



Bay of Bengal Large Marine Ecosystem Project



Fisheries, Marine Environment, and Integrated Coastal Management Policy Processes, Content and Implementation in the BOBLME Countries

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*Eight countries, connected by one ecosystem,
working together to secure its future.*



Fisheries, Marine Environment, and Integrated Coastal Management Policy Processes, Content and Implementation in the BOBLME Countries

Regional Synthesis & Country Questionnaires



Sail-powered fishing vessel in Sri Lanka

October 2012

Final Report



Abstract

This paper examines policy processes, policy trends, and policy implementation with regards to capture fisheries, the marine environment, and integrated coastal management (ICM) in Bay of Bengal Large Marine Ecosystem (BOBLME) countries. For the countries included in the analysis (Maldives, Sri Lanka, India, Bangladesh, Myanmar, Thailand, Malaysia and Indonesia), policy documents and relevant literature was reviewed and help was sought from officials/experts in the region. Individual country information was analyzed to generate a regional synthesis.

The use of formal policies to form strategies and implementation action plans for fisheries and marine environmental management, has been reasonably successful in the countries around the Bay of Bengal. As would be expected, the detail of policy differs between countries, as do processes to develop policy, and methods of implementation. However, there is a surprising degree of similarity between main policy trends, the issues included in policy, and the strategies being used to manage the fisheries sector. The regional review suggests that much policy in the region is already well specified, and that while countries could certainly improve their policy content, greater challenges may lie in implementing policy and in improving policy processes, than in improving policy itself.

Whilst fisheries and to some extent marine environmental policy and processes are well established in the region, it appears that ICM practices are less robust. Following an initial period of enthusiastic ICM planning over the 1990s and early 2000's, there has been an apparent lack of review and evolution of the development of ICM policies since then. This has resulted in diminished communication, cooperation and information exchange between sectors operating in the coastal zone. Environmental impact assessment (EIA) processes are a well-established safeguard throughout the region, although cumulative effects of development are less well detected.

Keywords: Bay of Bengal, Asia, fisheries, marine environment, integrated coastal management, policy, legislation.

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The views contained in this report are those of the authors, and do not necessarily represent those of FAO, GEF or the Bay of Bengal Large Marine Ecosystem Project.

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Table of Contents

1	INTRODUCTION AND SOME METHODOLOGICAL COMMENT	1
2	POLICY PROCESSES	3
2.1	FISHERIES POLICY PROCESSES	3
2.2	MARINE ENVIRONMENTAL POLICY PROCESSES	8
2.3	ICM POLICY PROCESSES	15
3	FISHERIES POLICY CONTENT AND IMPLEMENTATION	20
3.1	INTRODUCTION	20
3.2	FISHERIES POLICY CONTENT	20
3.3	FISHERIES POLICY IMPLEMENTATION	31
4	MARINE ENVIRONMENTAL POLICY AND IMPLEMENTATION	41
4.1	MARINE ENVIRONMENTAL POLICY CONTENT	41
4.2	MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	46
5	ICM POLICY CONTENT AND IMPLEMENTATION	50
5.1	ICM POLICY CONTENT	50
5.2	ICM POLICY IMPLEMENTATION	52
6	OVERALL CONCLUSIONS.....	55
Appendices		
	APPENDIX A: TERMS OF REFERENCE	57
	APPENDIX B: BIBLIOGRAPHY	61
	APPENDIX C: MALDIVES	69
	APPENDIX D: SRI LANKA	93
	APPENDIX E: INDIA	123
	APPENDIX F: BANGLADESH	152
	APPENDIX G: MYANMAR	184
	APPENDIX H: THAILAND.....	204
	APPENDIX I: MALAYSIA	233
	APPENDIX J: INDONESIA.....	264
	APPENDIX K: SUMMARY OF INDIVIDUAL TABLE RESPONSES.....	289

Table of Figures

FIGURE 1: FISHERIES POLICY AND ITS INFLUENCE ON SECTOR DEVELOPMENT PLANNING	3
FIGURE 2: ICM POLICY DEVELOPMENT	16
FIGURE 3: USE OF POLICY TARGETS	20
FIGURE 4: POLICY CONTENT - FISHERIES MANAGEMENT OBJECTIVES	22
FIGURE 5: FINANCIAL/ECONOMIC AND MARKETING ISSUES	27
FIGURE 6: SOCIO-ECONOMIC AND POVERTY ISSUES	29
FIGURE 7: POLICY IMPLEMENTATION - MANAGEMENT APPROACHES	31
FIGURE 8: EXPLOITATION LEVELS OF HILSA IN BANGLADESH (1995 – 2003)	33
FIGURE 9: POLICY IMPLEMENTATION - USE OF INPUT CONTROLS	34
FIGURE 10: POLICY IMPLEMENTATION - OUTPUT CONTROLS & TECHNICAL MEASURES	35
FIGURE 11: POLICY IMPLEMENTATION - ECONOMIC MANAGEMENT TOOLS	36
FIGURE 12: POLICY IMPLEMENTATION - USE OF SUBSIDIES	37
FIGURE 13: MARINE ENVIRONMENTAL TARGETS	41
FIGURE 14: MARINE ENVIRONMENTAL MANAGEMENT OBJECTIVES	43
FIGURE 15: UTILIZATION OF MARINE ENVIRONMENT POLICY IMPLEMENTATION TOOLS	46
FIGURE 16: ICM IMPLEMENTATION AND MONITORING MECHANISMS	53
FIGURE 17: INSTITUTIONAL MAPPING OF MARINE ENVIRONMENTAL MANAGEMENT IN INDIA	151

Table of Tables

TABLE 1: MAIN INFLUENCES ON SETTING FISHERIES POLICY	6
TABLE 2: ENVIRONMENTAL POLICIES AND MARINE IMPLEMENTING STRATEGIES IN THE BOBLME COUNTRIES	8
TABLE 3: MAIN INFLUENCES ON SETTING MARINE ENVIRONMENTAL POLICY	12
TABLE 4: CONSTRAINTS TO SUCCESSFUL FISHERIES POLICY IMPLEMENTATION	38
TABLE 5: RANKING OF CONSTRAINTS TO EFFECTIVE FISHERIES POLICY IMPLEMENTATION	40
TABLE 6: RANKING OF CONSTRAINTS TO EFFECTIVE MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	49
TABLE 7: RANKING OF SECTORAL EMPHASIS IN BOBLME ICM PLANNING	50
TABLE 8: FISHERIES POLICY - SUMMARY OF REGIONAL RESPONSES	290
TABLE 9: MARINE ENVIRONMENTAL POLICY - SUMMARY OF REGIONAL RESPONSES	291
TABLE 10: ICM POLICY - SUMMARY OF REGIONAL RESPONSES	292

Table of Boxes

BOX 1: STAKEHOLDER CONSULTATION IN ENVIRONMENTAL POLICY DEVELOPMENT IN INDIA	13
BOX 2: EXAMPLE OF GOOD MANAGEMENT TARGETS BY BOBLME COUNTRIES	21
BOX 3: DECENTRALIZATION OF FISHERIES MANAGEMENT IN INDIA	22
BOX 4: KEY POLICY OBJECTIVES FOR AN EAF	25
BOX 5: CONFLICT RESOLUTION IN SRI LANKAN POLICY	26
BOX 6: LIST OF FISHERIES POLICY IMPLEMENTATION TOOLS	31
BOX 7: HILSA STOCK MANAGEMENT IN BANGLADESH	33
BOX 8: SEA TURTLE PROTECTION IN BANGLADESH	42

Acronyms used

BIMSTEC	Bay of Bengal Initiative for Multi-Sectoral Technical & Economic Cooperation
BOB.....	Bay of Bengal
BOBLME	Bay of Bengal Large Marine Ecosystem
BRD	Bycatch Reduction Device
CBD	Convention on Biological Diversity
CCD.....	Coastal Conservation Department (Sri Lanka)
CCRF	Code of Conduct for Responsible Fisheries
CITES.....	Convention on International Trade in Endangered Species of Wild Flora & Fauna
CZM	Coastal Zone Management
DoF	Department of Fisheries
EAF	Ecosystem Approach to Fisheries
EIA	Environmental Impact Assessment
ETP.....	Endangered, Threatened or Protected
FAO.....	Food and Agriculture Organization (of the United Nations)
GEF	Global Environment Facility
ICM.....	Integrated Coastal Management
IOTC.....	Indian Ocean Tuna Commission
IPOA	International Plan of Action
IUU	Illegal, Unreported and Unregulated (fishing)
MoEF	Ministry of Environment and Forestry (Bangladesh)
MPA.....	Marine Protected Area
MPEDA	Marine Products Export Development Authority (India)
MRC.....	Marine Research Centre (Maldives)
NEAP.....	National Environmental Action Plan
NGOs	Non-Governmental Organization
SAARC.....	South Asia Association for Regional Cooperation
SAM	Special Area Management (Sri Lanka)
SEAFDEC	Southeast Asia Fisheries Development Center
SoE.....	State of Environment
SSF	Small-Scale Fisheries
TURF	Territorial Use Rights Fisheries
VMS.....	Vessel Monitoring System

Note further country-specific acronyms can be found at the end of each country appendix.

1 INTRODUCTION AND SOME METHODOLOGICAL COMMENT

This paper has been prepared by Poseidon Aquatic Resource Management Ltd¹, on behalf of the FAO Bay of Bengal Large Marine Ecosystem (BOBLME) project. The paper forms an output of component 2.2 of the BOBLME project, and updates and expands previous work completed by Poseidon for FAO (Macfadyen, 2006)². Its main objective is to provide a regional synthesis of policy processes, content and implementation for capture fisheries, the marine environment and integrated coastal management (ICM) in Bay of Bengal Large Marine Ecosystem countries. This regional synthesis covers the following countries: Maldives, Sri Lanka, India, Bangladesh, Myanmar, Thailand, Malaysia, and Indonesia (see **Appendix A** for full Terms of Reference).

Given the budget available for this study, it was completed using a desk study approach to complete a standard questionnaire for each country. This questionnaire was structured into key sections focusing on capture fisheries, the marine environment and ICM, and within each of these three themes, there is an exploration of policy processes, policy content, and policy implementation.

The fisheries policy questionnaire was slightly modified from the previous work completed in 2006 and then completed based on current status/information, providing an opportunity to assess change and progress over the last five-year period. The questionnaires on marine environmental policy and ICM policy were completed from new.

With regards to policy content, the main purpose of the questionnaires is not to summarize the complete contents of policy in each country, but rather to pick up on the extent to which countries may be adopting different issues that are topical at the present time, and which might be expected to be increasingly integrated into policy given that they represent what might be termed as 'best practice'. The detailed information for all the individual countries reviewed is collated in **Appendix K**.

The questionnaires were first populated by the consultants based on an extensive literature search of past and existing policies in each country. In completing the individual country tables, the principal sources of information were national fisheries/aquaculture policy documents and legislation, and where possible the consultants have gone back to these core documents. However, fisheries plans and policy statements have also been considered, other published literature has been reviewed, and stakeholders in the region have also been consulted. References used for each country are provided in **Appendix B**.

¹ See www.consult-poseidon.com

² Note that the 2006 study presented information on fisheries and aquaculture policy only, and covered: Bangladesh; Cambodia; China PRC; India; Indonesia; Japan; Korea RO; Malaysia; Myanmar; Pakistan; Philippines; Sri Lanka; Thailand; and Vietnam.

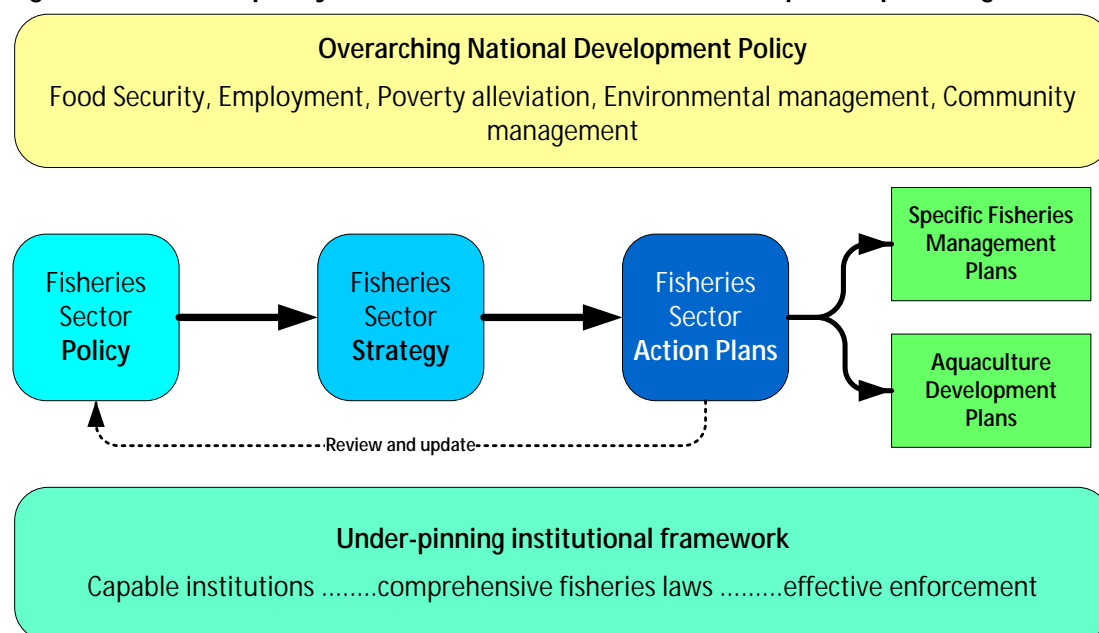
The first drafts of the completed questionnaires were then sent to the BOBLME National Coordinators in each country who convened one or more national working groups with representative experts/stakeholder with knowledge of fisheries, the marine environment and ICM, in order to both validate the consultants' initial findings and more importantly, complete some of the ranking processes in the questionnaire. The completed questionnaires were then sent back to the consultants for analysis, the results of which are presented in this report. The report was then sent to the BOBLME National Coordinators for further assessment and verification and the draft finalized in July 2011.

A workshop was then organized by BOBLME entitled 'Regional Workshop: Policy directions in fisheries, coastal and marine environment and ICM in the Bay of Bengal Large Marine Ecosystem (BOBLME) countries'. Held in Penang, Malaysia over October 2 - 4, 2012, the content and findings of the report were presented to a group of around 30 representatives from around the region. The presentation was followed by a series of plenary and country-wise breakout discussions where the participants were asked to update, verify, validate and amend the report comments, including the country questionnaires. Based on these discussions, the report was then finalized.

2 POLICY PROCESSES

Policies may consist of formal and well documented legislation and/or regulations, economic instruments and public investment programmes, or more informal decisions, used to achieve a given objective. A relevant and specific national policy for sectoral development is the cornerstone for effective strategic planning and implementation (see figure below). As such it is important that the processes by which policies are developed, and over time, reviewed and updated, are robust and inclusive.

Figure 1: Fisheries policy and its influence on sector development planning



Policy making has been defined as " *the process by which governments translate their political vision into programmes and actions to deliver outcomes*" (UK Cabinet Office, 1999).

There are a number of characteristics of 'good' policy, including:

- **Strategic** – looks ahead and contributes to long term government goals
- **Outcome focused** – aims to deliver desired changes in the real world
- **Joined up** – works across organizational boundaries
- **Inclusive** – is fair and takes account of the interests of all
- **Flexible and innovative** – tackles causes, not symptoms and is not afraid of experimentation
- **Robust** – stands the test of time and works in practice from the start.

This section therefore looks at how policy is formed, the influence of different stakeholder groups and the degree to which the policy development process is responsive to on-going changes in the sector and in the wider national development environment.

2.1 FISHERIES POLICY PROCESSES

Five of the eight BOBLME countries have specific sectoral policies for fisheries:

- **Sri Lanka:** 'Ten Year Development Policy Framework of the Fisheries and Aquatic Resources Sector 2007 – 2016' (March 2007). Also supported by a 'Fisheries Sector Development Strategy for 2010 – 2013'.
- **India:** 'Comprehensive Marine Fisheries Policy' (2004) at federal level as well as a number of State level fisheries policies and policy statements.
- **Bangladesh:** 'National Fisheries Strategy' (1998) and a 'National Fisheries Strategy and Action Plan for the Implementation of the National Fisheries Strategy' (2006).
- **Myanmar:** 'National Policy on Fishery Sector' (undated) and a 'Master Plan' (2001-2031) for national development.
- **Thailand:** 'Fishery Policy Directions of Thailand Statement' (2006) and a 'Master Plan for Marine Fisheries' (commencing from 2010).

In most of these cases the strategies have a finite life (usually five to ten years), with some being open-ended. The other three countries approach sectoral policy indirectly through the following mechanisms:

- The **Maldives** includes policy directives as a specific chapter in the in the '*Aneh Divehi Raaje*' ('National Framework for Development 2009 - 2013'). Otherwise a number of policy elements can be found in a new draft Fisheries Bill (to be resubmitted in 2011).
- **Malaysia** has a brief set of 'objectives and functions' for the Department of Fisheries, as well as elements of fisheries policy in the new 'National Agriculture Policy' (2010 - 2020), which is supported by the National Strategic Fisheries Plan (2010-2020).
- **Indonesia** has policy directives embedded in a series of Government and Minister of Marine Affairs and Fisheries decrees and laws.

2.1.1 Stakeholder influences on policy

The process of setting fisheries policy has traditionally adopted a 'top down' approach whereby policy content is largely decided on the basis of national development priorities, reflecting contrasting elements such as increasing GDP and production, safeguarding livelihoods, ensuring food security and fulfilling export and foreign exchange earning aspirations. Whilst it is obviously essential to be consistent with wider national development policy, it is increasingly apparent that fisheries policy must also meet the hopes and specific needs of sector participants at all different levels. Traditionally too, it has also been the case that more economically powerful stakeholders have tended to have a greater say in policy development than more marginalized stakeholders. Whilst it is relatively easy to include larger industrial stakeholders (indeed such organizations are often key drivers of policy change), it may be less easy to include representation from small-scale fisheries and the large number of upstream / downstream sector participants.

A number of approaches in countries in recent years have however served to broaden participation in policy development. These approaches have included more open workshop processes to develop policy, as well as the publication of 'position

papers' or so-called 'white papers'³ for public comment and response, in an attempt to improve transparency and provide mechanisms to increase stakeholder influence.

Based on the questionnaires contained in this report however, the fundamental policy setters in fisheries policy typically remain the *technical government staff in the fisheries ministry / department at national level* (see **Table 1** overleaf). The only exceptions were the Maldives and Indonesia where *non-sector political government staff, also at national level*, are the main policy setters and were the second most influential group overall. *Technical fisheries staff at Provincial and local levels* were the next most influential groups.

Non-Governmental Organizations (NGOs) from civil society were ranked the fifth most influential, scoring particularly highly in Thailand (the most influential) and the Maldives, but were less influential in Indonesia and Malaysia.

Sector participants were the next most influential groups, with the harvesting sectors from *large scale, small scale* and then *post-harvest representatives* ranked 7th, 8th and 9th respectively. The large-scale harvesters were particularly influential in Thailand and had the least influence in Bangladesh. The small-scale fisheries (SSF) sector was also influential in Thailand and India, but surprisingly low in Bangladesh and the Maldives given the size and importance of SSF in these countries, but in the Maldives the industrial processing sector is known to be particularly influential. In addition, the 2006 National Fisheries Strategy in Bangladesh was designed to shift representation towards greater community participation and consultation.

Overall the least influential groups on setting policy were *political government staff at provincial or local levels*, as well as *donors and / or consultants funded by them*. Only in the Maldives and Bangladesh were the latter seen to have any significant influence.

Although not included in the questionnaire, it is also likely that fisheries policy at national level is influenced by *regional commitments and considerations*. For instance, those nations with important tuna fisheries (e.g. the Maldives, India, Sri Lanka, Thailand, Malaysia & Indonesia) all members of the Indian Ocean Tuna Commission IOTC (the Maldives as a 'Cooperating Non-Contracting Party') and are thus bound by certain resolutions. Likewise membership of the Southeast Asia Fisheries Development Center (SEAFDEC), the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) and the ASEAN Working Group on Fisheries may have an influence on national policy development, either through needing to conform to certain conditions or as a result of awareness developed as a result of participating in these groups.

The BOBLME countries (with the exception of Maldives) are members of the Asia Pacific Fisheries Commission which works to improve understanding, awareness and cooperation in fisheries issues in the Asia-Pacific Region and holds regular consultative forum meetings.

³ In Canada, a white paper "is considered to be a policy document, approved by Cabinet, tabled in the House of Commons and made available to the general public." (Doerr, 1973). Doerr also notes that the "provision of policy information through the use of white and green papers can help to create an awareness of policy issues among parliamentarians and the public and to encourage an exchange of information and analysis. They can also serve as educational techniques (Doerr, 1981)

Table 1: Main influences on setting fisheries policy

	Level of policy setting influence	Ranking of influence (1 most influential to 12 least influential)								Average	Overall Rank
		Maldives	Sri Lanka	India	Bangladesh	Myanmar	Thailand	Malaysia	Indonesia		
MOST INFLUENTIAL	Technical government staff in fisheries ministry/department at national level	4=	1	1	1	1=	1=	1	2	1.5	1
	Political government staff at national level	1=	2	5=	4	1=	8	12=	1	4.3	2
	Technical government staff in fisheries ministry/department at provincial level	7=	4	2	12=	3=	1=	2	4	4.4	3
	Technical government staff in fisheries ministry/department at local level	9=	3	12=	3	6=	1=	3	6	5.3	4
	Non-governmental organizations from civil society	3	9	4	5	6=	1=	8=	10	5.8	5
	Technical government staff in other sector ministries/departments	4=	8	12=	2	3=	8=	4	7	6.0	6
	Harvesting sector representatives from large-scale/industrial sector	7=	5	5=	12=	6=	1=	6=	9	6.4	7
LEAST INFLUENTIAL	Harvesting sector representatives from small-scale/artisanal sector	12	6	3	12=	6=	1=	6=	8	6.8	8
	Processing/marketing sector representatives	1=	7	12=	12=	6=	1=	5	11	6.9	9
	Political government staff at provincial and/or municipal council level	9=	10	12=	12=	3	8=	12=	3	8.5	10
	Political government staff at local level	9=	11	12=	12=	6=	8=	12=	5	9.3	11
	Donors and/or consultants funded by them	4=	12	12=	6	12	12	8=	12	9.4	12

Source: Questionnaire to BOBLME countries (2011)

Note: The lowest rank of 12 may indicate virtually no influence

2.1.2 Policy update and review

Policy guiding the fisheries sector is not just comprised of formal policy documents, but also of *ad hoc* and more informal decisions that may be taken in response to sector needs or lobbying by particular interest groups. Thus policy may also be contained in Ministerial or Departmental decisions that may be formally documented, or just communicated to stakeholders and absorbed in working practices. Research also plays a critical role in informing policy decisions and in our research we explored the extent to which countries have formal research plans.

Policy update and review processes are assessed country by country following the table overleaf.

In the *Maldives* national policy tends to follow the Government election cycle, with successive governments preparing development plans upon coming into power. For instance the current 'Strategic Action Programme (SAP or *Aneh Divehi Raaje*) runs over 2009 - 2013 (the current Government was elected in 2009 and the next elections are 2014).

In *Sri Lanka* fisheries policy tends to be in line with a recurrent 10 year planning cycle, but is also influenced by changes in Government with consequential changes in strategic thinking.

In *India* there is a five year national development plan cycle (currently ending in 2012). Fisheries research plans are also based around the same planning cycle and can thus inform policy updates at national revision points, which mechanisms built in to support this process.

In *Bangladesh*, fisheries policies are reviewed roughly every five years, although this is not fixed, mainly when the Department of Fisheries or BFRI (Bangladesh Fisheries Research Institute) consider changes are necessary. BFRI have considerable influence, which is validated by an annual research planning workshop and the preparation of a five year fisheries research plan.

Myanmar provided little information on policy development processes beyond the fact that private sector lobbying is not effective in changing policy, which is very much driven by a top down approach.

In *Thailand* national and sectoral planning also revolve around the same five year planning process, currently based on the National Economic and Social Development Plan (2007 - 2011), although the Master Plan for Marine Fisheries Management (the Master Plan) was developed at the end of 2008 and not approved by Cabinet until 2010. Research planning in Thailand is also based on the Master Plan.

In *Malaysia*, the DG for Fisheries is responsible for preparing fisheries sector plans under a variable set of overarching planning cycles lasting between four and ten years. Possibly the most influential policy framework is the Agro-food Policy (2011 to 2020) which will go under review in 2019, including fisheries elements. The National Fisheries Strategic Plan (2011-2020) will be reviewed by 2019. The Strategic Directions for Fisheries Research and Development (2010-2015) contain plans for research and development until 2015.

Indonesia also has a five year recurrent planning cycle, which is currently represented by the Strategic Plan of Ministry of Marine Affairs and Fisheries (2010 – 2014).

In summary, fisheries policy reviews and updates within the BOBLME countries tend to be concurrent with national policy development cycles, most frequently over five year periods. The main exceptions to this are in cases where changes in government might accelerate policy changes. The success of lobbying by sector participants for policy change is not particularly notable in these countries. In contrast, changes in research planning cycles and priorities may exert particular influence on policy update and review, reflecting the strong influence of Governmental technical specialists in setting policy.

2.2 MARINE ENVIRONMENTAL POLICY PROCESSES

None of the BOBLME countries have ‘marine environmental’ policies as such, but all have some degree of national environmental planning, including biodiversity conservation strategies, often with strong marine and coastal elements. The national marine environmental strategies and the main implementing strategies are listed below:

Table 2: Environmental policies and marine implementing strategies in the BOBLME countries

Country	Policies	Implementing strategies & plans
Maldives	Strategic Action Plan, National Framework for Development (2009 – 2013)	National Biodiversity Strategy and Action Plan (2002) National Environmental Action Plan III (2009) National Strategy for Sustainable Development (2009)
Sri Lanka	National Development Policy - <i>Mahinda Chintana</i> (2005) National Environment Policy (2003) National Wetland Policy (2005) National Policy on Wildlife Conservation (2000) National Policy on Watershed Management (2004)	National Coastal Resources Management Plan (2003) National Environmental Action Plan (NEAP) National Programme of Action for the Protection of the Marine Environment from Land-based Activities (2003) National Oil Spill Contingency Plan (2000) National Invasive Species Action Plan National Wetland Conservation Plan (2004) National Climate Change Adaptation Strategy for Sri Lanka (2011 – 2016)

Country	Policies	Implementing strategies & plans
India	National Environment Policy (2006) National Forest Policy (updated update 2006) National Conservation Strategy and Policy Statement on Environment and Development (1992) Policy Statement on Abatement of Pollution (1992) National Agriculture Policy (2000) National Water Policy (2002) Ocean Policy Statement (1982)	National Biodiversity Action Plan (2008)
Bangladesh	National Environment Policy and Implementation Plan (1992) National Water Policy (1999) National Policy for Conservation of Mangrove forests 6th Five year plan (2010-15)	National Environment Management Action Plan (1995) Coastal Development Strategy (2006) National Adaptation Program of Action (2009) Climate Change Strategy & Action Plan (2009) National Water Management Plan (2001 - 2025)
Myanmar	National Medium Term Priority Framework National Environment Policy (1994) Forest Policy (1995)	National Sustainable Development Strategy National Biosafety Framework (NBF) Ayeryarwady Dolphin Conservation & Management Action Plan (2005)
Thailand	Policy and Prospective Plan for Enhancement and Conservation of National Environmental Quality (1997 - 2016) National Policy on Marine and Coastal Resources (2006) Policy, Measure & Plan for Sustainable Biodiversity Conservation & Utilization (2008 – 2012)	Country Management Plan (2008 – 2011)
Malaysia	National Biodiversity Policy (1998) National Policy on Environment (2002) Common Vision on Biodiversity (2009) National Ecotourism Policy (1996)	National Biodiversity Strategic Action Plan Action Plan for the Conservation and Sustainable Use of Fishery Resource Biological Diversity of Malaysia (2006) National Action Plan for the Management of Coral Reefs in Malaysia (2008) NPoA Coral Triangle Initiative (2010-2015) National Physical Plan II (2010)
Indonesia	National Development Plan (2000 - 2004) (PROPENAS) Medium Term Development Plan	Strategic Plan of Ministry of Marine Affairs and Fisheries (2010 – 2014) National Strategies & Wetland Management Action Plan Biodiversity Action Plan for Indonesia (1993) Indonesian Biodiversity Strategy and Action Plan 2003 - 2020 (IBSAP) National Action Plan for Climate Change

Approaches to environmental policy planning vary widely across the different BOBLME countries. A number of countries in the region (i.e. Sri Lanka, Bangladesh, Thailand and Malaysia) have specific environmental policies, although a number of these are now rather dated. In most cases these are implemented through some form of national action plan which usually includes marine environmental elements (see **Section 4.1** for more details).

For those countries without a specific environmental policy, there are usually implementing plans of some kind reflecting sustainability initiatives in the wider national development policy and planning framework. One example is the Maldivian 'National Strategy for Sustainable Development' which is partially based on the 'National Environmental Action Plan III' (2009 - 2013).

2.2.1 Stakeholder influences on marine environmental policy

Based on the questionnaire contained in this report, the fundamental policy setters in marine-related aspects of environmental policy tend to be both *technical government staff in the environmental ministry / department national level*, followed by the *political government staff*, both at national levels (see Table 3 overleaf). The main exception is Bangladesh, where although the Ministry of Environment and Forestry (MoEF) was responsible for drafting the 1982 National Environment Plan, in reality it was drafted by an informally organized Task Force composed of technical specialists sourced from international donor agencies, experts from selected NGOs and some civil society bodies (Islam, 2007). As a result, this may have reduced the political 'ownership' of the Policy (Aminuzzaman, 2010).

Compared to fisheries policy setting, environmental policy was more strongly influenced by *political government bodies at provincial or state levels*, although Bangladesh and Malaysia were the exceptions. Environmental policy setting in Myanmar is almost entirely dictated by national or provincial level political actors. *Technical staff from non-environmental Ministries* are also a strong influence in most countries.

The *private sector* and *NGOs* are both mid-ranked in terms of their influence on environmental policy setting. Both groups are considered particularly influential in Thailand and Indonesia but have no influence at all in Myanmar.

There was a similar pattern for *political government staff at local level* who are also influential in the heavily decentralized governments of Thailand and Indonesia. *Donors and consultants* had only some influence in policy setting in Bangladesh (see comments above) and Sri Lanka. The least influential group were *technical specialists at the local level* (except in Indonesia where they were considered to be strongly influential).

In **summary**, there was a much more polarized approach to policy setting for the marine environment than in the fisheries sector. This reflects the multi-sectoral nature of environmental policy development and the strong influence of city municipalities, which indicates a strong bias towards the decentralized nature and increasing influence of coastal cities in countries like Indonesia and Thailand (there was no response from India on this subject, but given the devolved nature of government a similar situation probably exists there too).

In the less decentralized governments of the Maldives, Sri Lanka and Myanmar, environmental policy development tends to be a national task with relatively little localized influence.

Table 3: Main influences on setting marine environmental policy

Level of policy setting influence		Ranking of influence (1 most influential to 12 least influential)							Average	Overall Rank
		Maldives	Sri Lanka	Bangladesh	Myanmar	Thailand	Malaysia	Indonesia		
MOST INFLUENTIAL	Technical government staff in environmental ministry/department at national level	1	2	1	3	1	1	2	1.6	1
	Political government staff at national level	1	1	8	1	1	5	1	2.6	2
	Technical government staff in other sectoral ministries / departments	3	2	3	12	1	4	2	3.9	3
	Political government staff at provincial or state level	3	4	12	1	1	6	2	4.1	4
	Technical government staff in environmental ministry/department at provincial level	3	4	12	4	1	7	2	4.7	5
	Private sector industry	9	9	4	12	1	2	2	5.6	6
LEAST INFLUENTIAL	Non-governmental organizations from civil society	9	6	7	12	1	3	2	5.7	7
	Public sector industry	3	9	4	12	9	8	2	6.7	8
	Political government staff at local level	3	11	12	12	1	10	2	7.3	9
	Donors and/or consultants funded by them	3	7	6	12	12	11	2	7.6	10
	Technical government staff in environmental ministry/department at local/district level	9	7	12	12	12	9	2	9.0	11
	Others	12	12	1	12	12			9.8	12

Source: Questionnaire to BOBLME countries (2011)

Note: The lowest rank of 12 may indicate no influence. India provided no ranking in questionnaire responses

2.2.2 Marine environmental policy update and review processes

In the *Maldives* the current NEAP III (2009-2013) will be reviewed in 2013. This legally requires public participation, and particularly community participation, in decision-making through the EIA process. The Maldives Marine Research Centre (MRC) contributes to the process but its capability appears to be severely constrained by low staffing and funding levels.

In *Sri Lanka* environmental policy documents tend to be reviewed every five years in line with the national development planning cycles. This is assisted by the strong marine research capability in the country, although this may be compromised by funding limitations. In addition the questionnaire respondents highlighted a narrow and sector-specific focus of research with a lack of joint thinking between different ministries.

In *India*, environmental policy is reviewed on an annual basis with a provision to undertake consultation with a cross section of stakeholders every three years. There is a more comprehensive review over the longer term when the National Environmental Policy undergoes a more comprehensive review (see **Box 1** below).

Box 1: Stakeholder consultation in environmental policy development in India

A draft of the *2006 National Environment Policy* was prepared through an intensive process of consultation within the Government and with inputs from experts.

The draft, in both English and Hindi, was posted on the website of the Ministry of Environment and Forests and responses were invited from individuals and organizations, through advertisements in national and regional newspapers. The draft was open for public consultation from 21 August, 2004 to 31 December, 2004.

Consultations were also held with concerned Ministries of the Central Government, and all State/UT governments at meetings of the State Environment Ministers and senior officials. The latter were encouraged to undertake local level public consultations. The draft was also provided to the Members of Parliament and their views and suggestions were invited. The Ministry of Environment and Forests also held consultations with representatives of major academic and research institutions, and key industry associations, voluntary organizations, and individuals who were well known in the field. Detailed summaries of responses were prepared and the various concerns expressed by the respondents were included in the review deliberations.

Source: Study questionnaire

In *Bangladesh* there are no fixed dates for revision of environmental policy. Policy development initiatives tend to be taken by individual Ministries based on sectoral development needs, as well as following pressure from the media and vocal organizations such as the Bangladesh Environment Lawyers Association (BELA). This means that high profile issues such as ship breaking, waste management and increasingly climate change vulnerability tend to undergo more regular review than softer issues such as marine biodiversity. This is exacerbated by the weak national capability in marine environmental research.

In *Myanmar*, the National Commission for Environmental Affairs (NCEA) is the focal point for all environmental affairs, including environmental management (ICRI 1997). It is mandated to develop environmental policy, issue guidelines for implementing policy, to set environmental standard and lay down rules and regulations, guide and regulatory agencies on legal matters, and formulate policies and strategies that take into account environmental and developmental priorities. There are, however, no guidelines on how often this should occur.

In *Thailand* the environmental management cycle tends to be long-term e.g. up to 20 years (Policy and Prospective Plan for Enhancement and Conservation of National Environmental Quality, 1997 - 2016). Thailand's Environmental Quality Act clearly states that environmental quality must be based on good science and thus must involve science and research in their formulation.

In *Malaysia* the first National Steering Committee on Biodiversity (NSCB) was formed in 1993 in order to address policy matters relating to the Convention on Biological Diversity (CBD). Chaired by the Secretary-General of the then Ministry of Science, Technology and Environment (MOSTE), it comprised a wide range of ministries, agencies and NGOs. Representatives from the state governments were also invited to sit in as and when required. The NPBD has not been revised in the twelve years since its inception. This is largely due to the fact that the policy fell under the responsibility of a number of different ministries over the period. Malaysia's Fourth National Report to the CBD (2009) suggested that a review be carried out. Following this, a rapid review of the NPBD was initiated by NRE. The review, which is ongoing, will provide recommendations on the appropriate consultative process and studies required for the revision exercise, as well as the particular aspects of the NPBD that need to be improved or updated. It is anticipated that the review will focus on recommendations pertaining to operational aspects, as the NPBD did not set targets and timeframes, or delegate duties of implementation to relevant agencies.

In *Indonesia*, in line with national planning guidelines, environmental policy is usually reviewed every five years and most recently in 2009. In recent years this policy development has benefited from stronger research and baseline information but, according to the questionnaire respondents, this might have resulted in too much complexity and resulting implementation difficulties, especially at local levels.

2.3 ICM POLICY PROCESSES

2.3.1 Existence of ICM policies and plans

Of the BOBLME countries, only *Bangladesh* has a specific Coastal Zone Management Policy (2005). *Sri Lanka* has a recurrent National Coastal Zone Management Plan (1990, 1997 & 2004) and *India* a recent (2011) Coastal Regulation Zone Notification.

Malaysia has recently started implementation of a National Coastal Zone Physical Plan which will provide a framework for managing the environmental sensitive areas along Peninsular Malaysia's coastline and to promote sustainable development along its shores.

Indonesia only developed an ICM approach in 2007 through the Coastal and Small Island Management (CSIM) Law (Act No 27/2007) which is widely regarded as a *de facto* ICM policy framework. The Ministry of Marine Affairs and Fisheries is appointed as the lead agency, and delegates powers at Provincial and municipal levels and includes both marine zoning and an obligation to provide shore access for local communities.

Myanmar does not appear to have any documented ICM initiatives (BOBLME, 2010) and *Thailand* seems to lack any policy that includes ICM terminology.

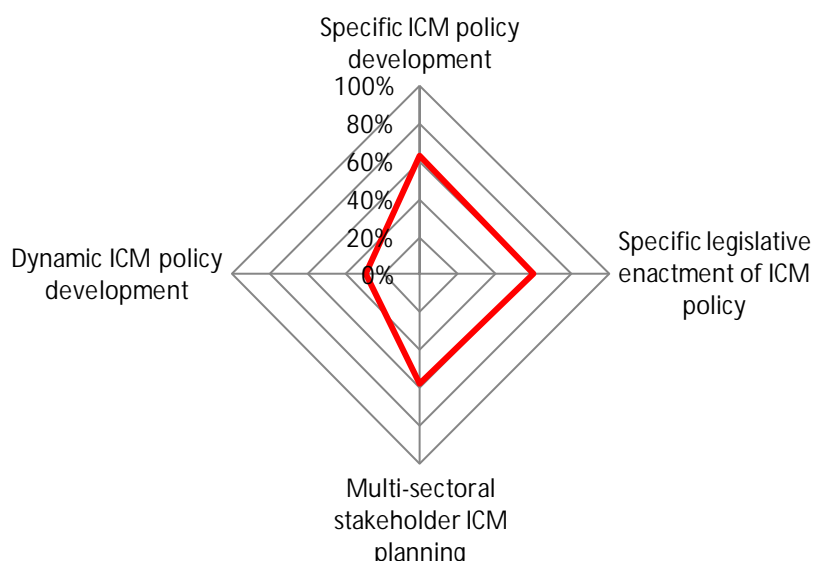
The results of the questionnaire are presented in the radar or 'spider web' chart in **Figure 2** below, with respect to the level of development of ICM policy and planning initiatives, their enactment through specific legislation and the inclusion of multi-sectoral stakeholder involvement. This particular type of graphical analysis has been used throughout this report.

In interpreting the graphs, the following points should be noted:

1. Because policy documents do not include an issue, this does not necessarily mean that a country is not involved with concrete implementation activities related to the issue concerned⁴;
2. The percentage of policy documents containing reference to a particular issue is calculated by dividing the total number of policies including the issue, by the total number of policies for which the consultants are fairly certain whether the issue is included or not. Typically it has been possible to say with a high degree of certainty whether issues are included or not for more than 90% of individual countries' policies; and
3. The graphs provide a clear indication of where there is most consistency within the region in terms of widespread/common references to specific issues i.e. those data points close to the outside of the "spider's web".

⁴ This relates to the slightly grey area as to whether government actions represent 'policy'. For the sake of this paper, a fairly narrow definition of policy is assumed, and one which relates primarily to statements in formal policy and planning documents.

Figure 2: ICM policy development



This graphic shows that around 2/3's of the respondents engaged in some degree of ICM policy development, enactment and stakeholder planning. However the most striking result is the low level of on-going (e.g. dynamic) ICM policy development. This suggests that much of this initial effort in ICM has been driven by external donors with comparatively little country ownership and thus sustainability. For instance Bangladesh's Coastal Zone Management Policy evolved from a UK-Netherlands-funded CZM Project over 2000 - 2005 and despite an ICZM 'Identification Mission' in 2009 with further Dutch funding, on the ground implementation of ICM in Bangladesh has shown little signs of revival.

2.3.2 Coastal zone policy update and review processes

In the *Maldives*, although several national laws and regulations directly and indirectly govern coastal management (Appendix C), there is no overarching framework policy or law to consolidate ICM. Recent assessments of coastal management in the country have identified the need to develop such a framework. The Ministry of Housing and Environment published national guidelines on how to prepare a land-use plan, along with a nationwide training programme to empower island people to prepare a land-use plan for their own islands. Extensive consultations are carried out with local communities before commencement of every coastal development project and the minutes and key results are sent to those who are involved in the process for their final comments, and disseminated among them and as well as to the general public through print and electronic media. There is no requirement for, or documentation of, stakeholder endorsement under any Maldivian law. But in practice documentation of stakeholder endorsement is carried out by each government authority for such stakeholder participatory activities carried out by each office.

In *Sri Lanka* the Coast Conservation Act of 1981 shifted emphasis from 'Coast Protection' to 'Coastal Zone Management'. This Act indicates that ICM planning should be based on comparative studies and must be revised every 4 years. It also specifies a 'Coast Conservation Advisory Council', indicating the agencies which should be included in the Council. The Advisory Council has to approve the plan and then advise the Minister in Charge of the subject and the Coastal Conservation Department (CCD) on policy matters. The 2004 CZM Plan steered the CCD towards a role that places more emphasis on policy planning and greater involvement in facilitating and coordinating planned ICM e.g. introducing the concept of shoreline management for controlling coastal erosion and the introduction of Special Area Management (SAM).

In *India*, in 1991 the Coastal Regulation Zone Notification (CRZ Notification, 1991) was issued by the Ministry of Environment and Forests under the Environmental Protection Act, 1986 to protect the 500 meter zone from the high tide line and along rivers and creeks up to the area of tidal action. This has recently been replaced by the draft Coastal Management Zone (CMZ) Notification in 2008 which was finally enacted in 2011. This new act was fiercely contested by a broad-based platform called the National Campaign for the Protection of the Coast (NCPC) made up of the National Fishworkers Forum (NFF), other fishing community organizations, NGOs and environmental groups who contended that the CMZ notification was an attempt to replace the 'regulatory' framework of the 1991 notification with a "management" framework that would, in effect, allow any form of development on the coast as long as there was a 'management plan' in place. The final notification takes into account the outcomes of the public consultations, five rounds of consultations with fishermen's associations, the recommendations contained in "Final Frontier", as well as the comments received after the pre-draft and draft notification were put up for comments in April and September 2010.

In *Bangladesh* the PDO - ICZM Project (2002 - 2005) was set up with UK/Netherlands funding. The main goal of the PDO-ICZM project was to structure and introduce a process of ICZM in Bangladesh. Largely as a result of this, the Ministry of Water Resources produced the first CZM Policy in 2005. WARPO was designated as the lead agency, with Inter-ministerial Technical Committees and Program Steering Committees to be established. As discussed above there have been little further implementation activities since, largely due to the lack of multi-sectoral coordination in the coastal zone. The only bilateral communication that takes place between the Ministry of Land and other executing agencies is when the latter require land for construction purposes. Further, the agencies responsible for coastal management activities have hardly any representation at the local level. This situation is exacerbated by weak coordination and linkages between WARPO and the universities and institutes conducting coastal and marine-related research.

In *Myanmar*, a recent review (BOBLME, 2010) was not able to identify any pilot programs on ICM or community based ICM. It is not clear if this is due to the absence of any ICM or community based ICM initiatives in Myanmar, or if there are any programs which are not being documented. Until 1985, the Ministry of Agriculture and Forestry was solely responsible for the management of the agricultural, fisheries and forestry sectors. However, by the late 1990s, the

government realized the need for independent management of each sector given their strong growth, and separate Ministries were created to manage each sector. At the grass-roots level, if conflicts arise due to overlapping decisions between these sectors, then it is the prerogative of local authorities (such as the Peace and Development Council at the state or division level) to intervene and find the best solution to solving the problems. As such, there are only weak legal coordination and institutional mechanisms at national level, and a lack of environmental protection laws to cover all aspects of coastal and marine ecosystems.

In *Thailand*, there is no specific policy that has ICM terminology in it. However, the Natural Resource Exploitation Act groups several sectors and agencies under this Act which includes the Forest Act of 1941, the Fisheries Act of 1947, the Minerals Acts of 1967, the Petroleum Act of 1971, and the Tourism Act of 1979. The integration between multiple sectoral and coordination of various organizations makes this Act the closest referral to any policy related ICM initiatives. The Tenth National Economic and Social Development Plan (2007 to 2011) promotes community rights and participation in natural management e.g. community forest and community coastal management.

In *Malaysia* there is no ICM policy *per se*, but spatial planning is encapsulated in the recent National Physical Plan II (2010). This plan contributes towards the conservation of the country's biodiversity through its fourth objective to secure spatial and environmental quality and diversity for a high quality of life. It includes various relevant policy statements, such as "NPP 24: Sensitive coastal and marine ecosystem shall be protected and managed in a sustainable manner". This recognizes that the coastal zones of Peninsular Malaysia have generally been experiencing rapid development including large-scale reclamation for tourism and urban purposes and that policies are needed to control and guide these developments so that the potential threats to the marine and coastal ecosystems such as alteration and loss of habitat, coastal pollution, over exploitation and coastal erosion and deposition can be minimized and monitored.

In *Indonesia*, before enactment of the Coastal and Small Island Management Law in 2007, the coastal zone was managed through single-sector legislation governing at least 14 economic development sectors. As a result management of coastal areas had become a continuous conflict of interests among the government institutions, whose authorities are named in each sectoral law. This fragmented coastal zone management resulted in overlapping policies, regulations, and planning, and the conflicts of authority led to legal uncertainty for stakeholders and investors and to degradation of coastal resources. An overlap remains between the central government's authority to designate protected areas and local governments' authority to demarcate coastline. It is still unclear what the authority of the local government really is. To address this issue, MMAF has compromised by initiating Local Marine Conservation Areas (LMCA). These efforts cannot, however, solve the problem of jurisdictional conflict between the national park authority, which is under the Ministry of Forestry, and local government, which means that the planning and implementation of a national marine protected area network remains problematic.

In **summary** the nature of ICM policy development in the BOBLME countries is highly varied and in some cases, appears to lack both a stakeholder consultation process and any real long-term commitment from Governments. As pressure on limited and increasingly valuable coastal lands grows under the twin onslaught of population growth and climate change, there needs to be increased development of equitable and sustainable ICM policy implementation mechanisms.

