective legal and regulatory framework in terms of developing MCS-networks and to implement efforts to combating IUU fishing
- 24) Strengthening Monitoring, Control and Surveillance (MCS) programs under national laws and regulations for combating IUU fishing and enhancing cooperation among relevant national agencies within the country for effective implementation of laws and regulations for combating IUU fishing
- (33) Establish and strengthen regional, sub-regional, and bi-lateral coordination on fisheries management and efforts to combat IUU fishing; and where appropriate promote the establishment of Monitoring, Control and Surveillance (MCS) network through inter-agency coordination and information sharing;
- (33) Support consultative dialogues at regional/sub-regional level among fisheries legal officers to share and exchange information on updated legal and regulatory frameworks in addressing issues in fisheries management;

Cooperation with flag states operating in the region

(2) The voluntary RPOA plan covers

- to actively cooperate with relevant flag States and fishing entities operating in the region in ensuring that fishing vessels entitled to fly their flags do not undermine the effectiveness of conservation and management measures, including engagement in or supporting illegal fishing
- (7) The Guidelines is intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities
 - Strengthening the Management of Fishing in the High Seas and RFMO Areas
 - Flag States should implement, where appropriate, observer programs in accordance with relevant national, regional or international regulations with respect to high seas fisheries
 - Flag States should cooperate with the relevant RFMOs in complying with their Catch Document Schemes to prevent the landing of fish and fishery products from IUU fishing in the RFMO areas

Port state measures

(2) The voluntary RPOA plan covers

- to adopt port State measures, where appropriate, based on the FAO 'Model Scheme on Port State Measures to Combat IUU Fishing
- (7) The Guidelines is intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities
- Strengthening the Management of Fishing in the High Seas and RFMO Areas
 - Port States should strengthen their respective port state measures including control of port entry, use of port services, requirements for pre-port entry notification and designation of ports for fishing vessels
- (24) Promoting the implementation of port State measures through enhanced inter-agencies and regional cooperation in preventing the landing of fish and fishery products from IUU fishing activities from all foreign fishing vessels, and encouraging the use of the "Regional Fishing Vessels Record (RFVR)"

Catch documentation scheme

(2) The voluntary RPOA plan covers

- to standardise catch and landing documentation throughout the region and implement catch documentation or trade certification schemes for high value product

- (17) ASEAN Catch Documentation Scheme for Marine Capture Fisheries

Trade analyses

(2) The voluntary RPOA plan covers

- to check trade discrepancies regarding export of fish and fish product and take appropriate action and, as a minimum, report these discrepancies to the flag State

Improving governance in IUU fishing

- (7) The Guidelines is intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities

- States are encouraged to
 - Update related laws and regulations as well as system of reporting catch and compiling appropriate logbook information

	<ul style="list-style-type: none"> ○ Monitor all fishing vessels by maintaining records and their performance with respect to compliance to their national laws and regulations, including current owners and operators authorized to undertake fishing activities at designated fishing areas ○ Implement, where appropriate, a Vessel Monitoring System (VMS) for all commercial fishing vessels licensed by the respective States ○ Intensify efforts to address IUU fishing, especially destructive fishing (e.g. blast and cyanide fishing) by promoting community-based management approach to prevent, deter and eliminate any violations with support from relevant government agencies and communities ○ Intensify respective surveillance during fishing operations where appropriate, as well as port state control at designated landing ports <p>- (23) Take measures to prevent unauthorized fishing and eliminate the use of illegal fishing practices by building awareness of their adverse impacts, strengthening law enforcement, developing and promoting responsible and selective fishing gears and practices, enforcing regulations and encouraging alternative means of livelihoods</p> <p>- (23) Strengthen regional and national policy and legislation to implement measures and activities to combat IUU fishing, including the development and implementation of national plans of action to combat IUU fishing, and promote the awareness and understanding of international and regional instruments and agreements through information dissemination campaigns</p> <p>- (33) Implement measures to prevent unauthorized fishing and eliminate illegal fishing practices, e.g. strengthening enforcement of laws and regulations, establishing monitoring control and surveillance (MCS) mechanisms and network, developing and promoting responsible fishing practices, encouraging supplementary livelihood options;</p> <p>- (33) Strengthen the implementation of measures and activities to combat IUU fishing by ensuring compliance with national laws and regulations, and with the provisions of relevant international instruments; encourage the development and implementation of national plans of action to combat IUU fishing; promote inter-agency coordination for effective implementation of laws and regulations; and enhance awareness and understanding of applicable international and regional instruments and agreements through information dissemination campaigns;</p> <p>- (33) Mobilize regional/sub-regional collaboration frameworks and tools for combating IUU fishing, e.g. Regional Plan of Action to Promote Responsible Fishing Practices including Combating Illegal, Unreported and Unregulated Fishing (RPOA-IUU); ASEAN Regional Plan of Action for the Management of Fishing Capacity (RPOA-Capacity); Regional Fishing Vessels Record (RFVR); ASEAN Catch Documentation Scheme (ACDS), and the use of technologies to support monitoring and surveillance of fishing activities, e.g. Vessel Monitoring System (VMS), traceability systems;</p>
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- (33) Improve the capacity of relevant national authorities to effectively implement the requirements of port State measures and flag State responsibilities;

Regulating transshipment

- (7) The Guidelines is intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities.

- Regulating transshipment and landing of fish/catch across borders

Preventing poaching in the EEZ of ASEAN Member States

- (7) The Guidelines is intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities

- Preventing poaching in the EEZs of ASEAN Member States
 - take appropriate actions against fishing vessels operating illegally beyond their designated areas, e.g. through flag States measures, port State measures and coastal State measures
 - should cooperate in compiling a list of vessels reported to have been illegally operating (poaching) beyond their respective EEZs, and share this list among the relevant countries
 - should support in regularly updating information for the Regional Fishing Vessels Record (RFVR) endorsed by the Special SOM-34thAMAF
 - are encouraged to establish mutual bilateral/multilateral agreements among neighboring countries to set terms and conditions (including enforcement, penalties, and other regulations), for permission to fish in each other's fishing areas

Controlling the trade of live fish, reef fish and ETP species

- (7) The Guidelines is intended to provide tools for the ASEAN Member States (AMSs) to ensure that fish and fishery products from the region entering the global supply chain do not come from IUU fishing activities

- Controlling Illegal Fishing and Trading Practices of Live Reef Food Fish, Reef-based Ornamentals and Endangered Aquatic Species
 - States should conduct regular inter-and intra-meetings among relevant authorities (including customs departments) and exporting companies for mutual agreements on harvesting practices and data reporting of live reef food fish, reef-based ornamentals, and endangered aquatic species.
 - States should have appropriate mechanisms for the monitoring and data collection of live reef food fish and reef-based ornamentals trades

	<ul style="list-style-type: none"> ○ States should ensure that export of endangered aquatic species is avoided, except for research and experimental purposes for which such export should be accompanied by appropriate documents ○ States should encourage participation of small-scale/artisanal fishers, who account for majority of LRFF production, in co-management, and to enhance their awareness of the impacts of illegal fishing and trading of such aquatic species ○ States should consider establishing a network between the LRFF importing and exporting countries, to strengthen LRFF management at the regional level
<p>Food Safety and Better Nutrition</p>	<p>Capacity building</p> <ul style="list-style-type: none"> - (6) Build institutional capacity through incorporating nutrition in food and nutrition data collection, management and communication and systematic training - (6) Implement food security and nutrition awareness and education for farmers, traders and food and agriculture policy-makers, programme planners, including integrating nutrition education in agriculture extension services - (13) Define primary responsibility of food business operators - (23) Encourage the implementation of appropriate international standards and strengthen programs relevant to Sanitary and Phytosanitary (SPS) measures, Technical Barriers to Trade (TBT) measures, R&D, as well as capacity building and awareness raising on fish trade-related issues, and information dissemination recognizing the different status of development in Member Countries - (33) Strengthen fish quality and safety management systems that support the competitive position of ASEAN fish and fishery products in the world markets, including possible adoption of cold chain management standards and moving towards ISO22000 and ISO/IEC 17025 accreditation of national fish inspection laboratories; enhance capacity and acknowledge the recognized national laboratories, risk analysis and equivalence agreement, e.g. the Mutual Recognition Agreement (MRA); and promote the implementation of the quality and safety management systems among small and medium enterprises in the AMSs; - (33) Promote and conduct training programs and develop training materials to upgrade the technical skills and competencies of personnel in the public and private sectors on fisheries post-harvest technologies, and food quality and safety management systems; - (33) Assist small-scale producers to comply with standards on safety and quality of fish and fishery products by providing support programs including capacity building; <p>Improve food safety policies</p>

- (6) Improve policy coherence supportive to nutrition with special focus on market expansion and improvement of market access for vulnerable groups through food price policies, trade policies, and agricultural land conversion
- (13) Consistency with ATIGA and WTO's SPS and TBT Agreements
- (13) Equivalence and Mutual Recognition
- (13) Harmonisation with International Standards
- (13) Strengthening and Harmonisation of Regional and National Food Control Systems
- (23) Promote the production of and preserve the diversity of traditional fish products by assisting producers to secure stable supplies of quality raw materials, meet food safety requirements and to improve product identity, nutritive value and marketing. In the process, promote One Village, One Fisheries Product (FOVOP) and other initiatives to promote local fishery products
- (32) Sustain the supply of fish and fishery products from the ASEAN to improve food security, facilitate poverty alleviation, and improve the livelihoods of ASEAN people dependent on the harvesting, farming and marketing of fish and fishery products, by enhancing the necessary national fisheries policies, legal and institutional frameworks that encourage and support responsible fisheries and aquaculture operations, including small-scale operations as well as providing supplementary livelihood options

Research

- (6) Undertake research on innovative agricultural technologies focusing on improved production and productivity of non-cereals (pulses, fruits, vegetables, and animal-source foods), reduction of post-harvest losses and food wastage along the entire value chain

Establish a risk management system

- (6) Establish risk management system and tools to identify social safety nets, especially during crises, build adequate emergency food reserves and relief systems as a buffer to natural and man-made disasters as well as mitigate effects of high food prices and price volatility
- (13) Systematic Risk Analysis Framework
- (13) Science-based, Independent Risk Assessment Process

Fish quality

- (6) Incorporate nutrition objectives, components, measurable indicators into the design of food and agricultural, trade, food security policies and programmes
 - (9) & (10) Enhance quantity and quality of production with sustainable, „green“ technologies, resource management systems, and minimise pre-and post-harvest losses and waste
 - (9) & (10) Ensure food security, food safety, better nutrition and equitable distribution
 - (23) Strengthen fish quality and safety management systems that support the competitive position of ASEAN fish products in the world markets, including moving towards ISO/IEC 17025 accreditation of national fish inspection laboratories, strengthening capacity and acknowledging the recognized national laboratories, risk analysis and equivalence agreement such as the Mutual Recognition Agreement (MRA) and promote the implementation of the quality and safety management systems among small and medium enterprises in the ASEAN region
 - (32) Optimize the utilization of catch/harvest by reducing post-harvest losses and wastes to increase fish supply and improve economic returns through promotion of appropriate technologies, facilities and best practices along the supply chain
- Promote agro-biodiversity**
- (6) Promote agro-biodiversity for improved nutrition and climate change adaptation, including support the conservation of, access to, and fair and equitable sharing of the benefits arising from the use of genetic resources that can diversify available nutritious foods for consumption and also to adapt to changing climate
- Improve supply chain handling**
- (6) Improve storage, preservation, transport and distribution technologies and infrastructure to reduce food insecurity, food nutrient loss and waste
 - (13) Integrated 'Food Chain' Approach
 - (13) Transparency
 - (22) Optimise the utilisation of catch from water to market by reducing post-harvest losses and waste to increase fish supply and improve economic returns
 - (23) Encourage relevant control agencies at all levels in applying appropriate legislation and coordinated activities regarding the handling, processing, distribution, storage, marketing, quality and safety of fish and fishery products

- (24) Regulating the quality and safety of ASEAN fish and fishery products all throughout the supply chain to meet standards and market requirements as well as acceptability by importing countries, and development and promotion of ASEAN seal of excellence/label

- (33) Encourage relevant control agencies at all levels to apply appropriate legislation and coordinated activities regarding the handling, processing, distribution, storage, marketing, quality, and safety of fish and fishery products;

- (33) Adopt standards and guidelines for handling fish and fishery products, and implement hygienic fish handling onboard fishing vessels and provide training on fish and fishery products handling as part of the requirements for issuance of permits at all levels for fish vessel crews;

Traceability

- (23) Develop traceability systems, with mechanisms as needed to certify or validate the information, for the whole supply chain, and establish regulations and enforcement schemes in line with international standards. Align Member Countries' inspection systems and incorporate strengthened port inspections in the process as a means to improve inspection systems

- (13) Reliable Traceability System

- (24) Enhancing traceability of fish and fishery products from capture fisheries through the implementation of the "ASEAN Guidelines for Preventing the Entry of Fish and Fishery Products from IUU Fishing Activities into the Supply Chain," and "ASEAN Catch Documentation Scheme for Marine Capture Fisheries"

- (29) Practical advice on what data to collect at what level in the supply chain to ensure traceability of aquaculture products

Technologies to improve fish quality

- (22) Improve technologies and facilities to ensure fish quality assurance and safety management systems

- (23) Introduce and provide support for the development and application of technologies that optimize the utilization of catches, reduce post-harvest losses, wastes and discards in commercial and small-scale fisheries and processing operations, through improved processing, facilities and infrastructure development, on-board and on-shore handling, storage, distribution and marketing of fish and fishery products

- (33) Improve the efficient use of aquafeeds by strictly regulating the quality of manufactured feed and feed ingredients, and support continued/applied research for developing suitable alternative protein sources that will reduce the cost and dependence on fish meal and other fish-based products, and subsequently promote regional

sharing of information on feed ingredients; encourage the culture of species requiring no or low fish meal content in their feed and application of effective feeding management practices, taking into account the need for cultural and social acceptance of feed ingredients;

Strengthen inter-sectoral collaboration

- (6) Strengthening and promoting better inter-sectoral collaboration and coordination mechanisms between ASEAN Sectoral Bodies related to agriculture, health, rural development, education environment, economic, labour, energy, social welfare and others

Forming multi-stakeholder partnerships

- (6) Forming multi-stakeholder partnerships for achieving food security and nutrition, particularly through engaging civil society and farmer organisations in policy dialogues, promoting the role of the private sector in the production of nutritionally enhanced foods and in generating resources or investments in agriculture, engaging training and research institutions in support of research, and human and institutional capacity-building

Guidelines on food security and nutrition

- (15) Regional Guidelines on Food Security and Nutrition Policy for the following policy areas:

- Agricultural policies
- Marketing and pricing policies
- Trade policies
- Infrastructure policies
- Poverty alleviation and social sector policies
- Health policies
- Education policies
- Population policies
- Macroeconomic policies.
- Exchange rate policies
- Fiscal policies
- Monetary policies

	<ul style="list-style-type: none"> - (23) Develop standards and guidelines for aquaculture products handling and transportation, hygienic vessel design and construction, and include training of fish handling as part of the requirement for issuance of permits at all levels for fish vessel crews, and encourage new workers to enter the industry where needed <p>Promote traditional production methods</p> <ul style="list-style-type: none"> -(33) Promote the production of and preserve the diversity of traditional fish products by assisting producers to secure stable supplies of quality raw materials and meet food safety requirements; and improve product identity, nutritive value and marketing. In the process, promote the identity of and other initiatives on local fishery products;
International Trade	<p>Mechanisms to overcome trade barriers</p> <ul style="list-style-type: none"> - (5) The goal if the AIFS framework and SPA-FS 2015-2020 is to ensure long-term food security and nutrition, to improve the livelihoods of farmers in the ASEAN region. <ul style="list-style-type: none"> - Convene a seafood forum to deliberate specifically on technical barriers to seafood trade with a view to promote movement of fish and fish products intended for human consumption - (9) & (10) Enhance trade facilitation, economic integration and market access - (22) Support the competitiveness of the ASEAN fish trade - (33) Encourage, as appropriate, the development of national laws, rules and regulations on trading of species in accordance with relevant rules of international law; <p>Small producer and SME support to access international trade</p> <ul style="list-style-type: none"> - (9) & (10) Assist resource constrained small producers and SMEs to improve productivity, technology and product quality, to meet global market standards and increase competitiveness - (23) Assist small-scale producers to comply with standards on safety and quality of fish and fishery products by providing support programs including training - (23) Assist small-scale producers from both capture fishery and aquaculture in securing and maintaining access to markets at the national, regional and international levels, and in the process, develop marketing systems that are not capital intensive and accessible for local producers - (33) Promote fair distribution of benefits gained from both intra-regional and international trade of fish and fishery products among small-scale actors along the whole value chain;

- (33) Assist small-scale producers from both capture fisheries and aquaculture in securing and maintaining access to markets at the national, regional and international levels, and in the process, develop marketing systems that are not capital intensive but are accessible for local producers;

Product branding

- (23) Encourage and provide guidance to develop/improve branding of fish and fishery products that demonstrate the eco-friendly and socially acceptable nature of ASEAN fish products (e.g. one community one fishery product), including organic standards and coordination of Halal requirements

- (32) Support the competitiveness of the ASEAN fish trade through the development of procedures and programs that would certify, validate, or otherwise indicate the origin of fish and fishery products to improve product traceability, sustainable fishing practices, and food safety, in accordance with international and national requirements;

- (33) Encourage and provide guidance to develop/improve branding or eco-labeling of fish and fishery products that demonstrate the eco-friendly and socially acceptable nature of ASEAN products, including organic standards and coordination of Halal requirements

Strengthen ASEAN approaches on international and regional trade issues

- (9) & (10) Strengthen ASEAN joint approaches on international and regional issues affecting the FAF sector

- (22) Promote joint ASEAN approaches and positions in international trade in fish and fishery products indigenous to the region by harmonising the standards, criteria and guidelines and developing mutually-recognised agreements on sustainability and safety management systems

- (23) Strengthen cooperation and mechanisms among Member Countries to work towards common positions that could be reflected in international fish trade related fora, such as World Trade Organization (WTO), Food and Agriculture Organization of the United Nations (FAO), Office International des Epizooties (OIE), Codex Alimentarius Commission, and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

- (23) Increase participation and involvement of Member Countries in international fora and technical committees such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Codex Alimentarius Commission, Food and Agriculture Organization of the United Nations (FAO), Office International des Epizooties (OIE), Regional Fisheries Bodies (RFBs), and World Trade Organization (WTO); and promote

ASEAN interest, recognizing that fisheries policies of relevance to the ASEAN region are increasingly discussed and agreed upon at the global level

- (32) Promote joint ASEAN approaches and positions in international trade in fish and fishery products produced in the region, by harmonizing the standards, criteria, and guidelines, and developing mutually recognized agreements on sustainability and food safety management systems;

- (33) Strengthen cooperation and mechanisms among AMSs to work towards common positions that could be reflected in international fish trade related fora, e.g. World Trade Organization (WTO), Food and Agriculture Organization of the United Nations (FAO)/COFI Sub-committee on Fish Trade, Office International des Epizooties (OIE), Codex Alimentarius Commission (CAC), and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES);

- (33) Increase participation and involvement of AMSs in international fora and technical committees, e.g. CITES, CAC, FAO, OIE, Regional Fisheries Bodies (RFBs), and WTO; and promote ASEAN interest, recognizing that fisheries policies of relevance to the ASEAN are increasingly discussed and agreed upon at the global level

Standardization of inspection and certification systems to facilitate trade

- (11) This is a draft template allowing to AMS to recognize as equivalent the other Party's fishery products inspection and certification systems governing raw materials, holding, handling, transporting, processing, packaging, and trade in fishery products

- (23) Strengthen cooperation among Member Countries to implement international standards with regards to trade on fish and fishery products within the ASEAN region

- (23) Establish regional/ASEAN standards applicable for fishery and aquaculture products that are in line with international requirements and applicable to the region. Harmonize standards, technical regulations and conformity assessment procedures as inputs for the establishment of the ASEAN Policy Guidelines on Standards and Conformance, to increase the competitiveness of fishery products on regional and international markets

- (33) Strengthen cooperation among AMSs to implement international standards with regards to trade in fish and fishery products within the ASEAN;

- (33) Implement regional/ASEAN standards (e.g. ASEAN Good Aquaculture Practices (ASEAN GAqP), ASEAN Shrimp Good Aquaculture Practices (ASEAN Shrimp GAP), and ASEAN Policy Guidelines on Standards and Conformance) applicable for fishery and aquaculture products that are in line with international requirements and applicable to the region; and promote such standards to be acceptable by importing markets;

	<ul style="list-style-type: none"> - (33) Encourage the implementation of appropriate international standards and strengthen programs relevant to Sanitary and Phytosanitary (SPS) and Technical Barriers to Trade (TBT) measures, R&D, as well as capacity building and awareness raising on fish trade-related issues; - (33) Apply traceability systems with mechanisms as needed to certify or validate the information for the whole supply chain by harmonizing AMSs' inspection systems in line with international standards and strengthening port inspections process to improve traceability; <p>Stakeholder engagement in trade related issues</p> <ul style="list-style-type: none"> - (23) Engage the private sector (e.g. ASEAN Seafood Federation) in addressing trade-related issues, and in collaborative efforts to promote and sustain regional and international trade - (33) Engage the private sector (e.g. ASEAN Seafood Federation) in addressing trade-related issues, and in collaborative efforts to promote and sustain regional and international trade;
<p>Labor and Working Conditions</p>	<p>Labor governance</p> <ul style="list-style-type: none"> - (22) Improve the working conditions of people engaged in fisheries activities - (23) Encourage good and appropriate employment practices in accordance with domestic laws and regulations; - (23) Ensure that national programs and policies on aquaculture address social, economic and environmental aspects of sustainable aquaculture to improve food security, livelihoods, employment and poverty alleviation by (i) providing the mechanisms and enabling environment for good aquaculture practices, efficient markets and fair trade; (ii) strengthening the capacity of small-holder farmers; and (iii) promoting inter-agency collaborations; - (32) Improve the working conditions of people engaged in fisheries activities, and strengthen measures for safety of fishing vessels taking into consideration the specificity of fisheries of the region; - (32) Encourage good and appropriate employment practices in accordance with domestic laws and regulations or relevant international instruments - (33) Promote the implementation of good and appropriate employment practices in accordance with domestic laws and regulations or relevant international instruments; <p>Capacity development of stakeholders in labor issues</p> <ul style="list-style-type: none"> - (23) Strengthen the capacity of fisheries communities and the capability of fisheries-related organizations, NGOs and the private sector to better implement necessary actions towards enabling the communities and local organizations to increase resilience, improve livelihoods, alleviate poverty, adopt alternative livelihoods adapt to

	<p>climate change in support of achieving sustainable development, and encourage the participation of women and youth groups in the process;</p> <ul style="list-style-type: none"> - (33) Improve the capability of fishing crew and workers in fishing industry, and conduct educational and skills development program for new crew members and workers entering the industry; while also adopt appropriate technologies to optimize number of crew onboard fishing vessels <p>Safety at sea</p> <ul style="list-style-type: none"> - (23) Strengthen efforts to address safety at sea, including considerations of working conditions and socio-economic development, and ensure that these considerations are addressed by all concerned authorities while improving monitoring and control of the status of conditions, especially on small fishing boats; - (33) Ensure safety at sea, decent working conditions and implementation of onboard fishing vessels sanitation, including the development of new design for fishing vessels, in compliance with relevant international standards; <p>Inter-agency cooperation at national, sub-regional and regional level on labor issues</p> <ul style="list-style-type: none"> - (24) Addressing issues on labor (safe, legal and equitable practices) in the fisheries sector in the Southeast Asian region through strengthened cooperation among relevant national agencies within the country as well as establishing regional, sub-regional and bilateral cooperation and collaboration via relevant ASEAN platforms, and helping to support the development and implementation of relevant labor guidelines for the fisheries sector;
Research and Science	<p>Capacity enhancement</p> <ul style="list-style-type: none"> - (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes: <ul style="list-style-type: none"> - Promote nutrition education and consumer awareness of healthy diets, conduct social marketing campaigns and lifestyle change communication programmes to promote physical activity and dietary diversification, including increased consumption of micronutrient-rich foods. (SPFAF 3.7) - Promote good agriculture practices to minimize the negative effects on natural resources such as soil, forest and water and reduce the greenhouse gas emission (SP-FAF4.2) - Build competencies, share information, technologies and assistance packages with a focus on small scale producers (SPFAF4.3)

- (33) Strengthen the capacity to plan for sustainable fisheries in the context of changing socio-economic and ecological environments through the mobilization of the most up-to-date data and information, and the provision of appropriate policy summaries for decision makers;

Research Investment requirements

- (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes:

- Identify infrastructure investment requirements to increase production and reduce post-production losses,
- Increase investments in collaborative R&D activities, and strengthen existing regional collaboration among AMS and with key international institutes, such as the International Rice Research Institute (IRRI) to generate sustainable technologies and management and harvesting systems, and effective extension/communication systems for technology diffusion (SP-FAF1.9)
- Increase investment in R&D for technologies and management systems with a focus on resilience to facilitate climate smart/friendly agriculture, land use, and fishery in cooperation with research programmes and networks on the basis of best practices (SP-FAF4.1)
- Provide access to climate-related financial resources to support climate friendly agriculture (SPFAF4.8)

Private sector participation in research

- (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes:

- Increase private sector participation in policy discussions, programme and project formulation, research and development (R&D) and provide incentives and foster an enabling environment for public-private partnerships (PPPs) towards enhancing productivity and quality, recognizing that the 'private sector' in the context of FAF must refer not only to larger commercial enterprises but must also include the small-scale farmers, fishermen and SMEs (SPFAF1.3)

Research on balancing increased production with conservation objectives

- (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes:

- Carefully balance production increases with conservation objectives and needs of local communities to develop better management systems to minimize eco-system damage and promote sustainable management of forest and aquatic resources management (SPFAF1.8)

Regional partnerships in research

- (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes:

- Regularly review the nature of R&D partnerships and strategic partnerships with concerned organizations to ensure that the research and training agendas are aligned with ASEAN goals (SP-FAF1.11)

- Standardise and harmonise concepts, methods and presentation of national statistics and strengthen technical capacity of AMS to conduct multicounty studies and undertake accurate situational analysis and planning (SPFAF1.13)

- Enhance coordination and develop joint approaches through consultations among AMS and related ASEAN bodies in regional and international for a in order to gain a better hearing for its views and proposals, and to obtain more favourable outcomes in negotiations and agreements affecting FAF sector (SP-FAF6.1)

- Present ASEAN common position on the issues affecting FAF sector in fora such as Conference of Parties on the United Nations Framework Convention on Climate Change (UNFCCC), World Trade Organization (WTO), United Nations Forum on Forests (UNFF), World Organization for Animal Health (OIE), International Plant Protection Convention (IPPC), Codex Alimentarius Commission (CODEX), Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and International Tropical Timber Organisation (ITTO) (SPFAF6.2)

- (32) Promote cooperation among AMSs and with international and regional organizations to support the implementation of good aquaculture practices through joint research, technology transfer, and human resource development

- (32) Improve and exchange technologies, and enhance facilities to ensure that fish quality assurance and safety management systems are in place and operational, taking into account the importance of traditional fishery products and food security requirements, and promote the development of fishery products as supplementary livelihoods for fisheries communities;

Research on improving extension services

- (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes:

- Identify and document technology success stories and explore new methods of extension including enhanced use of information and communications technology (ICT) and other communication facilities for dissemination of successful technologies and management systems throughout AMS (SPFAF1.12)

Integrate gender issues in research

- (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes:

- Integrate gender issues into climate friendly agriculture, fishery and forestry practices to reduce the higher vulnerability of women to the social and economic impact of natural disasters and climate change. (SPFAF 4.7)

Research on new technologies

- (19) Develop new technologies and best practices to improve agricultural productivity, address health/disease and environmental issues, and minimize post-harvest losses in agriculture, livestock and fisheries

- (18) The Strategic Plan of Action (SPA) for The ASEAN Cooperation in Agricultural Research and Development (2016-2020) includes:

- Develop yield and productivity enhancing technologies and best practices that involve land use intensification in a sustainable manner, bearing in mind that expansion of cultivable land rapidly reaches its limits even in the land-abundant AMS

- Develop new and appropriate technologies, best practices and management systems to ensure food safety and address health/disease and environmental issues, particularly in the fast-growing aquaculture, livestock and horticulture sub-sectors (SPFAF1.6)

- (32) Enhance the efficient use of energy by adapting appropriate technologies for fishing gear and fishing vessel design, and fishing operations; and promote the use of alternative energy sources

- (33) Explore the use of advanced technologies for marine (inshore and offshore) and inland aquaculture, including the development of full-cycle breeding and aquaculture technologies for selected high-value species;

- (33) Strengthen support for the development and application of technologies and best practices that optimize the utilization of catches/farmed products, reduce post-harvest losses and wastes, value-add byproducts and valorize fish waste/trimmings in commercial and small-scale fisheries, aquaculture, and processing operations,

through improved processing, facilities and infrastructure development, onboard and onshore handling, and storage, distribution and marketing of fish and fishery products

Research on impact of fishing activities on the ecosystem and aquatic animals

- (23) Conduct research on the impacts of various gear types and methods, including light fishing, trawls and push nets, on ecosystems and populations of aquatic animals and also the effects of fishing vessel discharges and waste disposal on marine ecosystems, to promote the use of selective fishing gears and sustainable devices
- (33) Intensify research on the impacts of various fishing gear types and methods on the ecosystem and populations of aquatic animals, and develop and promote environment-friendly fishing practices, e.g. low impact and fuel efficient (LIFE) fishing gears/methods;

Research on alternatives for fish meal in fish feed

- (5) Promote research and development in alternative source of fish meal for fish feeds production
- (33) Provide government support for R&D on: ... (iii) improving the feeding and aquatic animal health management;

Risk assessment on the use of GMO products in fisheries and aquaculture

- (23) Strengthen risk assessment and R&D related to the use of Genetically Modified Organism (GMO) products in fisheries and aquaculture, including food safety issues
- (33) Provide government support for R&D on: (i) improving existing genetic resources; ...
- (33) Conduct risk assessment and R&D related to the use of Genetically Modified Organism (GMO) products in aquaculture (e.g. broodstock and aquafeeds) including food safety issues;

Research on assessing the impact of climate change on aquaculture

- (33) Provide government support for R&D on: ... (ii) assessing the impact of climate change on aquaculture; ...

Research on underutilized fisheries resources

	<p>- (33) Explore the potential of under-utilized fishery resources through comprehensive fishery resources surveys, and promote their exploitation in a precautionary manner based on analysis of the best available scientific information</p> <p>Research in support of fisheries management</p> <p>- (33) Foster cooperation with other countries for the conduct of stock assessment on straddling, transboundary, highly migratory, and shared fishery resources, as appropriate, to serve as inputs for formulating science-based fishery management plan; and strengthen sub-regional and bilateral cooperation including inter-agency cooperation for management of such resources</p> <p>Research on inland fisheries</p> <p>- (33) Promote Research and Development (R&D) (<i>in inland fisheries</i>) to understand the migration patterns, spawning grounds and seasons, and nursery grounds of important inland aquatic animals; and ensure the sustainability of inland fisheries by maintaining health of the ecosystem, particularly the inter-connectivity of habitats and the specific management needs during the dry season</p>
Fisheries Data Collection and Sharing	<p>Strengthen the national capacity to collect, analyze and share fisheries data</p> <p>- (22) Strengthen knowledge/science-based development and management of fisheries through enhancing the national capacity in the collection and sharing of fisheries data and information</p> <p>- (23) Strengthen national statistical mechanisms for fisheries and aquaculture and the exchange of statistical data and related information. Include other non-routine data and information such as fish consumption surveys as well as mobilizing local and indigenous knowledge with the aim of improving the valuation of fisheries and monitoring their performance, to address the needs of the ecosystem approach to fisheries and adaptation to climate change</p> <p>- (32) Strengthen knowledge, including local knowledge, and science-based development and management of fisheries by enhancing the national capacity to collect, analyze, and share fisheries data and information</p> <p>- (33) Strengthen national statistical mechanisms for fisheries and aquaculture including data collection disaggregated at species level, and exchange of statistical data; and include collection/compilation of nonroutine data and information, e.g. from fish consumption surveys, species composition, biological information, as well as local and indigenous knowledge, with the aim of improving the valuation of fisheries including monitoring of their performance</p>

- (33) Strengthen the collection of data and information, where relevant, on species under international concern, e.g. sharks and rays, sea turtles, catadromous eels, aquatic mammals, etc., and harmonize/standardize data collection methods among countries in the region;
- (33) Coordinate, decentralize and enhance the sharing of relevant statistics and fisheries-related data and information between the national fisheries and other authorities including those responsible for food security, environment, trade, aquaculture, water resources, agriculture/forestry, wetlands, migration/employment, and rural development;
- (33) Share and exchange information on research findings, good practices, and experiences among countries, including national and regional institutions