3 FISHERIES POLICY CONTENT AND IMPLEMENTATION

3.1 INTRODUCTION

Information on policy content and direction in individual BOBLME countries has been analyzed to generate a regional synthesis of the extent to which *policy contains references to different issues* (as summarized in the Tables in **Appendix K**) and the *main strategies and tools used to implement policy*. In the figures in the following text, the radar or “spider-web” graphs are used to show the percentage of policies that include a particular issue.

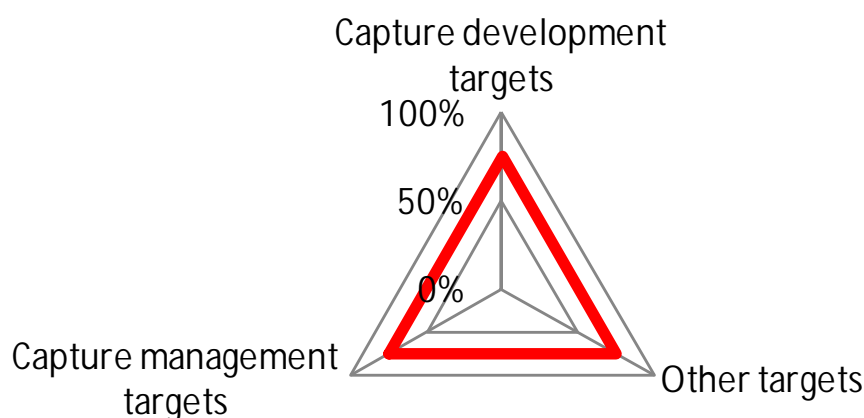
The following text provides comment and discussion on each of the four main subsections i.e. the use of targets, fisheries management issues, financial/economic and marketing issues, and socio-economic and poverty issues.

3.2 FISHERIES POLICY CONTENT

3.2.1 The use of policy targets

Policy documents in the region were reviewed to see whether they contain specific and quantifiable targets for a) development (i.e. production totals), and b) management, of the fisheries sector. They were also assessed for the inclusion of targets related to other issues.

Figure 3: Use of policy targets



Fisheries policies have traditionally used *development targets* to establish production and in some cases employment goals for the sector. Whilst useful for providing the private sector with an understanding of the margins for expanding fisheries, they can be regarded as encouraging unsustainable production increases if not carefully aligned with resource management. Thus there is often a lack of coherence between policy objectives of increasing production and increasing sustainability.

Around three-quarters of the BOBLME countries set such targets, including two of those without formal fisheries sector policy documents (Malaysia & Indonesia). These targets are mainly production target increases by certain dates, usually disaggregated into different fisheries components (e.g. coastal, offshore, freshwater, etc). In some cases (e.g. Bangladesh) these are explicitly linked to other non-sectoral development targets such as poverty reduction. In India, production increases are set in line with predicted maximum sustainable yield estimates.

Encouragingly however, a similar proportion of countries employ **fisheries management targets**. Fisheries management targets are considered a more focused and responsible approach to target as they can be made SMART⁵ and better aligned with resource sustainability objectives. Examples of fisheries management targets adopted by BOBLME countries are shown in **Box 2** below.

Box 2: Example of good management targets by BOBLME countries

- Declaration of Fisheries Management Areas (Sri Lanka)
- Fleet reduction targets in line with capacity limits (India)
- Stock recovery plans (Thailand & India)
- Marine and freshwater protected areas / no-take zones (Bangladesh, Myanmar, Malaysia & Indonesia)
- Gear restrictions (Myanmar, Malaysia & India)
- Institutional reform (Thailand)

Again around three-quarters of policies also have targets relating to **'other' factors**. Most typically these 'other' targets relate to increases in:

- **Exports** (e.g. India's MPEDA has a detailed vision, including ambitious export targets as well as targets for a share of domestic and global exports);
- **Per capita fish availability** (e.g. Sri Lanka has provided a per capita fish consumption target over the 'Fisheries Sector Development Strategy 2010' - 2013);
- **Value-adding** (e.g. the Thai government has an interesting objective to increase the per unit value of seafood products by 10% each year);
- **SSF incomes** (e.g. the Malaysian Government looks to ensure the net income of groups involved in the fisheries activities exceed RM 1,500 (US\$ 500) per month);
- **Public sector investment** e.g. the Malaysian Government seeks an additional investment into the fisheries sector of RM 10 billion (US\$ 3.3 billion) by 2020); and
- **Commercializing technology** (e.g. the Malaysian Government has committed to commercialize five research and development (R&D) outputs per year and develop ten new technologies by 2020).

Key findings / discussion points: The inclusion and relative use of targets in policy documents indicates that:

- The majority of countries are still committed to substantial marine capture fisheries production increases despite some doubt over the availability of fish stocks to support this on a long-term basis;
- There is increasing use of variety of fisheries management targets. There is scope to produce regional guidelines on 'good' management target setting to ensure that BOBLME countries can formally adopt the wide range of different management tools available to them;

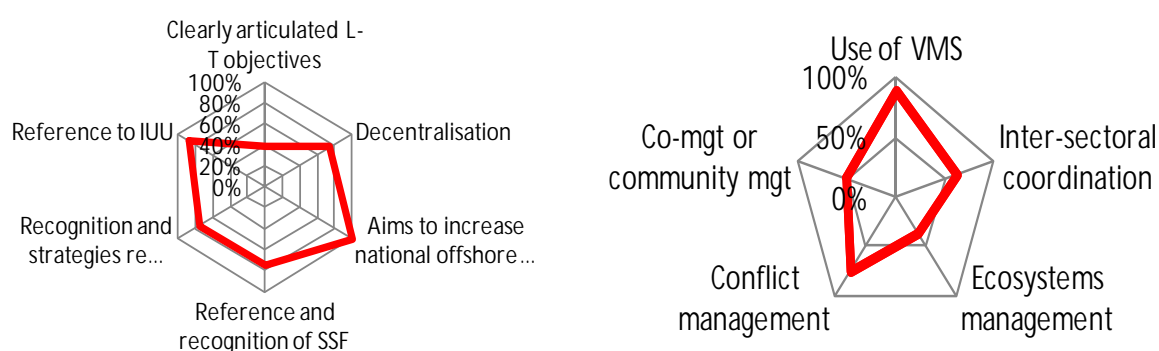
⁵ SMART: Specific, Measurable, Achievable, Realistic and Timely

- Likewise there are some other interesting and innovative targets which BOBLME policies have adopted which could also be adopted on a wider scale;
- The extent to which different countries monitor and evaluate their progress in achieving these targets was not analyzed but this would be a useful exercise in its own right.

3.2.2 Fisheries management objectives

The content of different fishery policies in terms of their management objectives was examined through the questionnaires. Eleven different indicators - varying from the presence of long-term objectives to the use of specific tools such as conflict resolution - were examined and the overall results are presented in Figure 4 below and examined in the subsequent text.

Figure 4: Policy content - Fisheries management objectives



Long-term management objectives: The setting of long-term management objectives is important as it demonstrates strategic thinking and allows for rationalization of the sector, especially if long-term reform is required. However, less than half the BOBLME countries stated specific long-term policy objectives for the fisheries sector and in most cases these were implicit rather than explicit e.g. using the term sustainable in rather a loose fashion. One of the precise uses of long-term objectives was that by Malaysia to optimize fishing capacity by 2020.

Decentralization: effective community / co-management requires decentralization of budgets, the ability to raise and retain revenue at the local level, and coherence between community/co-management policy and legislation. Around three-quarters of BOBLME countries include decentralized fisheries management in their policies, and in India fisheries management is entirely a state responsibility with efforts being made to delegate the authority to lower levels (see Box 3 below).

Box 3: Decentralization of fisheries management in India

In India fisheries management is a State affair. There are increasing provisions under which the State can delegate the authority to even lower levels i.e., various forms of local self-governments. In Tamil Nadu there are instances in which District administration is evolving and implementing successful local arrangements. In one such system, the operational timings of trawlers and traditional vessels are adjusted to avoid any conflict.

In Thailand there is a particularly strong process of decentralization, with increasing responsibility for monitoring, control and enforcement being delegated to the local authority (Sub-district authority or *Ao Bo To*) consistent with the policy of decentralization in the National Constitution. In contrast, in Malaysia decentralization of fisheries is only starting to be considered, as the strong central control of fisheries has always been considered as one of the reasons for its management success (De Young, C., 2006)

In Bangladesh there is a tiered governmental system for Department of Fisheries representation at district and lower levels (e.g. upazilas). However decentralization is not reflected in policy documents and power tends to be 'de-concentrated' rather than developed. The situation is changing and in 2005 the government delegated powers of implementation of rules under the Marine Fisheries Ordinance to the DFOs of coastal districts.

Efforts to increase national offshore fleet: in all eight BOBLME countries, fisheries policies of strategies emphasized the need to expand their national fleets offshore. This includes the Maldives, who until recently have largely restricted fishing to coastal (e.g. within 75 km) waters. In the cases where countries have included specific fleet targets, the offshore fisheries component has always required the largest increase.

The reason for this expansion is usually two-fold. Firstly in many cases inshore fisheries are often fully exploited and as a result are showing greater incidences of conflict. Equipping and training fishers to move further offshore and out of conflict areas to target lower pressure stocks is thus a rational management response. However this needs to be accompanied by management measures to reduce pressures on inshore stocks, especially in the face of higher fuel costs that restrict movements offshore. A second explanation is a greater desire to allocate finite fish resources to national vessels rather than licensed foreign vessels, as this is likely to maximize downstream employment opportunities if more of the fish is landed in country, as well as providing for greater food security.

Recognition of, and reference to, small-scale fisheries: the majority of policies do favor 'small-scale fisheries' (SSF), although the lack of an appropriate generic definition of SSF hinders this formal recognition. Indeed most BOBLME countries define 'coastal' or artisanal' fishing as small-scale which is justifiable in most cases. Whilst some simply provide formal policy support to SSF, others use this to promote tangible benefits through either zoning of fishing grounds (Bangladesh & Thailand), favorable licensing regimes (Sri Lanka), integration into larger-scale operations (Indonesia) and the introduction of rights-based fisheries regimes (Sri Lanka & Thailand).

Reference to fleet over-capacity: adjusting the capacity of fishing fleets to available fish resources is one of the greatest challenges facing fishers in the Bay of Bengal and elsewhere. Despite this, although three-quarters of all the policies examined mentioned the need to balance fishing capacity this was rarely translated into formal capacity-reduction targets or management regimes. There are some exceptions - in both Myanmar and Indonesia there is a moratorium on issuing new or additional fishing licenses for coastal waters and any change in engine power or vessel tonnage requires official permission. Capacity adjustment would also require the existence of a reliable and up-to-date vessel registration scheme, a consideration which is not met in most countries. The issue is further complicated by dual flagging and reflagging of vessels.

Reference to the need to tackle IUU fishing: all the BOBLME countries explicitly include policy statements referring to the need to reduce the incidence of illegal, unreported and unregulated (IUU) fishing. This has emerged as a major global issue, especially since the publication of FAO's International Plan of Action (IPOA) to prevent, deter and eliminate IUU fishing (FAO, 2001). The need for action has been further stimulated by various market actions, such as the new EU Regulation to prevent, deter and eliminate IUU fishing which entered into force on 1 January 2010.

Requirements for the use of vessel monitoring systems (VMS): VMS is a specific tool required of some fleet segments in all BOBLME countries except for Bangladesh (although it is referred to in the 11th Five-Year national development Plan). In most cases, as would be expected, the policy reference is simply a stated intent to install VMS on parts of the fleet rather than any specific plan which is usually a separate, more detailed process.

Inter-sectoral coordination: the fisheries sector cannot operate in isolation as there are policy implications for a number of other sectors (and *vice versa*) such as marine transport, coastal tourism, municipal development and offshore minerals to name a few. In all cases cross-cutting issues are flagged up in policy statements, but only in about two-thirds of cases is the role of other ministries or organizations recognized and the need for cross-sectoral coordination mechanisms explicitly stated. In some cases this lack of coordination is exacerbated by perceived jurisdictional overlaps, such as that between fisheries and forestry in mangrove areas.

Ecosystems management: the ecosystems approach to fisheries (EAF) emerged from the Reykjavik Declaration in 2001 and formally appeared as a supplement to FAO's Code of Conduct for Responsible Fisheries (CCRF) in 2005 (FAO, 2005). It builds upon the precautionary approach through widening the range of users of marine ecosystems (inc. both extractive and non-extractive users) in decision-making and improved participatory measures. In particular it (i) provides guidance on developing an EAF management plan, (ii) outlines approaches for research to support improved EAF, and (iii) provides guidance on the institutional and economic foundations required.

Only in about one third of the policies reviewed was the EAF included as discernible content (see **Box 4** for typical EAF policy objectives).

Box 4: Key policy objectives for an EAF

- A fishery must be conducted in a manner that does not lead to over-fishing
- Harvesting and processing capacity should be commensurate with estimated sustainable levels of resource and that increases in capacity should be further constrained when resource productivity is highly uncertain
- Fishing operations must be managed to minimize their impact on the structure, function and biological diversity of the system.
- Risks of change to the marine ecosystem that are not potentially reversible over two or three decades must be minimized
- The lack of full scientific certainty should not be used as a reason for postponing management measures that prevent stock decline or environmental degradation.
- Fisheries policy and management strategy should facilitate the implementation of actions agreed under international obligations such as the CCRF.

Source: Huntington *et al*, 2008.

In Bangladesh one of the objectives in the 'National Fisheries Strategy and Action Plan for the Implementation of the National Fisheries Strategy' (2006) is to "Maintain ecological balance, conserve biodiversity and improve public health". In Thailand, the fisheries master plan includes a specific strategy (Number 2) for "Ecosystem and Fishing Ground Rehabilitation to Safeguard Biodiversity and Marine Environmental Quality" that includes components to (i) introduce temporal and permanent closed areas supported by participatory support by community organizations, (ii) promote the ecosystem approach to fisheries management and (iii) promote sea ranching. Beyond this no more detailed measures are provided.

Conflict management: the potential for resource use conflict, and mechanisms to alleviate/reduce conflict, is mentioned in policy documents of six of the BOBLME countries. In Sri Lanka, the Special Area Management (SAM) process deals with conflict both within the fisheries sector, and between fisheries and other sectors. When conflicts among stakeholders are likely to lead to resource depletion/degradation in environmentally sensitive areas, these areas are identified first as areas needing Special Management Measures in the legislation (see **Box 5** overleaf).

Box 5: Conflict resolution in Sri Lankan policy

The Special Area Management (SAM) process deals with conflict both within the fisheries sector, and between fisheries and other sectors. When conflicts among stakeholders are likely to lead to resource depletion / degradation in environmentally sensitive areas, these areas are identified first as areas needing Special Management Measures in the legislation. Management of such resources is then carried out by a SAM Committee consisting of representatives of all stakeholders. This has worked quite well in Sri Lanka. Two such management sites are the Hikkaduwa and the Rekawa coastal areas.

Disputes between user groups have been settled by government over a number of decades using a dispute resolution mechanism that has resulted in specific local regulations being made, and which can be thought of as a form of co-management. Fisheries Ordinance 1940 contains detailed provisions to deal with disputes. Sections 20 and 20A, provide regulations to appoint a Committee of Inquiry or a Commissioner to deal with fishing disputes. Many area-specific regulations have resulted from this process.

The 2002 policy document also has a section on access, which includes issues which will reduce conflict e.g. zoning, access to beaches and landing sites, etc. It states that "The State shall provide all facilitative functions to ensure that conflicts among resources users, especially between those using inland water bodies for agricultural and fisheries purposes are resolved through proper coordination of the activities of multiple stakeholders, with the support of the relevant authorities"

Source: Macfadyen et al, 2005, Fisheries and Ocean Resources Sector Policy 2002

In India, State level fisheries regulations are often partly put in place to deal with conflicts. For example the Tamil Nadu Marine Fisheries Act (1983) was formulated to regulate fishing activities, protect interest of different sections, conserve fish and resolve law and order at sea. A common form of conflict resolution is through zonation (usually depth-based) that separates industrial mobile gears (e.g. trawls) from static gear which tend to be small-scale in nature (e.g. as adopted in Bangladesh, Myanmar, Thai and Malaysia marine waters) or reservation of inshore areas for artisanal fishing only.

The fisheries chapter of the Maldivian Aneh Dhivehi Raaje does not specifically mention fisheries conflicts, but this probably reflects the largely homogeneous nature of the Maldivian fleet and the presence of a large number of key stakeholders on the Fisheries Advisory Board, both which serve to reduce the potential for conflict.

Co-management/community management: the inclusion of local communities in on-going fisheries management is increasingly recognized as a means of fostering long-term good governance, responsible resource management and increased regulatory compliance. The general principles for participatory management are embedded in around half the BOBLME countries, although its implementation success is more varied. In Sri Lanka co-management is also fostered by important non-fisheries legislation relating to coastal conservation, especially in SAM areas (see **Box 5** above) and fishermen's cooperative societies are seen as being able to provide

the necessary focus within a community on which a management system could be based. The number of cooperative societies, their membership and financial resources (both internally generated and loans) have greatly increased in recent years. In Myanmar, whilst no co-management and community management are included in policy, fishing rights and community participation are already widely implemented. Thailand's Master Plan for Marine Fisheries has a specific objective to support fishery institutional strengthening and co-management, including the networking at all levels to enable their active participation in marine fisheries management. However none of these co-management policies have gone so far as the allocation of exclusive rights or Territorial Use Rights Fisheries (TURFs).

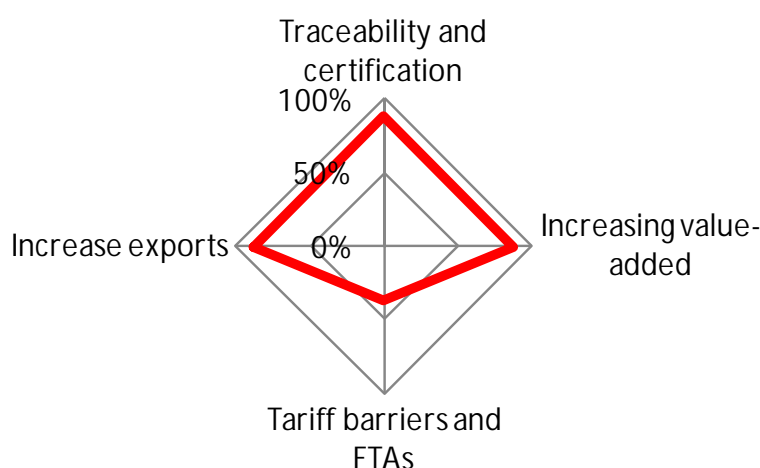
Key findings / discussion points: Some questions and issues raised by the text on fisheries management issues include:

- Policy commitments to rationalizing fleet capacity with available fisheries resources are common within the BOBLME countries but are rarely translated into formal capacity-reduction targets or management regimes;
- Likewise there is a frequent commitment to inter-sectoral communication and cooperation but such cooperation is often thwarted by jurisdictional overlaps and conflicts;
- Given the prevalence of IUU fishing and the importance for stock preservation of reducing IUU fishing activity, are countries utilizing the most cost-effective monitoring, control and surveillance methodologies?;
- The ecosystem approach to fisheries management is another common policy target yet the approach and mechanisms to implement this rarely exist in an integrated fashion; and
- The BOBLME countries have some leading global examples of 'on the ground' co-management and there is further scope for replication. However sufficient decision-making powers are not always devolved at the same time.

3.2.3 Financial/economic and marketing issues

The third main group of sub-issues assessed for their inclusion in policy documents related to financial, economic, marketing and trade issues.

Figure 5: Financial/economic and marketing issues



Traceability and product certification: there has been a strong market drive for increased product traceability in recent years, reflecting a combination of food safety concerns in an increasingly globalized market place, as well as greater consumer interest in the nature of the food we eat. This has resulted in a number of formal market regulations and an increasing number of voluntary, third party-certified product certification and traceability schemes. With BOBLME governments concerned about both ensuring food safety and the competitiveness of their products, this has inevitably been reflected in recent government policies in seafood production. However in most cases this has been focused on aquaculture products destined for the EU or US markets and there is relatively limited commitment to the traceability of capture fisheries products, especially for local or regional markets. Sri Lanka, India, Malaysia and Indonesia are now focusing on catch certification from wild fisheries.

Increasing product values: the majority of the BOBLME countries have policies focused on increasing the value of their seafood products; mostly through generic promotion (e.g. Maldives), but also through eliminating post-harvest losses (Sri Lanka), better post-harvest infrastructure (Sri Lanka & Bangladesh) and fiscal policies for product development and value-addition (Sri Lanka). One of the main reasons MPEDA was set up by the Indian Government in 1974 was to add value and promote Indian seafood products and is currently targeted to value add at least 75 percent of Indian seafood products by 2012.

Tariff barriers: with increased globalization there is a move to reduce tariff barriers and open up markets. Despite the implications for competitiveness, tariff-related issues are only raised by the policies / strategies of three of the BOBLME countries. In Sri Lanka this is mediated through the Board of Investment and in India is also under the mission and vision statement of MPEDA (which is part of the Ministry of Commerce and Industry). Myanmar policy is also reported to include statements relevant to tariff issues.

Increasing exports: the policies of all the BOBLME countries focus on increasing exports as a major policy directive, although the Thai policy is less explicit. It is seen as an important role of government intervention in terms of facilitating business overseas and ensuring the generic promotion of seafood products. Only in Bangladesh is there a caveat, stating that export development must not be at the cost of environmental degradation.

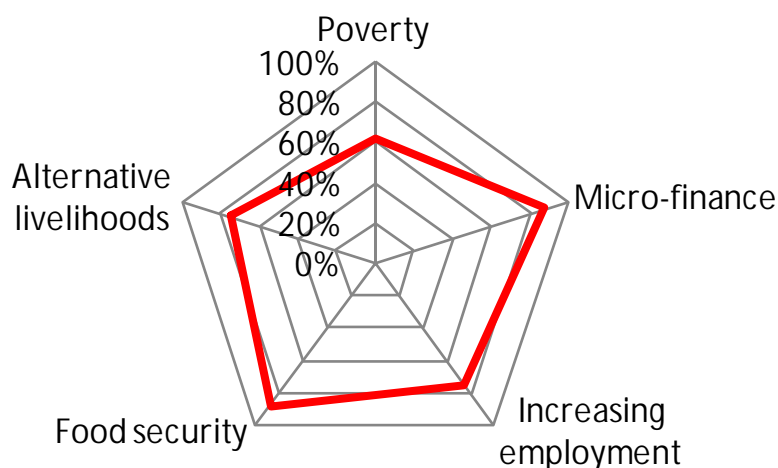
Key findings / discussion points: Some aspects for consideration, raised by the text above are:

- There is a need for greater emphasis of catch certification and traceability for capture fisheries as well as aquaculture, both for domestic as well as regional and international markets;
- The reduction of tariff barriers requires much greater policy attention in the BOBLME countries; and
- Policy advocacy for increasing exports needs to be balanced with food security (see below) and environmental needs.

3.2.4 Socio-economic and poverty issues

Given the dependence of coastal and rural inland communities upon fisheries, it is essential that fisheries policies support the disadvantaged, and are coherent with national development policies on issues such as micro-financing, food security and livelihood opportunities.

Figure 6: Socio-economic and poverty issues



Poverty: somewhat surprisingly, poverty alleviation is mentioned in less than two-thirds of the policies examined. This maybe because it is explicit in other national policy (for instance in the Maldives National Action Plan *Aneh Dhivehi Raaje*, or in India where poverty is addressed in all Central Sector Schemes by extending benefits to citizens 'below poverty line' as opposed to 'above poverty line' (all fisheries schemes have this component). In Bangladesh the National Fisheries Strategy (2006) is guided by the Poverty Reduction Strategy Paper (PRSP), and by international agreements signed by the government. In Thailand the word "poverty" is not included in the 2006 policy, although the policy does cover social issues and ongoing activities targeting poverty reduction.

Provision for micro-finance: seven out of the eight BOBLME countries include provisions for micro-credit or access to finance/capital in their policy statements. The instruments tend to include:

- Establishment of specialist agro / fisheries development banks (Sri Lanka, India, Malaysia);
- Favorable interest rates and re-payment terms (Maldives);
- Lending focusing on certain fleet / fisheries (Sri Lanka);
- Creation of revolving credit funds (Thailand);
- Associated training and capacity building (Maldives);
- Government encouraged NGO involvement (India & Bangladesh); and
- Alternative livelihoods (Bangladesh).

Maximizing employment: as in many other regions of the world, the role of fisheries in rural employment is undergoing changes. With the increasing dominance of the service sector, combined with rural depopulation, fisheries is becoming a less attractive career option for many young people. In addition, it is also recognized

that inshore fisheries in particular may be over-capacity and thus there is a policy incentive to reduce the number of boats - and people - involved in order to boost individual incomes - however this is politically a sensitive subject and thus often avoided in setting policy objectives. Only in Thailand was reducing employment levels to match fishing opportunities raised. In some countries such as Bangladesh there is a policy move to retrain and employ fishermen in aquaculture ventures. But in most countries, policies still retain a commitment to increasing employment in the fisheries sector.

Food security: the World Food Summit of 1996 defined food security as existing “when all people at all times have access to sufficient, safe, nutritious food to maintain a healthy and active life”. Food security is built on three pillars: (i) *food availability*: sufficient quantities of food available on a consistent basis; (ii) *food access*: having sufficient resources to obtain appropriate foods for a nutritious diet; and (iii) *food use*: appropriate use based on knowledge of basic nutrition and care, as well as adequate water and sanitation.

All the BOBLME countries, with the exception of Thailand, include food security within their fisheries policy content. Fish is widely seen as a cheap, widely available source of protein and micro-nutrients, which is particularly accessible to poorer rural and coastal communities. In India the primary national goal for fisheries is to increase per capita availability of fish from the current level of around 5 kg/year to around 11 kg/year (the foreword to the Comprehensive Marine Fishing Policy, 2004 states: “Relevance of the Marine Fisheries Sector extends beyond the livelihood security of the large coastal population to the food security of our countrymen and our foreign exchange generation”). In Bangladesh the contribution of fish to diets is characterized by the DoF’s food safety net program that ensures householders have sufficient grain during the period of the hilsa fishing ban.

Alternative livelihoods: three-quarters of the eight BOBLME countries provided assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities. The main exception was the Maldives where there is no perception that there are too many fishermen. In Sri Lanka, in coastal fisheries with excessive fishing effort, the policy is to reduce fishing pressure by diverting the excessive fishing effort to under-exploited fisheries or generating alternative employment activities e.g. eco-tourism programmes and aquaculture. The main mechanisms are through free or subsidized training programmes and income support.

Key findings / discussion points: Analysis of some important socio-economic and poverty issues included in policy raises the following questions and observations:

- Policy statements on employment prospects for fisheries need to balance the need to attract new recruits into the catching sector with anticipated fishing capacity reduction programmes;
- As global demand for fish continues to rise, BOBLME countries need to make explicit policy statements that attempt to balance the opportunity for the foreign exchange gains from exports with the need to ensure the food security of its people. This needs to recognize that a scarcity of fish on the local market not only reduces its availability, but also increases its cost.

3.3 FISHERIES POLICY IMPLEMENTATION

Up to this point, this report has focused on the *process* of preparing fisheries policies and their *content*. This next section examines how the BOBLME countries implement their policies and provides a comparative analysis of the varied approaches adopted. There are a number of different tools available that are listed below, and further details are provided in the subsequent text on their adoption within specific countries in the region.

Box 6: List of fisheries policy implementation tools

Stock management approaches

- MSY concept
- Harvest control rules
- Species-specific management plans:

Use of input controls

- Limited licensing
- Effort management
- Closed areas and MPAs
- Closed seasons
- Gear restrictions

Use of output controls and technical measures

- Total Allowable Catches (TACs)
- Minimum landings sizes
- Bycatch minimization:
- Mesh size restrictions

Economic management tools

- Rights-based management
- Landing charges
- License fees
- Harbor fees
- Import duties
- Export duties

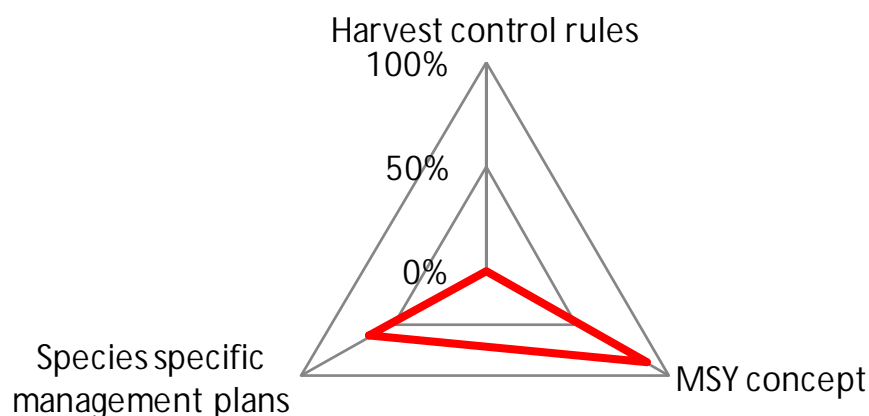
Subsidies & incentives

- Fuel subsidies
- Import / export duty waivers
- Subsidized vessel construction
- Improved gear selectivity
- Reduced environmental impacts
- Quality improvements
- Product innovation
- Infrastructure development

3.3.1 Stock Management Approaches

Policy can be used to provide policy guidance on how fisheries should be managed. In Figure 7 below, we present the general approaches and concepts used by the BOBLME countries to manage their stocks.

Figure 7: Policy implementation - management approaches



MSY concept: the Maximum Sustainable Yield (MSY) is the highest theoretical equilibrium yield that can be continuously taken from a stock under existing

environmental conditions without affecting significantly the reproduction process. Referred to in UNCLOS, it is an essential fisheries management benchmark. It is only one of a number of possible management reference points, but is considered as an international minimum standard for stock rebuilding strategies. The 2002 World Summit on Sustainable Development in Johannesburg suggested that a target date of 2015 should be set by which all fisheries should be maintained or restored to MSY.

With the exception of Sri Lanka, all the BOBLME countries state that they apply the MSY concept for their main commercial stocks. In the case of Sri Lanka, the 10 year framework (2007 - 2016) justifies expansion of coastal fisheries on basis of old estimate of MSY, but the MSY concept is not really applied as the basis on which to manage fisheries (although some recent NARA/Ministry work under an FAO project has established MSYs for some species such as lobster and sea cucumber). In the Maldives, where the main commercial catches are tuna from regional migratory stocks, there is dependency upon the Indian Ocean Tuna Commission (IOTC) to establish MSYs for key species, although this has not been done for the main BoB tuna species, skipjack. India has a long history and has built up considerable expertise in MSY-based stock assessment, and has recent estimates for most key stocks. Whilst available, MSY estimates in Bangladesh and Myanmar tend to be very outdated. Thailand, Malaysia and Indonesia state they also have recent MSY estimates for key species.

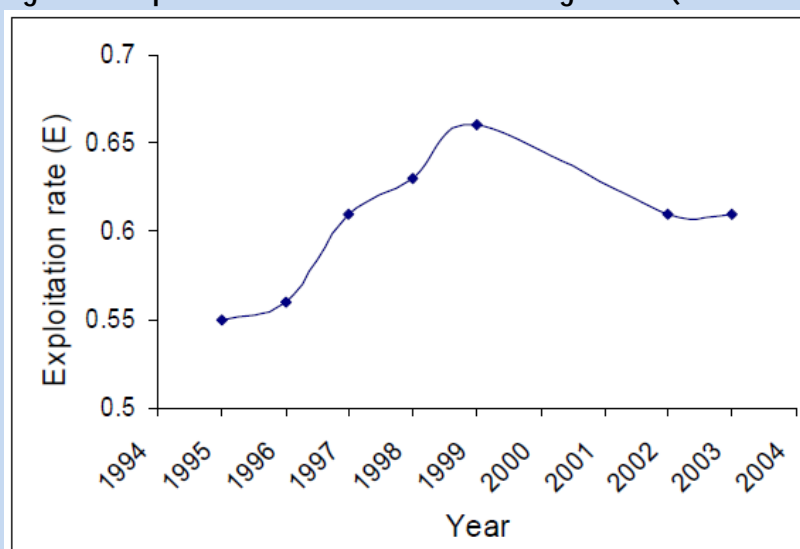
Harvest control rules: harvest control rules (HCRs) describe how harvest is intended to be controlled by management in relation to the state of some indicator of stock status. For example, a harvest control rule can describe the various values of fishing mortality which will be aimed at for various values of the stock abundance. It formalizes and summarizes a management strategy.

None of the BOBLME countries include HCRs in their management strategies. This is somewhat surprising given the high level adoption of MSY and thus the possible basis for providing target and limit reference points for key stocks. In the northern Bay of Bengal one of the best known stocks is that of the hilsa shad, a migratory species with major economic importance in India, Bangladesh and Myanmar. In Bangladesh there are harvest control tools, but these are permanent restrictions, and are not triggered by any stock status indicators. An explanation for this might be provided by the situation in Bangladesh (see **Box 7** below).

Box 7: Hilsa stock management in Bangladesh

The main stock management reference point that has been adopted in Bangladesh is the exploitation rate (E). This has been calculated since 1995 where it has varied between 0.55 and 0.66 up to 2003 (see figure below).

Figure 8: Exploitation levels of hilsa in Bangladesh (1995 – 2003)



Source: Amin *et al*, 2008

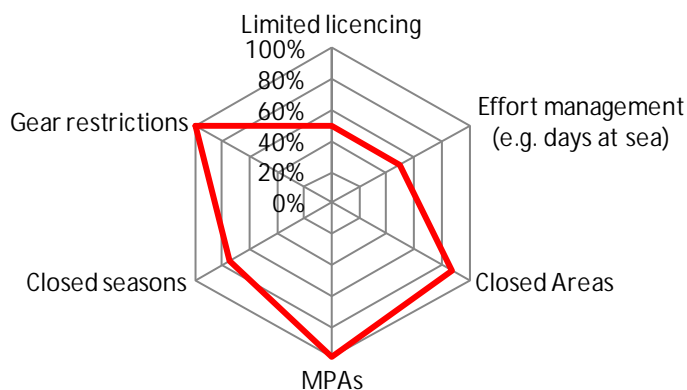
However the exploitation rate is not a good reference point as a stock may become more resilient to higher exploitation rates as the biomass increases. As a result, the exploitation rate is considered a reasonable indicator of fishing pressure and is not directly used in management decision-making. At present there is no intention to utilize indicator-based harvest control rules for fisheries management in Bangladesh (Huntington *et al*, 2008).

Species-specific management plans: another management tool is the preparation of management plans for key species (or similar species groups). These tend to provide (i) a description of the fisheries, (ii) the stock status and trends and (iii) management objectives, including HCRs where appropriate. Around two-thirds of BOBLME countries have such management plans, most notably for hilsa in India and Bangladesh. However most of them are for small (even if socially important) fisheries such as sea cucumber (Sri Lanka and Malaysia). There are some exceptions such as a plan for anchovy fisheries (in Thailand) and other small pelagic fisheries (in Malaysia). Myanmar is thought to have management plans for a wide range of species such as white pomfret, Spanish mackerel, Indian threadfin bream and grouper but these have not been reviewed by the current authors.

3.3.2 Use of input controls

Input controls are management instruments used to control the time and place, as well as type and/or amount of fishing, with the view to limiting yields and fishing mortality. The use of input controls by the BOBLME countries to implement policy on sustainable exploitation is presented and discussed below.

Figure 9: Policy implementation - use of input controls



Limited licencing: half of the countries stated they limit the number of licenses issued to control fishing effort. However this tends to be in restricted geographical areas (e.g. India), certain fleets (e.g. trawlers in Bangladesh) and fisheries (e.g. Indonesia).

Effort management/days at sea: only four countries (Sri Lanka, India, Bangladesh and Myanmar) attempt to restrict fishing effort through days/time at sea. In Bangladesh the maximum trip durations are specified for various types of vessels (mechanized, no-mechanized and with or without freezer, etc. and industrial trawlers). For instance, freezer trawlers are permitted for trips up to 30 days and non-freezer trawlers are permitted for 15 days.

Closed areas and MPAs: restricted spatial access is the most common form of input control, being relatively easy to legislate and control and if defined properly, MPAs and closed seasons can make a substantial contribution to stock conservation and achieving management objectives. The only country not to have major closed areas is the Maldives, as most of the fisheries are pelagic open-water fisheries (the lagoon-based bait fisheries do have spatial access controls).

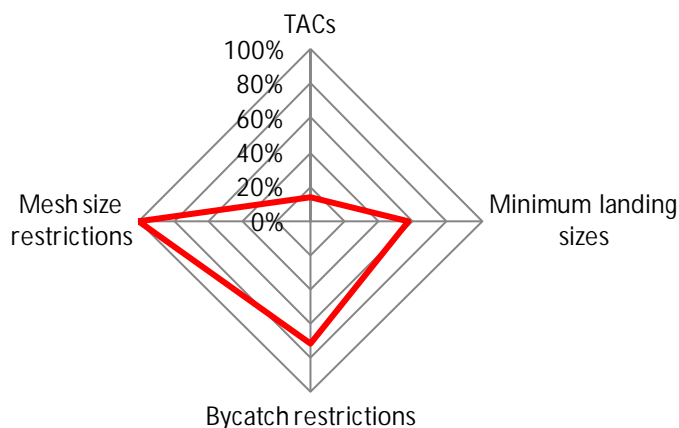
Closed seasons: likewise closed seasons for certain fisheries are also a common input control in the Bay of Bengal. These are particularly appropriate for protecting spawning or nursery aggregations, especially in shallow waters and estuaries. In India there are 45 - 60 day closed seasons for most fisheries, based on life-stage vulnerability. In Bangladesh there are strong access controls over the jatka (juvenile hilsa) fisheries. As note in the workshop, it is important to harmonize closed seasons and other technical measures in transboundary fisheries.

Gear restrictions: all the BOBLME countries use some form of gear restriction to control fisheries inputs. However these tend to be outright bans rather than seasonal restrictions as these are easier to regulate and implement.

3.3.3 Use of output controls and technical measures

Output controls are management instruments aimed at controlling the characteristics of the catch and landings. This is achieved by: (i) limiting catch or landings through Total Allowable Catch (TAC) and quotas; (ii) prohibiting the landing of protected species, certain sizes, a given sex, or animals in a particular stage of the breeding cycle; (iii) regulating discards; and (iv) establishing limits for the daily bag and possession. The use of output controls by the BOBLME countries in policy implementation is reviewed below.

Figure 10: Policy implementation - output controls & technical measures



Total Allowable Catches (TACs): the TAC is the total catch allowed to be taken from a resource in a specified period (usually a year), as defined in the management plan. The TAC may be allocated to the stakeholders in the form of quotas as specific quantities or proportions. Of the eight BOBLME countries, only Sri Lanka has implemented any TACs, being for lobsters and chank (a type of sea snail). It is widely recognized that whilst TACs work in some fisheries, the allocation of TAC shares and the monitoring of TAC uptake is challenging and may lead to unwanted side-effects such as increased discarding.

Minimum landings sizes: most countries (except the Maldives, where most fisheries are highly size selective anyway) use minimum landing sizes for certain species such as hilsa, pomfret and other high value commercial species. However the majority of catch has no size minimum and whilst this does reduce discard rates, inevitably has implications for juvenile bycatch and possible impairment on recruitment (despite the high natural mortality of many juvenile species in the Bay of Bengal).

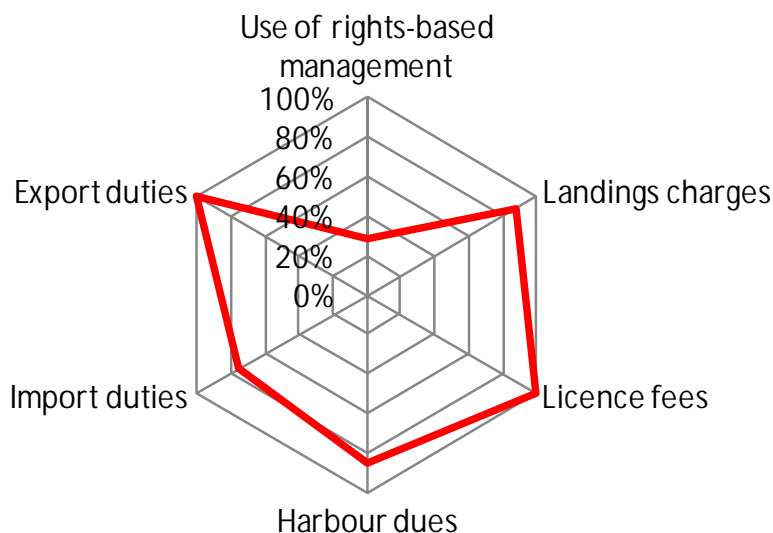
Bycatch minimization: most of the BOBLME countries have some form of bycatch reduction, but this is largely restricted to the industrial trawl fisheries. The use of bycatch reduction devices (BRDs) and turtle exclusion devices (TEDs) are recommended in India (TEDs are compulsory in all states adjacent to the main rookeries) and Bangladesh (where whitefish bycatch must not exceed 30%). However they are not mandatory in any BOBLME country and are often fiercely resisted by industry (Banks & Macfadyen, 2010).

Mesh size restrictions: mesh size restrictions are widely used throughout the BOBLME countries (with the exception of the Maldives where gillnets are banned). Mesh size restrictions are based on different net types and configurations, as well as target species and periods of usage.

3.3.4 Economic management tools

Economic management tools include a variety of mechanisms to change the cost structure of fisheries to suit policy objectives. The use of economic management tools by the BOBLME countries in policy implementation is presented and discussed below.

Figure 11: Policy implementation - Economic management tools



Rights-based management: only Sri Lanka and Thailand have developed any rights-based management approaches. In the case of Sri Lanka, this is mainly for traditional fishing techniques such as beach seines, stake seine and fish kraals where there is a strong spatial and community dependency involved. In Thailand, the 2006 'Fishery Policy Directions of Thailand Statement' notes that rights-based fisheries management is being actively promoted by government and will replace open access arrangements over time. The draft New Fisheries Law B. E. 2545 provides for "designated communities" to have rights to harvest aquatic resources within a designated community fishery area, or to be given the authority to manage and implement measures related to aquatic resources within a designated "community fishery area."

Licensing, harbor and landing fees: all the BOBLME countries levy fees for the licensing of fishing vessels and in some cases (e.g. Malaysia) certain fishing gear. In the case of Sri Lanka landing fees are only charged to foreign vessels landing fish in domestic ports whilst Bangladesh only charges for landing in facilities belonging to the state-owned Bangladesh Fisheries Development Corporation (BFDC). In Malaysia local boats are charged RM 0.01 per kg and foreign vessels RM 0.05 per kg for landing fish into designated fishing ports. Whilst a simple and effective cost-recovery system, it can encourage increased production in order to meet these costs.

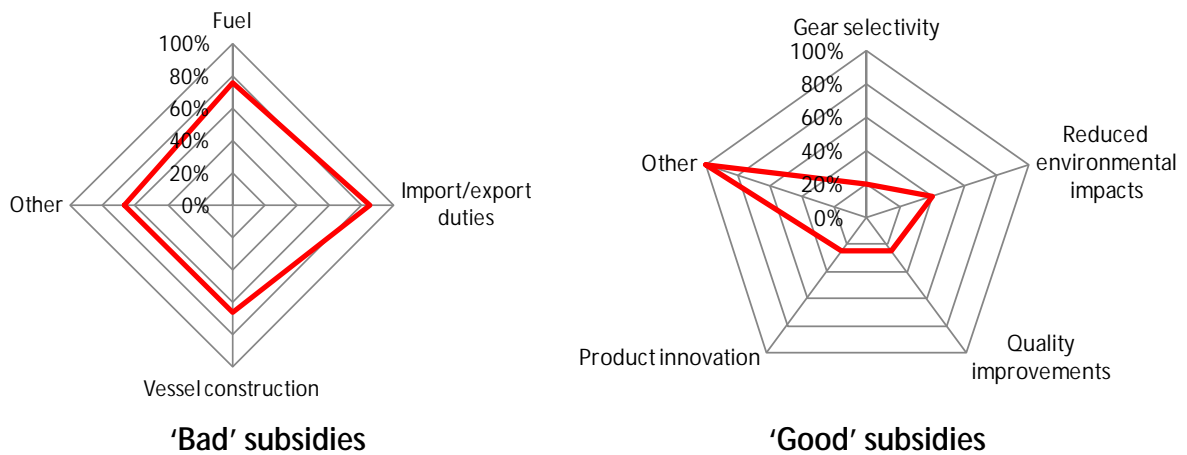
Import duties: around three-quarters of the BOBLME countries impose import duties on materials for fishing, although they are highly variable and are often waived (see next section overleaf).

Export duties: all the BOBLME countries except the Maldives and India charge some form of export duty on seafood products.

3.3.5 Subsidies

A subsidy is a direct or indirect payment, economic concession or privilege granted by a government to private firms, households or other governmental units in order to promote a public (policy) objective. Subsidies can be divided into 'bad' subsidies which might encourage economically unviable fishing and thus increase fishing pressure on vulnerable stocks, and 'good' subsidies (or incentives) that are provided to promote responsible fishing practices. What is clear from the figure below, is that generally speaking, countries in the region are supporting more bad subsidies than good ones.

Figure 12: Policy implementation - use of subsidies



Fuel subsidies: three quarters of the BOBLME countries provide fuel subsidies to their fishing fleets. In a number of cases these were introduced on a 'temporary' basis after the economic crisis of 2008 (e.g. Maldives and Thailand), mostly for small-scale fisheries. In Bangladesh only the industrial trawl fishery is subsidized due to the high fuel consumption involved, and this is justified on the basis that it generates foreign exchange and therefore deserves special support - this is highly contentious due to the high bycatch levels and habitat damage that result from this fishery. Only in Sri Lanka and Myanmar is fuel not subsidized.

Import / export duty waivers: whilst most countries do have import duties on machinery and tools, in most cases this is waived if it can be proved this is for fishing. Thus engines, spare parts and in most cases imported fishing gear are usually import-duty free, especially if for small-scale fisheries (e.g. outboard motors). Only in the case of Myanmar are no concessions made.

Subsidized vessel construction: subsidized interest rates are available for fishing vessel construction in Sri Lanka and Thailand.

Improved gear selectivity: only Malaysia supports the introduction of new technology transfers e.g. TEDs, JTEDs (Juveniles and Trash Excluder Devices), circle hooks. These are sold to investors at discounted rates through a scheme administered by the Fisheries Development Authority of Malaysia (FDAM/LKIM).

Reduced environmental impacts: In Bangladesh the DoF has in place a number of mechanisms which can be viewed as ‘positive incentives’ for compliance with the hilsa fishing ban periods, and therefore of overall sustainability – they include the provision of 30kg of rice/month/fishing family, and micro-credit support to fishermen for alternative livelihood activities in non-fishing activities.

Quality improvements: in the Maldives there is a provision in place where fishermen can borrow money (guaranteed by the Government) to buy and install refrigerated sea-water cooling systems. A prototype was designed in Korea which appears to be suitable for Maldivian fishing vessels. However the response to date is very poor – partly due to poor skipjack fishing since 2007. In India ice boxes, insulated fish holds and ice itself are subsidized for small-scale operators. Otherwise Government incentives for improving quality are surprisingly limited in the region.

Product innovation: there is little apparent support for product innovation amongst the BOBLME country governments.

3.3.6 Constraints to policy implementation

Based on the analysis above, a number of constraints to fisheries policy implementation have been identified (see table below).

Table 4: Constraints to successful fisheries policy implementation

Implementation approach	Constraints
Stock management approaches	<p>Difficulty in establishing and updating harvest control rules from available stock assessment information</p> <p>Cost of updating stock assessments</p> <p>Agreeing HCRs for transboundary stocks</p>
Use of input controls	<p>Poor or out of date license registration systems inhibit restricted licensing</p> <p>There is a constant and strong incentive for operators to substitute the managed input/s with alternative unrestrained inputs to increase their relative fishing power</p> <p>Normal effort creep through better knowledge/knowledge sharing, improved technology etc routinely undermines management and complicates assessment and management processes</p> <p>Difficulties in establishing license ceilings (how is this based - on no., engine power or fishing technique?) and allocating these in a fair and equitable basis</p> <p>The substantial resources required to physically survey areas in order to designate robust MPAs, no take zones and other spatial and seasonal restrictions</p> <p>Inevitable structural adjustment programs, and alternate management policies to ratchet back effective fishing effort are costly to government and industry</p>
Use of output controls & technical measures	<p>Difficulties in setting and allocating quota</p> <p>Restricted quotas may encourage high-grading and discarding of smaller and lower value species</p> <p>Likewise minimum landing sizes may encourage discarding and high-grading</p>
Economic management tools	<p>Difficulties in allocating rights-based management in terms of both the social and technical challenges involved and the skill sets needed</p> <p>Whilst import duties are often imposed by Government, they are a disincentive for investment and will need re-design to ensure that they do not inhibit the development of responsible fisheries with high livelihood enhancement potential - this balance is often difficult to achieve, especially if duties are set outside the fisheries sector</p>

Implementation approach	Constraints
Subsidies	<p>Fuel subsidies are widely seen as encouraging or maintaining unviable fishing practices. Many of these were introduced during economic downturns but are politically hard to withdraw</p> <p>Fiscal systems to encourage good fishing practices are difficult to implement, often have high administrative costs and burdens and are open to abuse</p> <p>Providing mechanisms to monitor and evaluate the uptake and impact of public sector funding is expensive</p>

The BOBLME countries were also asked to rank the main systemic constraints to effective policy implementation. These were scored from 1 to 5, with the most critical being scored 1 and least critical 5. The results are shown in **Table 5** overleaf and analyzed below.

Both the *capacity* (in terms of skills and experience) of Governmental staff (1=) and the *budget for MCS* (monitoring, control and surveillance) (1=) were considered the overall critical issues. This was followed by the level of *policy monitoring and evaluation* (3) and then budgets for government operations and *supportive regulations* (4=). The level of coherence with other sectoral policies (6), the *clarity of roles and responsibilities* between different implementation parties (7) and finally *budgets for salaries* (8) were considered the least influential factors on policy implementation.

These results indicate that both human capacity limitations and operational budgets for critical management operations were considered the most likely reasons for policy failure or ineffectiveness. It also demonstrates that policy integration factors (e.g. coherence with other sectors and the clarity of roles) are considered lesser issues. However the difference between the aggregate scoring between the first five constraint types was low, indicating that they were all of similar concern.

Table 5: Ranking of constraints to effective fisheries policy implementation
Scale of constraint 1 – 5 with 1 as very important

Potential constraint		Maldives	Sri Lanka	Bangla- desh	Myanmar	Thailand	Malaysia	Indonesia	Average score	Rank
MOST CRITICAL	Capacity levels of staff in Ministries / departments	1	3	1	1	3	2	1	1.7	1
	Budgets for enforcement of management measures e.g. for MCS operations	1	1	5	1	2	1	1	1.7	1
	A monitoring and evaluation (M&E) system to check on policy implementation	1	1	2	1	3	3	2	1.9	3
	Budgets for operations of Ministries / departments (i.e. for activities)	2	2	5	1	1	1	2	2.0	4
LEAST CRITICAL	Supportive regulations/laws giving effect to policy content	1	2	3	1	3	2	2	2.0	4
	Coherence with other sectoral and national policies	2	2	4	2	2	3	3	2.6	6
	Clarity in the roles/responsibilities between different implementation parties	2	3	5	2	3	4	3	3.1	7
	Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	4	3	5	1	3	5	2	3.3	8

4 MARINE ENVIRONMENTAL POLICY AND IMPLEMENTATION

4.1 MARINE ENVIRONMENTAL POLICY CONTENT

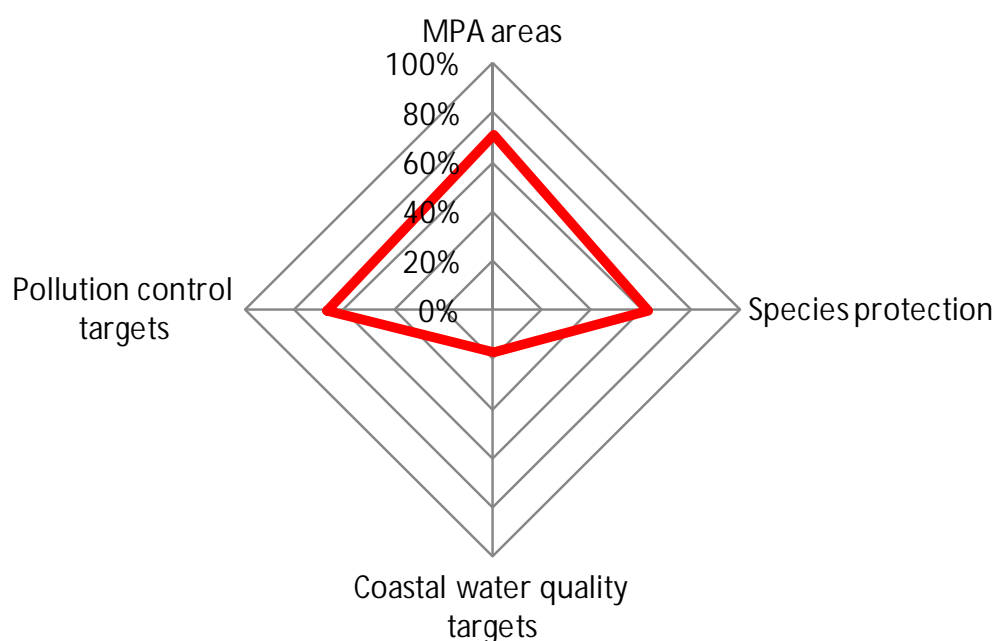
As discussed in Section 2.2, coastal and marine ‘policy’ is rarely specified as standalone policy, and is usually embedded in a wider environmental policy with some elements to be found in sectoral policies (e.g. biodiversity conservation, fisheries and marine transport). This analysis is therefore not as straightforward nor as comprehensive as for the fisheries policy in the previous section but attempts to evaluate the main principles involved.

4.1.1 The use of policy targets

Environmental policy targets tend to be ‘output’ rather than ‘outcome’ based. For example they tend to look at the area of a certain habitat protected or the number of management plans prepared rather than the outcomes in terms of increases in biodiversity or improvements in water quality. Four types of marine environmental targets are examined in this report:

1. **MPA areas:** the area of coast / sea surface covered by formally designated Marine Protected Areas (MPAs)
2. **Species protection:** the number of management plans or other mechanisms to formally conserve marine species
3. **Coastal water quality targets:** coastal sea area (or equivalent) whose water quality (in terms of a suite of biogeochemical and biological indicators) has been improved to published standards
4. **Pollution control targets:** reduction in the number of pollution incidences, key pollutant levels, discharge levels, as well as increases in pollution treatment processes, facilities and contingency plans.

Figure 13: Marine environmental targets



MPA areas: the use of Marine Protected Areas (MPAs) to protect vulnerable and sensitive habitats from fisheries and other uses has been widely adopted by BOBLME countries and provides the most tangible quantitative indicators included at policy level. In most cases these have been used for the protection of coral reefs, sea grass beds, turtle rookeries and sea mammal reserves. In addition mangrove areas have come under greater protection as their economic value in terms of coastal protection and biodiversity conservation is increasingly recognized. Most targets are either in terms of absolute area to be covered (e.g. in hectares) or in proportion to the total national coverage (e.g. in percentage terms).

Only the Maldives and Thailand, both highly dependent upon eco-tourism, appear to provide detailed quantitative MPA targets. Others, such as Sri Lanka, Bangladesh, Malaysia and Indonesia show clear intent to utilize MPAs in coastal and marine areas. The remaining two countries - India and Myanmar - are more ambiguous, although the former may have targets at State level which have not been available to the authors. Myanmar does not appear to have any formal policy targets for marine habitat protection although there is an active MPA programme in the country.

Species protection: a number of marine species (or species groups) are afforded protection through policy initiatives by BOBLME countries, most notably sea turtles, dugongs and sharks. A variety of approaches are used, including acceding to the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES).

No marine species are listed by the National Environment Policy (2006) in India, although there are already a number of marine and estuarine species protected via the Indian Wildlife Act, 1972. In Bangladesh protection for sea turtles and other endangered and threatened species is only just emerging and as yet they are not formally protected (see **Box 8** below). Likewise the protection of non-commercial marine species is not thought to be a policy objective in Myanmar.

Box 8: Sea turtle protection in Bangladesh

Until recently, marine turtles were not included in the protected list of the Bangladesh Wildlife (Preservation) (Amendment) Act of 1974. However, although the Act was later revised to include marine turtles, the amendment still exists as a draft notification today without having been included in the official gazette, rendering the inclusion of turtles within the protected list redundant.

Source: Sea Turtles of India, 2010

Coastal water quality targets: only Sri Lanka appears to have quantified targets for improvements to coastal water quality, possibly reflecting the importance of coastal tourism in its economy. Whilst it is accepted that establishing long-term coastal water monitoring, as well as developing the infrastructure to meet coastal water quality targets is expensive, this apparent lack of emphasis on coastal water quality improvement is perhaps unexpected. The rapid expansion of coastal aquaculture as well as tourism in many other countries is often a major driver for treating effluent discharges into the sea, especially given the improving demand for seafood traceability and safety.

Pollution control targets: around two-thirds of the BOBLME countries are thought to have pollution control targets embedded in their environmental policies. However details received from respondents were weak, although Malaysia has targeted full compliance for effluent discharge standards and have set targets in the form of the number of rivers whose quality classification need to be moved to the next level.

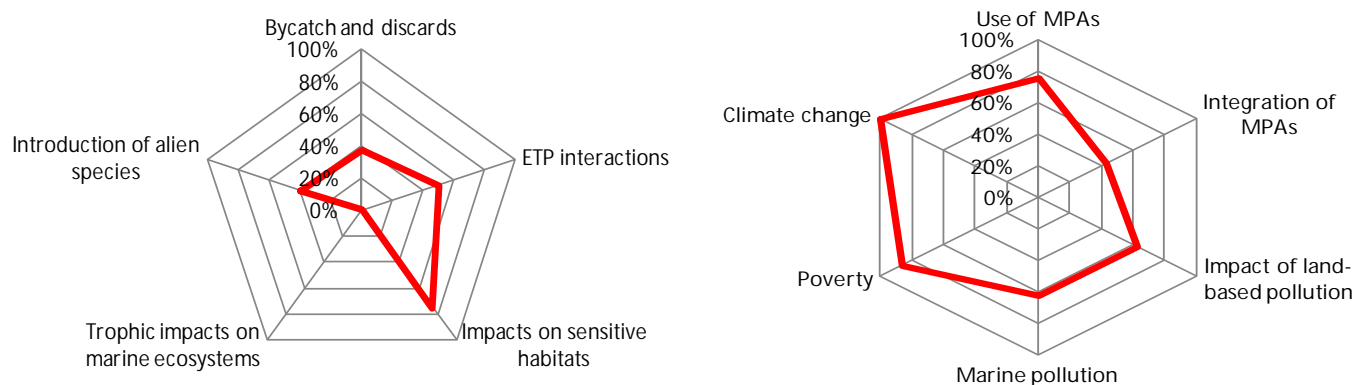
Key findings / discussion points: Analysis of marine environmental targets included in policy raises the following questions and observations:

- MPA targets tend to be set in an arbitrary fashion and would benefit from an improved needs analysis and greater detail;
- A number of BOBLME countries lack the political awareness to encourage the protection of endangered or threatened species that are not included in commercial catches. Given that the BOBLME is an important regional stronghold of some of these species (e.g. sea turtles as well as some important Gangetic dolphin species), greater regional protection and national commitment would appear warranted; and
- The apparent lack of coastal water quality or pollution prevention targets in the BOBLME countries suggests that there is a weak commitment to improving coastal water quality, and that existing monitoring regimes are less than robust. Again this would benefit from a regional solution.

4.1.2 Marine environmental management approaches

The following section examines the different approaches adopted by the BOBLME countries in tackling marine environmental management. These are summarized in the figure below and discussed further in the subsequent text.

Figure 14: Marine environmental management objectives



Bycatch and discards: like many tropical Asian fisheries, those of the BOBLME countries typically have high levels of bycatch, and low or negligible discards as it is normal to land all the catch. The term bycatch is misleading in that whilst it might not be the target catch, it usually has some economic or nutritional value and thus is not necessarily considered as negative. This is being strongly driven by the demand for 'trash fish' based aquaculture feeds in the region, which reduces the incentive to reduce bycatch levels. This partially explains why the issue only appears in less than half the environmental management requirements in these countries and (as discussed in Section 3.3.3 above) is largely confined to the economically significant industrial shrimp and finfish trawling, albeit on a significant scale. In most cases it is

considered a purely fisheries-related issue and is not considered under wider environmental or conservation policy.

ETP interactions: interaction with endangered, threatened and protected (ETP) species is considered in around half the environmental policy approaches of the BOBLME countries. At present this is mainly confined to 'iconic' species such as sea turtles, sharks and sea mammals. Management responses are mainly through the use of protected areas (e.g. Orissa in India for sea turtle rookeries), spatial or total bans on shark fishing (Maldives and Myanmar) and bans on the catching, killing and sale of certain ETP species (variable across all the BOBLME countries). At present there is limited regional coordination in the designation and subsequent protection of ETP species within the Bay of Bengal.

Impacts on sensitive habitats: sensitive habitats (e.g. coral reefs and sea grass beds) are usually protected through MPAs (see previous section).

Trophic impacts on marine ecosystems: the trophic impacts of fishing (e.g. alteration of the predator - prey relationships through fishing and consequential changes in the marine food chain and its dependents) are possibly one of the least understood areas of fisheries science yet may have profound impacts on future fisheries yields. Despite this importance there are no strategies or management approaches set out in any of the BOBLME policy documents reviewed. This said, a number of more recent policies do state the need to consider wider marine ecosystem and oceanic processes and their impact on fisheries (e.g. India's National Environment Policy, 2006).

Introduction of alien species: alien species can be introduced deliberately (i.e. through aquaculture and aquaria) or accidentally in ballast water. Of the five countries who responded to this issue, only two stated that they had active processes to prevent and combat such introductions (Sri Lanka and Indonesia). The issue was originally covered in the Maldives NBSAPM⁶ and is now included in NEAP III but is acknowledged to be very generic and not specific to fisheries issues. Sri Lanka has a ballast water monitoring programme and the issue is covered in the Fisheries and Agriculture Resources (FAR) Act (1996). Myanmar and Indonesia are both thought to include the issue in various acts and initiatives.

Use and integration of MPAs: as discussed above, MPAs are being increasingly used for the spatial protection of vulnerable habitats and are being extended into larger high seas areas. However, with the exception of Indonesia none of the BOBLME countries have detailed MPA development strategies nor attempt to build a coherent network of protected areas (i.e. with some degree of connectivity between them allowing them to function as a group rather than simply providing protection on a site by site basis).

Impact of land-based pollution: around two-thirds of BOBLME countries have programmes to tackle land-based pollution. The Maldives is one of the exceptions and whilst the NEAP III states an intention to "develop a Wastewater Policy and Wastewater Treatment Implementation Strategy" by mid 2010, there does not seem

⁶ National Biodiversity Strategy and Action Plan of the Maldives

to be a strategy towards improving coastal/lagoon water quality or protecting vulnerable habitats (i.e. coral reefs, sea grass beds) from land-based pollution apart from site-specific EIAs. Bangladesh also reports similar dependence upon the EIA process rather than a preemptive strategy approach. In Malaysia, the National Policy on the Environment (NPE) covers all forms of point sources, although the specific impact of land-based pollution on the marine environment is not covered.

Marine pollution: similarly around two-thirds of BOBLME countries are thought to have programmes to tackle marine pollution. Maldives ratified MARPOL 73/78 Annex I.II in 2005 but otherwise environmental policy does not consider marine-based activities as a major environmental threat to the Maldives. There is increasing recognition internationally of the negative impacts of abandoned, lost and discarded fishing gear, but none of the BOBLME countries consider this issue in their policies.

Poverty: the majority of BOBLME have integrated poverty-prevention strategies into their environmental policies. For instance, the Maldives 'National Solid Waste Management Policy' includes a 'social equity' principle to ensure that waste management interventions are fair in terms of their benefits and costs. In India there are strong connections between the National Environment Policy (2006) in terms of the impacts of environmental degradation and attempt to integrate sectoral poverty reduction strategies into environmental management activities. A similar approach is taken in Bangladesh and Indonesia. Only in Malaysia does environmental policy appear to be unassociated with poverty alleviation.

Climate change: the influence of climate change on marine environmental management approaches appears in the policies of all the BOBLME countries. This partially reflects their particular vulnerability (e.g. the Maldives, India, Myanmar and Bangladesh). The main response has been the preparation of climate change strategies and management plans (e.g. India 'National Action Plan for Climate Change', 2008; Bangladesh 'Climate Change Strategy and Action Plan', 2009; and Indonesia National Action Plan on Climate Change, 2008).

Key findings/discussion points: Analysis of marine environmental management measures included in policy raises the following questions and observations:

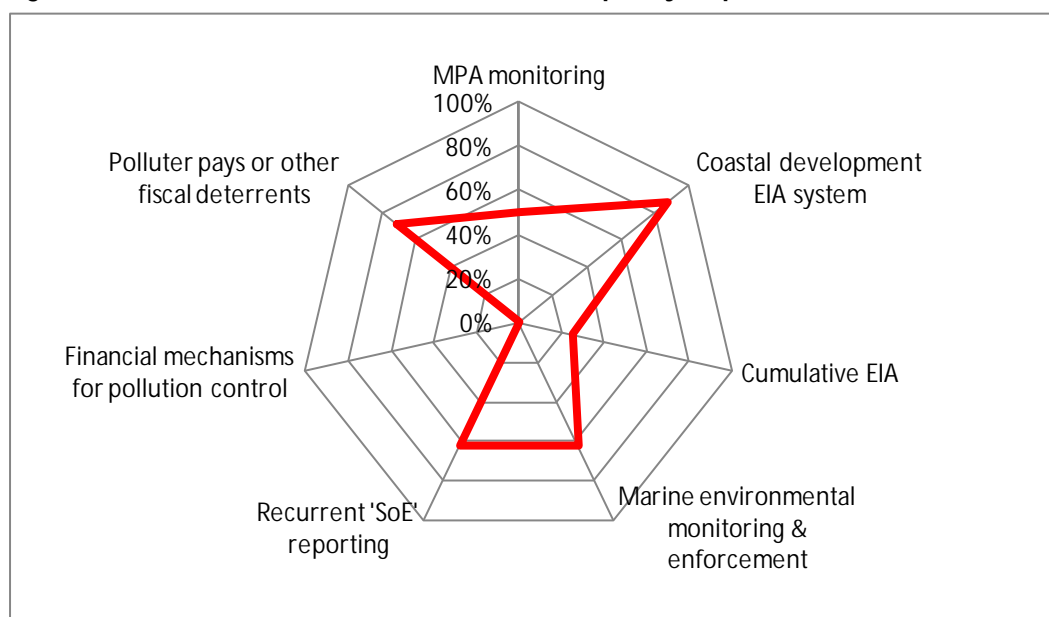
- The protection of ETP species is highly variable across the BOB and would strongly benefit from the establishment of regional guidelines and implementation coordination;
- To support the ecosystem approach to fisheries management, there needs to be greater emphasis on including the wider trophic impacts of fisheries (and indeed other sectors) in cross-cutting environmental policy formulation. Again this would benefit from a regional approach that would have to consider the effects of Indian Ocean tuna fisheries (via IOTC), artisanal tuna fisheries as well as other major small pelagic and demersal fisheries;
- Whilst progress in establishing MPAs in the region has been strong, there is an urgent need for a more strategic approach at both national and regional levels. Strategies at both levels need to consider priority areas (and species) for protection as well as the need to establish coherent networks of MPAs, again at both national and regional levels. These need to address both conservation as well as fisheries management objectives.

4.2 MARINE ENVIRONMENTAL POLICY IMPLEMENTATION

4.2.1 Monitoring and impact assessment

A major part of environmental policy implementation is the monitoring of environmental status and assessing the effectiveness of environmental management and mitigation approaches, resulting in the desired reduction of environment stresses and improved environment quality.

Figure 15: Utilization of marine environment policy implementation tools



MPA monitoring: whilst MPAs are reasonably easy to designate on conservation terms, their subsequent management and monitoring requires considerable financial and human resource commitments. On the west side of the Bay of Bengal, with the exception of India there is limited on-going commitment and monitoring of MPAs, although coral reef areas are generally afforded greater attention (e.g. in Sri Lanka). In Bangladesh there is little routine monitoring unless there is a known threat such as a pollution incident. In Thailand there is apparently a much stronger monitoring system with patrols by the Department of National Parks, Wildlife and Plants, the Department of Marine and Coastal Resources, the Department of Fisheries as well as the navy and marine police. Malaysia and Indonesia also had similar levels of commitment.

Coastal development EIA system: with the possible exception of Myanmar (where there is no formal process for EIA), all the BOBLME countries have comprehensive environmental impact assessment (EIA) schedules and implementation structures. However there is some concern over the follow-up processes (Maldives, Thailand and Malaysia), the lack of standardized methodologies and jurisdictional conflicts and a lack of transparency and effective public participation (Indonesia). In most cases the EIA process is considered as a bureaucratic hindrance rather than an opportunity to improve the design of a project.

Cumulative EIA: only in India and Indonesia is the cumulative impact of development considered. In the Maldives cumulative impacts are referred to in the EIA Regulations (2007) but there is no system to look at cumulative or in-combination impacts. However there appears to be a growing awareness of the need to assess cumulative impacts via sectoral 'strategic EIAs'.

Marine environmental monitoring & enforcement: around two-thirds of the BOBLME countries have some form of recurrent marine pollution monitoring and response. The Maldives has "*ad hoc*" monitoring and surveillance and the Coast Guard has a part-time marine pollution monitoring role in Sri Lanka. India appears to have a sophisticated 'Environmental Information System' (ENVIS) with 29 ENVIS Centers at State level dealing with the Status of Environment and related issues of the concerned State Government and the remaining 47 have been set up covering air pollution, water pollution, noise pollution, biodiversity, solid waste management, ecology and ecosystems, environmental education, NGOs, coastal ecosystem, clean technology, etc. Thailand has a marine water quality monitoring program carried out by the Pollution Control Department but this only operates at a broad scale. Malaysia has a coastal monitoring programme carried out by DOE at 158 locations around the country and has progressed with its River Basin Monitoring Programme that has been able to show improvements in pollution levels over a period of time.

Recurrent 'SoE' reporting: around two-thirds of the BOBLME countries produce a regular 'State of the Environment' (SoE) review that includes coastal and marine aspects. The Maldives last published a SoE review in 2004 but has recently produced a 'National Assessment Report' in 2010. The last Thailand SoE report was in 2005. Malaysia produces an annual 'Malaysia Environmental Quality Report'. This includes details of air, noise, river water, ground water and marine (island) water quality monitoring. Indonesia prepared an annual SoE report.

All eight countries produce national reports to the CBD that include a chapter entitled "Marine and Coastal Biodiversity" and provide a brief assessment of the status and threats.

Key findings / discussion points: Analysis of marine environmental targets included in policy raises the following questions and observations:

- Many of the growing number of the region's MPAs may be ineffective as there is limited on-going management and monitoring; and
- Whilst, with the exception of Myanmar, there are well developed EIA systems in place, there a number of common problems in terms of their implementation, follow-up and assessment of cumulative impacts. A more comprehensive comparative regional assessment (incorporating well known good practice models from outside the region) could shed increased light on the weaknesses of this essential tool in ensuring sustainable development.

4.2.2 Use of financial and fiscal tools

A number of financial and fiscal tools have been developed to promote good practice and provide punitive measures to deter poor environmental management.

Financial mechanisms for pollution control: somewhat surprisingly there were no schemes found that provided financial support for coastal users to control pollution e.g. subsidies for treatment and control mechanisms.

Polluter pays or other fiscal deterrents: nearly three-quarters of the BOBLME countries provided some form of 'polluter pays' scheme. In the Maldives and Sri Lanka fines are levied for infringing environmental standards. In Bangladesh there is policy acceptance of the polluter pays approach but it is only applied in severe pollution cases. Likewise in Thailand the regulatory mechanisms exist but require considerable effort and evidence to secure a successful conviction which acts as a deterrent in its own right. There is no adoption of the 'polluter pays' approach in Myanmar.

4.2.3 Constraints to Marine Environmental Policy Implementation

The BOBLME country respondents also ranked the influence of various systemic issues on the implementation effectiveness of marine environmental policy. These were scored from 1 to 5, with the most critical being scored 1 and least critical 5. The results are shown in **Table 6** overleaf and analyzed below.

In strong contrast to fisheries policy implementation (see **Section 3.3.6** above), the *clarity in the roles and responsibilities* between different implementation parties (1st) was considered the most important potential constraint to effective marine environmental policy implementation. This reflects the multi-sectoral nature of environmental management. Like fisheries policy implementation, however, *human capacity limitations* (2nd) were also an important factor.

Coherence with other sectoral policies (3rd) was also higher placed than in fisheries policy implementation, again due to the multi-sectoral nature of environmental management.

Adequate budgets for implementation activities were considered overall as equally important to *Enforcement budgets* and *policy monitoring and evaluation* (all 4th).

Supportive laws and regulations (7th) was considered of less concern whilst, like with fisheries, *salary budgets* (8th) were considered the least important.

Table 6: Ranking of constraints to effective marine environmental policy implementation
Scale of constraint 1 – 5 with 1 as very important

Potential constraint	Maldives	Sri Lanka	India	Bangla- desh	Myanmar	Thailand	Malaysia	Indonesia	Average score	Rank	
MOST CRITICAL	Clarity in the roles/responsibilities between different implementation parties	2	1	3	2	1	2	1	1.6	1	
	Capacity levels of staff in Ministries / Departments	1	3	2	3	1	3	1	1.9	2	
	Coherence with other sectoral and national policies	2	2	1	5	2	3	2	2.3	3	
	Budgets for operations of Ministries / Departments (for implementation of activities)	2	2	5	3	1	1	6	1	2.6	4=
LEAST CRITICAL	Budgets for enforcement of management measures	2	1	4	4	1	2	5	2	2.6	4=
	A monitoring and evaluation (M&E) system to check on policy implementation	2	1	5	3	1	2	4	3	2.6	4=
	Supportive regulations/laws giving effect to policy content	2	3	5	1	1	2	8	4	3.3	7
	Budgets for salaries to allow for sufficient staff numbers in Ministries / Departments	2	3	5	5	1	2	7	2	3.4	8

5 ICM POLICY CONTENT AND IMPLEMENTATION

Integrated Coastal Management⁷ (ICM) is an integrated approach to planning and management, in which all policies, sectors and, to the highest possible extent, individual interests are properly taken into account, with the proper consideration given to the full range of temporal and spatial scales, and involving stakeholders in a participatory way. It demands good communication among governing authorities (local, regional and national), and should address all three dimensions of sustainability: socio/cultural, economic and environmental. It thus provides management instruments that are not *per se* included or foreseen in the different policies and directives in such comprehensiveness (Rupprecht Consult & International Ocean Institute, 2006).

As discussed in **Section 2.3.1** (on page 15), only *Bangladesh* has developed a specific ICM policy *per se*. *Sri Lanka* has a recurrent National Coastal Zone Management Plan (1990, 1997 & 2004) and *India* a recent (2011) Coastal Regulation Zone Notification.

5.1 ICM POLICY CONTENT

5.1.1 Sectoral interests

Each BOBLME country was asked to rank the level of emphasis of different sectoral interests in ICM planning in their country. This showed that coastal fisheries and environmental conservation were both considered the main ICM priorities (see Table 7 below).

Table 7: Ranking of sectoral emphasis in BOBLME ICM planning

Sectoral emphasis	Maldives	Sri Lanka	India	Bangladesh	Myanmar	Thailand	Malaysia	Average score	Overall ranking
Coastal fisheries	3	3	3	3	3	2	3	2.9	1=
Environmental conservation	2	3	3	3	3	3	3	2.9	1=
Aquaculture	2	3	2	2	3	2	3	2.4	3
Port & industrial development	3	3	1	2	3	3	1	2.3	4=
Coastal defense development	3	3	3	1	1	3	2	2.3	4=
Tourism & recreation	3	3	1	1	2	3	3	2.3	4=
Urban development	2	3	1	1	2	3	2	2.0	7
Transport	2	1	1	1	2	3	2	1.7	8=
Military use	1	1	3	1		2	2	1.7	8=

Scoring on inclusion level: 3 High, 2 Medium, 1 Low, blank not scored. Indonesia did not complete this part of the questionnaire.

A brief commentary on the most notable findings is provided overleaf.

⁷ Formally referred to as 'Integrated Coastal *Zone* Management' (ICZM). The terms used are interchangeable.

Coastal fisheries: Average score 2.9, ranked 1=. Coastal fisheries is considered to be both a major source of potential impacts as well as being vulnerable to the effects of other sectors e.g. poor water quality, pollution events and access to sea space.

Environmental conservation: Average score 2.9, also ranked 1=. With coastal fisheries, the environment is the highest ranked sector to be included in ICM (only the Maldives ranked it of medium importance). It reflects not only the biodiversity value of the coastal zone, but also the economic importance of preserving environmental integrity for a combination of extractive uses (e.g. fishing and mangrove harvesting), eco-tourism and coastal protection (e.g. from natural features such as reefs and mangrove barriers).

Aquaculture: Average score 2.4, ranked 3. Like coastal fisheries, coastal aquaculture can cause impacts (eutrophication of receiving waters, mangrove and other habitat destruction, as a driver for cheap feed from low value bycatch etc) as well as being vulnerable to the actions of other users.

Port and industrial development: Average score 2.3, ranked 4=.

Coastal defense development: Average score 2.3, also ranked 4=. This scored highly in many countries, but low in Bangladesh and Myanmar. Given the vulnerability of both countries to climate change related sea level rise and the implications for coastal defense development, this appears anomalous and should be verified in the workshop.

Tourism and recreation: Average score 2.3, also ranked 4=. Tourism ranked surprisingly low in ICM planning, especially in Maldives and Sri Lanka.

Urban development: Average score 2.0, ranked 7. Given the rapidly expanding nature of urban areas in the coastal zone, this was another surprisingly low ranking, with only Sri Lanka and Thailand considering it an important element. This may be due to institutional jurisdictions rather than technical reasons.

Transport: Average score 1.7, ranked 8.

Military use: Average score 1.7, also ranked 8.

5.1.2 ICM planning levels

ICM can operate at a number of different levels e.g. transboundary, national, provincial, municipal and local to mentioned a few. Based on the questionnaire responses, ICM in the BOBLME countries tends to operate as follows.

International: whilst most ICM plans are at a national level (see next paragraph), there are some initiatives to manage common ICM problems at a regional level. For instance the South Asia Association for Regional Cooperation (SAARC) has a 'SAARC Coastal Zone Management Centre' (based in the Maldives) which recently (April 2011) held a study tour to Sri Lanka which provided a common platform for sharing experience and knowledge on coastal resources, their conservation and

management⁸. SEAFDEC is also another important regional organization supporting ICM in the Bay of Bengal.

National level: the majority of ICM initiatives in the region operate at the national level. However they may have an over-arching role, with greater detail and operational planning at the lower level (e.g. either Provincial or bio-geographic area levels), such as practiced in Sri Lanka.

State / Province level: State ICM plans are favored by India in particular, where plans have been developed for Chennai, the Andaman & Nicobar Islands, Orissa, Andhra Pradesh and West Bengal. A Provincial approach has also been adopted in Sri Lanka for the Eastern Province and in Myanmar, although no details have been provided on the latter. In Thailand the Provincial Administration Act (1997) has mandated the Provincial Administration Organization (PAO) to protect, take care of and maintain the natural resources and the environment, including providing an ICM role.

Municipality: we are not aware of any ICM planning at Municipal level.

Other: Sri Lanka currently has 11 'Special Area Management (SAM) projects with plans for 50 more. Many of these include coastal elements and have identified zoning schemes for management and conservation of coral reefs and sensitive habitats. These relatively small areas allow comprehensive stakeholder involvement and have thus proven important test beds for ICM planning in the country.

In Thailand the Tambol Administrative Organization (TAO) plays an important role in representing community concerns at higher levels in the government. The function of TAO is to represent community problems to the federal or provincial government (depending on the issue) and to conduct community-based projects that are relevant to the development of the communities.

5.2 ICM POLICY IMPLEMENTATION

If one reviews the definition of ICM (see first paragraph of **Section 5** above) ICM implementation is mainly concerned with developing communication, cooperation and information exchange between coastal stakeholders who will have differing, and often conflicting, views on coastal development and conservation.

The following section examines some of the main implementation and monitoring mechanisms in the BOBLME countries (see Figure 16 overleaf for a summary).

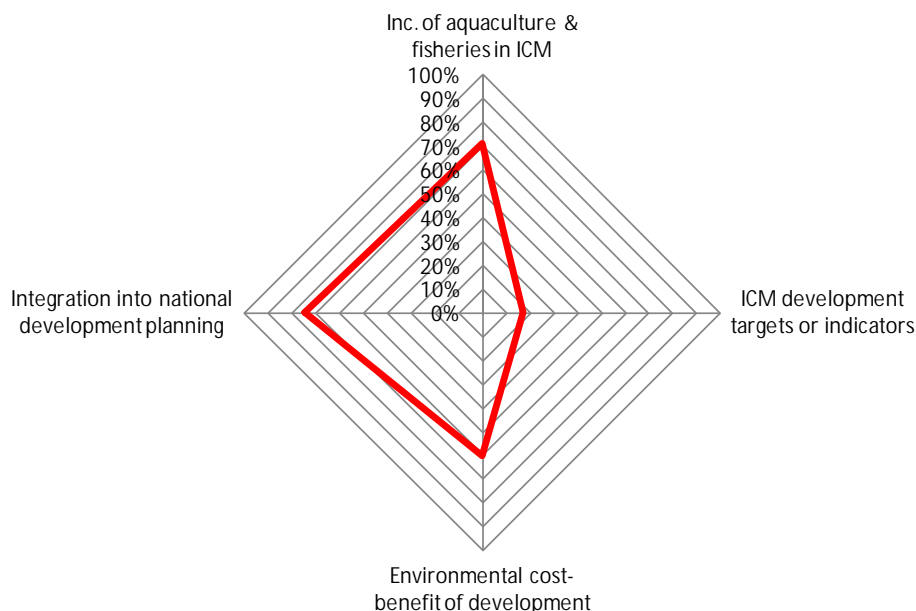
Inclusion of aquaculture and fisheries in ICM: it has already been established (see **Section 5.1.1** above) that coastal fisheries and aquaculture are both key features of ICM planning in the BOBLME region. However the formal mechanisms for their inclusion vary.

In the *Maldives* this is mainly through the EIA process, which includes both aquaculture as well as land-based development (e.g. harbor construction as well as that of other land-based infrastructure such as processing halls).

⁸ See <http://www.saarc-sec.org/2011/05/06/news/Activities-of-SAARC-Coastal-Zone-Management-Centre/56/>, accessed 8 June 2011

In *Sri Lanka* the institutional lead agency for ICM is the Coastal Conservation Department (CCD) which used to be under the Ministry of Fisheries. The 2004 CZM Plan (for the first time) included a chapter on integrating coastal fisheries and aquaculture with CZM (Chap. 5), incorporating the need to reduce impacts of coastal capture fishery and aquaculture on the CZ and to identify and regulate activities in the CZ that have adverse impacts on fishery productivity.

Figure 16: ICM Implementation and monitoring mechanisms



In *Bangladesh*, one of the main goals of the 2005 CZM Policy is to meet the Code of Conduct for Responsible Fisheries, and the sustainable development of livelihoods based on coastal / marine resources are also a central premise of the CZM Policy.

The *Indonesian* Ministry of Marine and Fisheries (MMAF) created the National Committee for Marine Conservation (NCCMC) prior to the adoption of the Coastal and Small Island Management (CSIM) Law to promote coordination and collaboration among coastal zone stakeholders. The NCCMC has three focus areas: establishing a marine protected area network; (b) conservation of biodiversity; and (c) sustainable fisheries. By establishing a focal area for sustainable fisheries, the MMAF has tried to reconcile fisheries within the conservation management framework.

ICM development targets: Only Sri Lanka has developed any specific development targets. The 2004 National ICZM includes policy statements, related strategies and proposed actions. These actions - which are backed up with implementation tables - are reasonably descriptive and can serve as qualitative indicators. Some CZM targets are also provided in the *Mahinda Chintana* (2006 - 2016) national planning framework. Whilst the *Maldives* does not have an ICM plan or strategy, NEAP III has a number of 'environmental stewardship' targets including strengthening multi-stakeholder engagement, harmonizing institutional mandates and strengthening organizational performance. It also has a goal to 'support the development of effective policies and systems and ensure comprehensive enforcement' through policy and legislation harmonization and capacity development.

Environmental cost-benefit of development: the Maldives has a new regulation in place (from 17 Feb 2011) for assessing and valuing environmental damage. In Sri Lanka much of the emphasis for ICM has resulted from the impacts of riverine and coastal sand mining on coastal erosion and the need to account for the impacts of actions across sectors (and more recently from the loss of beach access to communities as the result of tourism development).

The EIA process is designed to examine the environmental (including socio-economic) costs of development and to mitigate these through improved design. In *India*, the National Biodiversity Strategy & Action Plan (2008) requires the “valuation of goods and services provided by biodiversity and use of economic instruments in decision-making processes” via:

- To assign appropriate market value to the goods and services provided by ecosystems and strive to incorporate these costs into decision making, management and sustainable utilization of biological diversity resources;
- To factor in natural resource accounting (NRA) in the national economic planning processes and encourage financial institutions to adopt appropriate NRA appraisal practices so that risks to biological diversity are adequately considered in the financing of projects; and
- To facilitate integration of biodiversity concerns into cost-benefit analysis with a view to encouraging more efficient allocation of resources while making public investment decisions.

Integration into national development planning: In Sri Lanka the SAM's use strategic zoning to safeguard the ecological functions and biodiversity of the downstream ecosystems whilst enabling land development and economic growth in a mixed-urban zone. However it has been said that many of Sri Lanka's important scenic and recreational sites are being degraded due to a lack of integrated planning. The responses from the other BOBLME countries suggest that ICM currently has little impact on national development planning.

Key findings / discussion points: Analysis of the use of ICM implementation tools raises the following questions and observations:

- Some key ICM sectoral interests e.g. coastal defenses, tourism and urban development show surprisingly low levels of inclusion in BOBLME country ICM policies and plans. This suggests there is not full multi-sectoral engagement in the process, with a greater focus on ‘soft’ coastal resource issues rather than ‘hard’ planning issues.
- Apart from Sri Lanka there is very little targeting of ICM initiatives. This may be linked to the fact that most ICM work has been project-based (with a strong donor influence) resulting in both a lack of national commitment to the process and little follow up in terms of recurrent ICM planning cycles.
- A number of countries are heavily reliant upon the EIA process to encourage sustainable development. In most cases this does not capture the cumulative impacts that occur when sectoral interests are concentrated in a limited area (e.g. aquaculture in a bay). ICM should provide the communication and information pathways to ensure that many of these can be eliminated through robust, proactive environmental planning in the coastal zone.

6 OVERALL CONCLUSIONS

This paper has reviewed policy in eight countries to assess policy processes, content, and implementation in fisheries, the marine environment and integrated coastal management. The analysis has allowed for a regional synthesis to be presented, and for some key observations and discussion points to be raised. In addition some more general conclusions can be drawn as follows:

1. The use of formal policies to inform and serve as the basis for strategies and implementation action plans for fisheries management has been reasonably successful in the countries round the Bay of Bengal. In many cases there is a formal process for periodically reviewing policy and reflecting changes in updated strategies, often in line with recurrent national development planning revisions.
2. Whilst most fisheries policies include elements of FAO's Code of Conduct for Responsible Fishing (CCRF) in embedding the concept of resource sustainability, this often conflicts with policy targets that are based on increased production. There is scope to increase the use of outcome-based fisheries management targets that are more in line with the CCRF.
3. Whilst there is increasing mention of the ecosystem approach to fisheries management, there is little on the ground implementation of this to date. There are opportunities for greater regional cooperation in adopting the EAF and reflecting this in policy updates and implementation processes as they occur.
4. With the advent of climate change-induced alterations in sea level and trophic structure alterations and the inherent vulnerability of coastal communities, policy (across fisheries, marine environment and ICM) needs to be responsive to these changing needs. There are particular implications for food security, risk management and livelihood diversification.
5. Some key elements of marine environmental policy seem to be under-represented in the BOBLME countries. These include the protection of endangered and threatened freshwater, estuarine and marine species that are either not commercially important or are outside the 'iconic' species focus of NGOs and other conservation organizations. In addition the policy commitment to improving coastal water quality appears weak in some countries given the economic, social and health consequences involved.
6. There is an increasing use of MPAs in marine conservation. However, there is an opportunity to develop a more strategic approach to MPA designation and management at both national and regional levels in order to provide a coherent network of MPAs that act in combination rather than as isolated conservation areas.

7. Some key ICM sectoral interests e.g. coastal defenses, tourism and urban development show surprisingly low levels of inclusion in BOBLME country ICM policies and plans. This suggests there is not full multi-sectoral engagement in the process, with a greater focus on 'soft' coastal resource issues rather than 'hard' planning issues.
8. A number of countries are heavily reliant upon the EIA process to ensure that development is sustainable. However in most cases this does not capture the cumulative impacts that occur when sectoral interests are concentrated in a limited area (e.g. aquaculture in a bay). Well-structured ICM should provide the communication and information pathways to ensure that many of these impacts can be eliminated in through robust, proactive environmental planning in the coastal zone.

Appendix A: Terms of Reference

Review and synthesis report entitled “Policy directions in fisheries, coastal and marine environment and ICM in the BOBLME countries”

1. Background

Maldives, India, Sri Lanka, Bangladesh, Myanmar, Thailand, Indonesia and Malaysia, have declared their willingness to work together through the Bay of Bengal Large Marine Ecosystem (BOBLME) Project and lay the foundations for a coordinated programme of action designed to improve the lives of the coastal populations through improved regional management of the Bay of Bengal environment and its fisheries. The BOBLME project is a five year project with a total estimated budget of US\$ 31 million. It will cover five areas:

1. Development of a Strategic Action Plan (SAP) to protect the health of the ecosystem and manage the living resources of the Bay on a sustainable basis to improve the food and livelihood security of the region’s coastal population
 - Finalizing an analysis of trans-boundary issues
 - Establishing regional management arrangements with sustainable financing
 - The adoption of a SAP by member countries to address the issues identified above
2. Improving Coastal/Marine Natural Resources Management and Sustainable Use
 - Promoting community-based management
 - Improving policy harmonization
 - Devising regional fishery assessments and management plans for hilsa, Indian mackerel and sharks
 - Demonstrating collaborative critical habitat management in selected areas
3. Better understanding of the BOBLME Environment
 - Improving understanding of the large-scale processes and dynamics affecting the BOB
 - Promoting use of Marine Protected Areas to conserve regional fish stocks
 - Improving regional cooperation with regional and global assessment and monitoring programmes
4. Maintenance of Ecosystem Health and Management of Pollution
 - Establishing an effective ecosystem indicator framework
 - Developing a regional approach to identifying and managing important coastal pollution issues
5. Project Management
 - Developing a Monitoring and Evaluation system for the Project
 - Developing a Project information and dissemination system.

The Regional Coordination Unit (RCU) is currently based in the FAO Offices in Bangkok, Thailand. Under the day-to-day direction of the Regional Coordinator (RC), the RCU is responsible for the implementation and management of the project to its successful conclusion in accordance with the rules and procedures of the FAO as executing agency, GEF as the major donor, and the technical guidance of the Project Steering Committee (PSC).

2. Project Purpose

The objective of BOBLME Component 2 (Coastal/Marine Natural Resources Management and Sustainable Use) is to promote the development and implementation of regional and sub-regional collaborative approaches to common and/or shared issues affecting the health and status of BOBLME. Results and outputs of the various activities will serve as inputs into the finalization of the Transboundary Diagnostic Analysis (TDA) and into the development of the Strategic Action Plan (SAP).

Objectives of the Subcomponent 2.2 (Improved Policy Harmonization) are to: (i) promote better understanding of the policy processes in the BOBLME region, (ii) enhance capacity in the formulation of policy, and (iii) facilitate the exchange of information on policy and legislation among regional institutional stakeholders. The outputs of the subcomponent will support the future mainstreaming activities and provide critical inputs into the SAP. To achieve these objectives, the subcomponent will support the following activities: (i) policy studies, (ii) national technical workshops, (iii) regional policy meetings, (iv) strengthening of capacity in local policy formulation, and (v) creation of a normative documents portal.

In line with the 2010 Annual Regional Work Plan, adopted by the PSC in March 2010, the following activities will be undertaken:

An analysis and assessment of national institutional LME/EAF-related policy objectives, processes and implementation strategies will be undertaken for expected delivery in September. The RCU organizes and manages a Regional Workshop to review the findings of the analysis, and identify a work plan for strengthening national policy formulation. If adopted by the PSC early in 2011, the work plan will be implemented in 2011 – depending on budget.

This consultancy will make a key contribution to the achievement of the objective of Sub-component 2.2 by conducting the review “Policy directions in fisheries, coastal and marine environment and ICM in the BOBLME countries” and presenting its finding as key input for a Regional Technical Workshop on strengthening of policy formulation.

Terms of Reference

Duties and Responsibilities

Under the overall supervision of the FAO Regional Representative, the direct supervision of the BOBLME RC, the general technical guidance of the Lead Technical Officer and in close cooperation with the Chief Technical Advisor, the consultant will be responsible for conducting a review and producing a synthesis report entitled

“Policy directions in fisheries, coastal and marine environment and ICM in the BOBLME countries”

Specifically, the Consultant will:

1. Conduct a review and produce a synthesis report entitled “Policy directions in fisheries, coastal and marine environment and ICM in the BOBLME countries” (specific guidance attached in Annex 1). The review will be informed by available policies and selected fishery plans, sourced by the consultant, and responses to questionnaires supplied to the BOBLME National Focal Points for fisheries and the aquatic environment.
2. Participate in a BOBLME Regional Workshop on Strengthening Policy Formulation, (tentatively scheduled for December 2010), to present an overview of the report prepared under (1), and assist workshop implementation as a resource person and facilitator, as required.