Establish and enhance regional fisheries information systems

- (23) Enhance regional fishery information systems and mechanisms to facilitate sharing, exchange and compilation of statistics and information that are required at the sub-regional and regional level and apply, where appropriate, regionally standardized definitions and classifications for statistical data to facilitate regional compilation, analysis and data exchange
- (23) Coordinate, decentralize and enhance the sharing of relevant statistics and information of fisheries-related statistical data and information between the national fisheries and other authorities including those responsible for food security, environment, trade, aquaculture, water resources, agriculture/forestry, wetlands, migration/employment and rural development
- (33) Enhance regional fishery information systems and mechanisms to facilitate sharing, exchange and compilation of statistics and information required at the sub-regional and regional level, and apply where appropriate, regionally standardized definitions and classifications for statistical data to facilitate regional compilation, analysis, and data exchange;
- (33) Share and exchange information on research findings, good practices, and experiences among countries, including national and regional institutions

Community / stakeholder participation in fisheries data collection and analyses

- (23) Enhance and promote the participation of local communities, fisheries associations and other stakeholders in fisheries management and co-management. In addition, communities should take part in fisheries and stock assessments by providing data, local ecological knowledge, and status of the stocks

	<p>- (33) Promote the use of simple and practical indicators that had been developed, for planning, monitoring, and evaluation of fisheries in support of achieving sustainability;</p>
Fisheries Subsidies	<p>Impact assessment of government subsidies</p> <ul style="list-style-type: none"> - (23) Assess the possible impact of government subsidies on fisheries, particularly the impact on the special requirements and the needs of small-scale fisheries in the region - (33) Assess the possible impacts of subsidies on fisheries, particularly on the special requirements and the needs of small-scale fisheries in the region; <p>Financial incentives in aquaculture/fisheries development</p> <ul style="list-style-type: none"> - (23) Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance, for the responsible development of aquaculture enterprises and developmental activities that will optimize socio-economic returns and food security - (33) Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance, for the responsible development of aquaculture enterprises and developmental activities that optimize economic returns - (33) Raise awareness of the need to develop financial incentives and micro-credit, with national and regional institutional assistance for the responsible development of fisheries and aquaculture enterprises, and developmental activities that optimize economic returns
Marine Debris	<p>Increased governance on the issue of marine debris</p> <ul style="list-style-type: none"> - (32) Increase awareness and support the reduction of impacts of aquatic pollution and marine debris, including abandoned, lost or otherwise discarded fishing gear (ALDFG), and microplastics/microbeads on fisheries and aquaculture <p>Marine debris management</p> <ul style="list-style-type: none"> - (33) Assess and manage the impacts of aquatic pollution and marine debris, including abandoned, lost, or otherwise discarded fishing gear (ALDFG) and microplastics/ microbeads, on fisheries and aquaculture;

	<p>Research on fish vessel discharges</p> <ul style="list-style-type: none"> - (23) to conduct research on fishing vessel discharges and waste disposal
<p>Protection of Marine Mammals and ETP Species (includes here habitat management)</p>	<p><u>Species management</u></p> <p>Species protection</p> <ul style="list-style-type: none"> - (3) MOU on sea turtle conservation and protection <p><u>Area Management</u></p> <p>Fisheries objectives in MPAs</p> <ul style="list-style-type: none"> - (23) fisheries objectives in the management plans for MPAs, refugia concept - (23) recognising different management approaches to sustainably manage critical habitats, such as mangroves, sea grasses and coral reefs - (32) Implement effective management of fisheries that integrates habitat with fishery resources management, and aims to improve the social and economic benefits of all stakeholders, especially by delegating selected management functions to the local level and promoting co-management as a partnership between government and relevant stakeholders - (32) Promote inter-agency coordination of the multiple uses of inland aquatic resources for the development of conservation measures for inland aquatic habitats - (33) Ensure the integration of fisheries with habitats management by applying the concept of fisheries refugia in line with the Regional Guidelines on the Use of Fisheries Refugia for Capture Fisheries Management in Southeast Asia to complement the existing conservation and management measures; - (33) Promote the adoption of different management approaches to sustainably manage major critical coastal habitats, e.g. mangroves, coral reefs and seagrasses; and develop and disseminate information and guidance on the use of appropriate tools and interventions
<p>Special Support for Small-scale Fisheries</p>	<p>Policies in support of the small-scale fisheries sector</p> <ul style="list-style-type: none"> - (23) request to formulate and implement complementary and supportive policies for <ul style="list-style-type: none"> (i) capacity building of small-scale farmers and hatchery operators in adopting simple broodstock and hatchery technologies and innovations (ii) enhance small-scale farmers and hatchery operators' access to quality broodstock and SPF seeds produced through farmer-friendly broodstock management methods and

	<p>(iii) foster strong cooperation between the public and private sectors engaged in development and dissemination of quality broodstock and seed stock</p> <ul style="list-style-type: none"> - (32) Sustain the supply of fish and fishery products from the ASEAN to improve food security, facilitate poverty alleviation, and improve the livelihoods of ASEAN people dependent on the harvesting, farming and marketing of fish and fishery products, by enhancing the necessary national fisheries policies, legal and institutional frameworks that encourage and support responsible fisheries and aquaculture operations, including small-scale operations as well as providing supplementary livelihood options; - (33) Integrate aquaculture into rural development activities within the context of multiple-use of land and water resources through inter-agency coordination in policy formulation, project planning and implementation, stakeholder consultation, extension services and technology transfer; and participate in and provide support to regional initiatives that assess the role of aquaculture in poverty alleviation for better policy formulation <p>Capacity development</p> <ul style="list-style-type: none"> - (33) Strengthen the capacity of fisheries communities and the capability of fisheries-related organizations (e.g. by empowering such organizations as appropriate) to implement necessary actions towards increased resilience, improved livelihoods, adoption of supplementary livelihoods, and poverty alleviation, in support of achieving sustainable development with gender integration in the process; - (33) Enhance the participation of local communities, fisheries-related organizations, and other stakeholders in fisheries management and in fisheries and stock assessments by providing data, local ecological information, and traditional knowledge on the status of fisheries and stocks; - (33) Encourage the implementation of the Voluntary Guidelines for Securing Sustainable Small-scale Fisheries in the Context of Food Security and Poverty Eradication (SSF Guidelines) and promote the collection of sex-disaggregated statistics on fishers and fish workers in the fish value chain; <p>Livelihood improvement for the small-scale fisheries sector</p> <ul style="list-style-type: none"> - (23) enhance joint ASEAN programs to better protect the livelihoods of small-scale producers <p>Financial incentives for the small-scale fisheries sector</p> <ul style="list-style-type: none"> - (23) awareness for the need to develop financial incentives, especially for small-scale stakeholders and cooperatives
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	<ul style="list-style-type: none"> - (33) Raise awareness of the need to develop financial incentives, especially for small-scale stakeholders and cooperatives, e.g. micro-credit, with national and regional institutional assistance for the responsible development of fisheries enterprises and developmental activities that optimize economic returns - (33) Assess the possible impacts of subsidies on fisheries, particularly on the special requirements and the needs of small-scale fisheries in the region <p>Model framework of creating economic incentives</p> <ul style="list-style-type: none"> - (26) A common framework to promote and bring about One Village, One Fisheries Product (FOVOP) project, as a means of creating economic activities in the rural communities
Aquatic Animal Health and Biosecurity	<p>Capacity development in aquatic animal health and biosecurity</p> <ul style="list-style-type: none"> - (12) Terms of reference to address the lack of awareness among stakeholders such as government officials, animal health specialists, producers and traders about Antimicrobial resistance (AMR) - (33) Further enhance capabilities in the diagnosis and control of aquatic animal diseases through: (i) continued support in development of technology and techniques for disease identification; (ii) promotion of the widespread use of users friendly, field-friendly, rapid and standardized diagnostic tests; and (iii) establishment of regional and inter-regional referral systems, including the designation of reference laboratories and timely access to fish health experts within the region; <p>National disease control</p> <ul style="list-style-type: none"> - (23) Continue the national efforts to control serious disease outbreaks by providing government support to (i) R&D to improve the ability to handle new and emerging diseases and surveillance of transmission of diseases to wild populations; and (ii) regional initiatives on harmonization of regional disease control standards, disease reporting and implementation of contingency plans to handle new and emerging diseases - (32) Mitigate the potential impacts of aquaculture on the environment and biodiversity including the spread of pathogens of aquatic animals caused by over-intensification of aquaculture operations, inappropriate implementation of aquatic animal health management, and uncontrolled introduction and movement of aquatic species - (33) Reduce the risk of negative environmental impacts, loss of biodiversity, and disease transmission by regulating the introduction and movement of aquatic organisms in accordance with relevant regional and international guidelines, e.g. the Regional Technical Guidelines on Health Management for the Responsible Movement of Live Aquatic Animals

- (33) Continue national efforts to prevent and control serious disease outbreaks by providing government support to: (i) R&D following standard procedures (e.g. OIE standards) in handling emerging diseases and surveillance of transmission of diseases

Monitoring and mitigation of negative impacts

- (33) Monitor the impacts, and mitigate the negative impacts of invasive/alien species on the inland ecosystem and biodiversity

- (33) Promote the prudent use of legal antibiotics in aquaculture, and monitor the impacts of Antimicrobial Resistance (AMR) on aquatic animals

- (33) Undertake risk assessment of the culture of exotic aquatic species, and establish measures to prevent the escape of high risk species and their possible impacts on the natural ecosystem and biodiversity

Regional disease control

- (23) Further enhance the capabilities in the diagnosis and control of fish diseases within the region through (i) continued support in development of technology and techniques for disease identification; (ii) promotion of the widespread use of affordable, field-friendly, rapid and standardized diagnostic tests; and (iii) the establishment of regional and inter-regional referral systems, including the designation of reference laboratories and timely access to disease control experts within the region

- (23) Develop regional warning systems on aquatic animal health and diseases to inform other Member Countries of relevant epidemiological events and to raise awareness of new diseases that may pose risks. Build emergency preparedness capacity through rapid and timely responses to reduce potential catastrophic consequences of diseases

- (33) Continue national efforts to prevent and control serious disease outbreaks by providing government support to: (ii) regional initiatives on harmonization of regional disease control standards, disease reporting, and implementation of contingency plans to handle emerging diseases

- (33) Strengthen the implementation of regional warning systems on aquatic animal health and diseases to inform other AMSs of relevant epidemiological events and to raise awareness of emerging pathogens that may pose risks. Build emergency preparedness capacity through rapid and timely responses to reduce potential catastrophic consequences of emerging diseases as highlighted by ASEAN Network of Aquatic Animal Health Centres (ANAAHC)

	<p>Regional & global animal health exchange</p> <ul style="list-style-type: none"> - (25) regulate all aspects of the data exchange between the ASEAN Regional Animal Health Information System (ARAHIS) and the World Animal Health Information System (WAHIS) - (23) Reduce the risk of negative environmental impacts, loss of biodiversity, and disease transmission by regulating the introduction and transfer of aquatic organisms in accordance with the Regional Guidelines on the Responsible Movement of Live Aquatic Animals and Plants <p>Research in aquatic animal health and biosecurity</p> <ul style="list-style-type: none"> - (23) research and development (R&D) on (i) improving existing genetic resources; (iii) the feeding and disease management of broodstock - (33) Improve aquatic biosecurity by providing support to: (i) research on the development of domesticated, genetically improved, specific pathogen-free (SPF), and specific pathogen-resistant (SPR) aquaculture species; <p>Production of healthy high-quality seed in aquaculture</p> <ul style="list-style-type: none"> - (23) Promote the production and distribution of specific pathogen-free (SPF) and quality seed - (23) Apply the concept of aquatic biosecurity by providing support to (i) research for development of domesticated, genetically improved, specific pathogen-free (SPF) cultured species; and (ii) the small-scale hatchery operators and farmers so as to enhance their access to healthy broodstock and improve their ability to adopt, at the farm level, the established techniques for aquatic animal health care - (33) Improve aquatic biosecurity by providing support to: (ii) small-scale hatchery operators and farmers to access healthy broodstock and improve their ability to adopt, at the farm level, the established techniques for aquatic animal health management <p>Operational tools for transboundary controls of aquatic animal health</p> <ul style="list-style-type: none"> - (1) general SOPs for a regional control to reduce the risk of spreading trans-boundary aquatic animal diseases resulting from movement of live aquatic animals - (4) List of chemicals and drugs currently used in each AMS and recommendations on their use, including the ban in aquaculture - (23) develop and implement ASEAN guidelines for environment-friendly and responsible aquaculture and good aquaculture practices, including quality and safety management systems, harmonization for chemical use and
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	<p>food safety in aquaculture, traceability, quarantine and inspection/sampling procedure and sanitary and phytosanitary (SPS) measures</p>
<p>Disaster and Climate Change Management</p>	<p>Improved governance on disaster and climate change management</p> <ul style="list-style-type: none"> - (9) & (10) Increase resilience to climate change, natural disasters and other shocks - (20) Facilitating the achievement of Nationally Determined Contributions (NDCs) in the agriculture and forestry sectors - (20) Initiating and sustaining comprehensive capacity development of local, national and regional institutions to achieve food and nutrition security and sustainable development in the context of climate change - (22) Enhance resilience of fisheries communities to anticipate and adapt to changes in environmental conditions of inland and coastal waters - (22) Support ASEAN efforts to promote low carbon development by minimising the contribution of the fisheries sector to green-house gas emissions - (23) Adjust existing programs to take into consideration the effects of climate change, focusing on the programs for <ul style="list-style-type: none"> ... (iv) promoting safety at sea and other priority areas. Develop indicators and reporting measures to assess how actions of the programs build resilience to climate change - (32) Support the efforts to promote low carbon development technologies by minimizing the contribution of the fisheries sector to greenhouse gas emissions, with emphasis on promoting the use of energy-efficient equipment and alternative energy sources <p>Capacity development in disaster and climate change mitigation</p> <ul style="list-style-type: none"> - (20) Strengthen knowledge management mechanisms to safeguard food and nutrition security amidst changing climate - (23) Strengthen the capacity of fisheries communities and the capability of fisheries-related organizations, NGOs and the private sector to better implement necessary actions towards enabling the communities and local organizations to increase resilience, improve livelihoods, alleviate poverty, adopt alternative livelihoods adapt to climate change in support of achieving sustainable development, and encourage the participation of women and youth groups in the process;

- (23) Increase the efficient use of the alternative energy sources and reduce the use of carbon fossil energy by using appropriate fishing gear and fishing boats designs in fishing operations
- (32) Enhance resilience of fisheries communities in anticipating and adapting to changes in the environments of inland and coastal waters, including those caused by climate change, which could adversely affect communities in their operations of fisheries and aquaculture

Policies to mitigate the impact of disasters and climate change

- (23) Formulate and implement national policies and strategies that will enable the aquaculture sector to mitigate and/or adapt better to the impacts of climate change. These strategies should include providing support to R&D on climate change, increasing resilience, and strengthening the overall capacity of various stakeholder groups and fostering cooperation within the aquaculture sector and with other sectors
- (33) Monitor and assess the perceived impacts of climate change to fisheries and aquaculture; and adjust existing programs to take into consideration the effects of climate change and natural disasters, focusing on the programs for (i) developing appropriate adaptation and mitigation plans; (ii) integrating fisheries and habitats management; (iii) enhancing community resilience through livelihood diversification; (iv) strengthening local organizations; and (v) promoting safety at sea and other priority areas;

Research on disaster and climate change

- (20) Strengthening the scientific foundation with local knowledge on climate change and food security to improve decision-making at various levels with the participation of civil society and the private sectors
- (23) Provide government support for research and development (R&D) on
 - (ii) assessing the impact of climate change on broodstock management; and

Cooperation on improved mechanisms & technologies to mitigate the impact of disasters and climate change

- (19) Forge closer cooperation in the development, transfer and diffusion of climate smart agriculture and aquaculture technologies and best practices
- (20) Mainstreaming cross-sectoral, collaborative, inclusive approaches and mechanisms to addressing climate-related challenges and opportunities into regional, national, and local policies, programs, plans and investments to contribute to food security and Sustainable Development Goals (SDGs)

- (20) Advancing integrated climate change mitigation and adaptation responses through landscape approaches to safeguard food and nutrition security, promote sustainable livelihoods, and improve climate resiliency especially among poor farmers and other vulnerable groups

Regional exchange on climate change and related food security issues

- (20) Providing and strengthening platforms for developing and advancing ASEAN common interests on issues related to climate change and food security

Financial support for climate change initiatives

- (20) Securing climate change financing to support climate change initiatives supportive of food and nutritional security and sustainable development

Policy implied by international treaties and agreements and regional and subregional fisheries bodies which AMS are a party to

[1] United Nations Convention on the Law of the Sea UNCLOS

AMS members: Brunei Darrusalam, Indonesia, Lao, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam

Number of AMS members: 9

The United Nations Convention on the Law of the Sea is the base for many of the following treaties and agreements as well as the founding base for some of the following regional and subregional fisheries bodies.