Key Expected Outputs of the Consultancy:

The main outputs under this Consultancy are the (i) Review and Synthesis report “Policy processes and directions in fisheries, coastal/marine environment and ICM in the BOBLME countries” – electronic copy in MS Word format, language: English - specific guidance attached below), (ii) an overview presentation of the report in MS PowerPoint format, approx. 15-20 minutes and (iii), the provision of inputs and contributions to the successful implementation of the workshop.

Timing and Travel

Implementation of the activities will start immediately after signing of the contract. All reporting and accounting requirements will be completed by 15 November 2010. The total consultancy will not exceed 60 working days over a period from August 20 to October 31, 2010. Work will be carried out mainly from home, with conference calls scheduled when required. Travel to the region to participate in Regional Workshop required (currently scheduled for December 2010).

Experience and qualifications / rationale for the selection of the contractor:

Poseidon Aquatic Resources Management Ltd is an international consultancy with considerable experience in analyzing and providing advice for marine resource and environment management. This work builds on previous work conducted for FAO/Asia-Pacific Fishery Commission (APFIC) and more recently on various projects in the partner countries of the region. Therefore, Poseidon Aquatic Resources Management Ltd is the logical partner for BOBLME to undertake the review activity.

Guidance on Coverage and Content of the Review

The review will identify and evaluate the main policy directions for fisheries (capture fisheries), environment and ICM. In the case of fisheries this will involve updating the information presented in the RAP Publication 2006/23 - APFIC (2006). The review will cover the countries (coasts where appropriate) of Indonesia, Malaysia, Thailand, Myanmar, Bangladesh, India, Sri Lanka and the Maldives. In countries where only part of their EEZ fall in the BOBLME (Indonesia, Malaysia, Thailand, India and the Maldives), where possible, policies referring to those areas (e.g. Andaman Sea for

Thailand) will be reviewed, especially if there are substantial differences from the national policies.

The first task will be to (i) finalize the thematic scope of the study (within the broad categories of capture fisheries, environment and ICM), (ii) identify the key stakeholders in each country at Ministry, private sector and non-governmental levels and (iii) the current policies and implementation plans that exist in each country. The BOBLME National Focal Points (National Coordinators and/or Project Steering Committee Members) will be a critical resource for the latter two tasks.

The second task will be to prepare and send three questionnaires (e.g. capture fisheries, environment & ICM) to each of the eight partner countries that will inform the review (content of questionnaires to be cleared by the RC and CTA of the BOBLME project). The information will then be synthesized for each country and comparisons made across the region. In particular, any significant differences in the policy objectives in the eastern and western countries of the BOBLME (horizontal comparison) should be discussed. The report should also contain an analysis on the linkages (or lack of them) between higher level policy objectives, overall management strategies, and management plans (vertical comparison)

The main outcome should be a better understanding of both the process of policy formulation as well as the main policy directions of each country and the BOBLME as a whole. A second outcome will be knowledge of the gaps between higher level policy objectives and goals and the actual implementation of these through more specific management plans.

The review will be targeted at fisheries and aquatic (coastal, marine) environment policy makers and managers, as well as development professionals working within the South and Southeast Asia region and be written in a style that will facilitate their understanding of the issues and recommendations.

Case studies / examples of the types of best practices should be included in the review for those approaches, actions and outcomes which particularly well illustrate successes in promoting sustainable development of the fishery sector (best practice that aims to balance ecological well-being including the fishery resources), coastal environment, and human well-being. The analysis of these case studies, and other documented information and experience, including unofficial or anecdotal information, will require that the source of the information be included.

The expected length of the report is approximately 40-60 pages of text. Some illustrations/photographs to complement the text are encouraged and should be provided separately to the document (i.e. not embedded in the document). The report will include an executive summary, and should also highlight information gaps e.g. cases of best practices or lessons learned resulting from (project) interventions with lack of documentation.

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Appendix C: Maldives

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation	<ul style="list-style-type: none"> • Fisheries Master Plan under development (expects finalization in 2013, with 14 sub-studies already completed) • Fishery and the Environment Chapter in the Strategic Action Programme (SAP), Aneh Divehi Raaje. • Draft New Fisheries Bill –Started work in 2002; submitted to Parliament in 2007; but was withdrawn; a revision was undertaken through consultative process. Revised one to be re-submitted in 2011 • Fisheries Law of the Maldives (No. 5/1987) and its subsequent regulations and directives. • Regulation on Licensing for Fishing and Fish processing for Export and Aquaculture. Dated 17th November 2009 • Ministry of Fisheries and Agriculture (2009). Banning of all shark fishing within a 12 mile nautical radius from the outer atoll rim of the Maldivian Atolls. Directive No: FA-D/29/2009/20. Malé, Rep. of Maldives. pp. 1 • Directive on shark ban (March 2010). • Ministry of Fisheries, Agriculture and Marine Resources (2005). Unofficial Translation of Ministry of Fisheries, Agriculture and Marine Resources, Directive No: FA-G/29/2005/07 on Sea Turtles Conservation. Directive No: FA-G/29/2005/07. Malé, Rep. of Maldives. pp. 2 • Amended regulation export and licensing of yellow fin tuna in the Maldives (2010/R-13; 09 December 2010) • Sector outlook studies prepared with World Bank assistance (but not formally accepted by the Government as a formal strategy) 		
Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralization	<ul style="list-style-type: none"> • “Aneh Dhivehi Raajje” The Strategic Action Plan, National Framework for Development 2009 – 2013. The Government of Maldives. This is based on the Government’s manifesto • The National Biodiversity Strategy and Action Plan (2002) • Maldives does not have a Maritime Law. However, Maldives is party some of the sections of the IMO Convention. Maldives is also member of the • Maritime Rules and Regulation <http://www.transport.gov.mv/maritime%20regulations.php, accessed April 2011) exist on a variety of general transport and safety issues that are being considered for fishery development purposes. 		
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy.	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
Please provide a ranking in terms in terms of their <u>influence on policy content</u> , with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc Ranking 1 – 5	1. Political government staff at national level	Yes	1
	2. Political government staff at provincial and/or municipal council level	No	5
	3. Political government staff at local level	Yes	5
	4. Technical government staff in fisheries ministry/department at national level	Yes	3
	5. Technical government staff in fisheries ministry/department at provincial level	Yes	4
	6. Technical government staff in fisheries ministry/department at local/district level	No	5

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
1 = most influential 5= least influential	7. NGOs and Island communities	Yes	5
	8. Technical government staff in other sectoral ministries/departments/private sector	Yes	3
	9. Harvesting sector representatives from large-scale/	Yes	4
	10. Harvesting sector representatives from small-scale/artisanal sector	No	
	11. Processing/marketing sector representatives	Yes	1
	12. Non-governmental organizations from civil society	Yes	3
	13. Donors and/or consultants funded by them	Yes	3
	14. Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	There is under the Fisheries Law for a Fisheries Advisory Board. The Board is comprised of the Minister, Permanent Secretary, and two State Ministers from the Ministry of Fisheries and Agriculture, two Marine Research Centre staff, two private sector representatives, the Chamber of Commerce, and one person assigned by the President's Office. All meetings are minuted and decisions/recommendations must be reached by consensus. The consultation process at national level thus provides good opportunity, facilitation and support for all interested and affected parties to be involved with policy development		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?	Every 5 years		
When are the dates for the next major revisions/re-specifications of key policy documents?	Post 2013 and expiry of current "Aneh Dhivehi Raajje" The Strategic Action Plan		
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details of: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	No policy change No, but there was number of actions taken		
Is there a documented fisheries research plan? If so what period does it cover?	No.		
What are the main strengths and weaknesses with	Strengths		

Section A. FISHERIES POLICY PROCESSES	
Question	Answer
regards to: <ul style="list-style-type: none"> available research to inform policy, and the extent to which those research outputs are used in informing policy 	<ul style="list-style-type: none"> Research is generally strategic, and anticipatory. The MRC coordinates well with the Ministry, and also with other institutions and organisations outside of the Maldives e.g. IOTC. Small size of country and close working relationships between MRC and Ministry ensure good research/policy linkages. Fisheries Management Agency (FMA) has been developed within the Ministry's current organization chart. FMA working closely with MRC and Ministry <p>Weaknesses</p> <ul style="list-style-type: none"> There are few research providers outside of the MRC. There is potential for more regional joint research collaboration to take place. Due to resource limitations research activities are not always completely comprehensive

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets/Indicators		
<i>Does policy contain specific development targets for capture fisheries? Eg. Fisheries production, employment no's, etc. If so, pls elaborate?</i>	Targets and indicators are formulated based on result-based monitoring and evaluation framework developed by Department of National Planning (DNP)	
<i>Does policy contain specific management targets for capture fisheries? e.g. area under MPAs, etc? If so, pls elaborate?</i>	No	Aneh Dhivehi Raajje
Does policy contain any other specific <u>targets</u> or <u>indicators</u> e.g. value of exports? If so, what are they? (List all)	Targets and indicators are being formulated based on SAP	Aneh Dhivehi Raajje
2. Fisheries Management		
Does policy contain a clearly articulated statement of long-term objectives. If so what.	The Strategic Action Plan does not refer specifically to long-term objectives, but has "the sustainable development of fisheries for economic diversification and growth" as one of five goals for the sector, implying long-term objectives. The World Bank fisheries outlook studies currently being used to inform policy/management highlight the need for a precautionary approach, and the new draft fisheries law (not yet passed by Parliament) also contains reference to fisheries management based on a precautionary approach which would imply long-term objectives. Sustainable management of marine resources is also an explicit objective of the There is reference to long term objective fishery management in the SAP Page 338 of SAP. There are specific 5 statements. / SAP page 345.	Aneh Dhivehi Raajje, WB outlook studies, National Development Plan. Draft Law
Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for	Yes. In the fisheries chapter of the Aneh Dhivehi Raajji, it states that:	Aneh Dhivehi Raajje

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
decentralisation / devolution of management powers and responsibilities?	<p>Ministry of Fisheries and Agriculture is in the process of establishing functional desks at all Provincial Offices with at least one trained staff as a Project Officer. The Ministry intends to provide all services including project management and training programmes at province level. The province level desks will also be focal points for implementation of fisheries laws and regulations.</p> <p>Decentralisation is also itemised in the cross cutting themes and programmes relevant to the sector (Decentralisation: effecting provisions of fishery related services to local communities). Currently there are 30 fisheries inspectors and 7 fishery enforcement officers established to facilitate monitoring control and surveillance.</p>	
Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? if so, is such expansion at the expense of any foreign fishing interests currently operating in the country?	Yes. Foreign longline vessels were excluded from operating in national waters outside of 75nm from March 2010, and the Government intends to support trials for longline vessels using existing large pole and line vessels outside of 100nm	IFAD post-tsunami fisheries and agriculture rehabilitation project supervision reports
Does policy specifically refer to small-scale fisheries and if so, in what way?	Small scale fisheries is not defined. Not differentiated.	All policy documents
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	<p>Not specifically for the Maldivian fleet. The Maldives believes that its fleet capacity levels are entirely sustainable in the context of the Indian Ocean, even if purse seine activity by foreign vessels may be a potential issue of concern.</p> <p>Policy does however recognise some economic issues associated with individual vessel size (as opposed to overall fleet capacity) and states that "Heavy investments were made following the high fish landings in 2005 and 2006 when local fishermen and boat owners invested in newer and bigger boats. Falls in catch over the past 2 years have impacted these new investments heavily with the low fishing period also coinciding with higher fuel prices, crippling the industry."</p>	Aneh Dhivehi Raajje,
Does policy refer to and/or deal with IUU fishing? If so, in what way?	Yes. There is a new regulation to ensure that the Maldives is compliant with the new EC IUU regulation, and the motivation for exclusion of foreign vessels was partly because of concerns of IUU activity and the inability of the Maldives to police the activities of foreign vessels. In addition, an activity under Policy 7 (Enhance the regulatory framework to ensure sustainable fishery development and management) is to: "Establish Monitoring, Control and Surveillance (MCS) and provide training in compliance with local regional and international laws and regulations"	Aneh Dhivehi Raajje
Does policy refer to the use of VMS?	Yes. VMS units are now being introduced with financial support from the IFAD post-tsunami fisheries and agriculture rehabilitation project.	IFAD post- project supervision reports

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
Does policy refer to need for integration/co-ordination with other sectoral policies?	Not really. A special section of the Aneh Dhivehi Raajje dealing with fisheries, refers to cross-cutting themes and issues, but these cover things such as gender, climate change, decentralization, etc, and there is no specific reference in policy to cross-sectoral coordination, as opposed to the themes cross-cutting fisheries sectoral policy. Likewise other ministries listed as stakeholders do not cover other sectoral ministries, just cross-cutting Ministries	Aneh Dhivehi Raajje
Does policy mention eco-systems management? If so, what measures are suggested?	Not really, to the extent that fisheries policy per se does not mention or highlight the need for ecosystems management. However, policy documents state that the Ministry of Fisheries and Agriculture is responsible for the Protection and Conservation of marine biodiversity and <u>ecosystems</u> . And there are regulations dealing with turtle and shark catches. Ecosystems management may be considered less important in the Maldives than in other countries by virtue of the main pole and line type of fishing which has no habitat impacts, and virtually no bycatch or discards associated with the fishery.	Aneh Dhivehi Raajje, fisheries regulations.
Does policy include specific measures related to conflict management? If so, what are they?	Not specifically in the fisheries chapter of the Aneh Dhivehi Raajje. But a) the Aneh Dhivehi Raajje places considerable emphasis in general on conflicts, and b) as noted above, there is a formal requirement under the Fisheries Law for a Fisheries Advisory Board, and given its representation, this serves as a measure to minimise conflicts.	Aneh Dhivehi Raajje
Does policy include the use of fishery co-management and/or community management?	Not really	Aneh Dhivehi Raajje and other policy documents
3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	Yes, a specific policy objective/action is to: "Establish mechanism to conduct third party certification to improve the trade of fish and fishery related products". The pole and line skipjack fishery is currently undergoing MSC assessment"	Aneh Dhivehi Raajje
Does policy refer to increasing value-added? If so, how is this to be achieved?	Yes. Policy refers to 'branding of Maldive fish' , and to "Establish a fishery product promotion board to facilitate and improve the trade of fish and fishery products"	Aneh Dhivehi Raajje
Does policy refer to tariff barriers and/or free trade areas in the region?	No.	Aneh Dhivehi Raajje
Does policy seek to increase exports?	Yes. The 3rd of 5 main goals for the sector as specified in the National Action Plan is Promote	Aneh Dhivehi Raajje

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
	exports and trade of the fisheries sector. Plus Policy number 3 (of 7) is to Facilitate business development, trade and export promotion in fisheries. See above on value-added also	
4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Not in fisheries policy. (Although there is a lot about poverty in the social justice, SME and agriculture chapters of National Action Plan.)	Aneh Dhivehi Raajje
Does policy include mention of, or provide for, micro-finance?	Yes. Two actions are specified: Provide soft loans and training to assist in upgrading fish processing facilities established by fishing communities Request/solicit Bank of Maldives Plc to extend repayment period of fishing vessel/engine acquisition loans from 6 years to 10 years	Aneh Dhivehi Raajje
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing/maximizing employment?	Policy actions are most concerned with providing training and maintaining an interest with the young in entering the sector, as there is a strong concern that people are finding the sector less appealing to work in.	Aneh Dhivehi Raajje
Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or indirect food security (fish exported with money then available for food imports)	There is a clear distinction in management terms between 'fishermen', and those that are not commercial but rely on fishing for food and livelihoods	Fisheries law.
Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	No. See above. There is no perception that there are too many fishermen.	Aneh Dhivehi Raajje
5. Overall impression of policy trends		

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
	<p>In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.</p> <p>Principal trends over the last 10 years have been:</p> <ul style="list-style-type: none"> - Moves towards decentralisation through increased local government powers - Expansion of handline yellowfin export trade, and of associated processing plants - Moves towards privatisation e.g. skipjack liberalisation, and planned moves to privatise MIFCO (state fishing company) following recent break-up of MIFCO into a number of distinct operating units rather than its previous integrated form - Recent exclusion of foreign longline vessels and plans to trial domestic LL activity - Increasing emphasis on improved fisheries management and ecosystems, as evidenced by turtle and shark regulations, new IUU regulation, and joining of IOTC as a Cooperating Non-Contracting Party. 	

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<p>Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, cpue, MSY, etc</p>	<p>Not really. Due to lack of need, there are no harvest control rules in place at present for skipjack within the IO. There are also no HCRs for yellowfin at present. At a national level, there is (i) a strict limitation to hook and line only fisheries e.g. purse seine and gillnetting for all species, including skipjack tuna, are banned, (ii) there is a ban on shark fishing and (iii) a FAD management strategy, which includes strict rules over the use of FADs that have been implicitly related to maintenance of the skipjack and associated harvest.</p>	<p>MSC assessment public document</p>
<p>Is the MSY concept applied and how old are the most recent MSY estimates?</p>	<p>Not for skipjack. Yes for yellowfin. While traditional stock assessments have not been conducted, and the MSY is not well established for skipjack (the main catch), the monitoring of catch rate and size frequency trends is a form of stock assessment. MSY for yellowfin is prepared by the IOTC.</p>	
<p>Are there any species-specific management plans in place? If so for which species</p>	<p>Yes, a Reef Fishery Management Plan- 'Faana Masverikamu' Management Plan, 2011</p>	
<p>Which of the following input fisheries management are used if any</p> <ul style="list-style-type: none"> • <u>limited</u> licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) • effort management e.g. days at 	<ul style="list-style-type: none"> • No limited licensing, but a requirement to be licensed • No effort mgt • A few closed areas in some sensitive inner atoll areas for prohibition any form of fishing except bait fishing • No closed seasons • No purse seine or gillnet activity • Gear restrictions exist for small pelagic (bigeye and round scad). Only hook and line fishing is 	

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<ul style="list-style-type: none"> · sea restrictions · closed areas · MPAs · closed seasons · gear restrictions · other (specify) <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<p>allowed on these two species.</p>	
<p>Which of the following output fisheries management are used if any if any:</p> <ul style="list-style-type: none"> · TACs · minimum landing sizes · bycatch minimisation · fish escapement rates · other (specify) <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<ul style="list-style-type: none"> · No TACs · No minimum landing sizes · No bycatch limits (as not important issue) 	
<p>Which of the following technical fisheries management are used if any</p> <ul style="list-style-type: none"> · Mesh-size restrictions · Other <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<ul style="list-style-type: none"> · No hook size limits or other technical measures in SKJ or YFT 	
<p>What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc</p>	<p>None</p>	
<p>Which of the following payments/charges (if any) are imposed on the private sector</p> <ul style="list-style-type: none"> · landings charges · licence fees · harbour dues · import duties 	<p>License fees</p> <p>Import duties (engines, boat building material; often they are waived on ad-hoc basis)</p>	

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<ul style="list-style-type: none"> · export duties · other and what are the levels of charges involved?		
Are any subsidies provided to fishermen in the form of: <ul style="list-style-type: none"> · fuel tax/price reductions · import/export duty waivers · vessel construction funds · other i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity	<ul style="list-style-type: none"> · Fuel subsidies in 2008, 2009, and 2010. The intent of this subsidy to incentivise fishermen going to fishing. The fishermen will be compensated on a percentage of fuel bill spent for each fishing trip AFTER they have REPORTED the landings (i.e., for cases where proof of fishing is validated) · Waiving of import duty on engines declared to be fixed on fishing vessel. 	
Are any subsidies provided to fishermen in the form of grants/funds in support of <ul style="list-style-type: none"> · improved gear selectivity · reduced environmental impacts · quality improvements · product innovation · other i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives	<ul style="list-style-type: none"> · A provision is currently in place (at the time this writing) where fisherman can borrow money (guaranteed by the Government) to buy and install refrigerated sea-water cooling system. A prototype was designed in Korea which appears to be suitable for Maldivian fishing vessels. The response is very poor – partly due to poor fishing since 2007. 	

2. Constraints to effective policy implementation	
For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc	
<i>Potential constraint</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	4
Budgets for operations of Ministries/departments (i.e. For activities)	2
Budgets for enforcement of management measures e.g. For MCS operations	1

Capacity levels of staff in Ministries/departments	1
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	2
Supportive regulations/laws giving effect to policy content	1
Coherence with other sectoral and national policies	2
A monitoring and evaluation (M&E) system to check on policy implementation	1
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated?
 At national level, the small size of the Maldivian economy/population, a recent change in Government adopting to a more open approach, and cultural norms, all mean that consultation and participation in sector management is generally good and includes local knowledge, although is not in all cases especially formalised. Government holds meetings with both catching and private sector representations⁹ as required, and the private sector reports that the Government is willing and amenable to consultation with, and participation by, them. It should however be noted that catching sector representation is not that well established, and requires considerable capacity development in terms of institutional sustainability. Resources of the Ministry extension service are stretched, but the service undertakes both consultation and education. Other communication on important issues takes place by factory owners to fishermen at landing sites, and through radio and TV. In addition, at national level there is a formal requirement under the Fisheries Law for a Fisheries Advisory Board (Adan Ali, pers. comm., Stakeholder meeting I3, 15 November 2009). The Board is comprised of the Minister, Permanent Secretary, and two State Ministers from the Ministry of Fisheries and Agriculture, two Marine Research Centre staff, two private sector representatives, the Chamber of Commerce, and one person assigned by the President's Office (email correspondence, Adam Manik, MoFA). All meetings are minuted and decisions/recommendations must be reached by consensus. The consultation process at national level thus provides good opportunity, facilitation and support for all interested and affected parties to be involved.

B. Marine environmental policy content and implementation

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
Please list all relevant marine environmental policy documents and items of legislation? E.g. documented policy, master plans and action plans.	<ul style="list-style-type: none"> • National Biodiversity Strategy and Action Plan of the Maldives (MoHTE, 2002) • National Environmental Action Plan III (MoHTE), 2009) • Maldives National Strategy for Sustainable Development (Ministry of Housing, Transport and Environment, 2009) • National Solid Waste Management Policy (Ministry of Environment, Energy and Water, 2008) • National Energy Policy • Environment Protection and Preservation Act (4/93) • NPoA Sharks (draft) • Maldives Environment Management Project (Project document) • Atoll Ecosystem Conservation Project (Project document) • Note that the Maldives has NOT yet ratified CITES • EIA Regulations, May 2007

⁹ From the Maldives Seafood Processors and Exporters Association, the Fishermen's Association, and the Fishermen's Union, all of which are legally constituted and registered organisations

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES																								
Please list the key legislation covering the following areas: <ol style="list-style-type: none"> Marine and coastal habitat conservation Endangered threatened and protected species Land-based pollution control Marine-based pollution control Environmental impacts assessment Environmental standards (e.g. water quality) 	<p>Marine and coastal habitat conservation:</p> <ul style="list-style-type: none"> Law on sand mining in inhabited islands Regulation for mining of stone, coral and sand Regulation for the protection and conservation of the environment ion the tourism industry Regulation on assessing environmental damage Regulation on cutting down and transporting / and relocating of mature trees <p>Endangered threatened and protected species</p> <ul style="list-style-type: none"> Legislation on shark fishing bans Guidelines for encounters with whale sharks (?) <p>Environmental impacts assessment:</p> <ul style="list-style-type: none"> EIA Regulations 2007 <p>Environmental standards</p> <ul style="list-style-type: none"> Environment Protection and Preservation Act (Law 4/93) Environmental Protection and Preservations Act of Maldives Act 4/1993 Regulation on the Protection and Conservation of Environment in the Tourism Industry 																							
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy. Please provide a ranking in terms in terms of their <u>influence on policy content</u> , with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc	<table border="1"> <thead> <tr> <th><i>Stakeholder group</i></th> <th><i>Active involvement in policy development (yes/no)</i></th> <th><i>Ranking of importance in determining policy (1 being the most important)</i></th> </tr> </thead> <tbody> <tr> <td>1. Political government staff at national level</td> <td>y</td> <td>1</td> </tr> <tr> <td>2. Political government staff at provincial or state level</td> <td>y</td> <td>2</td> </tr> <tr> <td>3. Political government staff at local level</td> <td>y</td> <td>2</td> </tr> <tr> <td>4. Technical government staff in environmental ministry/department at national level</td> <td>y</td> <td>1</td> </tr> <tr> <td>5. Technical government staff in environmental ministry/department at provincial level</td> <td>y</td> <td>2</td> </tr> <tr> <td>6. Technical government staff in environmental ministry/department at local/district level</td> <td>n</td> <td>3</td> </tr> </tbody> </table>	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>	1. Political government staff at national level	y	1	2. Political government staff at provincial or state level	y	2	3. Political government staff at local level	y	2	4. Technical government staff in environmental ministry/department at national level	y	1	5. Technical government staff in environmental ministry/department at provincial level	y	2	6. Technical government staff in environmental ministry/department at local/district level	n	3		
<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>																						
1. Political government staff at national level	y	1																						
2. Political government staff at provincial or state level	y	2																						
3. Political government staff at local level	y	2																						
4. Technical government staff in environmental ministry/department at national level	y	1																						
5. Technical government staff in environmental ministry/department at provincial level	y	2																						
6. Technical government staff in environmental ministry/department at local/district level	n	3																						

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
	7. Technical government staff in other sectoral ministries / departments	y	2
	8. Public sector industry	y	2
	9. Private sector industry	y	3
	10. Non-governmental organizations from civil society	y	3
	11. Donors and/or consultants funded by them	y	2
	12. Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	Legally-binding provisions require public participation, and particularly community participation, in decision-making through the EIA process.		
When are the dates for the next major revisions/re-specifications of key policy documents?	2013		
Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	No		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform policy, and · the extent to which those research outputs are in informing policy 	Strengths · Weaknesses · MRC under-staffed		

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
Does policy contain specific marine environmental management targets or indicators in the following areas: <ol style="list-style-type: none"> 1. Inter-tidal and sea areas under formal MPA protection 2. Marine species to be brought under formal protection 3. Coastal, estuarine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) 4. Pollution/effluent control targets 5. Any other quantitative environmental targets (pls specify) 	The National Strategy for Sustainable Development (NSSD) includes the protection of coral reefs as one of seven national goals. Whilst their role in maintaining marine biodiversity - and ecotourism - is highlighted, so too is their role in maintaining baitfish stocks for the pole and line fishery. NEAP III presents numerous quantitative and qualitative targets, including: a. By 2011 5% of coral reefs are given protected area status;	<ul style="list-style-type: none"> · Maldives National Strategy for Sustainable Development (Ministry of Housing, Transport and Environment, 2009) · National Environment Action Plan (III)

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
	<ul style="list-style-type: none"> b. By 2011 recovery plans are prepared or all marine listed threatened species c. By 2013, increase by 100 percent the awareness and understanding of the significance of biodiversity conservation and actions that can be taken to conserve species and threatened ecosystems d. By 2011, accede to Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) e. By 2011, accede to Convention on Migratory Species (CMS) f. By 2011, prepare management plans for 75 percent of nationally significant wetlands g. By 2012, establish island waste management centres in 75 percent of inhabited islands h. By mid 2010, develop policies, standards and guidelines for management of groundwater aquifers and water catchments areas in inhabited islands. 	
2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?	<p>The only decentralised policy implementation is via site-specific EIAs. A major factors are cost and capacity in setting up multiple, decentralised powers. In fact, there is a trend towards the amalgamation of local councils (to reduce cost). Only really organised / capable municipality is that in Male.</p> <p>Yes to some extent. The Decentralization act provides powers to local councils in managing marine resources.</p>	“Aneh Dhivehi Raajje” The Strategic Action Plan - National Framework for Development 2009 - 2013
Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of: a. bycatch and discards? b. Interactions with endangered, threatened & protected	a. Bycatch and discards: there is a strong policy focus on reducing bait fish utilisation (essentially a bycatch), esp. form coral reefs. Given the selectivity of most fishing methods in the Maldives,	

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
<p>species?</p> <ul style="list-style-type: none"> c. Impacts on sensitive or vulnerable habitats d. Impacts on the trophic structure of marine ecosystems e. Introduction of alien or exotic species 	<p>most bycatch is economically or socially valuable and is landed. Discards are very rare in Maldivian fisheries.</p> <ul style="list-style-type: none"> b. Interactions with endangered, threatened & protected species: Cabinet decision on 21 June 1995 prohibiting catching or killing of any marine turtle species, and their sale, import and export of its products (although the harvesting of marine turtle eggs was not banned). c. Impacts on sensitive or vulnerable habitats: major focus on coral reefs (NEAP Goal 3; NSSD Goal 2; & NBSAPM Action 5). Also mangroves and to a lesser extent, sea grasses. d. Impacts on the trophic structure of marine ecosystems. With the exception of baitfish species (in NEAP III) there is no major focus on trophic impacts of fisheries (apart from the ban on fishing keystone predators like sharks). e. Introduction of alien or exotic species: originally covered in the NBSAPM, now included in NEAP III. Very generic and not specific to fisheries issues 	
<p>If these issues are not covered by environmental policy, are they covered in fisheries policy?</p>	<p>National development policy expects the expansion of domestic tuna fishing into longlining. This may have negative implications for the conservation of sharks and turtles.</p>	<p>“Aneh Dhivehi Raajje” The Strategic Action Plan - National Framework for Development 2009 - 2013</p>
<p>Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?</p>	<p>Objective 10.1 of NEAP III is to “Establish and manage MPAs”. The targets include (i) By 2011 establish a fully functional MPA System in the Maldives; (ii) by 2011 ensure that 05 percent of the coral reefs of the Maldives are given protected status; (iii) by mid 2010 introduce a national comprehensive system for the prevention and management of introduced marine pests and (iv) by 2011, prepare recovery plans for all marine listed threatened species. However this is no overarching strategy for MPA</p>	<p>NEAP III</p>

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
	development (see next)	
Does policy for MPA development recognise the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.	No, currently looks at individual site needs rather than a national , inter-connected network (although NEAP III does allude to an 'MPA system). Possibly inadequate focus on non-tourism areas. Also most of the marine protected areas are represented in one single GPS point and such demarcations and boundaries are in few places which have been protected in recent years. However, work is on going to implement boundaries for existing marine protected areas by the Environmental Protection Agency. However the Atoll Ecosystem Conservation Project is seeking to establish a comprehensive protected area system using Baa Atoll as a model for integration of the protected area system	NEAP III (Objective 10.1). National Assessment Report II (Department of Climate Change and Energy, Ministry of Housing, Transport and Environment, 2010)
Have MPAs been specifically developed to protect the following: a. Fish stocks (with no take zones, gear restrictions, etc) b. Critical habitats (e.g. coral reefs, mangroves, etc) c. Certain species Please give details where possible.	Bans on certain gear types (traps, gillnets) Ban on shark fishing. Issues of implementation subject to assessment.	
Does marine environmental policy consider the impacts of land-based pollution on the marine environment?	Only really via site-specific EIAs. Otherwise there does not seem to be a strategy towards improving coastal / lagoon water quality or protecting vulnerable habitats (i.e. coral reefs, sea grass beds) from land-based pollution. NEAP III states an intention to "develop a Wastewater Policy and Wastewater Treatment Implementation Strategy" by mid 2010 but progress on this objective (No. 20.1) is unknown.	GWP Consultants. Five Year Activity Plan 2006 - 2010 for the Maldives Water and Sanitation Authority. http://www.who.org.mv/LinkFiles/Reports_MWSA5Year.pdf
Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,	Maldives has ratified MARPOL 73/78 Annex I.II (August 2005). Otherwise environmental policy does not appear to consider marine-based activities as a major environmental threat to the Maldives. There appears to be no contingency plan for oil spills.	

<p>Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc</p>	<p>The National Solid Waste Management Policy includes a 'social equity' principle to ensure that waste management interventions are fair in terms of their benefits and costs. Goal 7 of the National Sustainability Development Strategy includes an objective to "take steps that will National Solid Waste Management Policy make a decisive impact on the reduction of the number of people living in poverty and those at risk of poverty". However this objective is realized through wider planning, such as the 'Strategic Economic Plan (Ministry of Planning and National Development, 2005) and the Seventh National Development Plan 2006 - 2010 (Ministry of Planning and National Development 2007).</p>	<p>National Solid Waste Management Policy National Sustainability Development Strategy Strategic Economic Plan (Ministry of Planning and National Development, 2005) Seventh National Development Plan 2006 - 2010 (Ministry of Planning and National Development 2007).</p>
<p>Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details</p>	<p>Yes, it is an increasingly key issue in Maldivian planning, given the vulnerability of the Maldivian islands to sea level rise and global warming.</p>	
<p>3. Overall impression of policy trends</p>		
<p>In summary, what are the main trends and changes in environmental policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.</p> <ul style="list-style-type: none"> • Integration of biodiversity protection and food security e.g. fisheries: esp. on baitfish stock conservation, bait alternatives, inc. aquaculture (see NEAP III). • According to some sources (Ali Rilwan, Blue Peace, pers., comm., Sept 2010), too much focus has been put on EIA implementation and not enough on wider conservation management. • Environmental management planning capacity has been weakened by (i) 'brain drain' to more lucrative employment overseas and (ii) people leaving government post for more lucrative private sector jobs, esp. in EIA preparation 		

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference
<p>C.1: Impact assessment</p>		
<p>What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate):</p> <ol style="list-style-type: none"> a. Restricted access (complete or partial by different groups?) b. Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year) 	<p>Restricted access, Restricted use, Zoning</p>	

<p>What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate):</p> <ol style="list-style-type: none"> Land-based rangers/checks Sea-based patrols Remote monitoring (e.g. air, satellite & telemetry) Other? 	<p>There are no monitoring mechanisms for the established dive sited and protected areas</p>	
<p>What forms of activity require an environmental impact assessment (EIA)?</p>	<p>The EIA Regulations (2007) provides a comprehensive description of the EIA process, including screening. Annex D provides a definitive list of activities requiring EIA, including aquaculture projects, fisher processing facilities, artificial reef projects, construction and development of jetties / marinas as well as a wide variety of other development types.</p>	<p>EIA Regulation 2007</p>
<p>What are the main strengths and weaknesses of the EIA system?</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • Focuses on main development areas, esp. tourism • Well tested and extensively documented • <p>Weaknesses:</p> <ul style="list-style-type: none"> • Need more assessment of cumulative and 'in combination' effects • Some critical habitats e.g. sea grass beds not included in EIA scope, not true 	<p>EIA Regulation 2007</p> <p>Ali Rilwan, Blue Peace, pers., comm., Sept 2010</p>
<p>Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details</p>	<p>Not really - cumulative impacts are referred to in the EIA Regulations (2007) but there is no system to look at cumulative or in combination impacts.</p> <p>The Maldives Environmental Management Project provides TA for a pilot regional strategic environmental assessment enhancing environmental management through the collection and use of data.</p>	

C.2 Marine environmental monitoring		
What are the main monitoring mechanisms for marine pollution control, its enforcement, and the prosecution of offenses <ul style="list-style-type: none"> a. Land-based rangers/checks b. Sea-based patrols c. Remote monitoring (e.g. air, satellite & telemetry) Other?	None at the moment, but some <i>ad hoc</i> monitoring and surveillances	
Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?	Yes, the 'National Assessment Report 2010. Inc. specific chapters on 'climate change and sea level rise, coastal and marine resources, and biodiversity resources. This recent report appears to be the second assessment report produced to date. SoE not produced regularly, last SoE was on 2004	National Assessment Report II (Dept. of Climate Change and Energy, MoHTE)
Are there annual (or recurrent) reports on the following: <ul style="list-style-type: none"> a. Status of marine areas and habitats under formal protection b. Status of species under formal protection c. Status of coastal water quality d. Number of reported pollution incidents 	The Ministry of Environment will prepare every two years (starting in August 2010) a progress report on implementation of the NSDS and also including future priorities, orientations and actions.	
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment	MoFA / MRC is mandated to undertake the fisheries impacts to marine environments, but due to resources constraints this has never been attempted.	
What are the strengths and weaknesses of marine & coastal environmental monitoring?	Strengths: Weaknesses: <ul style="list-style-type: none"> • No requirements for tertiary sewage treatment outside of tourist areas • Conflicting mandate objectives with fisheries and environment • Geographic spread 	

C.3 Financial and economic mechanisms		
Are there any financial support for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?	None	
Are there any financial incentives for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?	None, yes, environmental fines	

C.4 Constraints

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

Potential constraint	Scale of constraint 1 – 5 with 1 as very important
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	2
Budgets for operations of Ministries/departments (i.e. For activities)	2
Budgets for enforcement of management measures e.g.	2
Capacity levels of staff in Ministries/departments	1
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	2
Supportive regulations/laws giving effect to policy content	2
Coherence with other sectoral and national policies	2
A monitoring and evaluation (M&E) system to check on policy implementation	2
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated

C. Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
A.1: Policy and planning framework		
Is there a specific policy at either national or state / provincial level, for integrated coastal management? If so, please provide a full reference.	Although several national laws and regulations directly and indirectly govern coastal management (see below), there is no overarching framework policy or law that consolidates ICM in the Maldives. Recent assessments of coastal management in country have identified the need to develop such a framework.	Environment Research Centre (undated)
What other strategy or planning documents have produced for ICM at either national or state / provincial levels?	<ul style="list-style-type: none"> • Maldives Strategic National Action Plan for Disaster Reduction and Climate Change 2010 - 2020 (National Disaster Management Centre, 2010) • First National Communication of the Republic of Maldives to the UN Framework Convention on Climate Change (MoHAHE, 2001) • National Programme for Adaptation to Climate Change (NAPA) • Maritime Zones of Maldives Act No. 6/96 	
Please list all key legislation that has been produced to enact ICM.		
A.2 Development of ICM planning		
For national & state / provincial ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	The Ministry of Housing and Environment published national guidelines on how to prepare a land-use plan, along with a nationwide training programme to empower island people to prepare a land-use plan for their own islands	Level of involvement (low, medium or high)
Ministry of Planning (or equivalent)	Department of National Planning	
Ministry / Dept of Fisheries (or equivalent)	Ministry of Fisheries, Agriculture (MoFA)	
Ministry of Tourism (or equivalent)	Ministry of Tourism, Arts and Culture	
Ministry of Environment (or equivalent)	Ministry of Housing and Environment	
Other Ministries (please specify)	National Commission for the Protection of the Environment (guides policy) Department of National Planning Ministry of Housing and Environment. Island Councils	
Private sector interests		
NGOs	Blue Peace (http://www.bluepeacemaldives.org/index.htm) and others	
Civil society		

Foreign donor driven projects	SAARC Coastal Zone Management Centre Maldives Environment Management Project (Ministry of Housing, Transport & Environment) Atoll Ecosystem Conservation Project (GEF/UNDP)	
Others (please specify)		
Is there any specified requirement in law with regards to who should be involved with ICM formulation?	Coastal management in the Maldives are the Ministry of Housing and Environment, the Ministry of Fisheries and Agriculture and the. Responsibility for conservation and use of coastal resources is shared among these three ministries. Their mandates have similar issues, and hence there is confusion over the specific roles and responsibilities of each agency. Extensive consultations are carried out with local communities before commencement of every coastal development project, including harbour development projects. The minutes and key results of the consultation processes are well documented and sent to those who are involved in the process for their final comments, and disseminated among them and as well as to the general public through print and electronic media. There is no requirement for, or documentation of, stakeholder endorsement under any Maldivian law. But in practice documentation of stakeholder endorsement is carried out by each government authority for such stakeholder participatory activities carried out by each office.	
When are the dates for the next major revisions/re-specifications of key policy documents?	2013? (not exactly known)	
Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	The management of sharks is an example where the intervention from the stakeholders (tourism sector) has influenced the change of policy. The progress policy to regulate and eventually phase out of any form shark fishing in the Maldives (both in the coastal and in the EEZ), was essentially driven by the tourism sector. The total ban on shark fishing is effective from March 2010.	
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform ICM, and · the extent to which those research outputs are in informing policy 	Strengths <ul style="list-style-type: none"> · SAARC regional CZM planning initiative? Weaknesses <ul style="list-style-type: none"> · Inter-ministerial rivalries and lack of jurisdictional clarity (e.g. over who is responsible for managing sub-tidal sand mining) results in inactions. 	

Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Fisheries	High		No document available
Aquaculture	Medium		No document available
Tourism & recreation	High		No document available
Port & industrial development	High		No document available
Urban development	Medium		No document available
Coastal defence development	High		No document available
Transport	Medium		No document available
Military use	Low		No document available
Environmental conservation	Medium		No document available
Other (please specify)			
Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.	Aquaculture and land-based fisheries activities (e.g. fish processing) are 'Appendix D' activities requiring EIAs.		
Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.	<p>There is no ICM policy as such. However, given all the Maldives is coastal in nature, all national planning can be considered as coastal management, although the level of 'integration' is debatable.</p> <p>NEAP III has a number of 'environmental stewardship' targets (Goal 22) including strengthening multi-stakeholder engagement (Obj. 22.1), harmonising institutional mandates (Obj.22.2) and strengthening organizational performance (Obj. 22.3). It also has a goal (Goal 23) to "support the development of effective policies and systems and ensure comprehensive enforcement" through policy and legislation harmonisation and capacity development. There is no concrete implementation plan for the above</p>		
Are there specific provisions for co-management, what are these?	None.		
What level / levels is ICM set at:	Comment below:		Supporting Reference

International (e.g. transboundary cooperation)	SAARC Coastal Zone Management Centre, located in Malé, is mandated to oversee the developments of the ICM issues and play a facilitating role in harmonizing transboundary cooperation. Unfortunately its effectiveness is limited due to the nature of organizational structure in the SAARC.	
National		
State / Province		
Municipality		
Other (please specify)		
Does the plan specify mechanisms for user conflict management?		
Does the plan specify mechanisms for user zoning?		
Does the plan specify mechanisms for stakeholder consultation?		

Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
<i>Who are the main implementing authorities at:</i>		
International level	MoFA / MoHE, EPA (e.g., BOBLME and BOBP-IGO and other international conventions or arrangements/initiatives that Maldives belongs to	
National level		
State / Province level		
Municipality level		
Other levels (please specify)		
Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?	New regulation is in place (from 17 Feb 2011) for Assessing and valuation of environmental damage. The regulation gives Mechanistic approach to calculating the environmental damages	www.epa.gov.mv / publications
How is coastal zoning used in the development planning process?	Unclear how this works in Maldives	
Do any particular coastal users or sectors have priority in terms of resource allocation?	Unclear how this works in Maldives	
What mechanisms are there for reviewing coastal development priorities?	Unclear how this works in Maldives. Protect people and critical coastal infrastructure	

Acronyms:

AEP	Atoll Environmental Project
BOBLME	Bay of Bengal Large Marine Ecosystem Project
CZM	Coastal zone management
GEF	Global Environment Facility
ICM	Integrated coastal management
MoEEW	Ministry of Environment, Energy and Water
MoFA	Ministry of Fisheries and Agriculture
MoFAMR	Ministry of Fisheries, Agriculture and Marine Resources
MoHAHE	Ministry of Home Affairs, Housing and Environment
MoHAHE	Ministry of Home Affairs, Housing and Environment
MoHTE	Ministry of Housing, Transport and Environment
MPA	Marine Protected Area
UNEP	United Nations Development Programme

Appendix D: Sri Lanka

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation	<ul style="list-style-type: none"> • National Development Policy - Mahinda Chintana 2005 and its update – Vision for the Future 2010 • The Fisheries and Aquatic Resources Act (Act No. 2 of 1996) and its regulations addressing management, development and conservation. • The National Fisheries and Aquatic Resources Policy (2006) • Ten Year Development Policy Framework of the Fisheries and Aquatic Resources sector 2007 – 2016 (March 2007). • Fisheries Sector Development Strategy for 2010 – 2013. • National Aquatic Resources Research and Development Act No 54 of 1981 as amended by Act No 38 of 1996. • National Aquaculture Development Authority Act No 53 of 1998 • Strategy and Programme for Post-tsunami Reconstruction and Development of the Marine Fisheries Sector, 2006. Ministry of Fisheries and Aquatic Resources Development • Fisheries Citizens Charter – 2010. Ministry of Fisheries and Aquatic Resources Development. • National Plan Of Action for Sharks (NPOA -Sharks) (being prepared) 		
Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralisation.	<ul style="list-style-type: none"> • National Environmental Act No. 47 of 1980 • The Coast Conservation Act, No. 57 of 1981 and (amendment) Act No. 64 of 1988. • National Environmental Policy and Strategy 2003 • Coastal Zone Management Plan 2004 • Marine Environmental Protection Act 1992 • National Oil Spill Contingency Plan (2000) • Fauna and Flora Protection Ordinance, Chapter 567 and its Amendments 1993 and Act, No. 22 of 2009 		
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy.	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
Please provide a ranking in terms in terms of their <u>influence on policy content</u> , with 1 as the most important stakeholder group, 2 the second most important stakeholder group,	1. Political authorities at national level	Yes	2
	2. Political authorities at provincial or state level	Yes	10
	3. Political authorities at local level	Yes	12
	4. Technical government staff in fisheries ministry/department at national level	Yes	1
	5. Technical government staff in fisheries ministry/department at	Yes	4

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
<i>etc</i>	provincial level		
	6. Technical government staff in fisheries ministry/department at local/district level	Yes	3
	7. Technical government staff in other sectoral ministries/departments	Yes	8
	8. Catching sector representatives from large-scale/industrial sector	Yes	5
	9. Catching sector representatives from small-scale/artisanal sector	Yes	6
	10. Processing/marketing sector representatives including exporters	Yes	7
	11. Non-governmental organizations from civil society (CBOs/NGOs)	Yes	9
	12. Donors and/or consultants funded by them	No	
	13. Other (please specify Global & Regional Fisheries Management bodies)	Yes	11
	14. Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	No		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?	With each change of government? Usually there will be no changes to over-arching policy. However there may be changes in policy and implementation strategy based on the needs of the country at a given time.		
When are the dates for the next major revisions/re-specifications of key policy documents?	Current 10 year policy framework 2007 to 2016. Revised in 2010, next revision in 2013		
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details of: <ul style="list-style-type: none"> • what the policy change was • when the change occurred, and • which stakeholder group was the driver of change. 	Tax holiday for 6 years for the fisheries sector was given under the budget of 2010. To encourage reinvestment in the sector. (Change was caused due to government strategy to reinvest in the sector). The licensing fee of the small scale fishery sector was removed to enhance pro-poor development. (Change was caused according to a request by the small –scale fishery sector)		
Is there a documented fisheries research plan? If so what period does it cover?	The National Aquatic Resources Research and Development Agency (NARA) carries out fisheries research according to an annual plan. It includes – coastal and offshore fisheries – selected large and small pelagic, selected demersals, aquaculture (finfish and shellfish), seaweeds.		
What are the main strengths and weaknesses with regards to:	<ul style="list-style-type: none"> • Strengths – Availability of dedicated Research Institute. Trained staff, Equipment, 		

Section A. FISHERIES POLICY PROCESSES															
Question		Answer													
<ul style="list-style-type: none"> available research to inform policy, and the extent to which those research outputs are used in informing policy 		<ul style="list-style-type: none"> Weaknesses – Frequent changes in policy of the Ministry impacts research programmes. Strength vis-a-vis Policy: Research output is incorporated into policy when needed. Weakness: Delays in research output may affect policy decisions. 													
Section B: FISHERIES POLICY CONTENT		Answer	Supporting Reference												
1. Policy Targets/Indicators															
<p><i>Does policy contain specific development targets for capture fisheries? Eg. Fisheries production, employment no's, etc. If so, pls elaborate?</i></p>		<p>Yes. National production to 493,000 tons Coastal fish production increased to 236,132 tons Offshore fish production increased to 156,450 tons High seas production increased to 26,750 tons. Inland Fisheries and Aquaculture production increased to 74,450 tons Employment to 795,000 by 2016 As Amended in 2010 Production in 2013: Offshore marine (343960Mt), Coastal (246940 Mt), Inland fisheries (94800Mt).</p>	<p>Ten year development policy Framework of the Fisheries and Aquatic Resources sector 2007 – 2016. Fisheries sector development strategy 2010 - 2013</p>												
<p><i>Does policy contain specific management targets for capture fisheries? e.g. area under MPAs, etc? If so, pls elaborate?</i></p>		<p>To ensure the biological sustainability of the fisheries resources in the country, fisheries management areas will be declared where appropriate and necessary (Take from Fisheries Sector Development Strategy 2010 – 2013)</p>	<p>2006 policy, 10 year framework for fisheries development and Fisheries Citizens Charter.</p>												
<p>Does policy contain any other specific targets or indicators e.g. value of exports? If so, what are they? (List all)</p>		<p>Fish exports increased to 28,000 Mt. by volume and Rs. 18,000 million by value Per capita Cons. By 2013: 21.9 kg Fisheries Sector Development Strategy 2010 - 2013</p> <p>Production milestones</p> <table border="1"> <thead> <tr> <th>Year</th> <th>Coastal</th> <th>Offshore</th> <th>Inland aquaculture</th> </tr> </thead> <tbody> <tr> <td>2010</td> <td>195,140</td> <td>154,160</td> <td>55,500</td> </tr> <tr> <td>2011</td> <td>211,070</td> <td>205,130</td> <td>66,400</td> </tr> </tbody> </table>	Year	Coastal	Offshore	Inland aquaculture	2010	195,140	154,160	55,500	2011	211,070	205,130	66,400	<p>Ten year development policy Framework of the Fisheries and Aquatic Resources sector 2007 – 2016. Ref: DRAFT Fisheries Sector Development Strategy 2010 - 2013</p>
Year	Coastal	Offshore	Inland aquaculture												
2010	195,140	154,160	55,500												
2011	211,070	205,130	66,400												

Section A. FISHERIES POLICY PROCESSES					
Question		Answer			
		2012	228,300	267,600	79,300
		2013	246,940	343,960	94,800
2. Fisheries Management					
Does policy contain a clearly articulated statement of long-term objectives? If so what.		Not explicitly. Perhaps implicitly through Policy Mission (Directing the process of utilization of fisheries and aquatic resources for the benefit of the current and <u>future generations</u>). But Policy document itself and Citizen's Charter do not contain the words 'long-term' anywhere. 10 year policy development framework only refers to developing co-management as being a long-term process.			2006 Policy 10-yr policy framework Citizen's Charter
Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of management powers and responsibilities?		Yes			Ten year Development Policy Framework of the Fisheries and Aquatic Resources Sector. 13 th amendment of the constitution.
Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? if so, is such expansion at the expense of any foreign fishing interests currently operating in the country?		Yes, plans to expand offshore fisheries. Offshore and deep sea/high seas (332,300Mt) fish production increased by 2013. There are no foreign fishing interests currently operating in the country. Therefore there will not be any fishing at the expense of foreign fishing fleets operating in the country.			Ten year Development Policy Framework of the Fisheries and Aquatic Resources Sector. Fisheries Sector Development Strategy 2010 – 2013
Does policy specifically refer to small-scale fisheries and if so, in what way?		Yes in terms of coastal fisheries and target (Coastal fish production increased to 258,600 Mt tons by 2013) The licensing fee of the small scale fishery sector has been removed. Provide support to northern areas fish production which is basically small scale fish production. Introduction and promotion of sea weed, sea bass culture and oyster culture which will be beneficial to small scale fisheries. <i>Give priority to management of coastal fisheries in order to prevent the decline of resources considering their high contribution of such fisheries to fish production and employment generation</i> <ul style="list-style-type: none"> • <i>In coastal fisheries with excessive fishing effort, reduce fishing pressure by diverting the excessive fishing effort to under-exploited fisheries or generating alternative employment activities.</i> • <i>Protect the rights of the traditional fishers in coastal fisheries</i> 			Ten year Development Policy Framework of the Fisheries and Aquatic Resources Sector. Fisheries Sector Development Strategy 2010 – 2013

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	No. No reference to 'capacity' in policy, 10 year framework or Charter Yes, this issue has been addressed through the DRAFT fleet development plan. The offshore fishery sector and coastal aquaculture is being promoted to reduce the over-capacity of the coastal fishery sector.	DRAFT fleet development plan
Does policy refer to and/or deal with IUU fishing? If so, in what way?	Yes, in context of weak MCS and inefficient Coastguard. And as specific problem/issue with associated actions. Special consideration has been given to the implementation and management of fisheries sustainably by adopting techniques in response to the international treaties under the UNCLOS.	Ten Year Development Policy Framework of the Fisheries and Aquatic Resources Sector. Fisheries Sector Development Strategy 2010 – 2013
Does policy refer to the use of VMS?	Yes. As activity to address IUU, refers to: Install a vessel monitoring system to track the movement of vessels.	Fisheries Sector Development Strategy 2010 – 2013
Does policy refer to need for integration/co-ordination with other sectoral policies?	Once in 10 year framework. Not in other policy documents <i>Integration of inland fisheries and aquaculture with other line agencies such as Agriculture and Mahaweli Development Ministries, Agrarian Service, Dept: of Irrigation by introducing new legislation</i>	Ten Year Development Policy Framework of the Fisheries and Aquatic Resources Sector.
Does policy mention eco-systems management? If so, what measures are suggested?	No. 2002 did, but newer policy does not. 10 year framework just notes the productivity of eco-systems, and Charter refers to one of the services of the Coast Conservation Department as <i>Information Centers (Dissemination of information on environmental knowledge of the coastal eco-systems and supply of information)</i> The new strategy (Fisheries Sector Development Strategy 2010 – 2013) promotes co-management based on eco-system approach. (REF: Para 3.8.2) Ten year Development Policy Framework of the Fisheries and Aquatic Resources Sector. (REF: page 21 – table: Matrix 1 point 5).	2006 policy, 10 year framework and Citizens Charter Fisheries Sector Development Strategy 2010 – 2013
Does policy include specific measures related to conflict management? If so, what are they?	The Fisheries and Aquatic Resources Act No. 2 of 1996 has provided provisions under Part VII to settle disputes. Disputes between user groups have been settled by government over a number of decades using a dispute resolution mechanism that has resulted in specific local regulations being made, which is a form of co-management. Fisheries and Aquatic Resources Act No 2 of 1996 has provisions to deal with disputes provide regulations to appoint a Committee of Inquiry or a Commissioner to deal with fishing disputes. Many area-specific regulations have	Fisheries and Aquatic Resources Act No 2 of 1996 Part VII Macfadyen et al 2005 FAO Country Review BOBLME sub-component 2.3 assessments,

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
	<p>resulted from this process.</p> <p>Special Area Management (SAM) process deals with conflict both within the fisheries sector, and between fisheries and other sectors. When conflicts among stakeholders are likely to lead to resource depletion / degradation in environmentally sensitive areas, these areas are identified first as areas needing Special Management Measures in the legislation. Management of such resources is then carried out by a SAM Committee consisting of representatives of all stakeholders. This has worked quite well in Sri Lanka. Two such management sites are the Negombo Lagoon and the Rekawa Lagoon areas.</p> <p>The FAR Act is being amended to include all stakeholders in the co-management process which will facilitate dispute resolution among fishers and other user groups.</p> <p>In addition there are fisher groups that manage their disputes without external assistance. (e.g. Kattudel Fishery – Stake net fishery in the Negombo Lagoon).</p>	<p>site visits and country report</p> <p>SAM Plans</p>
Does policy include the use of fishery co-management and/or community management?	<p>Yes.</p> <p>General principles of participation are included in fisheries policy, and there is a Constitutional provision for decentralisation. Co-management is also fostered by important non-fisheries legislation relating to coastal conservation.</p> <p>Fishermen’s cooperative societies can provide the necessary focus within a community on which a management system could be based. The number of cooperative societies, their membership and financial resources (both internally generated and loans) have greatly increased in recent years.</p> <p>A co-management division in DFAR could be further supported with improved institutional capacity.</p> <p>The Coast Conservation Act, 1981 (makes provisions for the identification of special coastal areas needing management (under Special Area Management process) and the establishment of management committees with the participation of all stakeholders, including fishers.</p>	<p>FAR Act 1996</p> <p>Relevant Management Plans</p> <p>BOBLME sub-component 2.3 assessments, site visits and country report</p> <p>CCD Act No. 57 of 1981 and (amendments No 64 of 1988)</p>

3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	<p>Yes to traceability. Reference in 10 year framework in section on infrastructure as follows:</p> <p>Traceability is ensured through catch certificate system and the catch data logbooks.</p> <p>The Fisheries Sector Development Strategy 2010 – 2013 covers the compliance with the International Treaties on Law of the Sea and the implementation of sustainable fisheries.</p> <p>A 10 year fisheries development plan has a provision to address this issue</p>	10 year framework
Does policy refer to increasing value-added? If so, how is this to be achieved?	<p>Yes. Strong focus on 10 year framework. E.g.</p> <ul style="list-style-type: none"> • Eliminate post-harvest value losses in offshore fishing, inland fishing & aquaculture • New post harvest technologies • Address poor infrastructure impacting on value-added <p>And policy document makes reference in section on marketing to</p> <ul style="list-style-type: none"> • Promote production and consumption of value-added fish products. • Promote the export of value-added fish products. • Fisheries Sector Development Strategy 2010 – 2013 price competitiveness by promoting marketing. • Fisheries Sector Development Strategy 2010 – 2013 increase foreign exchange earnings through enhancement of fish and non-traditional fish products for exports. • Incentives provided through Fiscal Policies for value addition 	<p>10 year framework</p> <p>2006 policy Fisheries Sector Development Strategy 2010 – 2013</p> <p>Government Budget</p>
Does policy refer to tariff barriers and/or free trade areas in the region?	Yes, The Board of Investment (BOI) is an institutional setup to overcome the tariff barriers.	BOI Act No. 4 of 1978 as amended in 1980, 1983 and 1992 and many regulations thereafter.
Does policy seek to increase exports?	<p>Yes.</p> <p>And policy document makes reference in section on marketing to</p> <ul style="list-style-type: none"> • Promote the export of value-added fish products. 	2006 policy, 10 year framework Fisheries Sector Development Strategy 2010 – 2013

4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Fisheries social development through enhancement of socio-economic status of the productive poor.	Fisheries Sector Development Strategy 2010 – 2013
Does policy include mention of, or provide for, micro-finance?	Yes, in order to promote investment in sector, 10 year framework specifies the following actions: <ul style="list-style-type: none"> • Arrange for channelling of development oriented credit facilities through the banking/financial institutions • Introduce credit schemes to enable introduction of new One Day boats and for replacement of other boats and to provide working capital • Introduce credit schemes to enable additions and replacements of multi-day boats 	10 year framework
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing/maximizing employment?	No.	10 year framework
Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or indirect food security (fish exported with money then available for food imports)	Yes. One of (the first) 5 key policy objectives is <i>To improve the nutritional status and food security of the people by increasing the national fish production</i>	10 year framework, 2006 Policy
Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	Yes. Policy doc states: <i>In coastal fisheries with excessive fishing effort, reduce fishing pressure by diverting the excessive fishing effort to under-exploited fisheries or generating alternative employment activities</i> And framework has specific activities including <ul style="list-style-type: none"> • Facilitate eco-tourism programmes • Implement culture of marine and brackish water fish including ornamental fish based Establish institutional mechanism to implement alternative livelihood programme	10 year framework, 2006 Policy

<p>5. Overall impression of policy trends</p> <p>In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.</p> <p>Main trend is emphasis on developing the offshore sector. Also recent emphasis on co-management and the establishment of the co-mgt division in the Ministry. Promotion of inland aquaculture and mariculture</p>
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Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, cpue, MSY, etc	No. However there are size restriction and gear restrictions, temporal and spatial restriction for selected species in order to prevent over exploitation.	
Is the MSY concept applied and how old are the most recent MSY estimates?	Not really. 10 year framework justifies expansion of coastal fisheries on basis of old estimate of MSY, but MSY concept not really applied as basis on which to manage fisheries. However some recent NARA/Ministry work under an FAO project has established MSYs for some species e.g. lobster, chank (sea snail), sea cucumber etc (01 year)	Capacity Enhancement of the National Aquatic Resources Research and Development Agency (CENARA project) reports.
Are there any species-specific management plans in place? If so for which species	Yes. For some, as developed by recent FAO/CIDA project, e.g. sea cucumber, lobster, shrimp and marine aquarium fish – all resource types having many species. The chank (sea snail) management plans cover only one species. But these are not covering the major commercial fisheries e.g. tuna	CENARA reports
Which of the following input fisheries management are used if any <ul style="list-style-type: none"> • <u>limited</u> licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) • effort management e.g. days at sea restrictions • closed areas • MPAs 	<ul style="list-style-type: none"> • <u>limited</u> licensing Yes • effort management Yes; closed areas No • MPAs. Yes • closed seasons Yes (e.g. Lobsters) • gear restrictions. Yes • other (specify) Size restrictions (e.g. Lobsters, Chanks) and gear restriction and 	

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<ul style="list-style-type: none"> • closed seasons • gear restrictions (e.g. banned gear types) • other (specify) Pls provide as much detail as possible for different fisheries/fleets	net size restrictions	
Which of the following output fisheries management are used if any if any: <ul style="list-style-type: none"> • TACs • minimum landing sizes • bycatch minimisation • fish escapement rates • other (specify) Pls provide as much detail as possible for different fisheries/fleets	None to any in list TAC has been established for species studied under the CENARA project Yes for lobsters and chanks Yes Not studied	
Which of the following technical fisheries management are used if any <ul style="list-style-type: none"> • Mesh-size restrictions • Other Pls provide as much detail as possible for different fisheries/fleets	Yes - Mesh size limits Size restrictions for selected species Time and space	
What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc	Yes - Rotation basis (e.g. Beach Seine), Stake seine nets Fish Kraals	
Which of the following payments/charges (if any) are imposed on the private sector <ul style="list-style-type: none"> • landings charges • licence fees • harbour dues • import duties 	Landing charges – Yes – (Foreign fishing landings) Licensing fees – Yes Harbour dues – Yes Import duties – Yes Export duties – Yes	

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<ul style="list-style-type: none"> · export duties · other and what are the levels of charges involved?		
Are any subsidies provided to fishermen in the form of: <ul style="list-style-type: none"> · fuel tax/price reductions · import/export duty waivers · vessel construction funds · other i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity	Fuel Tax – No sub Import – exports duty waivers – Yes for gear and equipment Vessel construction – Yes – subsidized interest rates Strong history of social support/subsidies e.g: repatriation, support for families losing fishermen at sea, training courses, cooperatives (many of which were established with State support and subsidized boats, engines, etc.) fleet development in the 1950s, provision of first aid boxes recently. An activity in 10 yr framework is Provide investment rebates/subsidies on selected activities such as high seas/offshore fishing, aquaculture and production of industry inputs (boats, fishing gear, engines, machinery equipment and ice)	FAO policy review paper (Macfadyen, 2006) 10 year framework
Are any subsidies provided to fishermen in the form of grants/funds in support of <ul style="list-style-type: none"> · improved gear selectivity · reduced environmental impacts · quality improvements · product innovation · other i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives	<ul style="list-style-type: none"> · improved gear selectivity - No · reduced environmental impacts - No · quality improvements - No · product innovation – No other	

2. Constraints to effective policy implementation

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraint</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	3
Budgets for operations of Ministries/departments (i.e. For activities)	2
Budgets for enforcement of management measures e.g. For MCS operations	1
Capacity levels of staff in Ministries/departments	3
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	3
Supportive regulations/laws giving effect to policy content	2
Coherence with other sectoral and national policies	2
A monitoring and evaluation (M&E) system to check on policy implementation	1
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated

Marine environmental policy content and implementation

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
<p>Please list all relevant marine environmental policy documents E.g. documented policy, master plans and action plans.</p>	<ul style="list-style-type: none"> • Mahinda Chinthana (National Policy Document)- 2005 • Mahinda Chinthana – Way Forward – 2010 • Haritha Lanka Programme (Green Lanka Programme) - 2009 • Coastal 2000 • National Environment Policy (2003) • National Wetland Policy (2005) • National Policy on Wildlife Conservation (2000) • National Policy on Watershed Management (2004) • National Oil Spill Contingency Plan 2000 and its latest revision • National Invasive Species Action Plan (Draft) • National Wetland Conservation Plan (2004) • National Coastal Resources Management Plan (2003) and its latest revision • Sri Lanka’s National Programme of Action for the Protection of the Marine Environment from Land-based Activities. (2003). • Caring for the Environment; Path to Sustainable Development – Action Plan 2008 - 2012 • National Wetland Directory (2006) • Provincial Biodiversity Profiles • National Climate Change Adaptation Strategy for Sri Lanka 2011 – 2016 (all Sector Vulnerability Profiles) • NECCDEP documents for the East Coast • Portfolio Gap Analysis Study on Protected Areas in Sri Lanka - 2006 • National Environmental Action Plan (NEAP) which was later developed as the Haritha Lanka Program in 2009 • Biodiversity Conservation In Sri Lanka - A Framework for Action (Min. of Forestry & Environment / IUCN, 1998) • Addendum to the Biodiversity Conservation In Sri Lanka - A Framework for Action (Min. of Forestry & Environment 2006) • National Climate Change Adaptation Policy

<p>Legislation for the management and protection of the marine environment. Please list the key legislation covering the following areas:</p> <ul style="list-style-type: none"> g. Marine and coastal habitat conservation h. Endangered threatened and protected species i. Land-based pollution control j. Marine-based pollution control k. Environmental impacts assessment l. Environmental standards (e.g. water quality) 	<p><u>Marine and Coastal Habitat</u></p> <p>The Coast Conservation Act, 1981 (makes provisions for the identification of special coastal areas needing management (under SAM process described above) and the establishment of management committees with the participation of all stakeholders, including fishers) and its subsequent revisions</p> <p>National Aquatic Resources Research and Development Act No 54 of 1981 as amended by Act No 38 of 1996. Fisheries and Aquatic Resources Act 1996 and its subsequent revisions</p> <p>The Forest Ordinance No. 16 of 1907 and subsequent amendments in 1982, 1988 and 1995 (mangroves) and its subsequent revisions</p> <p>Fauna and Flora Protection Ordinance, No. 2 of 1937 and its subsequent revisions</p> <p>Fauna and Flora Protection Amendment Act No. 49 of 1993</p> <p>Sri Lanka Land Reclamation and Development Act Geological Survey and Mines Bureau Act and its subsequent revisions</p> <p><u>Land-based Pollution Control</u></p> <p>Marine Pollution Prevention Act of No. 59 of 1981 and No 35 of 2008</p> <p>National Environment Act No. 47 of 1980 and Amendment Act No. 56 of 1988</p> <p><u>Marine-based pollution control</u></p> <p>Marine Pollution Prevention Act of No. 59 of 1981 and No 35 of 2008</p> <p>National Environment Act No. 47 of 1980 and Amendment Act No. 56 of 1988 and its subsequent revisions</p> <p><u>Endangered threatened and protected species</u></p> <p>Fauna and Flora Protection Ordinance, No. 2 of 1937</p> <p>Fauna and Flora Protection Amendment Act No. 49 of 1993</p> <p>Fauna and Flora Protection Amendment Act No. 22 of 2009</p> <p>Fisheries and Aquatic Resources Act 1996 and its subsequent revisions</p> <p><u>Environmental impacts assessment</u></p> <p>Environmental Impact Assessment – EIA procedure and its subsequent revisions</p> <p>National Water Quality Standards (under preparation by CEA)</p>
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<p>Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy.</p> <p><i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</i></p>	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Political government staff at national level (Politicians)	Yes	1
	2. Political government staff at provincial or state level	Yes	3
	3. Political government staff at local level	Yes	7
	4. Technical government staff in environmental ministry/department at national level	Yes	2
	5. Technical government staff in environmental ministry/department at provincial level	Yes	3
	6. Technical government staff in environmental ministry/department at local/district level	Yes	5
	7. Technical government staff in other sectoral ministries / departments	Yes	2
	8. Public sector industry	Yes	6
	9. Private sector industry	Yes	6
	10. Non-governmental organizations from civil society	Yes	4
	11. Donors and/or consultants funded by them	Yes	5
12. Other (please specify)			
Is there any specified requirement in law with regards to who should be involved with policy formulation?	No		
When are the dates for the next major revisions/re-specifications of key policy documents?	Usually Policy documents are reviewed and revised (if necessary) every 5 to 6 years.		
<p>Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details:</p> <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	No. But the Ministry through its Implementing Agencies has drafted several Regulations.		

<p>What are the main strengths and weaknesses with regards to:</p> <ul style="list-style-type: none"> · available research to inform policy, and · the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> · Government Institutions, Universities, NGOs, INGOs, Individuals, <p>Weaknesses</p> <ul style="list-style-type: none"> · Inadequate funding for research, · Inadequate facilities · Insufficient research focussed towards issues identified in current policies · Research focus is too narrow and is often not multidisciplinary <p><u>Extent to which research informs Policy</u></p> <p>Strengths</p> <p>Key research staff in government and universities are actively involved in policy formulation process. Policy is based on research findings along with other factors. Reports, Publications, Information dissemination,</p> <p>Weaknesses</p> <p>Gaps in research may affect policies Inadequate dissemination of research findings</p>
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Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
Does policy contain specific marine environmental management targets or indicators in the following areas: <ol style="list-style-type: none"> 1. Inter-tidal and sea areas under formal MPA protection 2. Marine species to be brought under formal protection 3. Coastal, estuarine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) 4. Pollution/effluent control targets 5. Any other quantitative environmental targets (pls specify) 	Inter-tidal and MPA protection - Yes Marine species to be brought under formal protection Water quality targets Yes - Pollution/effluent control, CCD does coastal water quality monitoring programme at selected sites. NARA does water quality monitoring in lagoons, rivers and coastal waters. MEPA is also involved in water quality monitoring at selected sites with special reference to land-based and marine pollution. Water quality standards are under preparation by CEA with information from other relevant organisations.	Establishment of MPAs under the FFPO Fisheries management areas FFPO, and FAR Act Nat Env Act, Coastal 2000, CZMP, Water supply and Drainage Board Act. Water quality standards by CEA and Water supply and drainage board. Annual reports of government organizations
2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?	Yes – Provisions are made through the Provincial Councils Act ?? to delegate powers.	North Western Province Env Act has been established under this provision.
Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of: <ol style="list-style-type: none"> a. bycatch and discards? b. Interactions with endangered, threatened & protected species? c. Impacts on sensitive or vulnerable habitats d. Impacts on the trophic structure of marine ecosystems e. Introduction of alien or exotic species 	<ol style="list-style-type: none"> a. Yes – under the fisheries policy all forms of fishing gear should comply with reduction of incidental catch. b. Yes – under the FFPO and FAR Act there are several species protected, managed and restricted exports. c. Yes – CZMP also specifies protection of the habitats, Fisheries Act and the FFPO, Co-management plans and SAM plans, MPAs. d. NO e. Yes – Quarantine regulations, FAR Act, Ballast water monitoring programme. f. Biodiversity Conservation Action Plan and its Addenda. g. Marine Pollution Prevention Act No. 59 of 1981 and No. 35 of 2008. 	<ol style="list-style-type: none"> a. FAR Act, FFPO, marine mammals and sea turtles protection. b. FFPO, FAR Act c. CZMP, SAM plans and establishment of MPA gazette notifications, fisheries regulations. d. Biodiversity Conservation Action Plan and its Addenda. e. Marine Pollution Prevention Act No. 59 of 1981 and No. 35 of 2008.

If these issues are not covered by environmental policy, are they covered in fisheries policy?	See above	
Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?	Conservation of coastal habitats through Special Area Management Plans . Special Area Management (SAM) is a locally based, geographically specific, participatory planning process that allows for the comprehensive management of natural resources with the active involvement of the local community as the main stakeholder group. It involves co-management of resources through which decision-making, responsibility and authority in respect of natural resource use and management are shared between the government and the local resource users or community. Areas of Particular Concern (APC): FFPO also has the mandate to develop management plans for all MPAs.	FFPO, CZMP,
Does policy for MPA development recognise the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.	Not Yet	
Have MPAs been specifically developed to protect the following: d. Fish stocks (with no take zones, gear restrictions, etc) e. Critical habitats (e.g. coral reefs, mangroves, etc) f. Certain species Please give details where possible.	Yes	BRMS
Does marine environmental policy consider the impacts of land-based pollution on the marine environment?	Yes	MEPA Act, NARA Act, FAR Act, NEAct
Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,	Yes	MEPA Act, NARA Act, FAR Act, NEAct
Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Yes	FAR Act Biodiversity Conservation Action Plan and its Addenda. Marine Pollution Prevention Act No. 59 of 1981 and No 35 of 2008.

Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details	Yes	National Climate Change Adaptation Strategy. National Climate Change Policy
3. Overall impression of policy trends		
In summary, what are the main trends and changes in environmental policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.		

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference
C.1: Impact assessment		
<p>What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate):</p> <p>a. Restricted access (complete or partial by different groups?)</p> <p>b. Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year)</p>	<p>a. Only for National Parks – but not implemented properly</p> <p>b. No</p>	<p>Fauna and Flora Protection Amendment Act No. 22 of 2009</p> <p>Special Area Management Plans for Hikkaduwa and Bar Reef</p> <p>GCRMN status reports</p> <p>CORDIO status reports</p>
<p>What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate):</p> <p>a. Land-based rangers/checks</p> <p>b. Sea-based patrols</p> <p>c. Remote monitoring (e.g. air, satellite & telemetry)</p> <p>d. Other?</p>	<p>a. NARA monitors the reef status in the 4 marine protected areas with coral reefs</p> <p>b. There are no other monitoring mechanisms in place except for Hikkaduwa National Park where staff is present, but there is little or no action being taken to protect the marine habitat.</p>	<p>GCRMN status reports</p> <p>CORDIO status reports</p>
What forms of activity require an environmental impact assessment (EIA)?		
What are the main strengths and weaknesses of the EIA system?	<p>Strengths: Existing legislation and EIA process</p> <p>Weaknesses: Lack of implementation of existing laws in the operational phases of projects.</p>	
Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details	No.	

C.2 Marine environmental monitoring		
What are the main <i>monitoring</i> mechanisms for marine pollution control, its enforcement, and the prosecution of offenses <ul style="list-style-type: none"> a. <i>Land-based rangers/checks</i> b. <i>Sea-based patrols</i> c. <i>Remote monitoring (e.g. air, satellite & telemetry)</i> Other?	Regulations of the Marine Pollution Prevention Act and the establishment of the Coast Guard.	
Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?		
Are there annual (or recurrent) reports on the following: <ul style="list-style-type: none"> a. Status of marine areas and habitats under formal protection b. Status of species under formal protection c. Status of coastal water quality d. Number of reported pollution incidents 	<ul style="list-style-type: none"> a. Status of coral reefs in MPAs b. No c. Only in selected areas d. Yes, those which have been reported by the Marine Environment Protection Authority (MEPA = MPPA). However, chronic pollution from cities through canals and rivers are not monitored. 	<ul style="list-style-type: none"> a. GCRMN and CORDIO status reports
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment	YES. NARA and the Department of Fisheries and Aquatic Resources.	
What are the strengths and weaknesses of marine & coastal environmental monitoring?	Strengths: Available legislation and regulations Weaknesses: Lack of resources – both manpower and equipment. Lack of adequate funding.	
C.3 Financial and economic mechanisms		
Are there any financial <i>support</i> for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?	No	
Are there any financial <i>incentives</i> for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?	Polluter pay approach is present. Penalties for infringement is also present EPL licenses have to be taken	

C.4 Constraints

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	3
Budgets for operations of Ministries/departments (i.e. For activities)	2
Budgets for enforcement of management measures e.g.	1
Capacity levels of staff in Ministries/departments	3
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	1
Supportive regulations/laws giving effect to policy content	3
Coherence with other sectoral and national policies	2
A monitoring and evaluation (M&E) system to check on policy implementation	1
Other (add bullets as necessary, specify)	
Lack of incentives brought through Fiscal policies and the application of specific regulations such as pollution control	2

To what extent, how well, and how are policies communicated and disseminated

There is inadequate communication of policies to the stakeholders. Mainly there is a lack of information dissemination resulting in the non-compliance in many situations. There is also a lack of conversion of policy into actions.

Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
A.1: Policy and planning framework		
Is there a specific policy at either national or state / provincial level, for integrated coastal management? If so, please provide a full reference.	<ul style="list-style-type: none"> • National Policy – Mahinda Chintana (2005 and its updated version – Vision for the Future 2010) • National Coastal Zone Management Plan (CZMP) 1990 & 1997 and the most recent updates (2004) • Coastal 2000: Recommendations for a Resource Management 	Coastal Zone Management Plan (CZMP) 1990 & 1997, 2004 and Coastal 2000: Recommendations for a Resource Management
What other strategy or planning documents have produced for ICM at either national or state / provincial levels?	<ul style="list-style-type: none"> • National Biodiversity Conservation Action Plan (NBCAP) and recent addendums. • Coastal 2000: Recommendations for a Resource Management: produced by the CCD and endorsed by the Coast Conservation Advisory Council and approved by the Cabinet of Ministers in 1994 provided CZM policy guidance for future CZ management, inc. social & economic elements • The Master Plan for Coast Erosion Management (MPCEM) (1986) identifies medium and long-term measures and needs for investment in coastal protection. • Fernando. C. 2000. Policy guidelines for the development of a sustainable shrimp farming industry in Sri Lanka. Unpubl. • MOFOR, 2002: National Policy and the Development Plan: towards a new era of development, unpubl. Ministry of Fisheries and Ocean Resources • SAM Plans (List plans for all sites done – • Eastern Province Coastal Zone Management Plan (NECCDEP) • ISEA for North • ISEA for Trinco • ISEA for Hambantota • SAM plan fopr sand dunes (Amparai D) • SAM plan for Batticoloa Lagoons • SAM plan for Trincomalee Bay (Koddiyar Bay, Tampalagam Bay etc). 	

<p>Please list all key legislation that has been produced to enact ICM.</p>	<ul style="list-style-type: none"> • The Coast Conservation Act No. 57 of 1981 (shifted emphasis from “Coast Protection” to “Coastal Zone Management”). The act decreed the appointment of a Director of Coast Conservation with the following terms of reference: (i) administration and implementation of the provisions of the act; (ii) formulation and execution of work schemes for coast conservation within the coastal zone; & conduct of research, in collaboration with other departments, agencies and institutions for the purpose of coast conservation • Coast Conservation Amendment Act, No. 64 of 1988 • Tourist Development Act No. 14 of 1968 • Urban Development Authority Act No. 41 of 1978 Amended in 1984 and 1988 • Low Lying Land Reclamation Act No. 52 of 1982 • Recent amendments to the Coast Conservation Amendment A Bill to amend the Coast Conservation Act no. 57 of 1981. (Bill submitted to Parliament). • Marine Environment Protection Act (Act No. 35 of 2008) • Fisheries and Aquatic Resources Act • NARA ACT 	
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A.2 Development of ICM planning				
For national & state / provincial ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	Form of involvement (if any)		Level of involvement (low, medium or high)	
		Level of involvement (L, M, H)		How are they involvement
	MFAR,	H		Policy formulation level, implementation,
	DFAR,	H		Policy formulation level, implementation,
	DWLC	M		Policy formulation level, implementation
	FD	M		Only in protected forest areas
	CEA	H		Policy formulation level, implementation, Implementation of the EIA process
	NARA	H		Policy formulation and regulation level, implementation,
	GSMB	M		No, but some regulations have been issued
	MEPA	H		Policy and regulation formulation level, implementation,
	UDA	H		Only policy level if developing city infrastructure
	SLTDA,	H		Yes, Policy and regulation formulation level & implementation
	SLLRDC	M		No
	Provincial Env Authority	M		No
	NAQDA	L		Only if coastal aquaculture is involved
	CFHC	M		Yes, Policy and regulation formulation level & implementation
	Local Authorities	M		In Special Management Areas of Coast Conservation Department
	Police Department	M		No
Min of Defense	H	No		
INGOs/CBOs and NGOs	M	Only in coastal management projects		
Ministry of Finance and Planning	H	No		

Ministry of Finance and Planning)	Main Policy framework and Investment plan and provide funds to relevant Ministries and agencies	
Ministry / Dept of Fisheries (or equivalent)	CCD was originally under the Ministry of Fisheries but was upgraded to the status of government department in 1984 under the Ministry of Fisheries and Aquatic Resources (Appendix 8). Now the CCD placed under the Ministry of Defense.	
Ministry of Tourism (or equivalent)	Issue some relevant regulations	
Ministry of Environment (or equivalent)	Yes, Policy and Regulation formulation level, and implementation through its agencies,	
Other Ministries (please specify) - Ministry of Defense	Yes, Policy and Regulation formulation level, and implementation through its agencies,	
Private sector interests	Doing some related CSR activities	
INGOs/NGOs	Supporting the relevant Ministries , Agencies etc, implementing some activities through sponsorships	
Civil society	Supporting the relevant Ministries , Agencies etc	
Police Department	Yes, Implementing and Enforcement	
Ministry of Tourism (or equivalent)	Issue some relevant regulations	
Is there any specified requirement in law with regards to who should be involved with ICM formulation?	Coast Conservation Act No. 1981 has indicated that the CZMP should be prepared based on several studies and must be revised every 4 years. And also specified Coast Conservation Advisory Council Indicating agencies which should be included in the Council. Advisory Council has to approve the plan and then advice the Minister in Charge of the subject and the CCD on policy matters.	
When are the dates for the next major revisions/re-specifications of key policy documents?	The Coast Conservation Act requires the CZMP to be revised every four years.	
Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details:	<p>The CZMP of 2004 aims to steer the CCD towards a role that places more emphasis on policy planning and greater involvement in facilitating and coordinating planned integrated coastal zone management. Examples are introduction of the concept of shoreline management for controlling coastal erosion by examining this problem more holistically, and enhancement of Special Area Management (SAM).</p> <p>After Gazetting the new amendments to the CCD ACT, a new CZMP has to be prepared within 3 years. Thereafter the plan will be revised every 5 years.</p> <p>The term coast protection was changed to Shoreline Management</p> <p>The driver was Tourism and fishery sectors.</p> <p>Interim Set back standards were changed after the tsunami 2004.</p> <p>Initially the government determined the setback standards but the communities influenced the change in setback standards to the previous standards stipulated in the 1997 CZMP.</p>	

<p>What are the main strengths and weaknesses with regards to:</p> <ul style="list-style-type: none"> • available research to inform ICM, and • the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> • Regulations and CZMPs are available • Trained staff available <p>Weaknesses</p> <ul style="list-style-type: none"> • Lacks focused research programmes for ICM • Unavailability of long term data sets for modeling and for prediction of coastal processes. • The database is not comprehensive and much data is scattered among different institutions. <p>Research findings are incorporated in to policy development.</p>	
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Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Fisheries	High	The 2004 CZM Plan (for the first time) included a chapter on Integrating coastal fisheries and aquaculture with CZM (Chap. 5), inc. the need to reduce impacts of coastal capture fishery and aquaculture on the CZ and to identify and regulate activities in the CZ that have adverse impacts on fishery productivity. The DFAR is a member of the coast conservation advisory council	NCZM Plan (2004)
Coastal Aquaculture	High	Includes aquaculture impacts (pollution, loss of coastal habitats, adverse social impacts, etc.	NCZM Plan (2004)
Tourism & recreation	High	Although tourism is mentioned in the National ICZM Plan, there is no specific chapter allocated (as for fisheries & aquaculture). Although the CZMP has no chapter dedicated to tourism the CCD is directly involved in the approving of tourism and hotel development projects in the coastal zone based on the CZMP guidelines. The Ministry of Tourism is a member of the coast conservation advisory council. Approval of IEE, EIA, for tourism development	
Ports, Fishery Harbours & industrial development	High	CCD is directly involved in the approving of harbours development projects in the coastal zone based on the CZMP guidelines. Approval of IEE, EIA, for harbour development	

Urban and Beach Park development	High	Under the Urban Development Authority Act, No. 41 of 1978, the entire coastal zone has been gazetted as an Urban Development Area (UDA). This obviously overlaps with CCD responsibilities. In addition to the CCD permit a permit from the UDA should also be obtained by the developer in the CCD jurisdiction areas (Coastal Zone).	
Coastal Protection development	High	Combating coastal erosion is a major focus of ICZM. Policy focuses on strategic interventions in shoreline management, conserving natural shoreline and coastal features, controlling sand mining and mitigating the impacts of climate change.	
Transport	Low		
Military use	Low		
Environment conservation (Coastal resources – such as Coral reefs , Mangroves Lagoons and estuaries and sand dunes management)	High	Conserving coastal habitats is also a major focus on the National ICZM Plan. This reflects their rich biodiversity, economic and subsistence value And also to ensure the sustainable utilization of the resources.	
Beach access and Beach Park	High		
Other (please specify)			

<p>Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.</p>	<p>Yes, as CCD used to be under the Min. of Fisheries. The 2004 Plan (for the first time) included a chapter on Integrating coastal fisheries and aquaculture with CZM (Chap. 5), inc. the need to reduce impacts of coastal capture fishery and aquaculture on the CZ and to identify and regulate activities in the CZ that have adverse impacts on fishery productivity. Includes a series of fisheries and aquaculture related policy headings and associated actions:</p> <p>Fisheries:</p> <ul style="list-style-type: none"> • Harmful fishing practices that degrade coastal marine habitats and the bio-resources they contain will be controlled and minimized. • Harmful fishing practices that degrade brackish water habitats and their bio-resources will be controlled and minimized. • Adverse impacts on coastal resources/habitats due to over-exploitation of the coastal fishery resources will be minimized. • The coastal and marine environment will be protected from adverse impacts of fishery related activities. • The traditional marine fishery will be enhanced by management measures that address threats from other development activities and processes within and outside the CZ. • Brackish water fish production will be enhanced by management measures that address threats from other development activities and processes within and outside the CZ. • The socio-economic status of fishing communities displaced due to existing and future development activities and quasi-natural causes occurring in the CZ will be safeguarded. <p>Aquaculture:</p> <ul style="list-style-type: none"> • Adverse impacts on coastal communities and environment due to aquaculture in the North-western Province will be minimized. • Aquaculture initiatives will be promoted in areas other than the NWP in harmony with integrated CZ management. • Prospective entrepreneurs will be assisted and mobilized to engage in responsible aquaculture • Community participation in coastal aquaculture will be promoted to meet the socioeconomic aspirations of the local people. 	
<p>Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.</p>	<p>The National ICZM includes policy statements, related strategies and proposed actions. The actions - which are backed up with implementation tables - are reasonably descriptive and can serve as qualitative indicators. Some CZM targets are provided in the <i>Mahinda Chintana</i> (2006 - 2016) planning framework.</p>	
<p>Are there specific provisions for co-management, what are these?</p>	<p>Yes, in particular the overall SAM process is coordinated by the SAM coordinating committee headed by the divisional secretary of the area and facilitated by the CCD. The coordinating committee comprises the main governmental and non-governmental stakeholders including the fisheries cooperative societies in the SAM area.</p>	

What level / levels is ICM set at:	Comment	Supporting Reference
International (e.g. transboundary cooperation)	Yes – SAARC coastal resources center is coordinating regional level ICM especially capacity building, information dissemination, Regional cooperation on fisheries and CZM	
National	Overarching CZM (via the recurrent ICZM Plans) are set at national level.	
State / Province	A CZM Plan has been prepared for the Eastern Province	
Municipality		
Other (please specify)	Several SAM plans have been prepared SAM planning and co-management plans	
Does the plan specify mechanisms for user conflict management?	Yes	
Does the plan specify mechanisms for user zoning?	Yes – Bar reef and Hikkaduwa SAM plans have identified zoning schemes for management and conservation of coral reefs and sensitive habitats.	
Does the plan specify mechanisms for stakeholder consultation?	The Plan is a transparent document. But there appears to be only comprehensive stakeholder involvement in (a) Special Area Management (SAM) sites with multiple resource use conflicts, and (b) Level II SAM sites which are geographically smaller and have fewer user conflicts	

Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
<i>Who are the main implementing authorities at:</i>		
International level	SAARC coastal resources center (Regional level),	
National level	CCD, DFAR, DWLC, MEPA, FD,	
State / Province level		
Municipality level	Pradeshiya Sabha	
Other levels (please specify)	District-level zoning has been undertaken in certain areas e.g. Hambantota Divisional Secretary level SAM planning together with all relevant stakeholders.	
<i>Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?</i>	These are recognised, esp. in terms of the benefits of reducing coastal erosion On the other side, there is a recognition that tourism in particular has implications both on coastal habitats, but more importantly, social structures e.g. access. This is specifically recognised in the ICZM plan. All large development activities within the CZ require an IEE or EIA that assess the environmental cost and development benefits.	

<i>How is coastal zoning used in the development planning process?</i>	The SAM's use strategic zoning to safeguard the ecological functions and biodiversity of the downstream ecosystems whilst enabling land development and economic growth in a mixed-urban zone. However it has been said that many of Sri Lanka's important scenic and recreational sites are being degraded due to a lack of integrated revitalization and development plans particularly land use plans and zoning plans	National ICZM (2004)
<i>Do any particular coastal users or sectors have priority in terms of resource allocation?</i>	There are important coastal habitats and biodiversity areas have been given to the marine parks, wildlife conservation areas etc. Other areas have been given priority to fisheries and tourism development.	
<i>What mechanisms are there for reviewing coastal development priorities?</i>	Reviewing is done based on national development goals.	

Acronyms

CCD	Coastal Conservation Department
CZMP	Coastal Zone Management Plan
BOBLME	Bay of Bengal Large Marine Ecosystem
GOSL	Government of Sri Lanka

Appendix E: India

Section A. FISHERIES POLICY PROCESSES	
Question	Answer
<p>Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation</p>	<ul style="list-style-type: none"> • Indian Fisheries Act, 1897¹⁰ • Marine Fisheries Regulation Acts (MFRAs) of the four coastal States - Andhra Pradesh, Tamil Nadu, Orissa, West Bengal and the two Union Territories (UTs)- Puducherry and Andaman & Nicobar Islands • Comprehensive Marine Fisheries Policy, 2004, Ministry of Agriculture (MoA), Government of India (GoI) • State Level fisheries policies <i>e.g.</i> <ul style="list-style-type: none"> ○ Andhra Pradesh Vision 2020 ○ Tamil Nadu Policy Note, 2010 - 2011 ○ Kerala Fishing Policy¹¹ Eleventh Five Year Plan (2007-2012) • Coastal Aquaculture Authority Act, 2005¹² Marine Products Export Development Authority Act, 1972¹³ • Public Notice on Deep Sea Fishing Vessels, 2005, MoA, Go, IMPEDA Vision Document, 2007 • Territorial Waters, Continental Shelf, EEZ and other Maritime Zones Act, 1976 ... • Vision Documents of ICAR Institutes (CMFRI¹⁴, CIBA¹⁵, CIFT¹⁶, CIFE¹⁷, NBFGR¹⁸), MoA, GoI • Maritime Zones of India Act (Regulation of Fishing by Foreign Vessels), 1981 • India Coast Guard Act, 1978 • Coastal Aquaculture Authority Act, 2005 • India- Sri Lanka Palk bay Boundary Agreement, 1974,1976

¹⁰ Relevant parts of the Indian Fisheries Act, 1897 have been incorporated into the MFRAs of the coastal States/UTs

¹¹ <http://www.indiabusiness.nic.in/indian-states/kerala/FisheriesPolicy.htm>

¹² <http://aquaculture.tn.nic.in/>

¹³ <http://www.mpeda.com/>

¹⁴ Central Marine Fisheries Research Institute, Kochi, Kerala

¹⁵ Central Institute of Brackish water Aquaculture, Chennai, Tamil Nadu

¹⁶ Central Institute of Fisheries Technology, Kochi, Kerala

¹⁷ Central Institute of Fisheries Education, Mumbai, Maharashtra

¹⁸ National Bureau of Fish Genetic Resources, Lucknow, Uttar Pradesh

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralisation	<ul style="list-style-type: none"> • Environmental Protection Act, 1986 • Coastal Zone Management Plans by all the coastal States/UTs Coastal Regulation Zone Notification, 2011 (CRZ Notification, 2011) • The Water (Prevention and Control of Pollution) Act, 1974 • The Indian Wildlife (Protection) Act, 1972¹⁹ • The Biological Diversity Act, 2002 • National Environment Policy, 2006 		
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy. Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Political government staff at national level	--	--
	2. Political government staff at provincial or state level	--	--
	3. Political government staff at local level	--	--
	4. Technical government staff in fisheries ministry/department at national level	Yes	1
	5. Technical government staff in fisheries ministry/department at provincial level	Yes	2
	6. Technical government staff in fisheries ministry/department at local/district level	--	--
	7. Technical government staff in other sectoral ministries/departments	--	--
	8. Catching sector representatives from large-scale/industrial sector	Yes	6
	9. Catching sector representatives from small-scale/artisanal sector	Yes	3
	10. Processing/marketing sector representatives		
	11. Non-governmental organizations from civil society	Yes	4
	12. Donors and/or consultants funded by them		

¹⁹ As amended 2000, 2001 – specific to sharks, groupers, etc.

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
	13. Other (please specify)		
	14. Other (please specify)		
	15. Politicians	Yes	5
	In India, no political staff exists. There is political leadership comprising elected representatives of people. Therefore a new category has been created as Politicians.		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	In case of older laws, no such requirements were specified. However, in some cases (such as the EPA, 1986; Coastal Regulation Zone Notification, 1991) and most of the recent laws (such as the Coastal Aquaculture Authority Act, 2005; Coastal Regulation Zone Notification, 2011) stipulate public hearing.		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?	In the most recent case the CRZ Notification, 1991 was amended and as a new notification, CRZ Notification, 2011. Many other laws pertaining to the subject have provisions for periodic review. The national development plans prepared by the Planning Commission of India are for a duration of five years.		
When are the dates for the next major revisions/re-specifications of key policy documents?	The Eleventh Five-Year Plan will come to an end on 31 March 2012 and the Twelfth Five-Year Plan will be operational for the period April 2012 – March 2017.		
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details of: <ul style="list-style-type: none"> • what the policy change was • when the change occurred, and • which stakeholder group was the driver of change. 	The CRZ Notification, 1991 was amended and replaced by the CRZ Notification, 2011 in February 2011. <ul style="list-style-type: none"> • The major changes: definitions of coastal zone; permitted activities in the coastal zone; protection of rights of coastal communities e.g. fishermen; etc. • The new notification was promulgated in February 2011. • User groups, judiciary and civil society. Closed Season (Monsoon Fishing Ban). <ul style="list-style-type: none"> • Change in the months of operation and categorization of vessels. • During 2009 – 2010. • Lobbying by small-scale fishers. 		
Is there a documented fisheries research plan? If so what period does it cover?	All research plans are documented in the Five Year Plan Documents of the concerned Research Institutes under the Department of Agriculture Research and Education (DARE), Ministry of Agriculture (CMFRI, CIBA, CIFT, CIFE, NBFGR). Such Plans cover a period of five years. Further, the above-referred research institutes have Vision Documents each covering a period of 20 years.		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> • available research to inform policy, and • the extent to which those research outputs are used in 	Strengths: <ul style="list-style-type: none"> • Research is available to inform policy. In case of all research activities, there are built-in mechanisms to ensure that the research results inform the policy. 		

Section A. FISHERIES POLICY PROCESSES	
Question	Answer
informing policy	<p>Weaknesses:</p> <ul style="list-style-type: none"> • Even though the research results manage to reach the policy content, their level of implementation is rather weak. • There is preponderance of biophysical research at the cost of socio-economic research.

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets/Indicators		
<i>Does policy contain specific development targets for capture fisheries? Eg. Fisheries production, employment no's, etc. If so, pls elaborate?</i>	No.	
<i>Does policy contain specific management targets for capture fisheries? e.g. area under MPAs, etc? If so, pls elaborate?</i>	Yes. There are targets for reducing fishing fleet. There are targets for MPAs, determined by the Ministry of Environment and Forests	
Does policy contain any other specific <u>targets</u> or <u>indicators</u> e.g. value of exports? If so, what are they? (List all)	<p>4.1. India to become one among the top five seafood exporting countries in the world.</p> <p>4.2. Exports to increase from the current level of 0.61 million MT to at least 2 million MT by the year 2015.</p> <p>4.3. Value of exports to increase to US\$ 4 billion by the year 2012 and US\$ 6 billion by 2015.</p> <p>4.4. Marine products industry to have a share of at least 5-6% in world exports.</p> <p>4.5. Marine products exports to retain a share of 2.5% in India's total exports.</p> <p>4.6. The employment generation of the Industry to grow from the current level of 3.0 Million to 6.0 Million by 2015.</p> <p>10.1. The domestic market to grow to Rs.50 billion by the year 2010.</p> <p>However, the above targets pertain to the total export from the country, which includes products originating from both capture and culture sources.</p>	MPEDA Vision Document (2007)

2. Fisheries Management		
Does policy contain a clearly articulated statement of long-term objectives. If so what.	<p>At the national level, the 11th Five-Year Plan (2007-2012) has long-term objectives generally consistent with sustainability and the precautionary approach. These Plans also guide the formulation of plans at the state level. ,</p> <p>Likewise the 2004 Comprehensive Marine Fisheries Policy includes objectives to increase fish production, to promote socio-economic benefits from fisheries, and to ensure ecological sustainability. It is now the intention that this policy apply not just to areas outside of 12 nautical miles (nm), but also more strongly to inshore areas. But there appears to be a frequent disconnect between this high level national policy and the specification of similar objectives at State level.</p>	<p>11th Five Year Plan- Fisheries Working Group Document (2006).</p> <p>2004 Comprehensive Marine Policy.</p> <p>BOBLME 2.3 assessment report</p> <p>Vision 2020 Document of The Ministry of Agriculture</p>
Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of management powers and responsibilities?	<p>Yes. Under the Constitution of India, fisheries within the territorial waters is a State subject (List II below) and the primary responsibility of its development rests with the state governments.</p> <p>Items on List I (Union List) are dealt with by the Union Government .List III contains a list of items which fall under the shared responsibility of both the Union Government and the States (Concurrent List).</p> <p>Further, there are provisions under which the State can delegate the authority to lower levels <i>i.e.</i>, various forms of local self-governments. In Tamil Nadu there are instances in which District administration is evolving and implementing successful local arrangements. In one such system, the operational timings of trawlers and traditional vessels are adjusted to avoid any conflict.</p>	
Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? <u>if so, is such expansion at the expense of any foreign fishing interests currently operating in the country?</u>	<p>Yes. India has never signed a fisheries access agreement with a distant water fishing nation (DWFN), and has persisted for decades in its attempts (e.g. 1981 Charter Policy, joint ventures) to develop its own offshore industrial fisheries by nationally-owned fishing vessels. Indian has recognized the importance of fishing in the offshore region and policies are framed to achieve this. Chartering of vessels in the past and the Letter of Permission (LOP) at present conformed to this policy. Such expansion is aimed at utilizing the resources available in the country's EEZ and not intended to be at the expense any foreign fishing interests. However, despite proceeding with national development of its offshore fisheries, India's inshore fisheries have always been the most important sub-sector, both in terms of catch and numbers of people depending on the fisheries.</p> <p>"As the bulk of incremental catch to augment annual marine fish production has to come from deep-sea sector and beyond EEZ limit, the Government would encourage introduction of more resource specific vessels of above 20 m length"</p>	<p>Comprehensive Marine Fishing Policy, 2004</p>

Does policy specifically refer to small-scale fisheries and if so, in what way?	Policy advocates technology transfer to small-scale sector and the small-mechanized sector by providing incentives for acquisition of multi-day fishing units. A major objective is: <i>to ensure socio-economic security of the artisanal fishermen whose livelihood solely depends on this vocation.</i>	Marine Fishing Policy (DoAHD, 2004) Five Year Plans of Marine Fisheries Research Institutes Murari Committee Recommendations (which has cabinet approval)
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	Yes. The policy states that “assessment of existing fishing capacity and plans for regulating or developing one or the other sectors of EEZ would be taken up.” A Government sub-group was constituted in 1997 to assess fishing capacity, and the Government intends to have capacity measured	Comprehensive Marine Fishing Policy, 2004 National Committee for optimizing fishing Fleet The MFRAs
Does policy refer to and/or deal with IUU fishing? If so, in what way?	Not very explicit. But there is a reference in the policy document and the country intends to address this issue.	Comprehensive Marine Fishing Policy, 2004
Does policy refer to the use of VMS?	Yes. The 11 th Five-Year Plan refers to the introduction of Vessel Monitoring System.	
Does policy refer to need for integration/co-ordination with other sectoral policies?	Yes. Both the Comprehensive Marine fishing Policy, 2004 and the 11 th Five- Year Plan emphasize the need for close integration and cooperation among relevant sectors.	
Does policy mention eco-systems management? If so, what measures are suggested?	Not really in terms of eco-system based management. However, policy does state that fishers as the main stakeholders of the marine environment have to be sensitized against the land-based pollution. In addition, they also need to be educated on responsible fishing practices, which would cause the least disturbance to the marine ecosystem, including mangroves.	
Does policy include specific measures related to conflict management? If so, what are they?	Yes, especially at State level where Marine Fishing Regulation Acts are primarily put in place to deal with conflicts. Example - the Tamil Nadu Marine Fisheries Act, 1983 was formulated to regulate fishing activities, protect interest of different sections, conserve fish and resolve law and order at sea. Traditional Panchayat (Local self-Government at rural level) systems in some coastal states undertake the responsibility for conflict management.	BOBLME 2.3 Assessment Reports
Does policy include the use of fishery co-management and/or community management?	Yes. Co-management and/or community management are referred to in the Comprehensive Marine Fishing Policy, 2004, in so far as “Fish aggregating devices would be promoted as a community based activity”, and “Ornamental fish breeding and coastal cage aquaculture would be developed with a community orientation”. Government encourages the formation of associations in all sectors (aquaculture, inland fisheries, mariculture, coastal fishing, offshore fishing, etc.) in order to put in place an enabling framework to engage in discussions with stakeholders, to receive realistic	BOBLME 2.3 Assessment Report

	reports of field activities, constructive recommendations for strategy and policy formulation, and to receive feedback on government proposals.	
3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	India is in the process of putting in place an eco-labelling regime.	
Does policy refer to increasing value-added? If so, how is this to be achieved?	Yes, that is the major emphasis of work by MPEDA. It is targeted to value add at least 75 percent of the products by 2012.	MPEDA vision document
Does policy refer to tariff barriers and/or free trade areas in the region?	Yes, It does	MPEDA vision document
Does policy seek to increase exports?	Yes that is the major emphasis of work by MPEDA	MPEDA vision document
4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	<p>One of three policy objectives is 'to ensure socio-economic security of the artisan fishermen whose livelihood solely depends on this vocation.', but there is no specific mention of <u>poverty</u> in the Comprehensive Marine Fisheries Policy.</p> <p>In India poverty is addressed in all Central Sector Schemes by extending benefits to citizens 'below poverty line' (BPL) as opposed to 'above poverty line' (AOL). All fisheries schemes have this component. In addition, the poor in the fisheries sector derive benefits from a number of national Schemes such as the National Rural Employment Guarantee Act (NREGA), Rashtriya Krishi Vikas Yojana (RKVY), etc.</p>	<p>RKVY Scheme http://agricoop.nic.in/Rkvy/Rkvyfina1-1.pdf</p> <p>NREGA Act , 2005</p>
Does policy include mention of, or provide for, micro-finance?	Yes. Provision of micro finance is notable in India through a wide variety of mechanisms e.g. South Indian Federation of Fishermen Societies (SIFFS) and The National Bank for Agriculture and Rural Development (NABARD) in India runs probably the largest microfinance programme in the world. A number of agencies such as Public Sector Banks, cooperative societies, Rural development agencies, social and community organizations and NGOs are actively engaged in the process.	
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing/maximizing employment?	The policy has so not aimed at reduction in number of fishers. On the contrary, the policies support increase in employment opportunities in fisheries.	
Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or	Yes, the policies include both direct and direct food security through fisheries. The primary national goal for fisheries is to increase per capita availability of fish from the current level of around 5Kg/year to around 11Kg/year. And the foreword to the Comprehensive Marine Fishing Policy, 2004 mentions: "Relevance of the Marine	

indirect food security (fish exported with money then available for food imports)	Fisheries Sector extends beyond the livelihood security of the large coastal population to the food security of our countrymen and our foreign exchange generation."	
Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	The policies do not specify funding to fishers for leaving the sector. However, they do provide incentives through relevant programmes for fishers to adopt alternative or additional livelihood activities.	Orissa UNDP Project Document Gulf of Mannar Ecosystem Project Document
5. Overall impression of policy trends		
In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.		

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, CPUE, MSY, etc	Yes, maintaining fisheries at MSY is the basis of fleet development planning in India	
Is the MSY concept applied and how old are the most recent MSY estimates?	In India, a robust method of calculating Fish Yield Potential based on MSY exists. It is not based on individual species, but on major groups of fishes. There are 46 groups of fishes, which are subjected to stock assessment and their maximum sustainable yields worked. This forms the basis of determining the fish production potential. Most recent estimate is in 2010.	
Are there any species-specific management plans in place? If so for which species	Work on hilsa and shark management plans are in progress.	
Which of the following input fisheries management are used if any <ul style="list-style-type: none"> • limited licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) • effort management e.g. days at sea restrictions • closed areas 	<ul style="list-style-type: none"> • Limited licensing- In Orissa under the MFRA effort management- In some places in Tamil Nadu rotation of fishing vessels is done to manage effort. • Closed areas - The Ministry of Environment and Forests has declared several closed areas along the coastline and in the estuarine regions. • MPAs- Yes • Closed seasons- All the coastal states/UTs practice closed season varying from 45 to 60 	

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<ul style="list-style-type: none"> • MPAs • closed seasons • gear restrictions (banned gear) • other (specify) <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<p>days. gear restrictions- Through the MFRA's (e.g. purse seines in Tamil Nadu, Ring seines in Kerala)</p> <ul style="list-style-type: none"> • Gear rotation in Tamil Nadu (i.e., 4 days traditional crafts and 3 days trawlers) • Night fishing ban in Cuddalore, Tamil Nadu • Shrimp size, pomfret size limitation in Gujarat 	
<p>Which of the following output fisheries management are used if any if any:</p> <ul style="list-style-type: none"> • TACs • minimum landing sizes • bycatch minimisation • fish escapement rates • other (specify) <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<ul style="list-style-type: none"> • TACs- No • minimum landing sizes- Pomfret, Lobster • bycatch minimisation- Use of BRDs are mandatory in trawlers. In India bycatch discards are minimum. • fish escapement rates- No data available on this aspect. 	
<p>Which of the following technical fisheries management are used if any</p> <ul style="list-style-type: none"> • Mesh-size restrictions • Other <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<p>The MFRA's of States/UTs carry provisions for mesh size restrictions. Closed season</p>	<p>In all Acts</p>
<p>What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc</p>	<p>Such management measures are not in vogue.</p>	
<p>Which of the following payments/charges (if any) are imposed on the private sector</p> <ul style="list-style-type: none"> • landings charges 	<ul style="list-style-type: none"> • landings charges- In some places 	

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<ul style="list-style-type: none"> • licence fees • harbour dues • import duties • export duties • other <p>and what are the levels of charges involved?</p>	<ul style="list-style-type: none"> • Licence fees- Yes • harbour dues- Yes in all the fishing harbours and fish landing centres. • import duties- Yes • export duties- Yes other 	
<p>Are any subsidies provided to fishermen in the form of:</p> <ul style="list-style-type: none"> • fuel tax/price reductions • import/export duty waivers • vessel construction funds • other <p>i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity</p>	<p>Yes very many, but different at different State level. Huge range of subsidies as social support, and including fuel</p> <ul style="list-style-type: none"> • Fuel tax/price reductions- Yes • Import duty waivers- yes for OBM and Nets • Export duties are exempted on export of marine products from India. • Vessel construction funds- Yes for some types of small fishing vessels • Other- Many inputs like coal tar, salt, lifesaving equipment, kerosene for boat propulsion, GPS, processing, post-harvest, etc are subsidized. 	BOBLME 2.3 assessment report
<p>Are any subsidies provided to fishermen in the form of grants/funds in support of</p> <ul style="list-style-type: none"> • improved gear selectivity • reduced environmental impacts • quality improvements • product innovation • other <p>i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives</p>	<p>No real use of positive subsidies in terms of positive environmental impacts although may have strong social benefits</p> <ul style="list-style-type: none"> • improved gear selectivity - Replacement of unsustainable gear(e.g. monofilament nets) • reduced environmental impact s- Incorporation of TED and BRD in trawlers • quality improvements - For small-scale operators such as promotion of the use of Ice box, Improvement of fish hold, ice subsidy • product innovation - Conversion of trawlers to resource-specific fishing vessels and also diversion of vessels from inshore to offshore fishing grounds. • Other - housing, insurance of boats, life insurance, revamping of crafts and gear under government supported schemes. 	BOBLME 2.3 assessment report

2. Constraints to effective policy implementation

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	
Budgets for operations of Ministries/departments (i.e. For activities)	
Capacity levels of staff in Ministries/departments	3
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	
A monitoring and evaluation (M&E) system to check on policy implementation	5
Political will to implement policies	1
Number of staff	2
MCS	4

To what extent, how well, and how are policies communicated and disseminated

Note critical issue in India is that Marine Policy is set at Union level, but a real disconnect between that and implementation of fisheries policy and management at State level.

Marine environmental policy content and implementation

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
<p>Please list all relevant marine environmental policy documents and items of legislation? E.g. documented policy, master plans and action plans.</p>	<ul style="list-style-type: none"> • National Environment Policy 2006 (Approved by the Union Cabinet 18 May 2006). Builds on earlier policies (see list below): <ul style="list-style-type: none"> • Environmental Action Programmes 1993 • Marine Fishing Policy, 2004 National Forest Policy, 1988 & update 2006 National Conservation Strategy and Policy Statement on Environment and Development, 1992 Policy Statement on Abatement of Pollution, 1992 National Agriculture Policy, 2000 National Population Policy, 2000 National Water Policy, 2002RZ Notification (1991): recognise that mangrove and coral reef areas as ecologically sensitive, providing them protection of the highest order. • National Rehabilitation and Resettling Policy 2007 • Deep Sea Fishing Policy, 1991 • Water Act 1974 • Wild life Act 1972 • Environment Act 1986 National Wildlife Action Plan, 1983 National Tourism Policy, 1998 • National Biodiversity Action Plan (2008). MoEF • Ocean Policy Statement (1982): Sets out basic principles through which the development of ocean is to be carried out. Now updated via the 'Vision Perspective Plan 2015' of the Department of Ocean Development.
<p>Please list the key legislation covering the following areas:</p> <ul style="list-style-type: none"> m. Marine and coastal habitat conservation n. Endangered threatened and protected species o. Land-based pollution control p. Marine-based pollution control q. Environmental impacts assessment r. Environmental standards (e.g. water quality) 	<p>Marine and coastal habitat conservation:</p> <ul style="list-style-type: none"> • The Environment Protection Act, 1986 No.29 of 1986, [23/5/1986], amended 1991 • Indian Fisheries Act 1897 • Offshore area Mineral (Development and Regulation) Act, 2002 <p>Endangered threatened and protected species</p> <ul style="list-style-type: none"> • The Indian Wildlife (Protection) Act, 1972, a mended 1993, 2002 & 2006. • The Indian Forest Act, 1927. • Forest (Conservation) Act 1980) • Biological Diversity Act, 2002. • No. 16 of 2003, [17/1/2003] - The Wild Life (Protection) Amendment Act, 2002

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
	<ul style="list-style-type: none"> · CITES, Convention on Biodiversity, 1992. Land-based pollution control: · Water (Prevention and Control of Pollution) Act (1974), as amended 1988 · Water Cess Act 1977 · Mines and Minerals (Development and Regulations) Act, 1957 Hazardous Wastes (Management and Handling) Rules, 1989 · Municipal solid wastes (Management and Handling) Rules, 2000 · Biomedical wastes (Management and Handling) Rules, 1998 · Recycled plastics (Manufacture and Usage) Rules, 1999 · Chemical accidents (Emergency Planning, Preparedness, and responses) Rules, 1996 · Batteries (Management and Handling) rules, 2001 · Manufacture, storage and import of hazardous chemicals (1989) · Manufacture, Use, Import, Import and Storage of Hazardous Microorganisms, Genetically Engineered organisms or cells, Rules, 1989 · National Mineral Policy, 1993 · The Air (Prevention and Control of Pollution) Act as amended by Act 1989 Marine-based pollution control: · Marine Pollution, 1973 and 1978, International Convention for the Prevention of Pollution of Ships (MARPOL 73/78); · London Dumping Convention, 1972; · Convention on Civil Liability for Oil Pollution Damages (CLC 1969) and its Protocol, 1976; Fund, 1971 and its Protocol, 1979; · Guidelines for ship breaking activities by CPCB: Aims at minimizing the pollution impact of ship breaking activities by fixing responsibility for several authorities of state government and ship breaking association Environmental impacts assessment: · EIA Notification (1994 and amended from time to time): The developmental projects have been classified into two categories – one to be dealt with at the Centre and the other by the State level expert appraisal committees. Live recording of proceedings of public hearings has been made mandatory to ensure transparency. Environmental standards · National Environment Tribunal Act, 1995 · National Environment Appellate Authority Act, 1997

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy.	Stakeholder group	Active involvement in policy development (Y/N)	Ranking of importance in determining policy (1 being the most important)
<p>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</p>	1. Political government staff at national level		
	2. Political government staff at provincial or state level		
	3. Political government staff at local level		
	4. Technical government staff in environmental ministry/department at national level		
	5. Technical government staff in environmental ministry/department at provincial level		
	6. Technical government staff in environmental ministry/department at local/district level		
	7. Technical government staff in other sectoral ministries / departments		
	8. Public sector industry		
	9. Private sector industry		
	10. Non-governmental organizations from civil society		
	11. Donors and/or consultants funded by them		
	12. Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	<p>A draft of the 2006 National Environment Policy was prepared through an intensive process of consultation within the Government and inputs from experts The draft, in English and Hindi was posted on the website of the Ministry of Environment and Forests and responses were invited from individuals and organizations, through advertisements in national and regional newspapers. The draft was open for public consultation from 21 August, 2004 to 31 December, 2004. Consultations were held with concerned Ministries of the Central Government, and all State/UT governments at meetings of the State Environment Ministers and senior officials. The latter were encouraged to undertake local level public consultations. The draft was also provided to the Members of Parliament and their views and suggestions were invited. The Ministry of Environment and Forests also held consultations with representatives of major academic and research institutions, and key Industry Associations, Voluntary Organisations, and individuals who are well known in the field. Detailed summaries of responses were prepared and the various concerns expressed by the respondents were addressed.</p>		

<p>When are the dates for the next major revisions/re-specifications of key policy documents?</p>	<ul style="list-style-type: none"> · Policy implementation review is specified on an annual basis. · There is provision to undertake consultation with a cross section of stakeholders every three years. · At the end of the third review, a more comprehensive examination will be undertaken to evolve a new national Environmental Policy
<p>Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details:</p> <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	<p>No</p>
<p>What are the main strengths and weaknesses with regards to:</p> <ul style="list-style-type: none"> · available research to inform policy, and · the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> · Lot of research taking place in Universities and Institutes <p>Weaknesses</p> <p>Mechanism for consolidating the research outputs and integrating them into policies is weak.</p>

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
Does policy contain specific marine environmental management targets or indicators in the following areas: <ol style="list-style-type: none"> 1. Inter-tidal and sea areas under formal MPA protection 2. Marine species to be brought under formal protection 3. Coastal, estuarine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) 4. Pollution/effluent control targets 5. Any other quantitative environmental targets (pls specify) 	Fisheries are considered a 'state' subject in India (except for fisheries outside of territorial waters). There are not targets specified under the National Environment Policy (2006). -	National Environment Policy (2006).
2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?	Specific marine environment policy does not exist. However, The National Environmental Policy mentions Govindarajan Committee recommendation that suggests - significant devolution of powers to the State/UT level in the matters of coastal marine resources development processes. -	
Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of: <ol style="list-style-type: none"> a. bycatch and discards? b. Interactions with endangered, threatened & protected species? c. Impacts on sensitive or vulnerable habitats d. Impacts on the trophic structure of marine ecosystems e. Introduction of alien or exotic species 	The National Environment Policy does not specifically deal with these aspects. - - - Vulnerable habitats and marine biodiversity are covered by most policy statements (inc. NEP, Ocean Vision 2015) at national level. The later also highlights the impacts of wider oceanographic processes e.g. sediment processes on fisheries	National Environment Policy (2006). Ocean Vision 2015
If these issues are not covered by environmental policy, are they covered in fisheries policy?	Yes	
Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?	The Wildlife (Protection) Act, 1972, amended 1993, 2002 & 2006 is the central legislation for protected areas designation in India. The terminologies and definitions of protected areas vary, but the principles of conservation are being embraced as reflected by the declaration of 'marine biosphere reserves', 'national parks', 'wildlife sanctuaries', coral reefs, mangroves, etc, which include	Rajagopalan (2008)

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
	the coastal and marine ecosystems.	
Does policy for MPA development recognize the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.	Specific policy for MPAs does not exist. --	
Have MPAs been specifically developed to protect the following: <ol style="list-style-type: none"> Fish stocks (with no take zones, gear restrictions, etc) Critical habitats (e.g. coral reefs, mangroves, etc) Certain species Please give details where possible.	<ol style="list-style-type: none"> Yes Yes Yes (Sea cucumber Dugong, etc.) Significantly, in India, MPAs are designated for conservation and preservation of the ecosystem, and not for fish stocks as the fisheries in India is based on multi-species exploitation	
Does marine environmental policy consider the impacts of land-based pollution on the marine environment?	There is no specific marine environment policy	
Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,	Not applicable . -	
Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Yes. <ol style="list-style-type: none"> Alleviation of mass poverty Nexus between Environmental degradation and poverty Non-fisheries sector poverty reduction strategies 	National Environment Policy 2006)
Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details	Yes. <ol style="list-style-type: none"> Vulnerability of coastal environment Sea level rise These are mainly addressed via the National Action Plan for Climate Change (NAPCC 2008)	

3. Overall impression of policy trends

In summary, what are the main **trends and changes** in environmental policy over the past 10 years? Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.

Several issues hindering effective establishment and management of PAs have been identified by India. The country presentation by India, in April 2007, at the South and West Asia Sub-regional Workshop on the Review of, and Capacity Building for, the Implementation of the Programme of Work on Protected Areas, highlighted that enabling mechanisms were still being developed to incorporate Programme Element 223 on governance, participation, equity and benefit sharing of CBD's PoW PA, into the legal framework. It was also highlighted that there are currently limited provisions for sharing benefits with local communities. During discussions at the workshop, it was reported that little data is currently available on the socioeconomic status of communities dependent on PAs, and that efforts need be taken to collect such information (SCBD, 2006).

Whilst management of PAs lies with the Forest Departments, the responsibility for fisheries management within these areas continues to be vested in the Fisheries Departments. The lack of co-ordination and co-operation between these different departments leads to a host of complex regulations, little understood by communities. It is also to be noted that this lack of co-ordination means that the expertise and experience of the Fisheries Departments in dealing with fishing communities and fisheries management are not sufficiently used in PA management.

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference
C.1: Impact assessment		
<p>What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate):</p> <ol style="list-style-type: none"> Restricted access (complete or partial by different groups?) Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year) 	<p>There are different categories of protected areas. These vary from complete denial of access to restricted use. In some cases, there is an inner core area, which is totally protected with peripheral ring where partial restriction is imposed. Seasonal prohibition is also in vogue.</p>	
<p>What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate):</p> <ol style="list-style-type: none"> Land-based rangers/checks Sea-based patrols Remote monitoring (e.g. air, satellite & telemetry) Other? 	<p>All these plus participatory monitoring by the local stakeholders/beneficiaries/groups</p>	
<p>What forms of activity require an environmental impact assessment (EIA)?</p>	<p>All projects and activities are broadly categorized in to two categories - Category A (require clearance from the Central Government MoEF) and Category B (require prior environmental clearance from the State/Union territory Environment Impact Assessment Authority (SEIAA)), based on the spatial extent of potential impacts and potential impacts on human health and natural and man made resources. The scale of project will dictate whether it is Cat. A or Cat B. level. Cat. A projects include all offshore oil and gas development, large river valley project e.g. hydro; various large primary processing industries; all ship breaking; and large (>5 million tpa cargo) ports (exc. fishing ports).</p>	<p>EIA Notification 2006</p>
<p>What are the main strengths and weaknesses of the EIA system?</p>	<p>Strengths:</p> <ul style="list-style-type: none"> It is a legal requirement that needs to be complied with <p>Weaknesses:</p> <ul style="list-style-type: none"> There is no standard/agreed methodology set for EIAs and there is no clarity regarding norms to pick up the agencies for undertaking the EIAs. Often the purpose of EIA is defeated due to inappropriate methods and agencies 	
<p>Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details</p>	<p>Yes, Section 9 of the EIA Form A is designed to capture “the potential for cumulative impacts with other existing or planned activities in the locality”.</p>	<p>EIA Notification 2006</p>

C.2 Marine environmental monitoring		
<p>What are the main <i>monitoring</i> mechanisms for marine pollution control, its enforcement, and the prosecution of offenses</p> <ul style="list-style-type: none"> a. <i>Land-based rangers/checks</i> b. <i>Sea-based patrols</i> c. <i>Remote monitoring (e.g. air, satellite & telemetry)</i> <p>Other?</p>	<p>All the three.</p> <p>The Environmental Information System (ENVIS) was implemented by the Ministry by end of 6th Five Year Plan as a Plan Scheme for environmental information collection, collation, storage, retrieval and dissemination to policy planners, decision makers, scientists and environmentalists, researchers, academicians and other stakeholders.</p> <p>ENVIS is a decentralized computerized network database system consisting of the focal point located in the Ministry and a chain of network partners, known as ENVIS Centres located in the potential organizations/institutions throughout the country.</p> <p>In order to develop ENVIS network as a comprehensive distributed environmental information network system, the ambit of ENVIS was extended to cover all the States/UTs of the country. Necessary guidelines and policies were provided to revise the earlier EFC of the scheme and the new concept for covering the State Government departments were completed through a revised SFC.</p> <p>Presently, the ENVIS network consist of 76 ENVIS centres apart from the focal point, out of which, 29 ENVIS Centres are on State Government Departments dealing with the Status of Environment and related issues of the concerned State Government and the remaining 47 have been set up on various environmental disciplines covering from air pollution, water pollution, noise pollution, biodiversity, solid waste management, ecology and ecosystems, environmental education, NGOs, media and even environmental parliament, coastal ecosystem, clean technology, etc.</p> <p>The DOD established an integrated and Coastal and Marine Area Management (ICMAM) Project Directorate at Chennai in January 1998 to implement the four capacity building projects. They include Geographical Information System (GIS) based information system for selected critical habitats, Determination of Waste Allocation Capacity for selected coastal areas; Development of environmental Impact Assessment (EIA) Guidelines for selected coastal activities and Preparation of Model ICMAM Plan for selected Coastal areas</p>	<p>http://envfor.nic.in/envis/envis.html</p>

Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?	India produced a national report to the CBD every five years (the most recent being in 2009). This includes a chapter entitled "Marine and Coastal Biodiversity" and provides a comprehensive assessment of the status	MoEF (2009)
Are there annual (or recurrent) reports on the following: e. Status of marine areas and habitats under formal protection f. Status of species under formal protection g. Status of coastal water quality h. Number of reported pollution incidents	The above mentioned report to CBD also provides details on the number of species and the area of habitats under protection, although is mainly concerned with coral reefs rather than other important marine habitats.	MoEF (2009)
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment	No	
What are the strengths and weaknesses of marine & coastal environmental monitoring?	<p>Strengths:</p> <ul style="list-style-type: none"> In India, Environmental conservation is getting very high priority reflected through high level of commitment and allocation of resources. Skilled manpower and level of research activities in the country is of high order. <p>Weaknesses:</p> <ul style="list-style-type: none"> The level of awareness on fisheries related issues among the environmental governance regime is rather low. 	
C.3 Financial and economic mechanisms		
Are there any financial <i>support</i> for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?		
Are there any financial <i>incentives</i> for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?	The NEP accepts the 'polluter pays' principle and "promotes the internalization of environmental costs, including through the use of incentives-based policy instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest, and without distorting international trade and investment".	NEP, 2006

C.4 Constraints

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	
Budgets for operations of Ministries/departments (i.e. For activities)	
Budgets for enforcement of management measures e.g.	4
Capacity levels of staff in Ministries/departments	2
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	3
Supportive regulations/laws giving effect to policy content	
Coherence with other sectoral and national policies	1
A monitoring and evaluation (M&E) system to check on policy implementation	5
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated

Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
A.1: Policy and planning framework		
Is there a specific policy at either national or state / provincial level, for integrated coastal management? If so, please provide a full reference.	<p>National</p> <ul style="list-style-type: none"> • The integrated management of natural resources is the basic tenet of the Ministry of Environment and Forests and their approach adopts integrated coastal zone management. The Coastal Regulation Zone notification, 2011 provides legal basis to some of the requirements of the integrated coastal zone management. World Bank funded Society for Integrated Coastal Management operates on Orissa, West Bengal and Gujarat; funding HTL mapping, Hazard line mapping for the country • NEP <p>State</p> <ul style="list-style-type: none"> • Integrated Coastal and Marine Area Management (ICMAM) Plan for Chennai, Department of Ocean Development, ICMAM 288pp. • Andaman and Nicobar Coastal Zone Management Authority and Amendment. • Orissa Coastal Zone Management Authority and Amendment. • Andhra Pradesh Coastal Zone Management Authority and Amendment. • West Bengal Coastal Zone Management Authority 	Vision Perspective Plan 2015'
What other strategy or planning documents have produced for ICM at either national or state / provincial levels?	Guidelines for sustainable development and management of brackish water aquaculture have been drawn up. State Governments like Andhra Pradesh and Tamil Nadu have aquaculture guidelines at the local level also. CRZ 2011 Island Coastal Regulation Zone Notification (for (A & N and Lakshadweep)	CAA, 2006
Please list all key legislation that has been produced to enact ICM.	<p>Coastal Regulation Zone Notification 2011: In 1991, the Coastal Regulation Zone Notification (CRZ Notification, 1991) was issued by the Ministry of Environment and Forests under the Environmental Protection Act, 1986, to protect the 500 meter zone from the high tide line and along rivers and creeks up to the area of tidal action. The said notification has now been replaced by the CRZ Notification, 2011.</p> <p>Coastal Aquaculture Authority Act, 2005.</p> <p>Based on the directions of the Supreme Court, all coastal States/UTs submitted their coastal zone management plans to the Ministry of Environment & Forests in mid 1990s to ensure the smooth and expeditious implementation of developmental schemes and projects</p> <p>Hazardous Wastes (Management and Handling) Rules, 1989.</p>	

A.2 Development of ICM planning		
For national & state / provincial ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	Form of involvement (if any)	Level of involvement (low, medium or high)
Ministry of Planning (or equivalent)	All programmes have to go through Planning Commission	High
Ministry / Dept of Fisheries (or equivalent)		Low
Ministry of Tourism (or equivalent)		Low
Ministry of Environment (or equivalent)		High
Other Ministries (please specify)		Medium
Private sector interests		Low
NGOs		High
Civil society		High
Foreign donor driven projects		Nil
Others (please specify)		
Is there any specified requirement in law with regards to who should be involved with ICM formulation?	ICM is not well established in India. Only the Coastal Aquaculture Authority Act, 2005 has specific provisions in the Rules and Regulations enacted under the Act.	
When are the dates for the next major revisions/re-specifications of key policy documents?	There are no specific time frames for revisions/re-specification. However, provisions do exist for revision of guidelines, etc. under some Acts to carry out need-based revisions (e.g. Coastal Aquaculture Authority Act, 2005)	
Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	Fishing community and industry often lobby against measures aimed at ICM. In 2009, the coastal zone management plan was dropped on account of lobbying. Fishing community, hotel industry and builders are the stakeholders who drive the change.	

What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> • available research to inform ICM, and • the extent to which those research outputs are in informing policy 	Strengths- Institutional capacity to generate research. <ul style="list-style-type: none"> • Weaknesses- <ul style="list-style-type: none"> • Lack of governance regime/governance capacity to achieve synergy/trade-off among conflicting resource use sectors • Lack of socio-economic research to inform ICM 	
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Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Fisheries	High		
Aquaculture	Medium		
Tourism & recreation	Low		
Port & industrial development	Low		
Urban development	Low		
Coastal defence development	High		
Transport	Low		
Military use	High		
Environmental conservation	High		
Other (please specify)	Here low means the sector has to pass through rigorous scrutiny. Fisheries get priority on poverty platform. Defense get easy clearance		
Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.	As such no ICM planning is on ground		
Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.	No		

Are there specific provisions for co-management, what are these?	Although no ICM is on ground, the policy is to support a multi-stakeholder participation approach.	CAA
What level / levels is ICM set at:	Comment	Supporting Reference
International (e.g. transboundary cooperation)		
National		
State / Province		
Municipality		
Other (please specify)		
Does the plan specify mechanisms for user conflict management?		
Does the plan specify mechanisms for user zoning?		
Does the plan specify mechanisms for stakeholder consultation?		

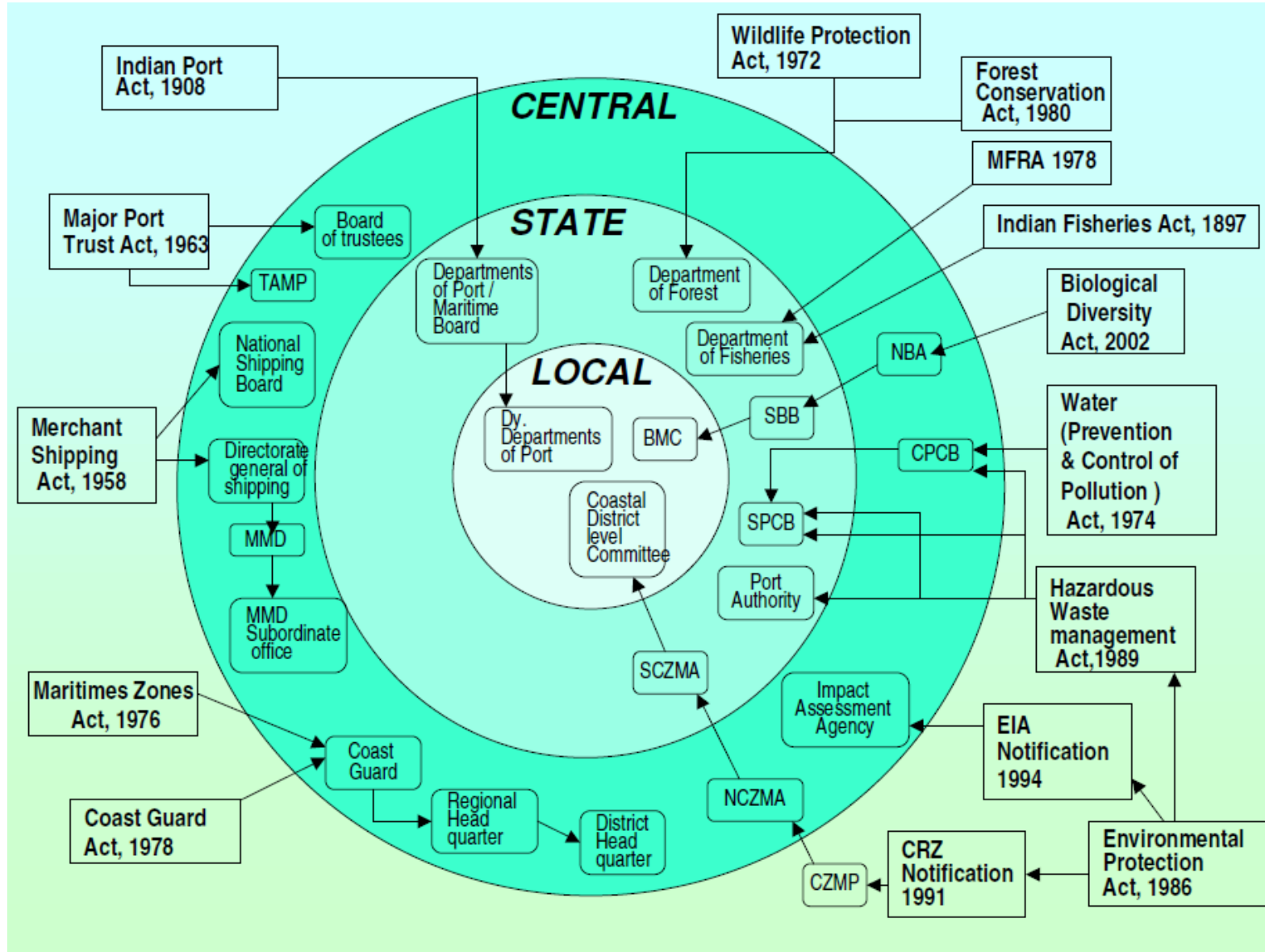
Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
<i>Who are the main implementing authorities at:</i>		
International level		
National level	Ministry of Environment and Forests is designated as the nodal agency to implement the coastal and marine area management component. Coastal Aquaculture Authority (CAA) also has a stake	
State / Province level	State Coastal Zone Management Authorities. Tamil Nadu Coastal Zone Management Authority enforces the Coastal Regulation Zone Notification.	
Municipality level	Nil	
Other levels (please specify)		

<p><i>Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?</i></p>	<p>The National Biodiversity Strategy & Action Plan (2008) requires the “valuation of goods and services provided by biodiversity and use of economic instruments in decision making processes” via:</p> <ul style="list-style-type: none"> • To assign appropriate market value to the goods and services provided by various ecosystems and strive to incorporate these costs into decision making, management and sustainable utilization of biological diversity resources. • To factor in natural resource accounting (NRA) in the national economic planning processes and encourage financial institutions to adopt appropriate NRA appraisal practices so that risks to biological diversity are adequately considered in the financing of projects. • To facilitate integration of biodiversity concerns into cost-benefit analysis with a view to encouraging more efficient allocation of resources while making public investment decisions. • Tools for valuation are being developed 	
<p><i>How is coastal zoning used in the development planning process?</i></p>	<p>To decide on (permitted/prohibited) activities</p>	
<p><i>Do any particular coastal users or sectors have priority in terms of resource allocation?</i></p>	<p>All the other sectors are subjected to rigorous scrutiny as prescribed in the CRZ Notification 1991 (replaced by 2011) and other provisions . However, defence establishments get priority. The fishers also get some preference.</p>	
<p><i>What mechanisms are there for reviewing coastal development priorities?</i></p>	<p>No mechanisms at present.</p>	

Acronyms

CAA	Coastal Aquaculture Authority
CBD	Convention for Biological Diversity
CRZ	Coastal Regulation Zone
CZMP	Coastal Zone Management Plan
DoAH&D	Department of Animal Husbandry and Dairying
EBM	Ecosystem-based management
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ENVIS	Environmental Information System
EPA	Environment (Protection) Act, 1986
GIS	Geographical Information System
ICMAM	Integrated Coastal and Marine Area Management
MOEF	Ministry of Environment and Forests
MPA	Marine Protected Area
MPEDA	Marine Products Export Development Authority
NABARD	National Bank for Agriculture and Rural Development
NAPCC	National Action Plan for Climate Change, 2008
NEP	National Environment Policy (2006)
PA	Protected Area
POWPA	Programme of Work for Protected Areas
TAC	Total Allowable Catch
UT	Union Territory

Figure 17: Institutional mapping of marine environmental management in India



Source: Sonak et al (undated)

Appendix F: Bangladesh

Section A. FISHERIES POLICY PROCESSES	
Question	Answer
<p>Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation</p>	<ul style="list-style-type: none"> • National Fisheries Strategy and Action Plan for the Implementation of the National Fisheries Strategy (2006) • Bangladesh Marine Action Plan 2006 • National Plan of Action on MCS, 2008. • Department of Fisheries, 2004. Draft Fisheries Monitoring & Evaluation Strategy • Ministry of Fisheries and Livestock, 1998. National Fisheries Policy. • The Protection and Conservation of Fish Act, 1950 (amended 1982, amended 1995); • The Tanks Improvement Act, 1939 (amended 1986); • The Fish and Fish Products Ordinance, 1983; • The Marine Fisheries Ordinance, 1983; • The Marine Fisheries Rules, 1983 • Shrimp hatchery rules and regulations 2010 (proposed) • Fish and Fisheries Product Acts (2010) proposed • Jalmohal Management Policy 2009 • Hatchery Act, Food and Feed Act 2010 • Bangladesh-Code of Conduct for Responsible Fishing (drafted) – in line with FAOs CCRF for immediate implementation
<p>Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralisation</p>	<ul style="list-style-type: none"> • Bangladesh Coastal Zone Policy, 2005 by Ministry of Water Resources • A National Strategy for Economic Growth, Poverty Reduction and Social Development (2003) • Coastal Development Strategy 2006 • Integrated Coastal Resources Database 2005 • Poverty Reduction Strategy Paper-II 2009-2011 • National Water Management Plan 2004 • National Adaptation Program of Action 2009 • Bangladesh Climate Change Strategy and Action Plan 2009 • 6th Five year plan 2010-15 • Outline Perspective plan: Vision 2010-21 • National Environment Policy and Implementation Plan 1992 • National Tourism Policy 1992 • National Forest Policy 1994 • National Policy for Safe Water Supply and Sanitation 1998 • Livestock Development Policy 1992 • National Agricultural Policy 1999

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
	<ul style="list-style-type: none"> • Industrial Policy 1999 • National Water Policy 1999 • Draft National Land Use Policy 1999 • Draft National Wetlands Policy 1998 • National Energy Policy 1996 • National Rural Development Policy 2001 • The National Policy for the Advancement of Women 1998 • National Water Policy 1999 • National Shipping Policy 2000 • National Land Use Policy 2001 • The Environmental Conservation Act 1995 • The Territorial Waters & Maritime Zones Act 1974 • Territorial Waters and Maritime Zones Rules 1977 • Bangladesh Merchant Shipping Ordinance 1983 • Bangladesh Coastal Zone Policy, 2005 • Draft National Wetlands Policy 1998 • Coastal Zone Management: an analysis of different policy documents (PDO-ICZM) 2003 • Coast Guard Act 1994 • Bangladesh Mercantile Shipping Ordinance 1983 • Bangladesh Fishing Vessel Equipment Rules 2005 • Maritime Zones Act 1974 		
<p>Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy.</p> <p><i>Please provide a ranking in terms of their <u>influence</u> on policy content, with 1 as the</i></p>	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Political government staff at national level	yes	4
	2. Political government staff at provincial or state level	no	-
	3. Political government staff at local level	no	-
	4. Technical government staff in fisheries ministry/department at national level	yes	1

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
<i>most important stakeholder group, 2 the second most important stakeholder group, etc.</i>	5. Technical government staff in fisheries ministry/department at provincial level	yes	-
	6. Technical government staff in fisheries ministry/department at local/district level	no	3
	7. Technical government staff in other sectoral ministries/departments	yes	2
	8. Catching sector representatives from large-scale/industrial sector	no	-
	9. Catching sector representatives from small-scale/artisanal sector	no	-
	10. Processing/marketing sector representatives	no	-
	11. Non-governmental organizations from civil society	yes	5
	12. Donors and/or consultants funded by them	yes	6
	13. Other (please specify) Fishers association; Need to include Science & Technology Institutes in Policy formulation	yes	4
	14. Other (please specify) Ministry of Land, MoEF, MoWR, MoPI	yes	3
Is there any specified requirement in law with regards to who should be involved with policy formulation?	The 2006 National Fisheries Strategy represents shift towards far more community participation and consultation, and has a specific section on 'people's participation' which requires a level of decentralised planning and decision making. There is also a provision in law that if rules and regulations are to be amended, the Department must seek public opinion on any proposed changes. It is also mandatory for the DoF to invite local Members of Parliament and Upazila chairmen to awareness-building campaigns about hilsa management measures. Hilsa management committee is specified, and engaged in policy formulation. National Institutes, GOs and NGOs should be involved with policy formulation.		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?	As and when necessary, usually every 5 years intervals.		
When are the dates for the next major revisions/re-specifications of key policy documents?	Not fixed, as and when necessary		
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes, please provide details of: what the policy changes were <ul style="list-style-type: none"> • when the changes occurred, and • which stakeholder group was the driver of change 	No. Lobbying by any interest group, usually DOF and BFRI people urges government to change/amendments fisheries policy when they think it is high time to do that. Nowadays entrepreneurs also urge government to change/amend fisheries policy		

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
Is there a documented fisheries research plan? If so, what period does it cover?	BFRI have an annual workshop to present results, and discuss and agree future activities. This workshop, and annual budgetary planning, serves to provide the basis for a research plan. The process itself and the working relationships between BFRI and DoF staff also appear to suggest relatively good linkages between research and management. Usually 5 years research plan is prepared with priority. Most effective one is the yearly research evaluation and research plan workshop where all research activities are evaluated with concerned stakes and research plans are approved for implementation for the next 3-5 years depending on the individual research project proposal. Besides, a Technical committee also evaluates the research plans before funding is approved.	
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> • available research to inform policy, and • the extent to which those research outputs are used in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> • BFRI has more than 50 Ph.D. scientists, many of them trained overseas through previous donor-funded projects at high quality research institutes and universities. So human capacity for research is generally good. • Strong linkages with universities at home and overseas (offering courses and doing research on fisheries), DoF, Dept. of Environment, NGOs and donor agencies (development partners). <p>Weaknesses</p> <ul style="list-style-type: none"> • Strong focus on inland fisheries and aquaculture, to the exclusion of Coastal/marine fisheries • Not so many young staff being trained as before due to fewer donor funded scholarships • Weak linkages among various stakeholders. • Ecosystem-based fisheries research just started • Less attention/importance to marine fisheries • Meagre financial support for research • Chemical analytical facilities for heavy metal, primary production (with radioactive carbon), endocrinology, tagging, DNA marker, gene sequencing, etc. is lacking and often very meagre. • Lacks regulations for protection and conservation of sea mammals. 	
Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets/Indicators		
<i>Does policy contain specific development targets for capture fisheries? e. g. Fisheries production, employment no's, etc. If so, please elaborate?</i>	Not in NFP, but production increases are a key objective of the policy and 5 year plans have production targets. Also development targets focused in MDG Strategic plan, Fisheries Sector Road map, Vision 2021 and 6 th FYP. This includes targets for poverty reduction, production increase and employment increase.	NFP 6 th Five Year Plan 2010 Vision Paper 2021 Water Reservoir Protection Act (of Rajuk) Draft Fish Sanctuary Act 2010 (proposed) Jalmohal Management Policy 2009
<i>Does policy contain specific management targets for capture fisheries? e. g. area under Marine Protected Areas (MPAS), etc? If so,</i>	Yes, protection of fish habitats; openwater sanctuary establishment (section 5) and conservation and protection of shrimp breeding areas and season (section 7.9).	