Policy areas covered and policy topics addressed:

Policy area	Policy topic
Sustainable Marine Fisheries Resources Management	Fishing rights and obligations in the EEZ and the high seas - rights to fish in the EEZ and the high seas, and management and conservation obligations with respect to fisheries resources in the EEZ and high seas - management and conservation of shared, straddling, highly migratory, and high seas fish stocks - cooperation through RFMOs - management of anadromous and catadromous fish species
IUU Fishing	High seas conservation measures - the duty to take, or to cooperate with other States in taking, such measures for their respective nationals as may be necessary for the conservation of the living resources of the high seas.
Research and Science	Best scientific evidence in fisheries management in the EEZ and the high seas
Protection of Marine Habitats, Mammals and ETP species	Protection of marine mammals - the obligation to cooperate with a view to the conservation of marine mammals, and, for cetaceans, to in particular work through appropriate international organisations for their conservation, management and study
Fisheries Data Collection and Sharing	Scientific data exchange - to contribute and exchange scientific information, catch and fishing effort statistics and other data relevant to the conservation of fish stocks on a regular basis through competent international organizations, where appropriate
Marine Debris	Enforcement with respect to pollution by dumping

[2] United Nations Fish Stock Agreement (UNFSA)

AMS members: Indonesia, Philippines, Thailand, Viet Nam

Number of AMS members: 4

Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks.

The agreement addresses fisheries conservation and management measures of fishing nations fishing on straddling and highly migratory species. The agreement includes, among others,

- the precautionary approach in fisheries management;
- the necessity to have compatible conservation and management measures among member countries;
- the establishment of regional and sub-regional fisheries management bodies;
- the need for exchange of scientific research;
- flag state duties; and
- compliance and enforcement issues.

Policy area	Policy topic
Sustainable Marine Fisheries Resources Management	Management of straddling and highly migratory fish stocks - Fisheries management goals - application of the precautionary approach - the obligation to establish RFMOs
IUU Fishing	Compliance and enforcement by flag states - flag state duties
Fisheries Data Collection and Sharing	Research data exchange of straddling and highly migratory fish stocks - regional scientific data exchange

[3] FAO Compliance Agreement (FAOCA)

AMS members: Philippines, Myanmar

Number of AMS members: 2

Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on The High Seas.

The agreement defines and rights and obligations of flag states in regard to their high seas fishing vessels, including, but not limited to, record keeping requirements and information exchange with other fishing nations in regard to its high seas fishing vessels, including information about previous flags and names of the fishing vessels.

Policy area	Policy topic
IUU Fishing	Compliance and enforcement by flag states - flag state duties

	- fishing vessel data exchange
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[4] Port State Measures Agreement (PSMA)

AMS members: Cambodia, Indonesia, Myanmar, Philippines, Thailand, Viet Nam

Number of AMS members: 6

The Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing seeks to prevent, deter and eliminate illegal, unreported and unregulated fishing through the adoption and implementation of effective port State measures as a means of ensuring the long-term conservation and sustainable use of living marine resources.

The agreement addresses rights and obligations of port states in regard to foreign flagged fishing vessels landing fish or berthing in designated ports of the port state.

Policy area	Policy topic
IUU Fishing	Compliance and enforcement of port – and flag states - port state duties - flag state duties - fishing vessel data exchange

[5] Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

AMS members: Brunei Darrusalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam

Number of AMS members: 10

CITES works by subjecting international trade in specimens of selected species to certain controls. All import, export, re-export and introduction from the sea of species covered by the Convention has to be authorized through a licensing system. Each Party to the Convention must designate one or more Management Authorities in charge of administering that licensing system and one or more Scientific Authorities to advise them on the effects of trade on the status of the species. CITES is a globally accepted trade framework for species threatened with extinction (Appendix I), species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid utilization incompatible with their survival (Appendix II), and species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling the trade (Appendix III).

Policy area	Policy topic
International Trade	International trade controls of ETP species
Protection of Marine Habitats, Mammals and ETP Species	Protection of ETP species through trade regulations

[6] Convention on Biological Diversity (CBD)

AMS members: Brunei Darrusalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam

Number of AMS members: 10

Parties to the CBD have

- the sovereign right to exploit their own resources pursuant to their own environmental policies, and
- have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

They should

- develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity
- identify and monitor biological diversity
- establish a system of protected areas or areas where special measures need to be taken to conserve biological diversity
- rehabilitate and restore degraded ecosystems
- manage or control the risks associated with the use and release of living modified organisms resulting from biotechnology
- prevent the introduction of, control or eradicate those alien species which threaten ecosystems, habitats or species
- respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity
- develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations
- adopt measures for the ex-situ conservation of components of biological diversity, preferably in the country of origin of such components
- integrate consideration of the conservation and sustainable use of biological resources into national decision-making
- provide research and training on the measures for the identification, conservation and sustainable use of biological diversity
- Introduce appropriate procedures requiring environmental impact assessment for proposed projects
- promote, on the basis of reciprocity, notification, exchange of information and consultation on activities under their jurisdiction or control which are likely to significantly affect adversely the biological diversity of other States
- Make immediate notification in case of transboundary threats for biodiversity

- examine, on the basis of studies to be carried out, the issue of liability and redress, including restoration and compensation, for damage to biological diversity
- Exchange of information and technical and scientific cooperation

Policy area	Policy topic
Protection of Marine Habitats, Mammals and ETP species	Protecting and managing biological diversity and protected areas, nationally, regionally and internationally

[7] World Organisation for Animal Health (OIE)

AMS members: Brunei Darrusalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam

Number of AMS members: 10

Objectives include:

- Ensure transparency in the global animal disease situation
- Collect, analyse and disseminate veterinary scientific information
- Encourage international solidarity in the control of animal diseases
- Sanitary safety by safeguarding world trade by publishing health standards for international trade in animals and animal products
- The improvement of the legal framework and resources of national Veterinary Services
- Food safety by providing a better guarantee of food of animal origin and to promote animal welfare through a science-based approach

Policy area	Policy topic
Aquatic Animal Health and Biosecurity	Collect, analyse and disseminate the national animal disease situation
International Trade	Health standards for international trade
Food Safety and Better Nutrition	Traceability Animal welfare promotion

[8] Codex Alimentarius (CODEX)

AMS members: Brunei Darrusalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam

Number of AMS members: 10

The Codex Alimentarius is a collection of internationally adopted food standards and related texts presented in a uniform manner. These food standards and related texts aim at protecting consumers' health and ensuring fair practices in the food trade.

Policy area	Policy topic
International Trade	Health standards for regional / international trade

[9] Indian Ocean Tuna Commission (IOTC)

AMS members: Indonesia, Malaysia, Philippines, Thailand

Number of AMS members: 4

The Indian Ocean Tuna Commission (IOTC) is an intergovernmental organisation responsible for the management of tuna and tuna-like species in the Indian Ocean. It works to achieve this by promoting cooperation among its Contracting Parties (Members) and Cooperating Non-Contracting Parties in order to ensure the conservation and appropriate utilisation of fish stocks and encouraging the sustainable development of fisheries.

Area covered	High seas in the Indian Ocean, i.e. the Indian Ocean (defined for the purpose of this Agreement as being FAO statistical areas 51 and 57 and adjacent seas, north of the Antarctic Convergence, insofar as it is necessary to cover such seas for the purpose of conserving and managing stocks that migrate into or out of the Indian Ocean.
Species	Species managed by IOTC: Yellowfin tuna, Skipjack, Bigeye tuna, Albacore tuna, Southern Bluefin tuna, Longtail tuna, Kawakawa, Frigate tuna, Bullet tuna, Narrow barred Spanish Mackerel, Indo-Pacific king mackerel, Blue Marlin. In addition, the Commission's Secretariat collates data on non-target, associated and dependent species affected by tuna fishing operations, i.e. marine turtles, marine mammals, seabirds, sharks and fish species caught incidentally (bycatch).
Resolutions	Resolutions are binding on the Commission Members
Compendium of Active Conservation and Management Measures for the Indian Ocean Tuna Commission	
Resolution 19/01 On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence	
Resolution 19/02 Procedures on a Fish Aggregating Devices (FADs) Management Plan	
Resolution 19/03 On the Conservation of Mobulid Rays Caught in Association with Fisheries in the IOTC Area of Competence	
Resolution 19/04 Concerning the IOTC Record of Vessels Authorised to Operate in the IOTC Area of Competence	
Resolution 19/05 On a Ban on Discards of Bigeye Tuna, Skipjack Tuna, Yellowfin Tuna, and Non- Targeted Species Caught by Purse Seine Vessels in the IOTC Area of Competence	
Resolution 19/06 On Establishing a Programme for Transshipment by Large-Scale Fishing Vessels	
Resolution 19/07 On Vessel Chartering in the IOTC Area of Competence	
Resolution 18/01 On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence	
Resolution 18/02 On Management Measures for the Conservation of Blue Shark Caught in Association with IOTC Fisheries	
Resolution 18/03 On Establishing a List of Vessels Presumed to Have Carried out Illegal, Unreported and Unregulated Fishing in the IOTC Area of Competence	

Resolution 18/04 On BIOFAD Experimental Project
Resolution 18/05 On Management Measures for the Conservation of the Billfishes: Striped Marlin, Black Marlin, Blue Marlin and Indo-Pacific Sailfish
Resolution 18/07 On Measures Applicable in Case of Non-Fulfilment of Reporting Obligations in the IOTC
Resolution 18/09 On a Scoping Study of Socio-Economic Data and Indicators of IOTC Fisheries
Resolution 17/02 Working party on the implementation of conservation and management measures (WPICMM)
Resolution 17/05 On the conservation of sharks caught in association with fisheries managed by IOTC
Resolution 17/07 On the prohibition to use large-scale driftnets in the IOTC area
Resolution 16/02 On harvest control rules for skipjack tuna in the IOTC area of competence
Resolution 16/03 On the second performance review follow-up
Resolution 16/04 On the implementation of a pilot project in view of promoting the regional observer scheme of IOTC
Resolution 16/05 On vessels without nationality
Resolution 16/07 On the use of artificial lights to attract fish
Resolution 16/08 On the prohibition of the use of aircrafts and unmanned aerial vehicles as fishing aids
Resolution 16/09 On establishing a Technical committee on management procedures
Resolution 16/10 To promote implementation of IOTC conservation and management measures
Resolution 16/11 On port state measures to prevent, deter and eliminate illegal, unreported and unregulated fishing
Resolution 15/01 On the recording of catch and effort data by fishing vessels in the IOTC area of competence
Resolution 15/02 Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)
Resolution 15/03 On the vessel monitoring system (VMS) programme
Resolution 15/09 On a fish aggregating devices (FADs) working group
Resolution 15/10 On target and limit reference points and a decision framework
Resolution 14/01 On the removal of obsolete Conservation and Management Measures
Resolution 14/02 For the conservation and management of tropical tunas stocks in the IOTC area of competence ¹⁹³
Resolution 14/05 Concerning a record of licensed foreign vessels fishing for IOTC species in the IOTC area of competence and access agreement information
Recommendation 14/07 To standardise the presentation of scientific information in the annual Scientific Committee report and in Working Party reports
Resolution 13/04 On the conservation of cetaceans
Resolution 13/05 On the conservation of whale sharks (<i>Rhincodon typus</i>)
Resolution 13/06 On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries
Resolution 13/09 On the conservation of albacore caught in the IOTC area of competence

Resolution 12/01 On the implementation of the precautionary approach
Resolution 12/02 Data confidentiality policy and procedures
Resolution 12/04 On the conservation of marine turtles
Resolution 12/06 On reducing the incidental bycatch of seabirds in longline fisheries
Resolution 12/09 On the conservation of thresher sharks (family Alopiidae) caught in association with fisheries in the IOTC area of competence
Resolution 12/12 To prohibit the use of large-scale driftnets on the high seas in the IOTC area
Recommendation 12/15 On the best available science
Resolution 11/02 On the prohibition of fishing on data buoys
Resolution 11/04 On a regional observer scheme
Resolution 10/08 Concerning a record of active vessels fishing for tunas and swordfish in the IOTC area
Resolution 10/10 Concerning market related measures
Resolution 07/01 To promote compliance by nationals of Contracting Parties and Cooperating Non-Contracting Parties with IOTC conservation and management measures
Resolution 05/01 On conservation and management measures for bigeye tuna
Resolution 05/03 Relating to the establishment of an IOTC programme of inspection in port
Recommendation 05/07 Concerning a management standard for the tuna fishing vessels
Resolution 03/01 On the limitation of fishing capacity of Contracting Parties and Cooperating Non-Contracting Parties
Resolution 03/03 Concerning the amendment of the forms of the IOTC statistical documents
Resolution 01/03 Establishing a scheme to promote compliance by Non-Contracting Party vessels with resolutions established by IOTC
Resolution 01/06 Concerning the IOTC bigeye tuna statistical document programme
Resolution 99/02 Calling for actions against fishing activities by large scale flag of convenience longline vessels

Policy area	Policy topic
Sustainable Marine Fisheries Resources Management	<p>Tuna fisheries management in the IOTC area</p> <ul style="list-style-type: none"> - Tuna stock rebuilding plan in the IOTC area - Tuna stocks conservation and management measures in the IOTC area - FAD management plan in the IOTC area - discard ban in the IOTC area - prohibition to use large-scale drift nets in the IOTC area - harvest control rules for skipjack in the IOTC area - regulating light luring in the IOTC area - prohibition of aircrafts and drones as fishing aids in the IOTC area <p>Implementation of the precautionary approach in the IOTC area</p> <ul style="list-style-type: none"> - prohibition to fish on data buoys - limitation of fishing capacity in the IOTC area

IUU Fishing	<p>Tuna fishing vessel management in the IOTC area</p> <ul style="list-style-type: none"> - vessel records in the IOTC area - IUU fishing vessel list in the IOTC area - transshipment programme in the IOTC area - vessels without nationality in the IOTC area - port state measures in the IOTC area - VMS programme in the IOTC area - regional observer scheme in the IOTC area - market related measures in the IOTC area - port inspection programme in the IOTC area
Research and Science	<p>Scientific data and research utilization and exchange in the IOTC area</p> <ul style="list-style-type: none"> - scoping study on socio-economic data and data in the IOTC area - pilot project on promoting a regional observer scheme in the IOTC area - standardisation of scientific information in the IOTC area - using best scientific evidence for management in the IOTC area
Fisheries Data Collection and Sharing	<p>Fisheries data collection requirements in the IOTC area</p> <ul style="list-style-type: none"> - measures in case of non-fulfilment of reporting obligations in the IOTC area - recording catch and effort data in the IOTC area - mandatory reporting requirements in the IOTC area - data confidentiality policy and procedures in the IOTC area
Protection of Marine Habitats, Mammals and ETP species	<p>Conservation measures of ETP species in the IOTC area</p> <ul style="list-style-type: none"> - conservation of Mobulid Rays in the IOTC area - conservation of Blue Shark in the IOTC area - conservation of Striped Marlin, Black Marlin, Blue Marlin and Indo-Pacific Sailfish - conservation of sharks in the IOTC area - conservation of cetaceans in the IOTC area - conservation of whale sharks in the IOTC area - conservation of turtles in the IOTC area - reducing the incidental bycatch of seabirds in the IOTC area - conservation of thresher sharks in the IOTC area

[10] Western Central Pacific Fisheries Commission (WCPFC)

AMS members: Indonesia, Philippines, (Thailand and Viet Nam are cooperating non-members)

Number of AMS members: 4

The Western and Central Pacific Fisheries Commission (WCPFC) is a treaty-based organisation established to conserve and manage tuna and other highly migratory fish stocks across the western and central areas of the Pacific Ocean.