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
<i>please elaborate?</i>		
Does policy contain any other specific <u>targets</u> or <u>indicators</u> e.g. value of exports? If so, what are they? (List all)	Not specifically, only outline; mostly increase in export volume and employment opportunities are prioritized. But those should be in a sustainable way (not overexploitation).	
2. Fisheries Management		
Does policy contain a clearly articulated statement of long-term objectives? If so what are those?	<p>The 1998 National Fisheries Policy is weak in terms of long-term objectives in support of sustainability and the precautionary approach – while objectives do include ‘to maintain ecological balance, conserve biodiversity...’, its main focus in terms of objectives are to enhance production, alleviate poverty, fulfill demands for animal protein, and obtain foreign exchange.</p> <p><u>However</u>, DoFs mission is to ‘support <i>sustainable</i> [author’s emphasis] growth in fish and shrimp production with other aquatic resources as well, for domestic consumption and exports, and management of open water fisheries resources through community participation leading to equitable distribution of the benefits generated, for optimal economic and social growth of Bangladesh’, and the 2006 Strategy has a specific section on ‘long term objective planning’. It is also clear that with the introduction and implementation of the hilsa management plan, long-term objectives focusing on sustainability are now a driving force in the overall governance and policy framework.</p>	
Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of management powers and responsibilities?	<p>Decentralisation is not explicitly addressed in fisheries policy documents and at present, the government system in Bangladesh is primarily “de-concentrated” rather than “devolved”. But The 2006 National Fisheries Strategy has a specific section on ‘people’s participation’ which requires a level of decentralised planning and decision making. And In 2005 government delegated powers of implementation of rules under the Marine Fisheries Ordinance to the DFOs of coastal districts.</p> <p>Govt. is advancing towards decentralization of management power/ responsibilities, but the pace is slow.</p>	
Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? If so, is such expansion at the expense of any foreign fishing interests currently operating in the country?	<p>Yes, but not at the expense of any foreign fishing interests. At present no foreign fishing vessels are operating in the country; 2010 annual report notes that</p> <p><i>The Government has recently sanctioned another 30 offshore fishing vessels to harvest different variety of resources considering the potential of the pelagic and other resources e.g. Tuna and Cephalopods. The fishery resources of the rest of the EEZ need to be explored and exploited. It is also possible to extend fishing operation beyond the EEZ i.e. in the international waters, when the new fishing technologies will be transferred</i></p> <p>“Develop resource assessment methodologies to identify new fisheries potentials. Establish plan to collect information on deep water fishes” (Marine action plan).</p>	
	<p>DoF Annual Report March, 2010</p> <p>National Fisheries Policy, 1998.</p> <p>The National Fisheries Strategy, 2006.</p> <p>Hilsa Management Action Plan 2010-2011</p> <p>6 Five Year Plan 2010-15</p> <p>Outline Perspective Plan: Vision 2010-21</p> <p>Jalmahal Management Policy 2009</p>	
	<p>Macfadyen <i>et al.</i> 2005; National Fisheries Strategy, 2006</p>	
	<p>DoF annual report</p> <p>Marine Action Plan v 1.doc</p> <p>‘More fishing in the Bay ‘ – a news article published in the Daily Star on 01 February, 2011.</p>	

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
	At present 167 trawlers are in operation in the Bay, with the permission of extra 30 it would stand at 197 in total. Govt. and the private sector industrial trawlers association are specifically exerting efforts for initiating and expanding deep-sea fishing at >500 m isobaths of the EEZ.	
Does policy specifically refer to small-scale fisheries and if so, in what way?	Yes, in annual report separate section on artisanal and industrial fisheries. Both Govt. and local elected body prioritizes the rights of small-scale artisanal fishers; MFO 1983 protects the rights of artisanal fishers by demarcating their fishing rights within 40 m depth zones and isolating the industrial trawler fleets to fish at depths beyond 40 m depth zones; also highlighted in Fisheries policy, and Marine Fisheries Ordinance.	NFP 1998 & MFO 1983
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	'Not' in policy but 'yes' in action plan. "Based on the assessment of the resource prepare national allocation for the total number of mechanized commercial boats permitted", and "Distribute allocated numbers across the districts where boats are traditionally harbored". Overcapacity conflict is neutralized by depth zonation for various kinds of boats and vessels	Marine Action Plan v 1.doc MFO 1983 & MFR 1983
Does policy refer to and/or deal with illegal, unregulated and unreported (IUU) fishing? If so, in what way?	Yes. "International collaboration with navy and coast guard to guard fishing rights against foreign illegal fishing. International protocols IUU Fishing". National Plan of Action on MCS, 2008. Coast Guard Act 1994 refers for protection against IUU. Through Strengthening MCS and awareness regarding FAO-CCRF. DoF is taking up a plan to strengthen MCS during the next 5 years 2011-16.	Marine Action Plan v 1.doc Marine Fisheries Sector Sub-strategy 2006 Coast Guard Act 1994
Does policy refer to the use of Vessel Tracking and Monitoring System (VTMS)?	Not at the moment, as facility is lacking. But the policy spells out for catch monitoring through logbook checking (at surveillance point in Chittagong). VTMS is needed badly.	NFP, Section 11.4
Does policy refer to need for integration/co-ordination with other sectoral policies?	Yes.	NFP 1998 & MFO 1983
Does policy mention eco-systems management? If so, what measures are suggested?	One of policy objectives is "Maintain ecological balance, conserve biodiversity and improve public health". And NFP and other related policy documents have a strong emphasis on biodiversity and do mention ecosystems and ecosystems research	NFP, DoF Annual Report
Does policy include specific measures related to conflict management? If so, what are they?	Disputes and conflicts certainly exist within the fishery (e.g. between industrial trawlers and artisanal inshore net fisheries), but levels of participation in decision-making and the National Task Force for hilsa management and sub-level committees at Upazila and Union level serve as a mechanism for resolution of conflicts. Where conflict cannot be resolved through such measures, systems of arbitration and legal recourse through the course are (in principal/theory) available. It is not known whether such mechanisms have ever had to be	BOBLME 2.3 assessment report

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
	<p>relied on or how successful they were if so in resolving disputes in an effective manner.</p> <p>There is depth zonation for artisanal and industrial fishery. Artisanal would be confined within 40 m depth while industrial fishery would be beyond >40 m depth areas.</p> <p>As hilsa is a large single fish stock surrounded by three trans-boundary countries, need to be managed in a coordinated basis among BoB countries like Bangladesh, India and Myanmar for better management and to avoid any conflict.</p>	
Does policy include the use of fishery co-management and/or community management?	<p>Community management has proved successful in inland fisheries, but less so in marine fisheries (Khan 2010). The 2006 National Fisheries Strategy has a specific section on 'people's participation' which requires a level of decentralised planning and decision making.</p> <p>There is generally good consultation and decision-making process in place for the specification of hilsa management measures, and as noted there is a provision in law that if rules and regulations are to be amended, the Department must seek public opinion.</p> <p>These decision making processes, and indeed compliance with regulations, are supported by an extensive programme of awareness campaigns through both print and electronic media. The DoF has a number of television slots each year at critical periods, and uses well-known personalities/actors to convey fisheries management messages.</p> <p>Like hilsa management plan, Marine fisheries management plan need to be developed in such a way that can serve the purpose i.e. the research and management need to be strengthened for sustainable production of other commercially important marine fishes, like Tuna, Mackerel, shark, Shrimp etc, many of the stocks of these fishes are remaining under-exploited. ICM also supports this approach.</p>	
3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	<p>Yes, particularly in context of shrimp sector (exportable shrimp and fish products).</p> <p>Yes, under policy of transportation and marketing, "Cold-chain system will be established in fish marketing. Business persons will be encouraged to establish cold-chain based marketing systems."</p>	
Does policy refer to increasing value-added? If so, how is this to be achieved?	<p><i>Yes, policy has specified actions relating to:</i></p> <ul style="list-style-type: none"> - "Establishment of hygienic fish landing centers" - "Transportation and marketing" - "Fish Processing and Quality-Control" including "Value Added Products of frozen fish/shrimps will be strengthened for local and international markets." <p>Exports including "Technologies related to produce different value added products would be encouraged, based on international demand".</p>	
	<p>BOBLME 2.3 assessment report Hilsa Management Action Plan Halder 2004 (Review & improvement of catch monitoring system of hilsa of Bangladesh. 4th Fish. Project, dof. Rpt # 38.14, 65 pp).</p>	
	<p>DoF annual report NFP Export Promotion Report FIQC Rules 1997 (Sect. 23)</p>	
	<p>NFP Section 9.5, FIQC Rules 1997</p>	

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
Does policy refer to tariff barriers and/or free trade areas in the region?	No	
Does policy seek to increase exports?	Yes, big focus on export promotion but not at the cost of env. degradation.	NFP, 2006 strategy
4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	<p>Yes. The National Fisheries Strategy (2006) is guided by the Poverty Reduction Strategy Paper (PRSP), and by international agreements signed by the government.</p> <p>The management framework also observes traditional rights. The 2006 National Fisheries Strategy has specific text on 'pro-poor' which recognises the need to 'ensure that the poor retain their traditional rights to the resources through community leasing (inland) or allocation of fishing rights (marine)'.</p>	2006 strategy Steps toward Challenge 2010 Poverty Reduction Strategy Paper-II 2009-11 6 th Five Year Plan 2010-15 Outline Perspective Plan: Vision 2010-21
Does policy include mention of, or provide for, micro-finance?	<p>Under policy for credit, NFP states that "Shrimp sector as the important export orientated industry, credit to shrimp culture shall be on low interest rates, income tax free and shall have tax holiday"</p> <p>Annual Report also has references to disbursements of credit e.g.</p> <ul style="list-style-type: none"> • Micro credit for alternate livelihoods of fishers/engine boat drivers. • Micro credit for Jatka fishers. <p>And indeed the stated mandate of the DoF in the annual report is</p> <ul style="list-style-type: none"> • To facilitate arrangement for institutional credit for fish and shrimp farmers, fishers and fish traders. 	NFP DoF Annul report
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing/maximizing employment?	<p>General push to maintain or increase employment, esp. in aquaculture sector</p> <p>Policy supports for sustainable exploitation vis-a-vis livelihood security of the small-scale fishers and increased employment.</p>	NFP 1998 & MFO 1983
Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or indirect food security (fish exported with money then available for food imports)	<p>Yes. DoF mandate includes</p> <p>To formulate and implement development projects towards sustainable utilization of fisheries resources to ensure food security</p> <p>And provision of food-grain help to hilsa fishers during Jatka fishing ban periods.</p> <p>Recently food safety net program of DoF is aimed towards that.</p>	DoF annual report Safety net programme
Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	<p>Yes, DoF mandate includes</p> <p>To facilitate alternative income generating activities for rural poor and unemployed people towards poverty alleviation.</p>	DoF annual report Dev. Proje't's Report of DoF Jatka project's Report

Section A. FISHERIES POLICY PROCESSES		
Question	Answer	
	And number of references in annual report to alternative livelihood generating activities. To address this issue DoF is opting for implementation of Integrated Fish. Livelihood Project, to be financed by the World Bank.	Intg. Fish. Livl. Project proposal
5. Overall impression of policy trends		
In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations. Increased priority by the Govt. for increased yield or catch, export earnings, employment generation, food/protein security and increased budgetary allocation.		

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, catch per unit effort (CPUE), maximum sustainable yield (MSY), etc	<p>Not really. The main reference point that has been adopted in Bangladesh is the exploitation rate (E). However the exploitation rate is not a good reference point as a stock may become more resilient to higher exploitation rates as the biomass increases. As a result, the exploitation rate is considered a reasonable indicator of fishing pressure and is not directly used in management decision-making.</p> <p>There are harvest control tools, such as limitation of days per voyage, there are also permanent restrictions, and are not triggered by any stock status indicators or harvest control rules. For hilsa for example, the harvest control tools essentially consist of the following:</p> <ol style="list-style-type: none"> 1. Mesh size restrictions (>90 mm except for current nets (100 mm)) 2. No fishing of juveniles (e.g. fish <30 cm) 3. Complete fishing ban for 10 days in four spawning locations during 5 days before and 5 days after the first full-moon of the peak spawning season (mid October) in 4 spawning grounds of approximately 7,000 km² area. 4. Four hilsa nursery areas: 5. Declared as hilsa sanctuaries <p><i>Four sites in the coastal areas of the country have been declared as hilsa sanctuaries under the "Protection and Conservation of Fish Act-1950" for the effective conservation of jatka in the major nursery areas and the</i></p>	<p>BOBLME 2.3 assessment report</p> <p>NFP 198 & MFO 1993</p> <p>MFR 1983</p> <p>Hilsa Management Action Plan</p> <p>Halder 2004 (Review & improvement of catch monitoring system of hilsa of Bangladesh. 4th Fish. Project, dof. Rpt # 38.14, 65 pp).</p>

Section C: FISHERIES POLICY IMPLEMENTATION												
	<p><i>maintenance of fish bio-diversity.</i></p> <table border="1"> <thead> <tr> <th>Hilsa sanctuary areas</th> <th>Ban period</th> </tr> </thead> <tbody> <tr> <td>From Shatnol of Chandpur district to char Alexander of Laxmipur (100 km of lower Meghna estuary)</td> <td>March to April</td> </tr> <tr> <td>Madanpur/Char Ilisha to Char Pial in Bhola district (90 km area of Shahbajpur river, a tributary of the Meghna)</td> <td>March to April</td> </tr> <tr> <td>Bheduria of Bhola district to Char Rustam of Patuakhali district (nearly 100 km area of Tetulia river)</td> <td>March to April</td> </tr> <tr> <td>Whole 40 km stretch of Andharmanik river in Kalapara Upazila of Patuakhali district</td> <td>November to January</td> </tr> </tbody> </table>	Hilsa sanctuary areas	Ban period	From Shatnol of Chandpur district to char Alexander of Laxmipur (100 km of lower Meghna estuary)	March to April	Madanpur/Char Ilisha to Char Pial in Bhola district (90 km area of Shahbajpur river, a tributary of the Meghna)	March to April	Bheduria of Bhola district to Char Rustam of Patuakhali district (nearly 100 km area of Tetulia river)	March to April	Whole 40 km stretch of Andharmanik river in Kalapara Upazila of Patuakhali district	November to January	
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Whole 40 km stretch of Andharmanik river in Kalapara Upazila of Patuakhali district	November to January											
Is the MSY concept applied and how old are the most recent MSY estimates?	Yes, about 20 years old. Updated MSY estimate is done only for hilsa.											
Are there any species-specific management plans in place? If so for which species	Yes for hilsa and shrimp and FW prawn	Hilsa Management Plan 2010 Shrimp Policy (proposed, awaiting approval)										
<p>Which of the following input fisheries management are used if any</p> <ul style="list-style-type: none"> • <u>limited</u> licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) • effort management e.g. days at sea restrictions • closed areas • MPAs • closed seasons • gear restrictions (ban on certain types of fishing) • other (specify) <p>Please provide as much detail as possible for different fisheries/fleets</p>	<ul style="list-style-type: none"> • <u>limited</u> licensing, Yes. Viz. nos. of industrial trawlers is limited in nos. and govt. evaluates and discusses with the DOF before issuing new licences for industrial fishery. • effort management. Nos. of days per voyages are specified for various types of vessels (mechanized, no-mechanized and with or without freezer, etc. and industrial trawlers). Freezer trawlers are permitted for 30 days; non-freezer trawlers are permitted for 15 days. • closed areas and MPAs. Yes. Jatka sanctuaries in hilsa management plan. And to conserve the aquatic flora and fauna and to protect and preserve the natural breeding grounds and habitat of aquatic life. Bangladesh Government has declared a Marine Reserve in the Bay of Bengal on 29-10-2000. The area of the Marine Reserve is 698 sq. km, surrounded by the two fishing grounds namely middle ground and south patches. Besides this the government has given direction to establish two marine parks at i. surrounding the Saint Martin Island to protect coral island; ii. the water bodies and Mangrove forest criss-crossed in the Sundarban forest. 	MFO 1983 MFR 1983 National Shrimp Policy (proposed)										

Section C: FISHERIES POLICY IMPLEMENTATION		
	<ul style="list-style-type: none"> closed seasons. Yes. In Hilsa management plan. Also for shrimp (see Shrimp policy) gear restrictions. other (specify): viz. marine set bag nets and current nets should have specified mesh sizes, similarly other types of hilsa, Indian salmon nets have specified mesh sizes. Industrial trawlers have specified mesh sizes at cod ends for bottom, mid-water trawling. Mesh size of cod-end are mandated to be of: set bag nets > 30 mm; shrimp trawlers >45 mm; fish trawlers >60 mm; small-meshed gill nets >100 mm and large-meshed gill nets >200 mm. 	
Which of the following output fisheries management are used if any: <ul style="list-style-type: none"> TACs minimum landing sizes bycatch minimisation fish escapement rates other (specify) Please provide as much detail as possible for different fisheries/fleets	By-catch minimization Mandatory imposing of 30% of white fish for shrimp trawlers Large meshes for escapement of juvenile fishes Use of TED (turtles exclusion device)	MFO 1983 & MFR 1983
Which of the following technical fisheries management are used if any <ul style="list-style-type: none"> Mesh-size restrictions Other Please provide as much detail as possible for different fisheries/fleets	Various kinds of mesh size restrictions of various nets (viz. For estuarine/marine set bag nets the mesh size should be >45 mm Duration of voyage Depth restriction for artisanal and industrial fishing	MFO 1983 & MFR 1983
What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc	None	
Which of the following payments/charges (if any) are imposed on the private sector <ul style="list-style-type: none"> landings charges licence fees harbour dues import duties 	Landing charges at landing centres to BFDC. Licensing fee of Tk. 1300 (around US\$ 20) per year per boat to the DoF Export duties are imposed for export goods and similarly import duties for imported items. In DoF annual report, what does the following originate from i.e. is it a charge on private sector: <u>Fish and fisheries product</u> (economic code 2326 non-tax revenue).	DoF annual report

Section C: FISHERIES POLICY IMPLEMENTATION		
<ul style="list-style-type: none"> · export duties · other and what are the levels of charges involved?	Yes.	
Are any subsidies provided to fishermen in the form of: <ul style="list-style-type: none"> · fuel tax/price reductions · import/export duty waivers · vessel construction funds · other i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity	In the capture sector, there are no fuel subsidies provided to hilsa fishermen, only to the trawl sector based on a rationale that it generates foreign exchange and therefore deserve special support. Yes, only to industrial trawlers. Under policy for credit, NFP states that "Shrimp sector as the important export orientated industry, credit to shrimp culture shall be on low interest rates, income tax free and shall have tax holiday" Government support takes a number of forms including direct tax breaks (tax holidays, accelerated depreciation, reduced rates of income tax), reductions in indirect tax (e.g. VAT, statutory duty, customs duty, etc), funding for development projects, and banking sector support in the form of reduced interest rates For shrimp Gov provides 10% cash incentive against shrimp export, has declared shrimp aquaculture as tax free earning, and import tax exempted for shrimp industry related equipments, medicine and chemicals	Huntington, T. & G. Macfadyen (2010) NFP 1998
Are any subsidies provided to fishermen in the form of grants/funds in support of <ul style="list-style-type: none"> · improved gear selectivity · reduced environmental impacts · quality improvements · product innovation · other i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives	A critical aspect of compliance with hilsa management measures that are now in place to protect <i>Jatka</i> /juvenile hilsa and adult hilsa, is ensuring that livelihoods are not too adversely affected by the fishing ban periods. The DoF has in place a number of mechanisms which can be viewed as 'positive incentives' for compliance with the fishing ban periods, and therefore of overall sustainability – they include the provision of 30 kg of rice/month/fishing family, and micro-credit support to fishermen for alternative livelihood activities in non-fishing activities. Recently FAO financed Sidr & Aila project is giving small amount of grants, boats and nets and small-scale loans and providing capacity building trainings to fishers and fish/prawn-shrimp farmers under their rehabilitation programme.	Huntington, T. & G. Macfadyen (2010)

2. Constraints to effective policy implementation

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	
Budgets for operations of Ministries/departments (i.e. For activities)	5
Budgets for enforcement of management measures e.g. For Monitoring, Control and Surveillance (MCS) operations	
Capacity levels of staff in Ministries/departments	1
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	
Supportive regulations/laws giving effect to policy content	3
Coherence with other sectoral and national policies	4
A monitoring and evaluation (M&E) system to check on policy implementation	2
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated

Decision making processes, and indeed compliance with regulations, are supported by an extensive programme of awareness campaigns through both print and electronic media. The DoF has a number of television slots each year at critical periods, and uses well-known personalities/actors to convey fisheries management messages. These efforts are aimed towards achieving effective awareness and capacity building of the fishers community, general mass, and policy makers about their rights and obligations for the sector to sustain and conserve it for the future generations.

Marine environmental policy content and implementation

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
<p>Please list all relevant marine environmental policy documents and items of legislation? E.g. documented policy, master plans and action plans.</p>	<ul style="list-style-type: none"> • Water Prevention and Control of Pollution Acts and Rules, 1974: • Environment Policy 1992: It establishes the Department of Environment (DoE) under the Ministry of Environment and Forest (MoEF), headed by a Director General. The main strategies under the act include, inter alia, declaration of ecologically critical areas and restriction on the operation and process which can be carried or cannot be initiated in the ecologically critical areas, environmental clearance for industrial enterprises and projects, setting water quality standards for particular uses of water and promulgation of acceptable limits for discharging and emitting waste, as well as the formulation and definition of environmental guidelines. The fisheries objectives in the National Environmental Policy (1992) are to ensure an appropriate environment for the conservation and development of fisheries, to prevent activities, which diminish the wetlands/natural habitats of fish and encourage rehabilitative measures in this area, to ensure that development activities in fisheries do not create any adverse impact on the mangrove forests and other ecosystems, to evaluate existing projects on water resources development, flood control and irrigation to determine their adverse impact on fisheries and to adopt measures for alternate fish culture upon improvement of environmental conditions. • National Water Policy 1999: strengthened the role and responsibilities of BWDB and WARPO. Among others, the Policy stipulates that fisheries will receive due emphasis in water resources planning when the anticipated social impact is high, attempts will be made to keep the impact on natural aquatic environment to a minimum, state owned swamps and marshes that are important for fish, waterfowl and other wild life will not be drained, water bodies will be reserved for fish production and development to the extent possible, perennial links of these water bodies with rivers will be properly maintained, water resources projects will not interrupt fish movement and adequate provisions in controlled structures will be made to allow fish migration and breeding, and brackish aquaculture will be confined to specific zones designated by the government for this purpose. • Forest Policy 1994 • National Land Use Policy 2001 • National Fisheries Policy 1998 • Coastal Zone Policy 2005 • Livestock Development Policy • National Environment Management Action Plan (NEMAP) 1995 • National Adaptation Programme of Action (NAPA) 2009 • Bangladesh Climate Change Strategy and Action Plan (BCCSAP) 2009 • Bio-Safety Ordinance 2010 • Environment Court Act 2000 (Amendment 2002) • Factories Act (1965), Section 12 (1) and 13 (11) for waste management • National Environmental Policy 1995 • Environment Conservation Rules (ECR) 1997

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
	<ul style="list-style-type: none"> · Environment Conservation (amendment) Act 2000 · National Policy for Conservation of Mangrove forests (habitats) In June 2001 GoB prepared National Water Management Plan (NWMP) with the intention of operating and implementing National Water Policy 1999. The NWMP 2001 has three phases. · Short –term: 2000-2005 · Mid-term: 2006-10 · Long-term: 2011-25 · National Environment Policy and Implementation Plan 1992 · National Tourism Policy 1992 · National Forest Policy 1994 · National Policy for Safe Water Supply and Sanitation 1998 · National Fisheries Policy 1998 · The Marine Fisheries Ordinance, 1983 · The Marine Fisheries Rules, 1983 · Livestock Development Policy 1992 · National Agricultural Policy 1999 · Industrial Policy 1999 · National Water Policy 1999 · Draft National Land Use Policy 1999 · Draft National Wetlands Policy 1998 · National Energy Policy 1996 · National Rural Development Policy 2001 · The National Policy for the Advancement of Women 1998 · National Water Policy 1999 · National Agricultural Policy 1999 · National Shipping Policy 2000 · National Land Use Policy 2001 · The Environmental Conservation Act 1995 · The Territorial Waters & Maritime Zones Act 1974 · Territorial Waters and Maritime Zones Rules 1977 · Bangladesh Merchant Shipping Ordinance 1983 · Bangladesh Code of Conduct for Responsible Fishing drafted (in the line with FAO's CCRF) for immediate implementation · Bangladesh Coastal Zone Policy, 2005

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
	<ul style="list-style-type: none"> • National Policy for Safe Water Supply and Sanitation 1998 • Draft National Wetlands Policy 1998 • Brickfield Policy 2008
<p>Please list the key legislation covering the following areas:</p> <ol style="list-style-type: none"> a. Marine and coastal habitat conservation b. Endangered threatened and protected species c. Land-based pollution control d. Marine-based pollution control e. Environmental impacts assessment f. Environmental standards (e.g. water quality) g. Preservation of aquatic and water dependent ecosystem (NWMP) 	<p>Marine and coastal habitat conservation:</p> <ul style="list-style-type: none"> • DoE has declared 12 Ecologically Critical Areas (ECAs) in the country, including four rivers and their banks. It is now termed as Ecologically Critical Habitats. • Action Plan and Strategy on National Biodiversity 2010 (personal communication DG, DoE, 2010) • Establishment of ECA cell (personal communication DG, DoE, 2010) • Steps taken in the light of International Conventions (e.g. CBD) • ECA management ordinance (2010) • Durable Development and Tourism Policy of St. Martin Island (2010) <p>Endangered threatened and protected species</p> <ul style="list-style-type: none"> • National Biodiversity Framework (2007) • Steps taken for the preparation of plan and its implementation for the development and conservation of biodiversity in 04 ECAs (personal communication DG, DoE, 2010) <p>Land-based pollution control:</p> <ul style="list-style-type: none"> • National Programme of Action for Protection of the Coastal and Marine Environment from Land-Based Activities (undated) • Waste Management Rules (draft prepared) • Practices of Waste Management by implementation of 3R (Waste Reduce, Reuse and Recycle) for Bangladesh • Medical Waste Management Rules (2008) • Ship-breaking & hazardous Waste Management Rules (2010) • Guidelines for Environmental Management, Waste Treatment & Workers Occupational Health & Safety (OHS) for ship breaking yards in Bangladesh (2010) • Solid Waste Management Ordinance (2010) • National Agricultural Policy (1999) • Pesticides Law (1985) • For management of all city waste prepared a Programmatic CDM Project (personal communication DG, DoE, 2010) • Institutional strengthening for phasing out of Ozone depleting substances (ODS) • Transitional strategy for phasing out of CFC in manufacturing metered dose inhaler in Bangladesh • Partnership for clean fuel and vehicle <p>Marine-based pollution control:</p> <ul style="list-style-type: none"> • Marine Pollution Solas Convention, Stockholm Convention on POPs, Basel Convention etc. And National Rules

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
		(e.g. Port rules and measures for pollution control) Environmental impacts assessment: <ul style="list-style-type: none"> • Rule for Conservation of Environment 1997 (ECR 11997) • Guidelines for Industrial Clearance (ETP, EMP) (ECR 1997, NEP 1995) • EIA guidelines for other sectors Environmental standards <ul style="list-style-type: none"> • Water, air, soil, food etc. (ECR 1997) • Transboundary plan for development strategy and cross-cutting issues. 	
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy. <i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</i>	Stakeholder group	Active involvement in policy development (yes/no)	Ranking of importance in determining policy (1 being the most important)
	1. Political government staff at national level	A National Technical Committee on Biodiversity has been formed headed by the Secretary, Ministry of Environment and Forests; This Committee is comprised of all the institutions and government agencies relevant to Biodiversity Conservation. The Committee frequently meets to make policy decisions on biodiversity conservation in Bangladesh. BFRI and NGOs are not included in that committee. No technical committee yet formed by the Govt. for Marine environmental Policy.	6
	2. Political government staff at provincial or state level	no	-
	3. Political government staff at local level	no	-
	4. Technical government staff in environmental ministry/department at national level	yes	1
	5. Technical government staff in environmental ministry/department at provincial level	no	-
	6. Technical government staff in environmental ministry/department at local/district level	no	-
	7. Technical government staff in other sectoral ministries / departments	yes	2

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
	8. Public sector industry	yes	3
	9. Private sector industry	yes	3
	10. Non-governmental organizations from civil society	yes	5
	11. Donors and/or consultants funded by them	Although the MoEF was responsible for drafting the 1982 NEP, in reality it was drafted by an informally organized Task Force composed of the major actors. International donor agencies, experts from selected NGOs and some civil society bodies provided technical and back up support to the ministry (Islam, 2007). This may have lost political "ownership" of the Policy (Aminuzzaman, 2010).	4
	12. Other (please specify)	Faculty members in relevant departments of the universities and research organizations. Need to include science & technology institutes in policy formulation	1
Is there any specified requirement in law with regards to who should be involved with policy formulation?		Fisheries, Environment & Forests, Agriculture, Land, Industries, Local government institutions, Water resources, and Water transport authorities, civil societies.	
When are the dates for the next major revisions/re-specifications of key policy documents?		Not specified/fixed, revisions are done when needed.	
Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 		No lobbying by any interest groups. Initiatives are usually taken by the Govt. Ministries / respective departments for updating policy as per reports and activities of media, press, BELA (Bangladesh Environment Lawyers Association) and civil society and practical needs, such as for <ul style="list-style-type: none"> - industrial waste management - Municipal waste management - Hospital waste management - Ship breaking management - Brickfields management - Reduction of Greenhouse gas emission By the reports and activities of media, press, BELA (Bangladesh Environment Lawyers Association) and civil society the MoEF and DoE prepares guidelines and rules for Ship breaking activities (SBA) in Bangladesh. SBA activities stopped due to court verdict that without pre-cleaning, no foreign ship would be allowed to dismantle in Bangladesh.	
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform policy, and 		Strengths <ul style="list-style-type: none"> · Potential and diversified marine resources 	

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
<ul style="list-style-type: none"> the extent to which those research outputs are in informing policy 	<ul style="list-style-type: none"> Good research outputs are available in some sectors for govt. to take action Technical personnel, Civil society and journalists (news papers) always prioritize environment and biodiversity concerns Technically skilled manpower available in universities and research institutes to handle environmental issues and concerns Govt. is well aware of any consequences in the BoB. Policy makers, politicians are positive about any initiatives taken. <p>Weaknesses</p> <ul style="list-style-type: none"> Weak Inter-sectoral communication. Policy level endorsement/ backing of conservation of biodiversity are not getting momentum. Implementation of existing legislative mechanism or framework is not efficient enough to halt the conversion of forest lands to commercial, industrial and settlement purposes. Climate change induced hazards are taking heavy tolls on conservation initiatives. Spatial information gap regarding biodiversity and ecosystem related issues need to be fulfilled. Inadequate financial and technical capacity of respective organizations is a serious barrier for implementing NBSAP strategies and action plan. There are some policies, e.g. Export Policy 2006, Industrial Policy 2005) that do not explain how objectives of those policies (export promotion or industrial expansion for example) will be achieved without compromising environmental degradation or biodiversity conservation. Weak initiatives in marine environmental research

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
<p>Does policy contain specific marine environmental management targets or indicators in the following areas:</p> <ol style="list-style-type: none"> Inter-tidal and sea areas under formal MPA protection Marine species to be brought under formal protection Coastal, estuarine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) Pollution/effluent control targets Any other quantitative environmental targets (pls 	<p>Yes for all.</p> <p>Biodiversity targets have been set according to the CBD 2010 targets. They have also been outlined for 2010, which includes a set of 13 projects for 'coastal and marine ecosystem conservation'.</p> <p>It opts for participatory ecosystem management, community-based ecosystem management and advocacy/awareness development.</p> <p>Active participation of marine related peoples still very minimal at national level or policy level (marine policy content) as a result implementation is still minimal.</p>	<p>Ministry of Environment and Forests (2009)</p>

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
specify)		
2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?	Not specifically for decentralisation; but spells out for increased community-based integration and management. Decentralization of environmental management powers is essential.	
Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of: <ul style="list-style-type: none"> a. By-catch and discards? b. Interactions with endangered, threatened & protected species? c. Impacts on sensitive or vulnerable habitats d. Impacts on the trophic structure of marine ecosystems e. Introduction of alien or exotic species 	Yes. It also focuses on loss of fish habitats, degradation of habitats due to pollution, loss of biodiversity and overfishing; and clearance certificate from the environment department for any development activity. Coastal & wetland biodiversity management at St, Martin’s Island, Cox’s Bazar and Hakaluki Haor (Sylhet) – some steps were taken for biodiversity conservation in sensitive areas by: <ul style="list-style-type: none"> • Community-based adoption in the ECAs through biodiversity conservation & social protection through Climate Trust Fund. • Parki beach environmental management plan No rules for the conservation & management of sea-mammals; not also in Fish. Policy	National Environmental Management and Action Plan (NEMAP) Environment Conservation Rules 1997 DoE (2010) (Environment day publication 2010) FAO-CCRF 1995 Marine Fishery Ordinance 1983
If these issues are not covered by environmental policy, are they covered in fisheries policy?	Not fully covered, but partially discussed under Section 8(1, 2 and 3)	National Fishery Policy 1998
Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?	No separate National Policy on ‘Coastal & Marine Environment of the BoB and its biodiversity’. Bangladesh have Nineteen nationally designated protected areas comprising approximately 2,458 km, which is 1.66 percent of land area of the country. These include ten national parks, eight wildlife sanctuaries and one game reserve (all of which are forests). In 1997 UNESCO designated three wildlife sanctuaries of Sundarbans as a World Heritage Site (and RAMSAR). In addition over 200 community organisations manage waterbodies following sustainable principles including Protection of small sanctuaries within those waterbodies under agreements between the Ministry of Land and Ministry of Fisheries and Livestock. However, the PA network, remains notably under-represented in terms of freshwater wetlands and coastal wetlands of the delta, considering their high biodiversity value and presence of threatened species	Department of Environment (2010).

<p>Does policy for MPA development recognise the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.</p>	<p>Yes, usually through Public-private partnership.</p>	<p>CPD (Centre for Policy Dialogue) Biodiversity Report.</p>
<p>Have MPAs been specifically developed to protect the following: a. Fish stocks (with no take zones, gear restrictions, etc) b. Critical habitats (e.g. coral reefs, mangroves, etc) c. Certain species Please give details where possible.</p>	<p>Fish stocks: the PA system as such does not protect fish stocks. However there are seasonally protected areas for juvenile hilsa (see above) and catching hilsa under the size of <23 cm is banned. Collection of shrimp and prawn PL from the wild is discouraged in NFP and latter it was banned. The capture of sea turtles is banned under Bangladesh law. Use of TED is mandatory for every fishing vessel, but in practicality due to lack of logistics it could not be enforced efficiently. At present, Govt. is exerting best possible efforts for spatial protection of sea turtle nesting or other habitat. Thematically it was declared as an ECA but implementation of ECA status is still at minimal level.</p>	<p>4th National Report of CBD Report on Biodiversity & program of actions 2020, submitted to CBD Secretariat</p>
<p>Does marine environmental policy consider the impacts of land-based pollution on the marine environment?</p>	<p>Yes, but only via Environmental Impact Assessment (EIA). There is a comprehensive list of project types / size thresholds for pollution-causing industries and their need for EIAs. All development project and activity needs EIA and clearance from the Environment department before implementation. There are some sporadic, not continuous or regular, works / reports / studies on the EIA of coastal aquaculture but the effectiveness of those EIA studies are not robust in coastal areas.</p>	<p>Bangladesh Gazette (1997)</p>
<p>Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,</p>	<p>Yes, viz. Ship breaking activities (SBA)</p>	
<p>Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc</p>	<p>Yes, Environment policy indicates poverty reduction in general; also in PRSP (Steps towards Challenge 2010).</p>	
<p>Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details</p>	<p>Government has developed a 'Climate Change Strategy and Action Plan (MoEF, 2009). It recognizes the vulnerability of the coastal belt and cars in particular, and the high levels of poverty / lack of resilience in these areas. The impact on coastal biodiversity - and fisheries / coastal agriculture - is also well recognized.</p>	<p>MoEF. 2009 National Adaptation Plan of Action (2008)</p>

3. Overall impression of policy trends

In summary, what are the main **trends and changes** in environmental policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.

Positive trend, Govt. is prioritizing environmental concerns/issues and increased budgetary allocation; yet to qualify as a standard and sustainable environment policy. Although some new projects and steps have been taken but those are far behind as compared to other BOBLME member countries.

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference
C.1: Impact assessment		
What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate): <ol style="list-style-type: none"> a. Restricted access (complete or partial by different groups?) b. Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year) 	There are some guidelines for implementation of 'MPA' in the St. Martin's Island in a study by Tomasik (1998) but the guidelines/recommendations are not yet implemented fully. <ol style="list-style-type: none"> a. Controlled community fishing rights over given areas in artisanal fishery b. In order to protect breeding grounds and seasons of different species sanctuaries and closed seasons are declared. 	Tomasik (1998) Marine Fisheries Sector Sub-strategy (Section 2.5) Marine Fisheries Sector Sub-strategy (Section 2.8.4) and NFP (Section 8.2.3)
What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate): <ol style="list-style-type: none"> a. Land-based rangers/checks b. Sea-based patrols c. Remote monitoring (e.g. air, satellite & telemetry) d. Other? 	Both land/shore based and sea-based checks / enforcements are suggested. Only occasional monitoring / patrol is done by Coast Guards, sometimes by the DoE people when any sort of marine/coastal pollution happens	Marine Fisheries Sector Sub-strategy (Section 2.8.3)
What forms of activity require an environmental impact assessment (EIA)?	Industries are classified according to their potential impact on the environment into four categories - Green, Orange-A, Orange-B, and Red. Green industries are automatically granted a certificate. Orange categories must submit considerable further information and plans, and may be subject to field inspection. The highly polluting categories Orange-B and Red must in addition conduct a detailed EIA and prepare environmental management plans satisfactory to DoE. Schedule 1 of the Rules provides the category classification of most common industries but does not include aquaculture projects. The processing of fish, prawns and shrimps is categorized under Orange-B. Only Red category industries need EIA. Govt. is thinking for establishment of ETP by all shrimp hatcheries along the sea coast. All shrimp hatcheries are allowed to operate subject to clearance certificate from the DoE.	Bangladesh Gazette (1997): Bangladesh Environment Conservation Act 1995 (amended 2010) Environment Conservation Rules 1997 Environment Policy 1992 State of Environment 2006
What are the main strengths and weaknesses of the EIA system?	Strengths: <ul style="list-style-type: none"> • Address a wide range of polluting industries • Institute of Marine Science & Fisheries of the Chittagong University and BUET, Dhaka offers courses on EIA for developing skilled 	Ahammed and Harvey, 2004

	<p>manpower in this sector</p> <p>Weaknesses:</p> <ul style="list-style-type: none"> • The major inadequacies are in legislative control of the EIA, procedural appropriateness of current EIA system, institutional capacity and public participation • Rarely are alternatives in terms of design, technology or location suggested • Little environmental analysis of sectoral policies 	
<p>Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details</p>	<p>No - this is one of the weaknesses of the EIA system. Research and technical people are suggesting govt. to consider cumulative environmental impact assessments (CEIA) and it is hoped that in near future government would enforce mandatory requirement to conduct CEIA.</p>	
<p>C.2 Marine environmental monitoring</p>		
<p>What are the main monitoring mechanisms for marine pollution control, its enforcement, and the prosecution of offenses</p> <ul style="list-style-type: none"> d. Land-based rangers/checks e. Sea-based patrols f. Remote monitoring (e.g. air, satellite & telemetry) <p>Other?</p>	<p>Both land/shore based and sea-based checks/enforcements are suggested; occasional monitoring and patrols are done and cases are filed against the violators.</p> <p>But Remote monitoring is not in place yet.</p>	<p>Marine Fishery Policy (Section 8.2.6)</p>
<p>Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?</p>	<p>A State of the Environment report was produced by DoE in 2001. It includes some details of coastal areas, but the level of detail is limited. No update yet planned, but urgently needed.</p> <p>Bangladesh produces a national report to the CBD every five years (the most recent being in 2010). This includes a chapter entitled "Marine and Coastal Biodiversity" and provides a brief assessment of the status and threats.</p>	<p>DoE, 2001 (MoEF has submitted the 4th National Report of Bangladesh on 'Biodiversity and programme of action 2020' to CBD secretariat for 'Global Biodiversity Outlook'. Where considering the national environment and its threatened biodiversity, the entire country has been categorized into 9 areas for biodiversity conservation and a total of 74 projects were identified till 2020 (World Environment day, DoE, 2010).</p>

Are there annual (or recurrent) reports on the following: <ul style="list-style-type: none"> i. Status of marine areas and habitats under formal protection j. Status of species under formal protection k. Status of coastal water quality l. Number of reported pollution incidents 	The above mentioned report to CBD also provides details on the number of species and the area of habitats under protection, although is mainly concerned with coral reefs rather than other important marine habitats. Unfortunately not much emphasis given on corals and related organisms. Some fragmentary reports/studies done by Inst. of Marine Sci. & Fisheries of Chittagong University; DoF, Marine Fisheries & Technology Station of the BFRI.	DoE, 2010
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment	No, mostly done by DoF, BFRI, DoE, Inst. of Marine Sci. & Fisheries of Chittagong University, other universities and research institutes and some donor/development partners' assessments.	
What are the strengths and weaknesses of marine & coastal environmental monitoring?	Strengths: <ul style="list-style-type: none"> • Trained and skilled manpower available, though in limited numbers. • Law and regulations are in place. • Govt. prioritizes environment and every National Environment Day is celebrated with much enthusiasm and Nation Environment medal is given. Weaknesses: <ul style="list-style-type: none"> • No clear designation of institutional responsibility to anybody for monitoring • Implementation of law and rules are minimal • Skilled manpower remain unused • Lack of funds (financial constraint) for monitoring • Lack of well equipped environmental laboratory (centre of excellence) for analytical analyses. 	
C.3 Financial and economic mechanisms		
Are there any financial support for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?	Not truly.	
Are there any financial incentives for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?	Yes; minimal implementation, still in policy or as proposals at policy level, but not practiced well. But in serious cases polluters are penalized.	