Areas covered	High seas in the Western Central Pacific and areas under national jurisdiction (Article7)
CMMs:	Are legally binding
Vessel marking and Identification	FAO Standard Specifications for the marking and identification of fishing vessels apply to the operation of all fishing vessels of members of the Commission authorized to fish in the Convention Area beyond areas of national jurisdiction.
Research Management (CMM 2004-04) (CMM-2005-03) (CMM 2006-04) (CMM 2009-03) (CMM 2010-01) (CMM 2010-07) (CMM 2011-03) (CMM 2011-04) (CMM 2012-04) (CMM 2013-08) (CMM 2014-05) (CMM 2015-02) (CMM 2018-01) (CMM 2018-02) (CMM 2018-04) /	Sustainable catch of bigeye, yellowfin and South Pacific albacore & North Pacific albacore & striped marlin, swordfish, North Pacific Striped Marlin, sharks, cetaceans, whitetip shark, whale sharks, Silky sharks, sharks on longline, South Pacific albacore, management of bigeye, yellowfin, skipjack and Bluefin tuna, handling of turtle bycatch, incl. juvenile bigeye and FAD catches of juveniles, mortality of non-target species with an initial focus on seabirds, turtles and sharks
Boarding and inspection procedures (CMM 2006-08)	a. fishing vessels that are not on the WCPFC Record of Fishing Vessels and are flagged to Members of the Commission; b. fishing vessels reasonably believed to engage or to have been engaged in any activity in contravention of the Convention or any conservation and management measure adopted thereunder; c. fishing vessels whose flag Member does not dispatch patrol vessels to the area of application to monitor its own fishing vessels; d. fishing vessels without observers on board; e. large-scale tuna fishing vessels; f. fishing vessels with a known history of violating conservation and management measures adopted by international agreement or any country's national laws and regulations.
Conservation and management of sea turtles (CMM 2008-03) Obsolete on 20 January 2020	implement, as appropriate the FAO Guidelines to Reduce Sea Turtle Mortality in Fishing Operations and to ensure the safe handling of all captured sea turtles, in order to improve their survival.
Prohibit the use of large scale driftnets on the high seas in the convention area (CMM 2008-04)	is not intended to apply to a CCM-flagged vessel that can demonstrate that it is duly authorized to use large-scale driftnets in waters under national jurisdiction and while on the high seas in the Convention Area all of its large-scale driftnets and related fishing equipment are stowed or secured in such a manner that they are not readily available to be used for fishing.

High seas FAD closures and catch retention (CMM 2009-02)	General definitions and principles
Prohibiting fishing on data buoys (CMM 2009-05)	Self-explanatory
Transshipment (CMM 2009-06)	The provisions of this Measure shall apply to all transshipment in the Convention Area of all highly migratory fish stocks covered by the Convention. Provisions of this Measure shall not apply to transshipment of highly migratory fish stocks where fish is taken and transhipped wholly in archipelagic waters or territorial seas.
Establishment of a list of vessels presumed to have carried out illegal, unreported and unregulated fishing activities in the WCPO (CMM 2010-06)	
Observer programme by vessels fishing for fresh fish north of 20°N	
WCPFC implementation of a Unique Vessel Identifier (UVI) (CMM 2013-04)	For vessels > 100GT
Measure on daily catch and effort reporting (CMM 2013-05)	
Measure on the special requirements of small island developing states and territories (CMM 2013-07)	<ul style="list-style-type: none"> - Capacity development of staff - Technology transfer - Fisheries conservation and management - MSC - Support for domestic fisheries sector
VMS (CMM 2014-02)	<p>(a) The Commission VMS shall apply to all fishing vessels that fish for highly migratory fish stocks on the high seas within the Convention Area.</p> <p>(b) It shall apply to all vessels in excess of 24 metres in length with an activation date of 1 January 2008, and it shall apply to all vessels 24 metres in length or less with an activation date of 1 January 2009.</p>

WCPFC electronic record of fishing vessels (CMM 2014-03)	
Measure on establishing a Harvest Strategy for key fisheries and stocks in the Western and Central Pacific Ocean (CMM 2014-06) (CMM 2015-06) – target and limit reference points	
Port State Measures (CMM 2017-02)	Basically FAO PSM
Measure for the protection of WCPFC regional observer programme observers (CMM 2017-03)	
Measure on marine pollution (CMM 2017-04)	CCMs shall prohibit their fishing vessels operating within the WCPFC Convention Area from discharging any plastics (including plastic packaging, items containing plastic and polystyrene) but not including fishing gear. 3. CCMs are encouraged to prohibit their fishing vessels operating within the WCPFC Convention Area from discharging: a) oil or fuel products or oily residues into the sea; b) garbage, including fishing gear ¹ , food waste, domestic waste, incinerator ashes and cooking oil; and c) sewage, except as would be permitted under applicable international instruments.
Measures to address seabird bycatch (CMM 2018-03)	- very specific
established the Commission Regional Observer Programme, which shall be coordinated by the Secretariat of the Commission. (CMM 2018-05)	
Record of fishing vessels and	

authorization to fish (2018-06)	
WCPFC Compliance Monitoring Scheme (CMM 2018-07)	<p>The CMS is designed to:</p> <ul style="list-style-type: none"> (i) assess CCMs' compliance with their WCPFC obligations; (ii) identify areas in which technical assistance or capacity building may be needed to assist CCMs to attain compliance; (iii) identify aspects of CMMs which may require refinement or amendment for effective implementation; (iv) respond to non-compliance by CCMs through remedial and/or preventative options that include a range of possible responses that take account of the reason for and degree, the severity, consequences and frequency of non-compliance, as may be necessary and appropriate to promote compliance with CMMs and other Commission obligations;¹ and (v) monitor and resolve outstanding instances of non-compliance by CCMs with their WCPFC obligations.

Policy area	Policy topic
Sustainable Marine Fisheries Resources Management	<p>Fisheries management measures for tuna and tuna like species in the WCPFC area</p> <ul style="list-style-type: none"> - conservation and management measures to ensure the sustainable catch of bigeye, yellowfin and South Pacific albacore & North Pacific albacore & striped marlin, swordfish, North Pacific Striped Marlin, sharks, cetaceans, whitetip shark, whale sharks, Silky sharks, sharks on longline, South Pacific albacore in the WCPFC area - avoiding juvenile bigeye and FAD catches of juveniles in the WCPFC area - prohibit large-scale drift nets in the WCPFC high seas areas - fishing closures on FADs - prohibit fishing on data buoys in the WCPFC area - regulating transshipment in the WCPFC area
IUU Fishing	<p>Fishing vessel management in the WCPFC area</p> <ul style="list-style-type: none"> - vessel marking in the WCPFC area - boarding and inspection procedures in the WCPFC area - vessel lists of IUU fishing vessels in the WCPFC area - vessel list of fishing vessels allowed to fish in the WCPFC area - observer programme in the WCPFC area - small island developing countries support in the WCPFC area - obligatory use of VMS in the WCPFC area - port state measures in the WCPFC area - protection of the regional observer programme observers in the WCPFC area - electronic recording onboard of fishing vessels in the WCPFC area
Research and Science	<p>Tuna and tuna like fish species research in the WCPFC area</p> <ul style="list-style-type: none"> - continued research on bigeye, yellowfin and skipjack tuna, South Pacific albacore & North Pacific albacore & striped marlin,

	swordfish, North Pacific Striped Marlin, sharks, cetaceans, whitetip shark, whale sharks, Silky sharks, sharks on longline, South Pacific albacore in the WCPFC area
Fisheries Data Collection and Sharing	Electronic data collection on fishing vessels in the WCPFC area - electronic recording onboard of fishing vessels in the WCPFC area
Protection of Marine Habitats, Mammals and ETP species	Conservation measures of ETP species in the IOTC area - handling of turtle bycatch in the WCPFC area - reducing the mortality of non-target species with an initial focus on seabirds, turtles and sharks in the WCPFC area - reduce sea turtle mortality in the WCPFC area - measures to reduce seabird bycatch
Marine debris	Measures on reducing marine pollution in the WCPFC area

[11] Mekong River Commission (MRC)

AMS members: Cambodia, Lao PDR, Thailand, Viet Nam

Number of AMS members: 4

The Mekong River Commission (MRC) is the only inter-governmental organisation that works directly with the governments of Cambodia, Lao PDR, Thailand and Viet Nam to jointly manage the shared water resources and the sustainable development of the Mekong River.

As a regional facilitating and advisory body governed by water and environment ministers of the four countries, the MRC ensures the efficient and mutually beneficial development of the Mekong River while minimising the potentially harmful effects on the people and the environment in the Lower Mekong Basin.

Policy area	Policy topic
Sustainable Inland Fisheries Resources Management	Transboundary fisheries management in the MRC area - fisheries enhancement in the MRC area - fisheries co-management and transboundary fisheries management in the MRC area
Aquaculture	aquaculture development in the MRC area
Research and Science	Fisheries and fish friendly irrigation and agriculture in the MRC area
Fisheries Data Collection and Sharing	Monitoring of environmental, socio-economic, food safety and food security-, labor-, gender- and livelihood- issues - monitoring of fish diversity, abundance and ecology in the MRC area - monitoring of socio-economics and livelihoods in the MRC area - monitoring of food security and nutrition in the MRC area - monitoring of gender specific aspects in the MRC area
Protection of Marine Habitats,	Conservation of key habitats in the MRC area

Mammals and ETP species	
Disaster and Climate Change Management	Water development and adaptation of fisheries to climate change in the MRC area

[12] Network of Aquaculture Centres in Asia-Pacific (NACA)

AMS members: Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Viet Nam

Number of AMS members: 8

1. The objectives of the Organization shall be to assist the Members in their efforts to expand aquaculture development mainly for the purpose of:

- (a) increasing production;
- (b) improving rural income and employment;
- (c) diversifying farm production; and
- (d) increasing foreign exchange earnings and savings.

2. In order to facilitate the achievement of the foregoing objectives, the Organization shall:

- (a) consolidate the establishment of an expanded network of aquaculture centres to share the responsibility of research, training and information exchange essential to aquaculture development in the region;
- (b) strengthen institutional and personal links among national and regional centres through the exchange of technical personnel, technical know-how and information;
- (c) promote regional self-reliance in aquaculture development through Technical Cooperation among Developing Countries (TCDC); and
- (d) promote the role of women in aquaculture development.

Policy area	Policy topic
Aquaculture	Gender sensitive aquaculture development, improving income and employment in NACA member countries - aquaculture development in NACA member countries - improving income and employment in aquaculture in NACA member countries - promote the role of women in aquaculture development in NACA member countries
Research and Science	Research on diversified aquaculture farm production in NACA member countries
Fisheries Data Collection and Sharing	Research exchange and technical cooperation among NACA member countries - exchange among national and regional aquaculture centres in NACA member countries - technical cooperation in NACA member countries
Trade	Increased foreign exchange earnings in NACA member countries

[13] APFIC

AMS members: Cambodia, Indonesia, Malaysia, Myanmar, Philippines, Thailand, Viet Nam

Number of AMS members: 7

The purpose of the Commission shall be to promote the full and proper utilization of living aquatic resources by the development and management of fishing and culture operations and by the development of related processing and marketing activities in conformity with the objectives of its Members, and to these ends it shall have the following functions and responsibilities:

- (a) to keep under review the state of these resources and of the industries based on them;
- (b) to formulate and recommend measures and to initiate and carry out programmes or projects to:
 - increase the efficiency and sustainable productivity of fisheries and aquaculture;
 - conserve and manage resources;
 - protect resources from pollution;
- (c) to keep under review the economic and social aspects of fishing and aquaculture industries and recommend measures aimed at improving the living and working conditions of fishermen and other workers in these industries and otherwise at improving the contribution of each fishery to social and economic goals;
- (d) to promote programmes for mariculture and coastal fisheries enhancement;
- (e) to encourage, recommend, coordinate and, as appropriate, undertake training and extension activities in all aspects of fisheries;
- (f) to encourage, recommend, coordinate and undertake, as appropriate, research and development activities in all aspects of fisheries;
- (g) to assemble, publish or otherwise disseminate information regarding the living aquatic resources and fisheries based on these resources;
- (h) to carry out such other activities as may be necessary for the Commission to achieve its purpose as defined above.

Policy area	Policy topic
Recent sessions have elaborated that APFIC acts as a Regional Consultative Forum that works in partnership with other regional organizations and arrangements and members. It provides advice, coordinates activities and acts as an information broker to increase knowledge of fisheries and aquaculture in the Asia Pacific region to underpin decision making. No specific policy area and no specific policy topics are defined or addressed.	

[14] South Indian Ocean Fisheries Agreement (SIOFA)**AMS members:** Thailand**Number of AMS members: 1**

The objectives of this Agreement are to ensure the long-term conservation and sustainable use of the fishery resources (non-tuna) in the area through cooperation among the Contracting Parties, and to promote the sustainable development of fisheries in the Area, taking into account the needs of developing States bordering the Area that are Contracting Parties to this Agreement, and in particular the least developed among them and small-island developing States.

This Agreement covers fishery resources including fish, molluscs, crustaceans and other sedentary species within the area, but excluding highly migratory species (Annex I of UNCLOS) and sedentary species subject to the fishery jurisdiction of coastal states (Article 77(4) of UNCLOS).

Policy area	Policy topic
Sustainable Marine Fisheries Resources Management	Management of non-tuna fishery resources in the South Indian Ocean

[15] SEAFDEC**AMS members:** Brunei Darrusalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Viet Nam**Number of AMS members: 10**

SEAFDEC is the technical arm of ASEAN on fisheries-related issues. With the development of the Resolution on Sustainable Fisheries for Food Security for The ASEAN Region Towards 2020 and the Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 SEAFDC has presented a policy document that tries to cover all aspects of fisheries and aquaculture development and management in the region.

Despite SEAFDECs efforts to assist ASEAN with technical fisheries issues, the Japanese membership in SEAFDEC, the lack of funds to implement agreed activities under the ASEAN-SEAFDEC Strategic Partnership, the diminishing support for established SEAFDEC facilities in the region and the missing mandate for fisheries management were some of the issues mentioned by AMS as obstacles in cooperation with SEAFDEC.

SEAFDEC is currently in the process of redefining its role in the region and it will also be up to the AMS to decide to what extent SEAFDEC will have a role as a technical arm in ASEAN.

Policy area	Policy topic
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All policy areas except sector funding	The SEAFDEC – ASEAN Resolution and Plan of Action on Sustainable Fisheries for Food Security for the ASEAN Region Towards 2020 covers all identified policy areas.
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Annex 5: Views of AMS on regional policy issues/actions of importance

In section 3 of the questionnaires completed by AMS, they were asked to identify up to five issues/actions related to each policy area where regional policy or action could be beneficial. In analyzing the responses and suggestions provided by the AMS, the various policy issues/actions have been grouped by the consultants into policy topics and presented under the different policy areas (those proposed by the Ad Hoc Task Force and consultants).

Table 22 summarizes the responses. The table shows the number of issues/actions under each policy topic in the right-hand column (column 4), with column 3 showing the number of AMS which included an action/issue under each policy topic.

Policy topics in ***bold and italic*** in column 2 are those for which at least five AMS suggested a policy issue/action.

The full list of issues/actions under each policy area and topic is provided after the table.

Table 22: Policy topics identified by AMS in the completed questionnaire. Highlighted are areas with five or more AMS in support of the respective policy topic.

Policy area	Policy topics identified by AMS	No. of AMS proposing each policy topic	No. of issues under each topic
Column 1	Column 2	Column 3	Column 4
Sustainable Inland Fisheries Resources Management	Managing land-based activities affecting inland fisheries	3	3
	<i>Inland fisheries management</i>	7	8
	Research on inland fisheries	2	5
	Technology exchange	1	1
	Capacity building on inland fisheries management	2	4
	Stock enhancement in inland fisheries	1	1
	Inland fisheries regulations	2	3
	Data, research and knowledge sharing on inland fisheries	2	3
	Illegal trade of inland fish and fish products	1	1
	Enforcement of inland fisheries regulations	1	2
Climate change adaptation	1	1	
Sustainable Marine Fisheries Resources Management	<i>Marine fisheries management</i>	8	19
	Marine fish stock enhancements	1	1
	Fisheries certification	3	3
	Hygiene on board	1	1
	Capacity building on fisheries	2	4
Protection of aquatic habitats, incl. breeding and nursery grounds, and ETP species	2	3	

Policy area	Policy topics identified by AMS	No. of AMS proposing each policy topic	No. of issues under each topic
	Operationalize fisheries management institutions and identify fisheries management areas	1	1
	Sharing data, research and technologies in marine fisheries	4	7
	Enforcement in marine fisheries	2	5
	Marine environment pollution	1	1
Aquaculture	Aquaculture management	4	4
	Research	2	4
	Capacity building	2	6
	Feed supply	3	4
	Aquaculture standards	4	5
	Broodstock development	4	4
	Aquaculture product markets	1	1
	Information and technology sharing	2	3
	Export limitations on fry and fingerlings	1	1
IUU Fishing	<i>MCS Networking and cooperation</i>	7	20
	Port state measures	3	3
	Harmonisation of fisheries management measures for transboundary species	3	4
	Support for least developed countries	1	1
	Capacity building	2	6
	Regional action to support national legal action	1	2
	ASEAN Catch Certification scheme	1	1
Food Safety and Better Nutrition	Database for information sharing	1	1
	Collaboration on laboratory testing	4	6
	Capacity building and expertise sharing	4	6
	Joint border inspections	1	1
	Promote fish as animal food source	1	2
	Harmonized food safety standards	4	4
	Study on risk assessment	1	1
	Monitoring of regional policy implementation	1	1
International Trade	<i>Fish product marketing</i>	6	8
	ASEAN standards	4	5
	<i>Harmonized border controls</i>	6	9
	ASEAN Catch Certification	1	1
	ASEAN Trade agreements	1	1
	Monitoring trade policy implementation	1	1
Labor and Working Conditions	<i>Regulations and minimum standards for migrant workers</i>	6	10
	Awareness / Capacity building on labour laws	3	3
	Capacity building on technical issues	1	1
	Inspection of working conditions	1	4

Policy area	Policy topics identified by AMS	No. of AMS proposing each policy topic	No. of issues under each topic
	Repatriation protocol for crew members violating coastal state laws	1	1
	Regulations for vessel operators violating rights of crew members	1	1
Research and Science	Research on conservation and management	6	7
	Research on disease analysis and management	1	1
	Research on aquaculture feed	2	2
	Research on added value to fish	3	3
	Exchange of scientists	3	4
	Fishing gear research	1	1
	Regional research facilities	2	3
	Research inland fisheries resources	1	1
	Research to improve fishing / farming technologies	5	6
	Research to harmonize fisheries & aquaculture data	3	4
	Environmental research	2	2
	Research on disease control	3	4
	Research on broodstock development	1	1
	Improve research capacity in capture fisheries	2	3
	Research on law enforcement	1	2
Research on invasive species	1	1	
Data Collection and Sharing	Data / data collection harmonization	5	7
	Data sharing	8	13
	Regional Databases	2	2
	Research funding	1	1
	Training on data collection and sharing	2	2
	Cooperative Governance	1	1
	Oceanographic data collection	1	1
Fisheries Subsidies	Guidelines for subsidies	1	2
	Capacity building on WTO issues	1	1
	Eliminating subsidies that contribute to IUU fishing	2	2
	Analysis of correlations between overfishing, overcapacity and other crosscutting issues	1	3
Marine Debris	Cooperation to conduct impact assessments	1	1
	Capacity building	2	2
	RPOA on waste management at sea	2	2
	Commitment to address marine debris	4	6
	Guidelines on handling oil spills	1	1
	Fish product contamination with Microplastic	1	1
	Ballast water management	1	1
	Fishing gear labelling	6	11
Data and experience exchange on ETP species	4	6	

Policy area	Policy topics identified by AMS	No. of AMS proposing each policy topic	No. of issues under each topic
Protection of Marine Habitats, Mammals and ETP Species	Transboundary ETP species and ETP species habitat management	1	1
	Regional regulations to protect ETP species	3	5
	Support to manage ETP species	3	6
	Capacity to deal with stranded marine mammals	1	1
	Research on ETP species fishing gear interactions	3	3
	Establish a network of MPAs in ASEAN	1	1
Special Support for Small-scale Fisheries	<i>Establish & implement co-management/community-based fisheries management</i>	6	9
	<i>Alternative livelihoods</i>	7	9
	Funding mechanisms in support of small-scale fisheries	3	4
	Human rights issues in small scale fisheries	1	2
	Use of Environmentally friendly fishing gears in small-scale fisheries	1	1
	Defining small-scale fisheries	3	3
	Impact of agriculture on small-scale fisheries	1	2
Aquatic Animal Health and Biosecurity	<i>Disease management</i>	7	8
	Emergency preparedness	4	4
	<i>Biosecurity standards</i>	5	6
	Capacity building	2	2
	Joint border controls	3	3
	Waste water treatment	1	1
	Harmonisation guidance	1	1
Institutional support	2	2	
Disaster and Climate Change Management	Lack of specific policies and platforms to address overall fisheries and aquaculture disaster	1	1
Sector Funding	AGFP implementation	3	8
	Grants to fund AGFP	1	1
	Accountability in sector funding	1	5

Policy issues/actions suggested by AMS

Sustainable Inland Fisheries Resources Management

Managing land-based activities affecting inland fisheries

- Pollution from the land-based activities such as pesticide from agricultural sector and other industrial activities, as possible reasons contributing to the decline in the fish population.
- management of dam water flows

-
- Changes and loss of migratory route fish.

Inland fisheries management

- Decline of the fish species
- Introduction of the non-natives species
- Where appropriate, develop and/or implement adaptive co-management plans with ecosystem approach to inland fisheries
- Agreeing management arrangements and plans for shared/transboundary stocks (e.g. no fishing in spawning grounds at certain times of the year, or at any times in some conservation areas)
- Reducing inland water fish habitat and spawning ground
- Protection and rehabilitation of breeding grounds and grow-out areas including migratory paths
- Transboundary Fisheries Management
- Management of transboundary water resources

Research on inland fisheries

- Research and Development of Inland fisheries.
- Introduction of non-native species
- Where appropriate, develop and/or implement adaptive co-management plans with ecosystem approach to inland fisheries
- Develop native and/or native/endemic species breeding technology

Technology exchange

- Technology exchange on environmentally friendly fishing gears

Capacity building on inland fisheries management

- Capacity building on stock assessment methods for freshwater fish species
- Developing a list of banned or restricted species, quota for marine capture
- Raising awareness for the community
- Strengthening capacity of inland fisheries management

Stock enhancement in inland fisheries

- The use of protected areas and rehabilitated areas to enhance fish stocks

Inland fisheries regulations

- The regional regulation and action on protection of breeding ground, and management of dam water flow should be created for AMS
- Strengthen practical IUU fishing
- Developing policies on protection of the living environment for inland fisheries

Data, research and knowledge sharing on inland fisheries

- Sharing data and information
- Knowledge exchange on management strategies

-
- Standardized data collection on catch reporting for transboundary resources

Illegal trade of inland fish and fish products

- Illegal trading / smuggling of endangered fish species

Enforcement of inland fisheries regulations

- Weakness of law enforcement
- Law enforcement by state government and fishery community

Climate change adaptation

- Climate change (Natural disasters)

Sustainable Marine Fisheries Resources Management

Marine fisheries management

- Declining fisheries resources
- Registration of fishing vessels for AMS under RFVR (to include vessels 12 – 24 meters)
- Joint management of migratory and shared stock.
- Sustainable management of transboundary species
- Harmonize fisheries management mechanism and policies at regional level
- Implementation of the Millennium Sustainable Development Goal 14
- Implementation of an electronic logbook
- Issues related to shared stocks measures e.g. setting up TAC, quota – sovereign rights
- Issues related to multispecies fisheries
- SEAFDEC: Tuna (kawa kawa, longtail) and Small Pelagic Species (rastreliger)
- To link with regional fisheries management plan
- Lack of national fishery management plan, weakness of management and law enforcement for sustainable fishery
- Because of common seas, we have to cooperate. There are many straddling and pelagic species found in many countries. This is an international commitment under the UNCLOS.
- Transboundary species management and highly migratory species management
- Fleet capacity reduction program
- Management of overfishing intensity
- Management of destruction fishing gear to protect aquatic resources
- There are a number of high economic value species which are migratory species
- Policy on supporting and developing co-management policies

Marine fish stock enhancements

- Exchange on methods for stock enhancements

Fisheries certification

- Certification of regional fisheries – eACDS
- Application of Catch Certificate to prevent IUU Fishing Product from entering the market
- Strengthening of ASEAN Catch Documentation Scheme

Hygiene on board

- Hygiene On Board (HOB)

Capacity building on marine fisheries

- Capacity building on stock assessment methods
- Exchange program for fisheries management of ASEAN Member State (AMS)
- Capacity building on fisheries management
- Strengthening of MCS capabilities within AMS

Protection of aquatic habitats, incl. breeding and nursery grounds, and ETP species

- Protection and restoration aquatic habitats, including breeding and nursery grounds
- Established regional regulation to protect endangered species
- Spawning grounds and breeding grounds of aquatic products are declining or disappear

Operationalize fisheries management institutions and identify fisheries management areas

- Operationalization of Fisheries Management Institution of Fisheries Management Area

Sharing data, research and technologies in marine fisheries

- Benefits in sharing of information to increase understanding on shared stock
- Lack of regular survey and scientific data collection
- Lack of the local, regional and international information sharing system
- Strengthening of regional marine resource data collection.
- Establishment of electronic information sharing under ASEAN supported by E-READI
- Research standard
- Data sharing, regional database

Enforcement in marine fisheries

- To develop the local, regional and international MCS network
- Lack of national fishery management plan, weakness of management and law enforcement for sustainable fishery
- Implementation of national plan of action combating IUU fishing.
- Illegal trade in border area and implementation of PSMA in coastal area
- Fishing fleet

Marine environment pollution

- Marine environment pollution

Aquaculture

Aquaculture management

- Limited output from hatcheries
- All producers to be registered
- Introduction of non-native species
- Regulation of cage culture

Research

- Regional research on selective breeding and genetic modification
- Genetic improvement research and selective breeding, genetic banks, etc
- Fish feed research
- Research on indigenous species in Mekong

Capacity building

- Capacity building extension service provider.
- Development of regional aquaculture cooperation (inland)
- Promoting environmentally friendly aquaculture (inland)
- Promoting aquaculture through bio safety systems (inland)
- Promoting Good Aquaculture Practice (inland)
- Promoting farmers' strength (inland)

Feed supply

- Supply of Aquaculture feed
- Development of an ASEAN high quality seed production (indigenous and exotic species production) standard
- Development of ASEAN Aquaculture nutrition (high quality feed, local feed ingredient research) standard and agency to address these issues
- Fish Feed

Aquaculture standards

- Modification and harmonization of traceability standards, etc
- Development of national GAqP standard
- Traceability and standard
- Development of GAqP and PNS for Seaweed
- ASEAN standard of farm certification acceptable for the international standard (marine)

Broodstock development

- Selective breeding
- For some species could be role for regional work on genetic improvements and broodstock developments

-
- Establishment of seedling banks for aquaculture species in the AMS
 - Research on selective breeding, Regional brood stock network: shared biodiversity, gene,... (marine)

Aquaculture product markets

- Market

Information and technology sharing

- Sharing of information, technology and capacity between AMS to build capacity in some weaker AMS
- Information sharing (marine)
- Knowledge sharing (marine)

Export limitations on fry and fingerlings

- Export limitations on fry and fingerlings

IUU Fishing

MSC Networking and cooperation

- Strengthening Monitoring, Control and Surveillance (MCS) network
- Electronic – ASEAN Catch Documentation System (e-ACDS)
- Shared Vessel Monitoring System (VMS)
- Continued support for a consultative forum for MCS information exchange
- Capacity building of fisheries officers and inspectors, PSM, MCS,
- Information sharing, e.g. fishing fleet
- Transboundary cooperation and communication
- Risk assessment initiative
- Improve boat registration
- Need to improve reporting
- To establish the VMS system (largely national)
- To strengthen the MCS measure (regional cooperation)
- To cooperate with the concerned agencies
- Joint patrols along the border
- Joint training on boarding and inspection
- Information sharing of list of registered fishing vessels
- The establishment of an electronic information sharing platform to combat IUUF in ASEAN
- To enhance regional cooperation on information sharing on a real-time basis as well as cooperation on the use of the MCS information
- To enhance AMS' capacity and capabilities on the Monitoring, Control and Surveillance (MCS) and fight against IUU fishing through dissemination of the best practices, especially on maritime domain surveillance and investigation activities and experiences of the Network.
- To establish an IUU fishing watch list

Port state measures

- Port State Measures (PSM)
- Berthing without permission (e.g. PSMA), i.e. regional actions will help AMS to take legal action under respective domestic laws
- To be effective law enforcement and implementation of Port State Measures Agreement

Harmonisation of fisheries management measures for transboundary species

- Harmonization of fisheries management measures, e.g. fishing gear regulations, closed seasons, especially in waterbodies bordering neighboring countries
- Harmful gears
- To organize the local fishery community for the implementation of the fishery co-management
- To develop the specific rules and regulation for each fishery

Support for least developed countries

- Support for least developed countries

Capacity building

- Capacity Building on port State measures
- Capacity building on Monitoring, Control and surveillance in fisheries resources management
- Building the capacity and implementation of combating IUUF.
- Setting up an implementation and enforcement team to do intelligence for the MCS and improving information sharing networks between AMS and RFMOs
- Reinforcement of the monitoring operation system and joint patrols
- Capacity building and experience sharing

Regional action to support national legal action

- encroachment, i.e. regional actions will help AMS to take legal action under respective domestic laws
- transshipment, i.e. regional actions will help AMS to take legal action under respective domestic laws

ASEAN Catch Certification scheme

- ASEAN Catch Certification scheme implementation

Food Safety and Better Nutrition

Database for information sharing

- eCert system for AMS

Collaboration on laboratory testing

- Joint collaboration in laboratory testing
- Regional harmonization of laboratory testing
- Regional harmonization of laboratory standard testing

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- Some AMC lacking capability in laboratory testing (knowledge and expertise)
 - Some AMC lacking laboratory set up and equipment
 - Inter-lab proficiency testing amongst AMC

Capacity building and expertise sharing

- Sharing of expertise in food safety inspection
- On-the-job training on food safety testing
- Knowledge sharing and capacity building
- Capacity building
- Improving capacity of implementing current policies
- Regional training on common food safety standards

Joint border inspections

- Joint Border Inspection

Promote fish as animal food source

- Promote fish as the animal food source for combatting micro nutrient deficiencies in the region
- Promote high nutrient dense fish species for the use in aquaculture

Harmonized food safety standards

- Harmonized food safety standards at a regional level
- Regional harmonization of food safety standard.
- Harmonized and adoption of international standards
- Setting uniform standards for fishery commodities on food safety and rejection of IUU products.

Study on risk assessment

- Studying and assessing risks and food safety indicators at regional level

Monitoring of regional policy implementation

- Develop mechanisms to monitor policies and regulations

International Trade

Fish product marketing

- Marketing promotion for fishery products in AMSs
- Joint promotion for exports and investment in the region
- ASEAN branding
- Regional action on market promotion in oversea markets.
- Increase trade within ASEAN
- Strengthen negotiating power
- Create an ASEAN brand
- Need to have policies to support market development and market protection, traceability.

ASEAN standards

- ASEAN eco labelling
- ASEAN traceability
- e-Certification System, ASEAN Single Window
- AGFP could cover policies for the development of standards for the trading of fish and fishery products
- Raise standards

Harmonized border controls

- Harmonized import-export procedures
- AMSs Customs inquiry hotline
- To address TBT for AMC to become one region
- To Harmonize export procedure as ASEAN level.
- To provide accessible and proper information for industries
- Streamlined customs arrangement within AMS to facilitate intra-ASEAN trade.
- General ASEAN Standard inspection and certification scheme for imported and exported fisheries and aquaculture products including live ornamental fish
- Harmonization of taxonomic identification, HS Code and inclusion of species for import and export
- To establish a network /forum to share experiences on removing trade barriers

ASEAN Catch Certification

- To work on implementing ASEAN Catch Certification Documentation Scheme to facilitate intra-regional and international seafood trade.

ASEAN Trade agreements

- Negotiating and signing the trade agreement between ASEAN and other markets

Monitoring trade policy implementation

- Strengthening human resources to the ASEAN Secretariat to monitor and evaluate trade policies implementation.

Labor and Working Conditions

Regulations and minimum standards for migrant workers

- Guidelines on minimum standards for migrant workers in fisheries
- Seafarer work agreement
- Certification of Human Rights in Fisheries for Fisheries Business
- Regulation of migrant workers to ensure their protection and rights
- Some element of reasonable/fair salary
- Working conditions/safety
- Lack of rules and regulation for the right of fishermen in accordance with the ILO regulation No. 188 and recommendation No. 199.
- Aquaculture farmer and worker's income
- Aquaculture's worker right

-
- Working conditions in aquaculture
 - Gender discrimination in aquaculture
 - Need to ensure a fair wage/compensation
 - Compliance with Safety of Life at Sea (SOLAS)
 - Developing a general policy on humane treatment to violated fishermen and fishing vessels
 - Occupational safety of workers in aquaculture, marine capture and processing facilities

Awareness / Capacity building on labour laws

- Awareness raising on labour laws
- Human capacity building
- Lack of awareness on the right of the fishermen

Capacity building on technical issues

- Capacity building (technical skills in aquaculture)

Inspection of working conditions

- Lack of inspection on the working condition of the fisherman
- lack of survey on the social welfare of the fishermen
- Lack of supervision on the fishing vessel's owner for the right of the fishermen
- Requirement of Labor Dept.'s inspection of aquaculture farms

Repatriation protocol for crew members violating coastal state laws

- Develop protocol on repatriation of fisherfolk who are crew members of fishing vessels that violated other coastal state laws

Regulations for vessel operators violating rights of crew members

- Developing regulations on process of detecting, arrest and solving violated fishermen and fishing vessels

Research and Science

Research on conservation and management

- Resource conservation and management [CFIDM]
- Fishers working calendar of each types of inland fisheries resource
- Transboundary Stocks research
- Capture Fisheries, Regional research program on shared/migratory stocks
- Struggling in the management of migratory species
- Research on transboundary species for capture fisheries
- Research and development of technology and innovation to increase the efficiency of sustainable aquatic resource management.

Research on disease analysis and management

- Diseases analysis and management [FBD]

Research on aquaculture feed

- Food productivity – aquaculture e.g. developments in feed composition & selective breeding
- Research on feed formulation

Research on added value to fish

- Product development e.g. added value and innovative product [PHPI]
- Fisheries product diversification
- Research and development of technology and innovation in processing fisheries products to create diversity and added value

Exchange of scientists

- Exchange programmes for fisheries scientists and researchers
- Exchange of researchers
- Increase access/inputs to researchers in external international agencies and NGOs.
- HR (Capacity building)

Fishing gear research

- Fishing gear research and development

Regional research facilities

- Digitalization of fisheries research materials and equipment
- Joint investment in regional research facilities and projects
- Supply facilities

Research inland fisheries resources

- Fisheries resources potential especially for inland fisheries

Research to improve fishing / farming technologies

- Fisheries and Aquaculture Technology Improvement
- Technology Development
- Capture Fisheries, Development of fishing gear technologies to replace destructive fishing gear, such as bottom trawl
- Need High Technology
- Research on environmental friendly capture technology (i.e. fishing gears, fish species, etc.)
- Research and development of technology and innovation to increase production efficiency and reduce investment costs

Research to harmonize fisheries & aquaculture data

- Data Harmonization
- Capture Fisheries, Lacking on data collection and database
- Technology on selective breeding and genetic modification

-
- Advance culture technology on high-valued species (i.e. lobster, sea cucumber, mudcrab)

Environmental research

- Water environment research capacity
- Research on environmental-related issues such as harmful algal blooms and bio-toxins

Research on disease control

- Disease control
- Preventive and control measures on new and emerging diseases
- Research on fish vaccines and other measures on aquatic animal health
- Anti-microbial Resistance (AMR): its impacts on aquatic animal health, food safety and remediation strategies.

Research on broodstock development

- Seed and broodstock development

Improve research capacity in capture fisheries

- Capture Fisheries, Insufficient capacity building
- Capture Fisheries, New approach on fisheries management
- Staffs Ability

Research on law enforcement

- Law enforcement at sea
- Enforcement on existing regulation

Research on invasive species

- Transform invasive species issue

Data Collection and Sharing

Data / data collection harmonization

- Harmonization of data collection
- Standardizing definitions
- Digitalization of fisheries research materials and equipment for data collection
- Standardised data collection methods and data sets for shared stocks
- There is also a need to share similar protocols on collection of data on fisheries.
- Develop methods to use statistics promptly and efficiently
- Data collection for shared stocks

Data sharing

- Sharing of all fisheries data
- Sharing of research data

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- Collection and sharing publications on a minimum set of regional data on inland fisheries
 - Standardized definitions at the regional level for data collection
 - Exchanges and joint data collection for migratory stocks
 - AGFP needs to contain regional policy on it, so the process would be run as the consensus of ASEAN Member Countries (to establish national focal point on data sharing in ASEAN fisheries cooperation, and to have a harmonized/standardized data collection).
 - Would be good to have more sharing of data
 - Ethics in data sharing (COC)
 - Standardised data from some limited data sets on regional issues e.g. shared stocks etc.
 - Because of presence of common and/or straddling stock, there must be sharing of catch or aquaculture production data.
 - Develop information technology, databases and systems of joint information use.
 - Sharing data / information on climate change
 - Sharing data / information on fisheries resources (transboundary aquatic species in first step)

Regional Databases

- Creation of regional databases to gain access to regional research
- Arrange reports to disseminate information through databases and websites conveniently, quickly and in response to ASEAN group activities/projects.

Research funding

- Lack of budget

Training on data collection and sharing

- Have to train staffs
- Capacity building with training for member countries on application and use of VMS data to manage fishing vessels

Cooperative Governance

- Need more cooperative governance

Oceanographic data collection

- Oceanographic data collection

Fisheries Subsidies

Guidelines for subsidies

- Guidelines on the use of subsidies in trade and aquaculture
- Standard guidelines on subsidies

Capacity building on WTO issues

-
- Capacity building or technical assistance on WTO Transparency and Notification

Eliminating subsidies that contribute to IUU fishing

- AGFP supports for eliminate subsidies that contributing to IUU Fishing
- To discourage subsidies that may contribute to IUUF, over fishing and over capacity

Analysis of correlations between overfishing, overcapacity and other crosscutting issues

- Analytical review of overfishing and overcapacity
- Common view on Overfished Stock issue
- Common view on cross-cutting issues

Marine Debris

Cooperation to conduct impact assessments

- Joint cooperation to assess the impact on marine resources

Capacity building

- Capacity building
- Developing capacity on fishery resources management

RPOA on waste management at sea

- RPOA on marine plastic debris
- Formulating and promulgating RPOA and NPOA on waste management

Commitment to address marine debris

- Marine litter (including plastic) from fisheries and aquaculture
- lack of Budget
- lack of infrastructure
- lack of boats for surveillance
- Concerns on proliferation of plastic products
- Proper disposal of wastes from vessels and / or fish farms

Guidelines on handling oil spills

- regional guidelines on handling oil spills

Fish product contamination with Microplastic

- Microplastic contamination in fisheries products

Ballast water management

- Discharge of waste materials such as ballast water

Fishing gear labelling

- To develop a policy on the labelling of fishing gear
- To prohibit the abandonment or discarding of fishing gear

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- Reporting of lost gear or found fishing gear
 - Develop a programme of marking fishing gear
 - Regulate mechanisms for reporting ALDFG (abandoned, lost discarded fishing gear) from fishing vessels
 - Enhance awareness of the impact from ALDFG
 - Develop policies / programs on marking fishing gears with electronic equipment
 - Commitment to prevent, mitigate and even clean up abandoned fishing gear and Illegal fishing gear
 - Gear marking / FAD (determine the best practices on fishing gear/FAD management and specification)
 - Concerns on ghost/abandoned fishing gears
 - Researching and developing fishing gears produced by decompose materials

Protection of Marine Habitats, Mammals and ETP Species

Data and experience exchange on ETP species

- Exchange experience and sharing of data and information on ETP species
- Statements about support for CITES membership and related actions
- Interaction between ETP and fishing gears
- Smuggling of ETP species
- Involve migratory species
- To develop a data base and sharing information of ETPs

Transboundary ETP species and ETP species habitat management

- Endangered species and transboundary species management as well as the management of habitats for endangered species

Regional regulations to protect ETP species

- Establish regional regulations to protect endangered species
- Harmonize fisheries regulations on nationally endangered species at regional level (some species might be endangered species in one country but are still legally collected by its neighboring countries)
- Regulations to protect ETP species
- Formulating, promulgating, and implementing the regional RPOA, sub-RPOA and NPOA Action Plans
- Developing a mechanism to monitor and evaluate the implementation of RPOA and sub-RPOA

Support to manage ETP species

- Allocating a budget for the management of ETP species
- lack of budget
- lack of technologies
- Lack of HR
- Support marine mammals as ETPs at a regional level.

-
- Promote and support a station or institution to look after injured mammals and marine endangered species before release back to nature.

Capacity to deal with stranded marine mammals

- Strengthen Capacity Building on stranded marine mammals

Research on ETP species fishing gear interactions

- Interaction of ETP species and fishing activities
- Promote joint regional research studies.
- To assessing / collect information of ETPs resources, exploitation, trade and consumption in AMS

Establish a network of MPAs in ASEAN

- Establishing a network of marine protection areas in ASEAN

Special Support for Small-scale Fisheries

Establish & implement co-management/community-based fisheries management

- Participation of small-scale fisheries in the fisheries management process
- Exchange programmes for visits of small-scale fishers, including the capacity building of small-scale fishers in fisheries management
- Capacity building to promote cooperations for fisherfolk
- Developing co-management models in order to protect fisheries resources
- Developing policies on promotion of applying indigenous knowledge in sustainable management of small-scale fisheries
- Small scale fishing license and fishing vessel registration to prevent IUU fishing
- weaknesses in law enforcement
- Rational utilization of common resources (Water and Land)
- Fishery Conservation

Alternative livelihoods

- Provide opportunities for alternative livelihoods and improvements of ongoing livelihood activities
- Development of fisher village
- Support projects for funding for SSF and small-scale farmers
- To increase livelihood and access to international market
- Alternative livelihood income
- Post-harvest technology
- Implementation of the FAO guidelines on small-scale fisheries
- Improving living standard through access the fishery resources
- To develop Policies to create livelihoods for fishermen

Funding mechanisms in support of small-scale fisheries

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- Find sustainable financing mechanisms for SSF co-management
 - Access to finance
 - Gov gives subsidies (gear and vessels)....so any subsidy rules should take account of special needs of SSF.
 - Set up fund for small-scale fishery

Human rights issues in small scale fisheries

- Secure human rights of Fishers from human trafficking, labor exploitation, and slavery
- Security/insurance for fishers

Use of Environmentally friendly fishing gears in small-scale fisheries

- Environmentally-friendly fishing gears

Defining small-scale fisheries

- Working definition on small scale fisheries
- Harmonized definition for Small Scale Fisheries
- Definition of small-scale fisheries

Impact of agriculture on small-scale fisheries

- Disadvantages of modern agriculture.
- Conflicting between agriculture law is impacting on small scale fishery

Aquatic Animal Health and Biosecurity

Disease management

- Emerging diseases
- Bio-security measure
- Genetic modification
- Fish Disease
- Disease prevention and response
- Disease prevention and management following outbreaks
- Guidelines on the prudent use of antimicrobials in aquaculture and the monitoring of the impacts of Anti-microbial Resistance (AMR) on aquatic animal management
- Protocol for diseases prevention (marine)

Emergency preparedness

- Aquatic Emergency Preparedness and Response System for transboundary diseases
- Emergency preparedness of aquatic animal disease
- Strengthening regional warning system on Aquatic Animal Health and disease
- ASEAN Rapid Alert System for food and feed

Biosecurity standards

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- Biosecurity standards under Good Aquaculture Practice (GAqP) requirement
 - Biosecurity standards under Good Manufacturing Practice (GMP)
 - Harmonization of Biosecurity standards
 - Harmonized traceability standard with AGFP
 - Come up with minimum standard level on the ASEAN-wide quality for carrageenan content, fertilizer and other production related chemicals
 - Development of ASEAN Health and disease management and biosecurity standard and a regional agency to address these issues

Capacity building

- Capacity building for testing of aquatic diseases and food safety
- Requirement of HR and facilities

Joint border controls

- Joint Border Inspection
- Rise up compliance level on aquaculture inspection
- Minimum import and export requirements (i.e. SPS, diseases, food safety standards) on fish and fishery/aquatic products in the ASEAN regions

Waste water treatment

- Waste-water discharge from industrial facilities

Harmonisation guidance

- Harmonization guidance and methods of ASEAN aquatic animal health testing laboratory

Institutional support

- Strengthening the operationalization of the ASEAN Network for Aquatic Animal Health Center (ANAAHC)
- Development of ASEAN Health and disease management and biosecurity standard and a regional agency to address these issues

Disaster and Climate Change Management in fisheries and Aquaculture

- There are no specific policies and platforms to address overall fisheries and aquaculture disaster

Sector Funding

AGFP implementation

- An ASEAN Coordinator should coordinate the implementation of the policies.
- There's a need for sufficient funds to ensure effective implementation of the AGFP. A statement on funding in the AGFP will help to empower ASEAN to enhance the existing funding mechanism and to provide avenue for new funder or donor to assist in regional level projects/ programs within the AGFP scopes.

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- There should be a country focal person per ASEAN Member States that will do the coordination of the implementation.
 - Developing a list of activities/project need to use money from funds
 - Developing a regulation on management and use of funds
 - To introduce to potential sponsors
 - Negotiation with sponsor
 - Deploying activities/project

Grants to fund AGFP

- Grant budget

Accountability in sector funding

- Variety of programmes and projects providing funds
- Long change of administrative and financial budget channel to get approval from high authorities
- DoF obtain budget is not rationally within ministry
- Extraordinary Audit procedure
- Inconstancy of using allocated budget

Annex 6 – Assessing impacts: case study on evolution of the East Atlantic Bluefin Tuna fishery

This case study taken from Poseidon, Coffey, ANDi and F&S, 2018, 'Assessment of the impacts of the policy options proposed for the Amendment of the Fishery Control System (SC1) – Final Report

Introduction

East Atlantic Bluefin tuna (BFT) is exploited in the East Atlantic (FAO area 27) and in the Mediterranean (FAO area 37) by different fishing fleets flying various flags, including third country flags. The EU has an important stake in the fishery, in particular in Mediterranean waters. Given its transnational dimension, the BFT fishery is managed by The International Commission for the Conservation of Atlantic Tunas (ICCAT) which can adopt conservation and management measures mandatory for all its parties, including the EU.

In the early 2000, the ICCAT Standing Committee for Research and Statistics (SCRS) raised concerns over the status of the BFT stock and the likely misreporting of catches by most fishing nations, including the EU. It was assumed that the TAC of 32 000 tonnes set by ICCAT was significantly exceeded with likely real catches in the region of 50 000 tonnes. A weak control regime of BFT fishing vessels by almost all flag States concerned facilitated non-compliance with applicable rules, in particular catch limits and the use of planes to locate BFT schools. Therefore, BFT stock status had been deteriorating continuously over the years and in 2000 the stock was near collapse according to the ICCAT SCRS.

In 2006, the EU adopted a multi-annual recovery plan for BFT mainly to transpose into EU law the recovery plan adopted by ICCAT aimed at closing loopholes in the regional control system. The EU multi-annual recovery plan for BFT was subsequently amended in 2009, 2012 and 2016 to include in EU law the strengthened control measures adopted by successive ICCAT recommendations.

Soon after its creation, the European Fisheries Control Agency (EFCA) was mandated by the EU to coordinate joint deployment plans to control the BFT fishery under the general framework of Commission Decision 2008/323/EC establishing a specific control and inspection programme (SCIP_ related to the recovery of bluefin tuna in the Eastern Atlantic and the Mediterranean. EFCA interventions started in 2008 and have been continued since. The SCIP framework was renewed in 2014 through Decision 2014/156⁷⁷. As Figure 13 shows, risks of non-compliance are still high and could materialize in the absence of a SCIP.

⁷⁷ Commission Implementing Decision of 19 March 2014 establishing a specific control and inspection programme for fisheries exploiting stocks of bluefin tuna in the Eastern Atlantic and the Mediterranean, swordfish in the Mediterranean and for fisheries exploiting stocks of sardine and anchovy in the Northern Adriatic Sea

Figure 13: EFCA compliance risk-assessment for the BFT fishery

Fleet segment	Misrecording	Technical measures
Purse seiners targeting bluefin tuna for farming, associated vessels and farms	Red	Yellow
Pelagic trawlers	Yellow	Green
Bait boats (poles and lines)	Orange	Green
Line vessels	Red	Red
Fixed traps	Yellow	Green
Sport and recreational fisheries	Green	Red
Other catch fleet	Green	Green

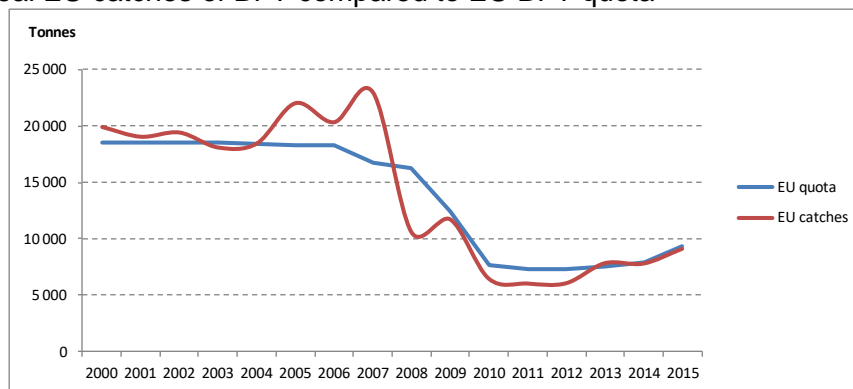
Source: EFCA (2017)

In summary, the BFT fishery presents an interesting situation with a somewhat weak control framework until 2007, substantially and markedly improved as from 2008, with the involvement of EFCA.

Effects of a strengthened control framework on the BFT fishery

As far as the EU is concerned, the changes introduced in 2007 in the control strategy had clear effects on the level of compliance with BFT catch limits. As shown in the figure below (Figure 14), EU catches were consistently above the catch limits allocated by ICCAT until 2007, and in particular over the 2004-2007 period. The situation changed from 2008, with real catches below or aligned with the ICCAT quota. Note that the main reason for the apparent EU quota under-usage in 2010-2012 was the repayment of previous year quota over-usage.

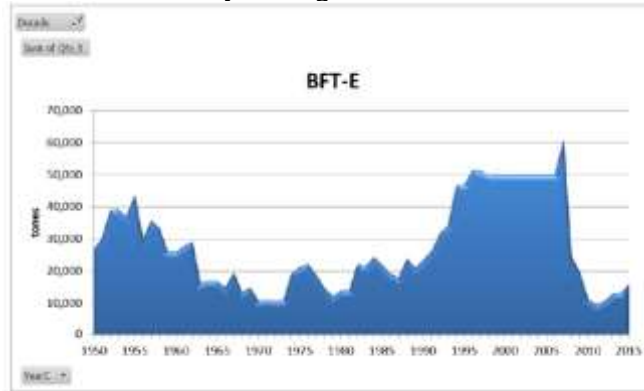
Figure 14: Real EU catches of BFT compared to EU BFT quota



Source: real EU catches extracted from ICCAT Task 1 (“inflated” tuna catches considered for stock assessment). EU quota: from ICCAT relevant recommendations.

Quota over-usage was not an EU specificity. Most other third country vessels did not comply either with catch limits. As shown in the following figure, total BFT catches in the year 2000 were in the region of 50 000 tonnes per year, as opposed to a TAC of \approx 30 000 tonnes, culminating in catches of 60 000 tonnes in 2007. The strengthening of the international BFT control framework from 2008 resulted in a substantial decrease of real catches at stock level, with total catches reasonably aligned with the TAC (Figure 15 below).

Figure 15: Real total catches of BFT by all flags

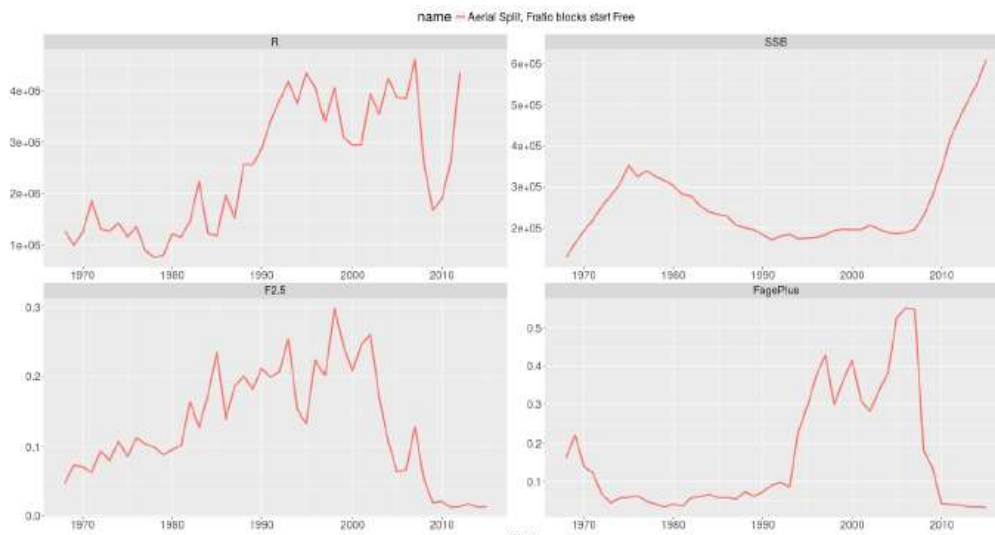


Source: ICCAT Report of the BFT 2017 stock assessment meeting.

Environmental impacts: stock trajectory

The preliminary results of the 2017 BFT stock assessment confirm the results obtained in 2014 with a clear rebuilding of the BFT stock. As shown in the figure below (Figure 16), preliminary results indicate a dramatic decrease in fishing mortality (lower left figure) and a substantial increase in the spawning stock biomass (top right figure).

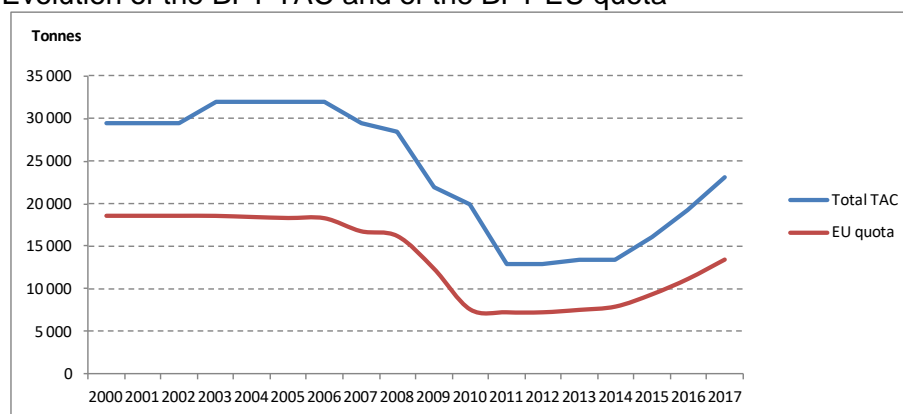
Figure 16: BFT stock status indicators



Source: ICCAT Report of the BFT 2017 stock assessment meeting

The rebuilding of the stock has supported increases in the TAC following years of reductions. In 2014, the total BFT TAC was 13 400 tonnes. It was increased gradually to reach 23 155 tonnes in 2017, i.e. an increase of 73% in just three years. The EU quota increased in proportion from $\approx 7\,200$ tonnes in 2011-2012 to a projected 13 400 tonnes in 2017, providing the EU BFT fishing fleet and recreational fishermen with higher fishing opportunities.

Figure 17: Evolution of the BFT TAC and of the BFT EU quota



Source: ICCAT relevant recommendations

Summary of environmental impacts

Increased compliance with conservation and management rules from 2008, in particular catch limits, as a consequence of a strengthened control scheme of the BFT fishery supported the rebuilding of the stock as evidenced by the clear improvement in stock indicators F and SSB from that year onwards. Assessed as in a healthier state compared to previous periods, ICCAT

was able to increase the TAC from 2015, with corresponding fishing opportunities for the EU fleet and recreational fishermen increasing in parallel.

Economic impacts: fishing vessels economic performances

Impacts on vessel profitability is estimated based on the following steps:

1. Identification of main fishing fleet segments exploiting BFT in the Mediterranean (from STECF 17-12 landing data) according to the contribution to total landing value of BFT.
2. Extraction of economic profitability indicators for concerned fishing fleet segments: gross value added (GVA), gross profit (GRP), GVA to income, and GRP to income (from STECF 17-12 economic data)
3. Cumulated fishing fleet economic performances estimated pro-rata for respective shares of the segment in the total value of landings of BFT (as per step 1).

Results of step 1 are shown in the following table (Table 23). The main fishing fleet segments targeting BFT are large scale purse seiners (French, Italian, Spanish) of 24-40m and 40+m length classes. The French longline fleet segment of 12-18m length class appears in the list of main segments selected. No EU small-scale fleet segments are among the main fishing fleet segments targeting BFT. Unfortunately, economic data for some important fishing fleet segments are not available. Therefore, results only cover around 54% of the EU fleet BFT landing values.

Table 23: Main EU fishing fleet segments targeting BFT in the Mediterranean

Fleet segment	Share of EU BFT landing value
FRA-PSVL40xx*	22.8%
FRA-PSVL2440	22.8%
ITA-PSVL40xx	21.4%
ESP-PSVL2440	10.1%
ESP-PSVL40xx*	6.2%
FRA-HOKVL1218*	4.5%
Total selected	87.8%

Source: from STECF 17-12 landing data

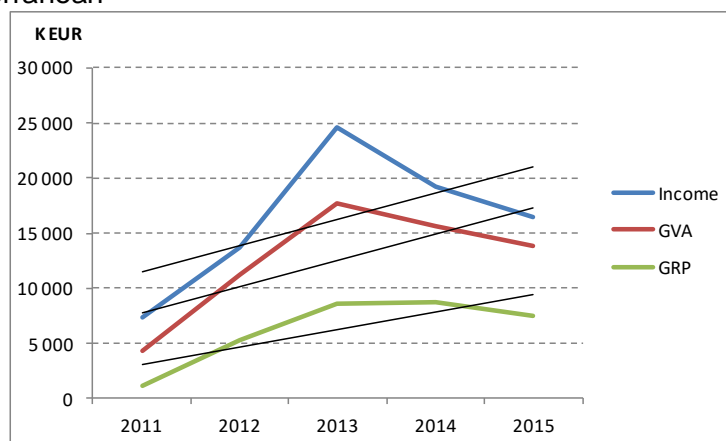
Note: *segment economic data not available (not reported or not published for confidentiality reasons)

The overall quality of EU fleet economic data on the fishing segments targeting BFT in the Mediterranean is somewhat poor. Data are only available for some segments, and for those segments, time-series are often not available with data gaps. For example, economic data for the FRA-PSVL2440 segment are missing for 2009, as are economic data for the ITA-PSVL40xx segment for 2010. It should also be mentioned that EU BFT vessel profitability is largely dependent on external factors impacting BFT prices. In particular, the situation in Japan, the main market for BFT, which is a main factor driving BFT market prices. The 2011 tsunami and the subsequent 2012-2016 economic crisis probably had adverse impacts on BFT prices and hence, on EU fishing fleet segment profitability.

Details of step 2 are not shown here (economic datasets for several fishing fleet segments).

Bearing in mind all limitations in relation to the robustness of STECF economic data concerning EU fishing fleet segments targeting BFT in the Mediterranean, results (step 3) indicate improved economic performances for all economic indicators (income, GVA and GRP), increasing on average over the 2011-2015 period (note: prior economic data are ignored due to discontinuous time-series). The decreases from 2013 are probably attributable to the adverse economic situation in Japan. Between 2011 and 2015, both income and GVA increased at an average rate of EUR 2.4 million per year, and GRP at an average rate of EUR 1.6 million per year.

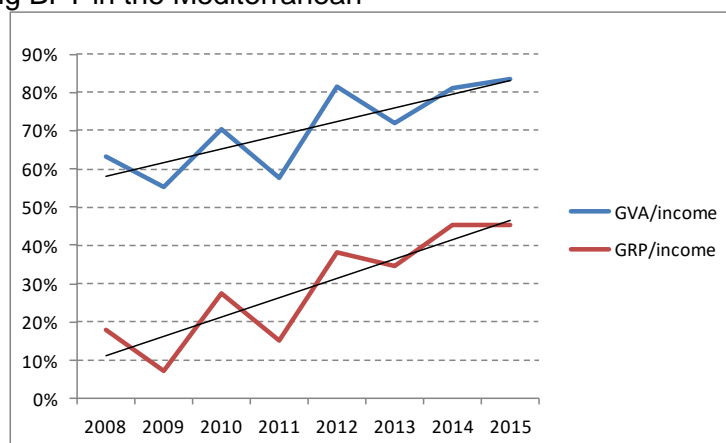
Figure 18: Evolution of cumulated income, GVA and GRP for EU fishing segments targeting BFT in the Mediterranean



Source: from STECF 17-12 economic data

At the fleet segment level, the ratios GVA to income and GRP to income, which can be used as a proxy for measuring vessels profitability, steadily increased over the 2008-2015 period at an average rate of 4% per year for GVA/income ratio, and 5% for GRP/income ratio.

Figure 19: Evolution of the GVA to income and GRP to income ratios for the EU fishing fleet segments targeting BFT in the Mediterranean



Source: from STECF 17-12 economic data

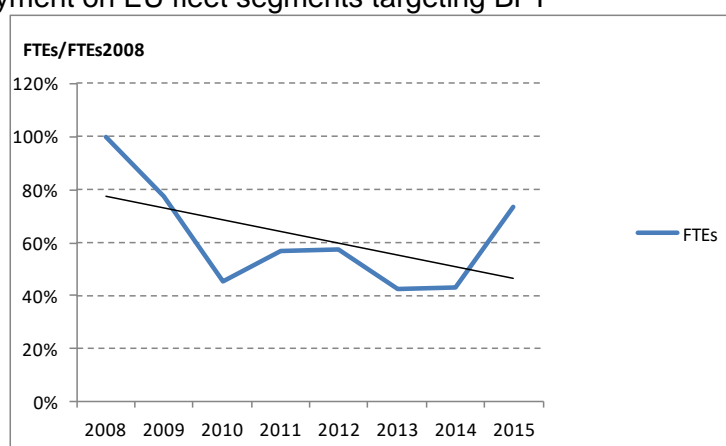
Summary of economic impacts

Although deteriorating in 2014 and 2015 due to adverse economic conditions in Japan, the economic performance of the EU fishing fleet targeting BFT in the Mediterranean substantially improved on average in recent years coinciding with the introduction of improved fisheries control. GVA increased at an average of EUR 2.4 million per year, while vessel profitability indicators increased by 4-5% per year.

Social impacts: onboard employment and wages

The number of full time employees (FTEs) onboard the EU fishing fleet segments targeting BFT in the Mediterranean generally decreased over the 2008-2015 period as shown in Figure 20. The relative improvement between 2014 and 2015 is probably underpinned by the 18% EU BFT quota increase between these two years which supported an extension of the duration of the fishing season and hence, increased working time for crew members.

Figure 20: Employment on EU fleet segments targeting BFT



Source: from STECF 17-12 economic data

Because of an incomplete dataset on crew remuneration, it is not possible to present the evolution of the average wage per FTE in the EU BFT fishery. However, since GVA tended to increase over the period with a decreasing number of FTEs employed, it can be assumed that average crew remuneration increased.

Cost-benefit of control

Costs of control of the BFT fishery can be approximated by adding the costs of JDPs coordinated by EFCA and the costs of the ICCAT mandated observer programme on BFT vessels, ranching units and traps.

Costs of JDPs: according to EFCA estimates (unpublished), BFT Mediterranean JDPs cost is approximately EUR 4.2 million per year including EUR 2.9 million for control at sea and EUR 1 million for coordination of controls for the main cost items.

ICCAT Observer programme: indications from the ICCAT biennale administrative report suggests that the average annual cost of observer deployment is in the region of EUR 650 000 EUR per year (data not detailed).

In total, cost of control can be rounded up to EUR 5 million per year on average. This total does not include regular expenses committed by Member States to discharge their obligations under the Control Regulation. It is not possible to estimate these costs in the absence of detailed activity indicators.

The cost-benefit ratio can be approximated by comparing the cost of control to the value-added generated by BFT fishery. Value added represents the net economic wealth supported by fishing activities, and therefore, the economic benefits for the EU economy. As shown in the following table, GVA accumulated over the 2009-2015 period is estimated to EUR 68.5

million with an estimated cost of control of EUR 35 million over the same period. The cost-benefit is therefore positive with EUR 1 invested in control supporting creation of EUR 2 for the EU economy. GVA estimates do not include economic benefits for ancillary industries (upstream, downstream including BFT ranching), so cost-benefit ratio is probably even higher.

Table 24: Cost-benefit estimate of control of the BFT fishery

(KEUR)	2009	2010	2011	2012	2013	2014	2015	Total
GVA	2 558	3 399	4 240	11 162	17 743	15 644	13 766	68 511
Cost of control	5 000	5 000	5 000	5 000	5 000	5 000	5 000	35000
Ratio								1.96

Source: own estimates

Overall Conclusion

The improved control framework of the BFT fishery, coupled with EFCA involvement under the umbrella of a SCIP, appears to have produced positive results. One of the main results is that compliance with catch limits has substantially improved as evidenced by the enhanced alignment between EU real catches and EU catch limits as from 2008 (Figure 14). Increased compliance supported the recovery of the BFT stock with stock status indicators (F and SSB) improving dramatically (Figure 16) compared to the situation prevailing before 2008. Cost-benefit ratio of control appears positive with at minimum EUR 1 invested in control supporting creation of EUR 2 net benefits for the EU economy.

Economic and social impacts are less clear due to external factors and poor data. Because of the high exposure of the fishery on external factors, and in particular on the economic and societal situation in Japan, it is difficult to establish a clear link between the recovery of the stock and the economic performances of the fishing fleet concerned. However, economic indicators available reflect a globally improving situation compared to the past with an overall increase in GVA and an improvement of vessel efficiency indexes.