C.4 Constraints

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

Potential constraints	Scale of constraint 1 – 5 with 1 as very important
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	6
Budgets for operations of Ministries/departments (i.e. For activities)	3
Budgets for enforcement of management measures e.g.	4
Capacity levels of staff in Ministries/departments	3
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	2
Supportive regulations/laws giving effect to policy content	1
Coherence with other sectoral and national policies	5
A monitoring and evaluation (M&E) system to check on policy implementation	3
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated In very few cases

Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Ref'
A.1: Policy and planning framework		
Is there a specific policy at either national or state / provincial level, for integrated coastal management?	Coastal Zone Policy (2005)	MoWR, 2005

<p>What other strategy or planning documents have produced for ICM at either national or state / provincial levels?</p>	<ul style="list-style-type: none"> · National Environment Policy and Implementation Plan (1992) · National Forestry Policy (1994) · Livestock Development Policy (1992) · National Fisheries Policy (1998) · National Tourism Policy (1992) · National Energy Policy (1996) · National Policy for Safe Water Supply and Sanitation (1998) · National Rural Development Policy (2001) · National Education Policy (1997) · National Children Policy (1994) · National Policy for the Advancement of Women (1998) · National Water Policy (1999) · National Agricultural Policy (1999) · Industrial Policy (1999) · National Shipping Policy (2000) · National Health Policy (2000) · National Land Use Policy (2001). · Coastal Development Strategy 2006 · Integrated Coastal Resources Database 2005 · National Water Management Plan 2004 · State of Environment (2006) · Water Act, 2010 (WARPO) · Draft National Wetland Policy (2000) · The Coast Guard Act (1994) · Wildlife Conservation Act (1973) · Bangladesh Environment Conservation Act, 1995 (amended 2010) · Environment Conservation Rules (1997) · Environment Policy (1992) · National Adaptation Program of Action 2005 · The Forestry Rules (1979); National Forest Policy (1994) · Bangladesh Climate Change Strategy and Action Plan (2009) · Poverty Reduction Strategy Paper-II 2009-11; Priority Investment Programme 2006 · 6th Five Year Plan 2010-15; Outline Perspective Plan: Vision 2010-21 · GoB Policy Note of ICZM issues February 1999 · Joint Donor Mission (IDA-NEDA-WFP) March 1999 · Joint Mission (IDA-NEDA) October 1999; · Coastal Zone Management: an analysis of different policy documents (PDO-ICZM) 2003 · ICZM Project (2000-2005); ICZM Identification Mission 2009 	
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Please list all key legislation that has been produced to enact ICM.	Many existing laws are applicable to the coastal zone. However no specific legislation has been enacted to implement ICM.	
A.2 Development of ICM planning		
For national & state / provincial ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	Form of involvement (if any). MoWR and WARPO, level of involvement is high.	Level of involvement (low, medium or high)
Ministry of Planning (or equivalent)	Overall budget, planning, activity, implementation	medium
Ministry / Dept of Fisheries (or equivalent)	Sustainable fishing and gear use in the near-shore waters, turtle breeding and conservation and biodiversity conservation, livelihood improvement of fishers	high
Ministry of Tourism (or equivalent)	Development of and popularizing eco-friendly tourism and spot development	low
Ministry of Environment (or equivalent)	Coastal land and water-based pollution, water quality standards and resource degradation	high
Other Ministries (please specify)	MoWR produced the first CZM Policy in 2005. WARPO was designated as lead agency, with Inter-ministerial Technical Committees and Program Steering Committees to be established.	medium
Local Govt. Ministry	Institutional capacity building	
Private sector interests	Empowering activity of coastal fishers	low
NGOs	Empowering activity of coastal fishers (COAST, BCAS, IUCN, BELA, BAPA)	high
Civil society	Empowering activity of coastal fishers	medium
Foreign donor driven projects	The PDO - ICZM Project (2002 - 2005) was set up with UK / Netherlands funding. The main goal of the PDO-ICZM project is to structure and introduce a process of ICZM in Bangladesh.	high
Others (please specify)		
Is there any specified requirement in law with regards to who should be involved with ICM formulation?	Yes, MoWR, WDB and WARPO in association with DoF, BFRI and DoE, MoE&F	Water Act 2010
When are the dates for the next major revisions/re-specifications of key policy documents?	Not fixed, revised when it seems necessary	

<p>Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details:</p> <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	<p>Not truly, but ship breaking yards association often creates pressure to relax some points of the law for their SBA. Govt. imposed ban on shrimp/prawn PL harvesting from nature due to lobbying by the scientists and fisheries managers.</p>	
<p>What are the main strengths and weaknesses with regards to:</p> <ul style="list-style-type: none"> · available research to inform ICM, and · the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> · Trained and skilled manpower available in the ministry/departments/universities and research institutes · Media, civil society and technical personnel are aware of the issues and raise their voice when necessary. <p>Weaknesses</p> <ul style="list-style-type: none"> · In Bangladesh the coast is an area of institutional weakness: though several government agencies and departments are working in the coastal region, there is hardly any linkage between them and institutional fragmentation is common (A policy review). Only bilateral communication takes place between the Ministry of Land and other executing agencies when the latter require land for construction purposes. Further, the agencies responsible have hardly any presence at the local level. Most of these agencies operate only from their Thana level offices; again this is not the case for all the departments who are responsible for program concerning the coastal areas. · Weak coordination and linkages of the concerned departments/ministries with the universities and institutes doing research related to ICM/marine; no guaranteed financial assistance for research studies on these issues. 	<p>Islam et al, 2009</p>

Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Fisheries	high	Need execution of policy/plan	
Aquaculture	medium	Need execution of policy/plan	
Eco-Tourism & recreation	low	Need execution of policy/plan	
Port & industrial development	medium	Need execution of policy/plan	
Urban development	low	Need execution of policy/plan	
Coastal defence development	low	Need execution of policy/plan	
Transport	low	Need execution of policy/plan	
Military use	low	Need execution of policy/plan	
Forest, Environmental conservation	high	Need execution of policy/plan	
Other (please specify) Ministry of Energy	medium	Need execution of policy/plan; Need to include Science & Technology Institutes in policy formulation	
Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.	Yes, one of the main goals of the Policy is to meet the Code of Conduct for Responsible Fisheries (CCRF). Sustainable development of livelihoods based on coastal / marine resources are also a central premise. Capture fisheries and aquaculture are both considered: Capture fisheries: a. Comprehensive policies, as dealt in the National Fish Policy, in relation to exploitation, conservation and management of marine fisheries resources will be followed; b. Fishers' right will be established on open water bodies for sustainable fisheries management. Aquaculture a. Environmentally adopted and socially responsive shrimp farming will be encouraged. In this regard, internationally accepted quality control measures will be introduced; b. All opportunities and potentials of aquaculture will be utilized in the coastal zone. Crab culture, pearl culture, sea grass conservation will be encouraged.		MoWR, 2005
Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.	No, although the main goal is to meet the 'Millennium Development Goals'. A PCU was established within WARPO would develop an ICZM Indicator Framework. Not yet completed/implemented by MoWR/GoB.		MoWR, 2005

Are there specific provisions for co-management, what are these?	Yes, co-management and participatory decision-making were a main principle of the ICZM approach to bring "decision-making power to the grass root levels". No co-management implementation mechanisms have been developed for ICM, although some NGOs are involved in the management of the sea turtles, Royal Bengal Tigers, migratory birds and cetacean fauna, etc. (as part of their donor aided programmes).	MoWR, 2005
What level / levels is ICM set at:	Comment	Supporting Reference
International (e.g. transboundary cooperation)		
National	Main ICM approach.	ICZM 2005 Islam 2004 (Where Land Meets the Sea—A Profile of the Coastal Zone of Bangladesh. The University Press Ltd., Dhaka, Bangladesh).
State / Province		
Municipality		
Other (please specify)		
Does the plan specify mechanisms for user conflict management?	yes	
Does the plan specify mechanisms for user zoning?	Yes	
Does the plan specify mechanisms for stakeholder consultation?	yes	

Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
Who are the main implementing authorities at:		
International level		
National level	MoWR, WARPO, DoF, DoE, Dept. of Forests & Wildlife	
State / Province level		
Municipality level	Department of Land, Administration, local govt.	
Other levels (please specify)	Need to include Science & Technology Institutes in Policy formulation	
Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?	Not usually done, recently CEGIS (Cent for Environmental and Geographic Information System) started to estimate such costs.	

How is coastal zoning used in the development planning process?	Still within the books, not practiced/implemented (as a must).	
Do any particular coastal users or sectors have priority in terms of resource allocation?	Not specifically, but it depends on area/region, demand and other factors, Ministry of Land decides this.	
What mechanisms are there for reviewing coastal development priorities?	Through Ministry of Planning	

Questionnaire development.

The questionnaire was initially populated by Poseidon from published literature. The questionnaire was then sent to the National Coordinator who convened a multi-disciplinary working group to further discuss and develop the questionnaire. A total of 22 participants from different stakes participated in the Policy Direction Consultation meeting. The nominated participants were provided with both soft and hard copies of the questionnaire (about 8 days before the consultation meeting) so that they could work on it prior to joining the consultation meet. The stakeholders were as follows:

- BFRI - 4 experts
- Support to BOBLME Project - 3 experts
- DoF - 3 experts
- Department of Environment - 2 experts
- Institute of Marine Science & Fisheries - 1 expert
- Bangladesh Agri. Univ. - 1 expert
- Dkaha Univ. - 1 expert
- Rajshahi Univ. - 1 expert
- WorldFish Centre - 2 experts
- Marine Fishers Assoc. - 1 expert
- Small-scale Fishers Assoc. - 2 experts
- CARITAS (NGO) - 1 expert

Total = 22 experts

Appendix G: Myanmar

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation	<ul style="list-style-type: none"> • National Policy on Fishery Sector (undated) • The Freshwater Fisheries Law; 1991 • Law relating to the Fishing rights of Foreign fishing Vessels; 1989 • Law amending the Law relating to the Fishing Rights of Foreign Fishing Vessels; 1993 • Myanmar marine Fisheries Law; 1990 and • Law Amending the Myanmar Marine Fisheries Law. 1993 • Law Relating to Aquaculture , 1989 • Master plan (30 years) long-term plan(2001-2031) targets 		
Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralisation	<ul style="list-style-type: none"> • National Medium Term Priority Frame works, (NMTPF), • Millennium Development Goal (MDG), Goal No. 1 and 7 • National Sustainable Development Strategy (2009) Goal No. 1/(6) 		
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy. Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Government staff at National level	Y	1
	2. Government staff at Region and State level	Y	2
	3. Government staff at local level (District and Township)	Y	3
	4. Technical government staff in fisheries ministry/department at National level	Y	1
	5. Technical government staff in fisheries ministry/department at provincial level, (Region and State Level)	Y	2
	6. Technical government staff in fisheries ministry/department at local/ (District and Township level)	Y	3
	7. Technical government staff in other sectoral ministries/departments	Y	2
	8. Catching sector representatives from large-scale/industrial sector, under Myanmar Fisheries Federation (MFF)	Y	3
	9. Catching sector representatives from small-scale/artisanal sector, under Myanmar Fisheries Federation (MFF)	Y	3
10. Processing/marketing sector representatives, (MPEA under MFF)	Y	3	

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
	11. Non-governmental organizations from civil society, Myanmar Fisheries Federation, (MFF), Forest Resources Eco-system Development Association (FREDA)	Y	3
	12. Donors and/or consultants funded by them	No	-
	13. Other (please specify)	-	
	14. Other (please specify)	-	
Is there any specified requirement in law with regards to who should be involved with policy formulation?	Office of the Attorney General, Foreign Economic Relations Department (FERD) and Relevant Ministries.		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?			
When are the dates for the next major revisions/re-specifications of key policy documents?			
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details of: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	No		
Is there a documented fisheries research plan? If so what period does it cover?	<i>30 years long-term plan (2001-2031) targets</i>		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform policy, and · the extent to which those research outputs are used in informing policy 	Strengths, <ul style="list-style-type: none"> · Good Coordination and Collaboration with NGOs Weaknesses <ul style="list-style-type: none"> · Inadequate human resources, research facilities and budget 		

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets/Indicators		
<p>Does policy contain specific development <u>targets</u> for capture fisheries? Eg. Fisheries production, employment no's, etc. If so, pls elaborate?</p>	<p>30 years long-term plan(2001-2031) targets Production of 4.15 million metric ton from all fishery sector And national policy includes following objectives:</p> <ol style="list-style-type: none"> 1. To promote all-round development in the fisheries sector. 2. To increase fish production for domestic consumption and share the surplus with neighboring country 3. To encourage the expansion of marine and freshwater aquaculture. 4. To upgrade the socio-economic status of fishery communities. 	<p>Policy poster / Macfadyen, G. (2006). Mya Than Tun, Yin Yin Moe & Soe Hla (2009)</p>
<p>Does policy contain specific management <u>targets</u> for capture fisheries? e.g. area under MPAs, etc? If so, pls elaborate?</p>	<p>Yes, Prohibited illegal and Irresponsible fishing gears, closed season, closed areas,</p>	
<p>Does policy contain any other specific <u>targets</u> or <u>indicators</u> e.g. value of exports? If so, what are they? (List all)</p>	<p>Export of 1.149 million ton value of 2,373 million us\$</p>	<p>Policy poster / Macfadyen, G. (2006).</p>
2. Fisheries Management		
<p>Does policy contain a clearly articulated statement of long-term objectives. If so what.</p>	<p>It is understood that there are long term objectives for the management of Myanmar's fisheries and their environmental sustainability with high level objectives are presented under Fisheries 2020.</p>	
<p>Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of management powers and responsibilities?</p>	<p>Yes, According to Myanma Fisheries Laws, decentralization and devolution of management powers and responsibilities from head office to Region and State had been provided.</p>	
<p>Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? if so, is such expansion at the expense of any foreign fishing interests currently operating in the country?</p>	<p>Yes. National fish production is expected to develop at a medium pace for the next few years. Total landing of marine catch is also expected to increase. The increase in marine fish production is expected primarily to derive from deep-sea fishing. It is estimate that about 1 million tonnes of fish can be additionally exploited annually from this source.</p>	<p>Macfadyen 2006</p>

Does policy specifically refer to small-scale fisheries and if so, in what way?	Yes, Replenishing of fish and prawn seeds into the natural water bodies and exemption of some small fishing gears and small scale aquaculture.	
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	<p>Yes to the extent that a moratorium has been placed on the issuance of new or additional fishing licences for vessels to harvest in coastal waters. This is to ensure that the current high fishing pressure on the limited coastal fisheries resources will not be increased, and over time should result in reduced capacity.</p> <p>Myanmar responded favorably to the IPOA for the Management of Fishing Capacity, by putting in place: (i) a monitoring system, and (ii) a licensing regime.</p> <p>Every fishing activity in Myanmar's fishery industry is controlled by the licensing and registration system to control both the fishing vessels and their gear, under the current Fisheries Law and Union of Myanmar Foreign Investment Law 1988</p> <p>Any attempt by fishermen to change the tonnage or engine power of fishing vessels or to construct fishing vessels require permission from the Director General of DoF and nautical approval from the respective authority.</p>	Macfadyen 2006
Does policy refer to and/or deal with IUU fishing? If so, in what way?	The country responded favorably to the IPOA to Prevent, Deter and Eliminate IUU Fishing, through its current MCS system, and claims it bans vessels from its waters that practice re-flagging to avoid regional conservation and management measures.	DE YOUNG, C. (2007)
Does policy refer to the use of VMS?	Yes, need to improve the same system with developed countries,	
Does policy refer to need for integration/co-ordination with other sectoral policies?	Yes, need to integrate / coordinate with other relating sectoral policies (e.g.) Forest Policy, Environment Policy ect;	
Does policy mention eco-systems management? If so, what measures are suggested?	Yes, According to the Myanma Fisheries Laws and Regulations, all fisheries habitats and eco-system are managed by fisheries authorities.	Poseidon Aquatic Resource Management Ltd (2010)
Does policy include specific measures related to conflict management? If so, what are they?	<p>Yes. Two fishing areas (offshore and inshore) have been established through a licensing scheme whereby areas are designated for specific fishing gear, classes of fishing vessels. This is an attempt to provide equitable allocation of resources and reduce conflicts between artisanal and commercial fishers. Basically, the two fishing areas are: inshore, for coastal fisheries, extending from the shoreline to 5 nm in the northern area and to 10 nm. in southern coastal areas; an area offshore from the outer limit of inshore area to the EEZ limit.</p> <p>Amending of the fisheries law of 1989 was to provide a more comprehensive legal framework to manage fisheries in national waters. This law was formulated to integrate and strengthen the legal framework relating to marine and inland fisheries and to, amongst other things, "strengthen systematically administrative activities to reduce conflict among the fishing communities"</p>	FAO country review Macfadyen 2006

Does policy include the use of fishery co-management and/or community management?	No co management and community management are included in policy but fishing rights and communities participation are already implemented based on the responsible fisheries management.	
3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	Yes	
Does policy refer to increasing value-added? If so, how is this to be achieved?	Yes	
Does policy refer to tariff barriers and/or free trade areas in the region?	Yes	
Does policy seek to increase exports?	Yes	
4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	<i>And national policy includes an objective 4. To upgrade the socio-economic status of fishery communities.</i>	Mya Than Tun, Yin Yin Moe & Soe Hla (2009)
Does policy include mention of, or provide for, micro-finance?	Yes	
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing/maximizing employment?	Increasing. The national development goals and aspirations include food security, higher farm income, employment generation to absorb excess rural labor, and increase in export earnings	Macfadyen 2006
Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or indirect food security (fish exported with money then available for food imports)	The national development goals and aspirations include food security, higher farm income, employment generation to absorb excess rural labor, and increase in export earnings	Macfadyen 2006
Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	No	

5. Overall impression of policy trends
In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.
Referred to 30 years plan

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, CPUE, MSY, etc	No	Poseidon Aquatic Resource Management Ltd (2010)
Is the MSY concept applied and how old are the most recent MSY estimates?	Yes, MSY is reason for to control over fishing capacity, recent MSY estimation was since conducted (1983)	Poseidon Aquatic Resource Management Ltd (2010)
Are there any species-specific management plans in place? If so for which species	Yes, Currently White Pomfret, Spanish Mackerel, Indian threadfin, Grouper (closed season), Spiny Lobster, Mantis Shrimp, Mud Crab, (size limit) all kind of Sharks, Sea Turtles, Marine Mammals (totally protected) (Sea Basses and Hilsa are to be implemented soon), under management plan	Poseidon Aquatic Resource Management Ltd (2010)
Which of the following input fisheries management are used if any <ul style="list-style-type: none"> • <u>limited</u> licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) • effort management e.g. days at sea restrictions • closed areas • MPAs • closed seasons • gear restrictions (banned gear types) • other (specify) 	There are nursery area closures and no take zones. The State, having been empowered by the Forest law 1992, declared all mangrove forests as protected areas. Fishing within three hundred yards around mangrove areas is strictly prohibited. In order to ensure the sustainable development of aquaculture techniques and to promote mangrove-friendly aquaculture practices strict guidelines were laid down by the Department of Fisheries As of May 24, 2004, the Myanmar Government has outlawed all shark fishing north of Lampi Island in the Myeik (Mergui) Archipelago <ul style="list-style-type: none"> • Limited Licensing system are not used, Close season in delta area(May to July) Banned Bone Kyaung Net, (it is similar to Tiger mouth bag net) • Effort management ? - Yes • Closed areas – see above Yes. Mud Crab protected area, Baby clam protected Area, Indian Threadfins Protected Area, 	FAO Country Review DE YOUNG, C. (2007) FAO TP 431 Mya Than Tun, Yin Yin Moe & Soe Hla (2009)

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
Pls provide as much detail as possible for different fisheries/fleets	<ul style="list-style-type: none"> • MPAs - Lampi Island, now an ASEAN Heritage Site & National Marine Park stretches for more than 70km. Yes, should Identified for more protected area. • Closed season started 2012, from June to August, only Taruntharyi Division, offshore fisheries • Gear restrictions (banned gear types)? Yes 	
Which of the following output fisheries management are used if any if any: <ul style="list-style-type: none"> • TACs • minimum landing sizes • bycatch minimisation • fish escapement rates • other (specify) Pls provide as much detail as possible for different fisheries/fleets	<ul style="list-style-type: none"> • TACs? No • minimum landing sizes ? Yes, Crab and Eel • bycatch minimisation ? Yes, TED Recommended • fish escapement rates ? Yes, JTED • other (specify) 	
Which of the following technical fisheries management are used if any <ul style="list-style-type: none"> • Mesh-size restrictions • Other 	Use of minimum mesh size perhaps the main management measure Yes (2 inches for Fishing Net Cod end, 1.5 inches for shrimp trawling net) Close season and Closed areas, Gear restriction	
What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc		

<p>Which of the following payments/charges (if any) are imposed on the private sector</p> <ul style="list-style-type: none"> · landings charges · licence fees · harbour dues · import duties · export duties · other <p>and what are the levels of charges involved?</p>	<ul style="list-style-type: none"> · landings charges ? Yes, Private · licence fees Yes Yes, Government · harbour dues ?, Yes, (Private, Government) · import duties ?, No, (Income Tex and Commercial Tex) · export duties ? Yes, (Income Tex and Commercial Tex) · Registration fees Yes 	<p>Marine Fisheries Law</p>
<p>Are any subsidies provided to fishermen in the form of:</p> <ul style="list-style-type: none"> · fuel tax/price reductions · import/export duty waivers · vessel construction funds <p>i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity</p>	<p>No</p>	
<p>Are any subsidies provided to fishermen in the form of grants/funds in support of</p> <ul style="list-style-type: none"> · improved gear selectivity · reduced environmental impacts · quality improvements · product innovation · other <p>i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives</p>	<p>No No No Yes Yes We had provided subsidies for (Aquaculture)</p>	

2. Constraints to effective policy implementation	
For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc	
<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	1
Budgets for operations of Ministries/departments (i.e. For activities)	1
Budgets for enforcement of management measures e.g. For MCS operations	1
Capacity levels of staff in Ministries/departments	1
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	2
Supportive regulations/laws giving effect to policy content	1
Coherence with other sectoral and national policies	2
A monitoring and evaluation (M&E) system to check on policy implementation	1
Other (add bullets as necessary, specify)	-
To what extent, how well, and how are policies communicated and disseminated	

Marine environmental policy content and implementation

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
<p>Please list all relevant marine environmental policy documents and items of legislation? E.g. documented policy, master plans and action plans.</p>	<ul style="list-style-type: none"> • An Environmental Law is currently in draft. • Forest Policy (1995): Provides basic fundamentals to conserve biodiversity, to ensure the sustainable development forest resources both for environmental and economy purposes • National Environment Policy 1994: The policy calls for integration of environmental considerations into the development process. It forms the basis for developing environmental strategies, environmental program and plans. • Myanmar Agenda 21: (1997) serves as a framework for integrating environmental consideration in the national development plans as well as the sectoral and regional development programmes in the future. This document is the expression of the political commitment of the Government to sustainable development. • National Sustainable Development Strategy (NSDS), Myanmar has been launched in July (2009). It covers three main areas of Social, Economic and Environmental issues and focus national effort to achieve sustainable development. • National Biosafety Framework (NBF) to be clarified • Ayeyarwady Dolphin Conservation and Management Action Plan (2005): Scientists from Wildlife Conservation Society (WCS) New York, Department of Fisheries, Department of Forestry and Department of Education surveyed the entire length of the Ayeyarwady River, from the Northern hill upstream confluence of May Kha and May Likha to the delta area since 2002 (to the sea) and again in 2003 and 2004 the segment between Mandalay and Bhamo, which Ayeyarwady dolphin were found permanently habitat area, and cooperative fishing with local cast net fisherman since generation to generation. The Department of Fisheries prohibited 72 kilometre length of river segment between Mingun and Kyauk Myaung for the protected area or Ayeyarwady dolphin and the cooperative cast net fishermen on the 28th December, 2005. At the ministry level the Ministry of Science and Technology is empowered to designate its directorate to carry out environmental research activities. The Ministry of Forestry oversee the conservation and management of forest biodiversity and wildlife. Protection conservation and management of coastal and marine areas are under the responsibility of fisheries department of the Ministry of Livestock and Fisheries and Ministry of Forestry
<p>Please list the key legislation covering the following areas:</p> <ul style="list-style-type: none"> h. Marine and coastal habitat conservation i. Endangered threatened and protected species j. Land-based pollution control k. Marine-based pollution control l. Environmental impacts assessment m. Environmental standards (e.g. water quality) 	<p>The process of drafting national environmental protection law began in 1998 was completed in 2000. But environmental law is not yet available in Myanmar, sectoral laws relating to environment are regarded as environmental protection laws. However these laws in general do not possess holistic vision on environmental management there by only emphasizing on specific issues of related sector.</p> <p>Marine and coastal habitat conservation:</p> <p>There is no current legislation for establishing marine protected areas (IUCN/WCMC, 1992).</p> <ul style="list-style-type: none"> • Myanmar Marine Fisheries Law (1990): clearly prohibits the use of explosives, poisons and toxic chemicals, harmful agents and damaging gears, and thus prohibits fisheries that can destroy coral reefs (ICRI 1997). • Freshwater Fisheries Law (1991): further development of the fisheries, to prevent the extinction of fish, safeguard

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
	<p>and prevent the destruction of freshwater fisheries waters, to obtain duties and fees payable to the State and to manage the fisheries.</p> <ul style="list-style-type: none"> • Territorial Sea and Maritime Zone Law (1997)1977: empowers the State with the authorities and powers for protection and conservation of marine environment, and for control of marine pollution etc. in the territorial sea, continental shelf and exclusive economic zone. • The Forest Law (1992). To implement environmental conservation policy of the government. To be confirmed? • Protection of Wildlife and Wild Plant and Conservation of Natural Areas Law (1994). To implement the policies on protecting wild flora and fauna and natural areas, to fulfil international convention obligations; to enable to conduct research. <p>Endangered threatened and protected species</p> <ul style="list-style-type: none"> • Protection of Wildlife and Wild Plant and Conservation of Natural Areas Rules (2002). To conserve natural ecosystems and protect wildlife species (1994) • Myanmar Pearl Law (1995): prevents extinction of oysters in Myanmar coastal areas. • Protection of sea grass beds and coral reefs are conserved by the Myanma Marine Fisheries Laws (1990) also Lampi Island National Marine Park and its surroundings area are notified as a protected area. In protecting those areas, blast fishing, illegal charcoal production and logging in island ecosystems has been continuously halted by authorities concerned • Land-based pollution control: • The Pesticides Law (1990), The Fertilizer Law (2002), The Municipal Law (1992), Directive of Waste water treatment(1994), the Myanmar Mines Law (1994), The Conservation of Water Resources Law (2006) <p>Marine-based pollution control:</p> <ul style="list-style-type: none"> • The Territorial sea Maritime Zone Law (1977), Myanma Marine Fisheries Law(1990), Law Relating to Fishing Right of Foreign Fishing Vessel (1991) <p>Environmental impacts assessment:</p> <ul style="list-style-type: none"> • There is no formal prescription for environmental impact assessment (EIA) in Myanmar. But EIAs are conducted on an <i>ad hoc</i> basis for projects funded by international organizations and some foreign corporations. The need for EIA laws is recognized by the Myanmar Agenda 21. • Environmental standards • Standing Order No.3 (1995) for Factories, Mills and Enterprise to prevent pollution 		
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy.	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Government staff at National level	Y	1

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
Please provide a ranking in terms in terms of their <i>influence</i> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc	2. Government staff at State and Region level	Y	1
	3. Government staff at District and Township	-	
	4. Technical government staff in sectoral ministries/departments at National level	Y	2
	5. Technical government staff in sectoral ministries/departments State and Region level	Y	3
	6. Technical government staff in environmental ministry/department at local/district and township level	-	
	7. Technical government staff in other sectoral ministries / departments	-	-
	8. Public sector industry	-	
	9. Private sector industry	-	
	10. Non-governmental organizations from civil society	-	
	11. Donors and/or consultants funded by them	-	
	12. Other (please specify)	-	
	Is there any specified requirement in law with regards to who should be involved with policy formulation?	The National Commission for Environmental Affairs (NCEA) is the focal point for all environmental affairs, including management (ICRI 1997). It is mandated to develop environmental policy, issue guidelines for implementing policy, to set environmental standard and lay down rules and regulations, guide and regulatory agencies on legal matters, and formulate policies and strategies that take into account environmental and developmental priorities	
When are the dates for the next major revisions/re-specifications of key policy documents?	As required		
Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	-		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform policy, and · the extent to which those research outputs are in informing policy 	Strengths <ul style="list-style-type: none"> · Public Awareness is increasing on the environmental affairs. Weaknesses		

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
	<ul style="list-style-type: none"> Further information on the current status and threats to MPAs and other vulnerable areas needs to be collected (UP-MSI, ABC, ARCBC, DENR, ASEAN, 2000) There is still needed of alternatives for livelihood of resource dependent communities

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
Does policy contain specific marine environmental management targets or indicators in the following areas: <ol style="list-style-type: none"> Inter-tidal and sea areas under formal MPA protection Marine species to be brought under formal protection Coastal, estuarine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) Pollution/effluent control targets Any other quantitative environmental targets (pls specify) 	<p>The environmental protection and management element in most sectoral laws is either weak or unavailable. The Fisheries Law covers Conservation Management and research sector regarding protection and management of coastal and marine ecosystem has already mentioned in Myanmar Marine Fisheries Law section 23.</p> <p>The Forest Policy Statement (1995) aims to increase the reserved forest to 30% of the country's total land area from the present status and the Protected Areas System to 5% in the short term and 10% in the long term from the present status so as to ensure the security of forest resources.</p>	http://www.myanmar-unfccc-nc.net/index.php?option=com_content&view=category&layout=blog&id=11&Itemid=7
2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?	No,	
Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of: <ol style="list-style-type: none"> bycatch and discards? Interactions with endangered, threatened & protected species? Impacts on sensitive or vulnerable habitats Impacts on the trophic structure of marine ecosystems Introduction of alien or exotic species 	Myanmar Marine Fisheries Law covers these	

If these issues are not covered by environmental policy, are they covered in fisheries policy?	Yes	
Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?	The Protection of Wildlife and Wild Plants and Conservation of Natural Areas Law (1994), Myanmar Marine Fisheries Law, Myanmar Aquaculture Law.	
Does policy for MPA development recognise the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.	No	
Have MPAs been specifically developed to protect the following: a. Fish stocks (with no take zones, gear restrictions, etc) b. Critical habitats (e.g. coral reefs, mangroves, etc) c. Certain species Please give details where possible.	Two shark fishing protected areas in Myeik Archipelago (Lampi Marine National Park). There are also closed seasons and implements for pomfret fishing. Protected area in the upper reaches of the Ayeyarwady river to protect the Ayeyarwady Dolphin (in cooperation with cast-net fishermen). A total of 32 wildlife sanctuaries and two national parks have been declared by the government in accordance with the Wildlife. This includes 5 on the coast, e.g. Mainmahla Island Wildlife Sanctuary, Thameehla Island Marine Sanctuary, Moscos Islands Marine Sanctuary and Lampi Island Marine National Park.	
Does marine environmental policy consider the impacts of land-based pollution on the marine environment?	Yes	
Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,	Yes	
Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Yes	
Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details	Yes, Adaptation to Climate Change regarding aquaculture	
3. Overall impression of policy trends		
In summary, what are the main trends and changes in environmental policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.		

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference
C.1: Impact assessment		
What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate): <ul style="list-style-type: none"> a. Restricted access (complete or partial by different groups?) b. Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year) 	-	
What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate): <ul style="list-style-type: none"> a. Land-based rangers/checks b. Sea-based patrols c. Remote monitoring (e.g. air, satellite & telemetry) d. Other? 	-	
What forms of activity require an environmental impact assessment (EIA)?	Rules on environmental impact assessment are said to be in process. There is no formal prescription for environmental impact assessment (EIA) in Myanmar. EIAs are conducted on an <i>ad hoc</i> basis for projects funded by international organizations and some foreign corporations. The need for EIA laws is recognized by the Myanmar Agenda 21.	
What are the main strengths and weaknesses of the EIA system?	Strengths: - Environmental Conservation Weaknesses:	
Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details	-	
C.2 Marine environmental monitoring		
What are the main <i>monitoring</i> mechanisms for marine pollution control, its enforcement, and the prosecution of offenses <ul style="list-style-type: none"> a. Land-based rangers/checks b. Sea-based patrols c. Remote monitoring (e.g. air, satellite & telemetry) Other?	-	

Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?	No	
Are there annual (or recurrent) reports on the following: a. Status of marine areas and habitats under formal protection b. Status of species under formal protection c. Status of coastal water quality d. Number of reported pollution incidents	No	
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment	Department of Fisheries	
What are the strengths and weaknesses of marine & coastal environmental monitoring?	Strengths: Weaknesses:	
C.3 Financial and economic mechanisms		
Are there any financial <i>support</i> for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?	No	
Are there any financial <i>incentives</i> for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?	No	
C.4 Constraints		
For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc		
Potential constraints	Scale of constraint 1 – 5 with 1 as very important	
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	1	
Budgets for operations of Ministries/departments (i.e. For activities)	1	
Budgets for enforcement of management measures e.g.	1	
Capacity levels of staff in Ministries/departments	1	
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	1	
Supportive regulations/laws giving effect to policy content	1	
Coherence with other sectoral and national policies	2	
A monitoring and evaluation (M&E) system to check on policy implementation	1	
Other (add bullets as necessary, specify)	-	
To what extent, how well, and how are policies communicated and disseminated		

Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
A.1: Policy and planning framework		
Is there a specific policy at either National or state / Region level, for integrated coastal management? If so, please provide a full reference.	No	
What other strategy or planning documents have produced for ICM at either National or State / Region levels?	A recent review (BOBLME, 2010) was not able to identify any pilot programs on ICM or community based ICM in Myanmar. It is not clear if this is due to the absence of any ICM or community based ICM initiatives in Myanmar or if there is any programs, then it is not being documented.	BOBLME, 2010
Please list all key legislation that has been produced to enact ICM.	No	
A.2 Development of ICM planning		
For National & State / Region ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	Form of involvement (if any), All levels of government line ministries, , local communities NGOs, INGOs	Level of involvement (low, medium or high)
Ministry of Planning (or equivalent)	to be confirmed	
Ministry / Dept of Fisheries (or equivalent)		
Ministry of Tourism (or equivalent)	to be confirmed	
Ministry of Environment (or equivalent)	NCEA, To develop sound environmental policy, law rules and regulations and lay down plan for policy and strategy and also environmental awareness coordination with line Ministries, INGOs, NGOs.	
Other Ministries (please specify)	In Myanmar, until 1985, the Ministry of Agriculture and Forestry was solely responsible for the management of agricultural, fisheries and forestry. However, by the late 90s, the government realised the need for independent management of each sector given their strong growth. As such separate Ministries were created to manage each sector. At the grass-root level, if conflicts arise due to overlapping decisions between these sectors, then it is the prerogative of local authorities (such as the Peace and Development Council at the state or division level) to intervene and find the best solution in solving the problems. A Ministry of Environmental Conservation and Forestry was formed in 2011	Tun Win, U. (2006)

Private sector interests	-	
NGOs	-	
Civil society	-	
Foreign donor driven projects	-	
Others (please specify)	-	
Is there any specified requirement in law with regards to who should be involved with ICM formulation?	All Ministries Concerned	
When are the dates for the next major revisions/re-specifications of key policy documents?	-	
Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	-	
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform ICM, and · the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> · <p>Weaknesses</p> <ul style="list-style-type: none"> · Weak legal coordination and institutional mechanisms and unavailability of environmental protection laws that cover all aspects of coastal and marine ecosystems · Although the science and technology development law encourages to promote research and development on environmental conservation again there is no proper mechanism to implement it · Insufficient resources financial skilled manpower etc · Lack of appropriate infrastructure and awareness appear as another limitation 	

Section B: ICM POLICY CONTENT	Answer	Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment
Fisheries	High	
Aquaculture	High	
Tourism & recreation	Medium	
Port & industrial development	High	
Urban development	Medium	
Coastal defence development	Low	
Transport	Medium	
Military use	-	
Environmental conservation	High	
Other (please specify)	-	
Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.	For Sustainable Fisheries Development and Food Security	
Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.	To be clarified by stakeholder workshop.	
Are there specific provisions for co-management, what are these?	-	
What level / levels is ICM set at:	Comment	Supporting Reference
International (e.g. transboundary cooperation)	Neighbouring Countries, Regional Institutions, (e.g. SEAFDEC)	
National	Ministries Concerned	
Region / State	Coastal areas of State and Region	
Municipality	-	
Other (please specify)	-	
Does the plan specify mechanisms for user conflict management?	Yes	
Does the plan specify mechanisms for user zoning?	Yes	
Does the plan specify mechanisms for stakeholder consultation?	Yes	
Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
Who are the main implementing authorities at:		
International level	-	

National level	Ministries Concerned	
State / Regional level	Authorities Concerned from State and Region	
Municipality level	-	
Other levels (please specify)	-	
<i>Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?</i>	To be confirmed after stakeholder workshop	
<i>How is coastal zoning used in the development planning process?</i>	To be confirmed	
<i>Do any particular coastal users or sectors have priority in terms of resource allocation?</i>	To be confirmed	
<i>What mechanisms are there for reviewing coastal development priorities?</i>	To be Confirmed	

Acronyms

CBD	Convention for Biological Diversity
DoE	Department of Environment
DoF	Department of Fisheries
EBM	Ecosystem-based management
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
GIS	Geographical Information System
ICRI	International Coral Reef Initiative
MoF	Ministry of Forestry
MPA	Marine Protected Area
NCEA	National Commission for Environmental Affairs
PA	Protected Area
SLORC	State Law and Order Restoration Council
SRUP	Socialist Republic of the Union of Burma
TAC	Total Allowable Catch

Appendix H: Thailand

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation	<ul style="list-style-type: none"> • The Fisheries Act B.E. 1947 (revised in 1953 and 1985) (“the Act”) • The Act Governing the Right to Fish in Thai Waters B.E. 1939 (“the Thai Waters Act”) • The Thai Vessel Act B.E. 1938 • Plan of Marine Fisheries Management (2010-2018) • The Fisheries Policy Direction in 2012 • The 2006 Fishery Policy Directions of Thailand Statement 		
Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralisation	<ul style="list-style-type: none"> • The Constitution of the Kingdom of Thailand B.E.2550 (as the core) legislation concerning the decentralization and public participation) • The National Reserved Forest Act B.E.2507 • Forestry Act, B.E.2484 • National Parks Act B.E. 2504 of 1961 (impacting on marine parks & their licensing of / management of these parks) • Wildlife Reservation and Protection Act B.E. 1992, which lists a number of protected species, and • the Enhancement and Conservation of the National Environmental Quality Act B.E. 1992, which provides for the protection wetlands amongst other things • Hazardous Substance Act B.E. 2535 (1992), • Thai Government including National Economic and Social Development Plans (1-9) of 1963-2006, and • the 10th National Economic and Social Development Plan (2007-2011). 		
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy. <i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</i>	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Political government staff at national level	yes	2
	2. Political government staff at provincial or state level	yes	2
	3. Political government staff at local level	yes	2
	4. Technical government staff in fisheries ministry/department at national level	yes	1
	5. Technical government staff in fisheries ministry/department at provincial level	yes	1
	6. Technical government staff in fisheries ministry/department at local/district level	yes	1
	7. Technical government staff in other sectoral ministries/departments	yes	2

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
	8. Catching sector representatives from large-scale/industrial sector	yes	1
	9. Catching sector representatives from small-scale/artisanal sector	yes	1
	10. Processing/marketing sector representatives	yes	1
	11. Non-governmental organizations from civil society	yes	1
	12. Donors and/or consultants funded by them	no	-
	13. Other (please specify)		
	14. Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	NO		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?	Not so often, Every five years.		
When are the dates for the next major revisions/re-specifications of key policy documents?	B.E. 2017 12 th National Economic Social Development Plan.		
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details of: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	No		
Is there a documented fisheries research plan? If so what period does it cover?	Most of research plan will be follow the Master Plan for Marine Fisheries		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform policy, and · the extent to which those research outputs are used in informing policy 	Strengths · Weaknesses ·		

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets/Indicators		
<p>Does policy contain specific development <u>targets</u> for capture fisheries? Eg. Fisheries production, employment no's, etc. If so, pls elaborate?</p>	<p>Yes.</p> <p>1. Fishery Policy in the Thai Waters To maintain the level of fishery production not less than 1.7 million tons per year and to reduce the uneconomic exploitation of fisheries resources not less than 100,000 tons per year</p> <p>2. Overseas Fishery Policy To produce fishery production through fisheries cooperation with foreign countries at least 1.8 million tons per year by employing 3,500 Thai fishing vessels of the length larger than 18 meters</p>	<p>www.fisheries.go.th (accessed Nov 2010)</p>
<p>Does policy contain specific management <u>targets</u> for capture fisheries? e.g. area under MPAs, etc? If so, pls elaborate?</p>	<p>Yes.</p> <p>1. To manage the responsible and sustainable marine fisheries; To facilitate the rapid recovery of the depleted fish stocks and to safeguard marine ecosystem from any destructive practices;</p> <p>2. To facilitate the rapid recovery of the depleted fish stocks and to safeguard marine ecosystem from any destructive practices;</p> <p>3. To support the fishery institutional strengthening and co-management, including the networking at all levels to enable their active participation in marine fisheries management;</p>	<p>Master Plan for Marine Fisheries</p>
<p>Does policy contain any other specific <u>targets</u> or <u>indicators</u> e.g. value of exports? If so, what are they? (List all)</p>	<p>4. Fishery Industry Policy To export fishery products not less than 1 million tons per year with value of 75,000 million baht. To increase value of fishery products at the rate of 10 percent per year and to increase consumption of fish per caput not less than 30 kilograms per year</p>	<p>www.fisheries.go.th (accessed Nov 2010)</p>
2. Fisheries Management		
<p>Does policy contain a clearly articulated statement of long-term objectives? If so what.</p>	<p>Vision: "Sustainable fisheries development based on the sufficiency economy that places the people at the centre"</p> <p>Mission</p> <p>1) To manage all activities pertaining to resource use, rehabilitation, maintenance and protection of the marine environment to ensure its high productivity under the current socio-economic reality and the state of the marine resources and ecosystem;</p> <p>2) To carry out the human resource development, institutional strengthening, and activities leading to the generation of bodies of knowledge pertaining to marine fisheries and environment management;</p> <p>3) To promote the application of the FAO Code of Conduct for Responsible Fisheries, and to promote the networking of such an observance at all levels.</p> <p>Objectives</p>	<p>Master Plan</p>

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
	1) To manage the responsible and sustainable marine fisheries; 2) To facilitate the rapid recovery of the depleted fish stocks and to safeguard marine ecosystem from any destructive practices;	
Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of management powers and responsibilities?	<p>There are three levels of government, National Government, Provincial Government, and Local Government. The National Government comprises the office of the Prime Minister, 13 Ministries, and 36 Ministers constituting a Cabinet. 77 provinces exist including 23 coastal provinces with responsibility for fisheries inside 6nm. Provincial Governors and District Officers are appointed by the National Government and act as their representatives. Provinces are divided into a number of districts, headed by district officers falling under the responsibility of the Provincial Governor. A district is divided into sub districts (Tambon) and is headed by a sub-district chief (Kamnan. A sub-district consists of several villages, headed by village heads. Each of these forms of Local Authority is with the control by the National Government through the Department of Local Administration, the Ministry of the Interior, or directly from the national ministries. The policy aims to encourage participation of Local authority in natural resources management.</p> <p>The Act also allows for the Provincial Governor to make management arrangements for fisheries within their province, with the agreement of the Minister. The Act has also been used in the past to apply local co-management arrangements (e.g. Bang Saphan Bay Fisheries Co-Management)²⁰</p> <p>In recent years, increasing responsibility for monitoring, control and enforcement have been delegated to the local authority (Sub-district authority or Ao Bo To) consistent with the policy of decentralization in the National Constitution B.E. 2550.</p> <p>Yes. Annual plans developed each year following consultation at local, Tambon, district and provincial level. Strong process of decentralization under the Thai constitution</p>	Banks 2010 in press. FAO Country Summary & BOBLME project design policy questionnaire
Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? if so, is such expansion at the expense of any foreign fishing interests currently operating in the country?	Yes	
Does policy specifically refer to small-scale fisheries and if so, in what way?	Yes, In 2006 Policy Directions document there is a section on SSF (and it has been mentioned about SSF in the new policy in 2012)	

²⁰ Ibid, DoF (2006)

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
	<p style="text-align: center;">Management of Commercial and Small Scale Fisheries</p> <p>The Department of Fisheries has implemented for commercial and small scale fisheries management as the following:</p> <ol style="list-style-type: none"> 1. Reserved zone within 3 km from shoreline, preserve zone for nursing area of juvenile fish and invertebrates 2. Promote the community-based fisheries management by using demarcated area for small scale fisheries and prevent trawling activities in the demarcated area. 3. Resources and habitats rehabilitation for recovering the fishery resource and habitats, artificial reef installation for obstruct trawling activities, shelter for spawners and juvenile fish, spawning area for fish and invertebrate 4. Plan for fishing capacity reduction especially the trawlers and push netters 5. Promote right-based fisheries to replace open access 6. Promote small business to small scale fishers to produce local fishery products 	
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	2006 Policy Statement notes that a specific fishing capacity reduction program for the Gulf of Thailand is being developed and is hoped to be implemented 'in the coming years (Plan for fishing capacity reduction especially the trawlers and push netters). In the Fisheries Policy in 2012, it has the direction to reduce the number of pushnet.	Banks 2010 in press. FAO Country Summary, 2006 Policy Directions
Does policy refer to and/or deal with IUU fishing? If so, in what way?	Thailand has accepted IPOA-IUU and set up the committee to develop the NPOA-IUU. Special webpage on IUU on DoF site	Banks 2010 in press. FAO Country Summary, 2006 Policy Directions www.fisheries.go.th (accessed Nov 2010)
Does policy refer to the use of VMS?	Yes. The project under Master Plan for Marine Fisheries	
Does policy refer to need for integration / co-ordination with other sectoral policies?	Yes. All activities/project under Master Plan for Marine Fisheries	
Does policy mention eco-systems management? If so, what measures are suggested?	<p><u>Strategy 3</u>: Development and promotion of responsible and sustainable fisheries</p> <ul style="list-style-type: none"> • Develop and promote fishing gears to improve selectivity • Regulate practices that are destructive to fish stocks and their habitats • Promote the utility of fish catch to its fullest potential • Develop methods that make use of potential resources not currently utilize 	Master Plan

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
	<p><u>Strategy 4</u>: Ecosystem and Fishing Ground Rehabilitation to Safeguard Biodiversity and Marine Environmental Quality</p> <ul style="list-style-type: none"> · Introduce temporal and permanent closed areas supported by participatory support by community organizations · Promote the ecosystem approach to fisheries management · Promote sea ranching 	
<p>Does policy include specific measures related to conflict management? If so, what are they?</p>	<p>Yes. It has been stated in the draft of new Fisheries Act through legislation on Zoning. Three major areas have been identified:</p> <ul style="list-style-type: none"> • Fishing grounds from 0 to 3.0 nautical miles (5 556 meters) from shore. to be managed by Tambon Administrative Office; • Fishing grounds from 3.0 to 6.0 nautical miles (11 112 meters) from shore to be managed by the Provincial Administrative Office; • Fishing grounds 6.0 nautical miles or more from shore to be managed by Fisheries Department. · Thailand’s Ocean Policy focuses on the need to address multiple use conflicts. <p>As the draft of new Fisheries Act is still in the process of approval from the cabinet, those zoning mechanism have been pending. There are only 9 of 23 provinces that expanded the reserved zone from 3 km to 3 nautical miles by Provincial declaration with agreement from Ministry.</p>	<p>Macfadyen 2006</p>
<p>Does policy include the use of fishery co-management and/or community management?</p>	<p>Objectives</p> <p>3) To support the fishery institutional strengthening and co- management, including the networking at all levels to enable their active participation in marine fisheries management;</p> <p><u>Strategy 1</u>: Efficiency enhancement of marine fisheries management system and co-management</p> <ul style="list-style-type: none"> · Review and upgrade fisheries law to ensure effective enforcement · Demarcate the boundaries of fishing grounds · Promote fisheries co-management, leading to rights based fishers · Management fishing capacity in recognition of stock depletions issues <p><u>Strategy 2</u>: Structural strengthening and efficiency improvement of fisheries bodies</p> <ul style="list-style-type: none"> · Establish fisheries management structure with a focus on stakeholder national and regional fishery management committees. · Strengthen the capacities of fishery organizations · Support to local government agencies to support strengthening of community organization activities in fisheries management · Establish a marine fisheries database 	<p>Master Plan</p>

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
	<ul style="list-style-type: none"> Develop and enhance local body knowledge in fisheries management 	
3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	Since 2000, DOF has put much more emphasis on quality-production of aquaculture rather than on quantity production concerns. DOF together with Thai aquaculture industry has developed and implemented two kinds of standard as Code of Conduct (CoC) and Good Aquaculture Practice (GAP). Traceability has been promoted to use since the past 5 years starting with manual traceability mainly for shrimp production using "movement document or MD" . It has been required for the production chain from hatchery to farm and farm to processing plant (via shrimp distributor, if necessary). And now DOF has initiated computerized traceability system called TraceShrimp to be used in the whole supply chain for shrimp industry including feed manufacturer, hatchery, farm, shrimp distributor, processor, trader--exporter and importer.	Policy Directions 2006
Does policy refer to increasing value-added? If so, how is this to be achieved?	Yes. To accelerate research in supporting commercial aquaculture for increasing trade volume, quality standard and reducing cost of production.	
Does policy refer to tariff barriers and/or free trade areas in the region?	Yes. DOF have sent technical staff to attend the meeting and inform decision maker.	
Does policy seek to increase exports?	Yes. Department of Fisheries Thailand together with other concerning government organizations and fishery industry also have been participating many food and seafood exhibition.	
4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	The word poverty is not in 2006 policy directions. But section in 2006 documents on social issues, and ongoing activities targeting poverty reduction. Activities include: Promote small business for local fishery products, ready to eat product and promote One Tombol One Product (OTOP); Program for alternative job training in practice and on the success site visit; Promote fisher group revolving fund to face out loan and secure for their livelihoods; Promote the fisher group co-op shop for cheaper essential daily needs; Promote fisher wives as house wife groups to do small business on fishery or agriculture products.	Policy Directions 2006
Does policy include mention of, or provide for, micro-finance?	No, not specifically. But DoF has provided seed funding in past for fisher groups for revolving fund	Macfadyen 2006
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing/maximizing employment?	Reducing number of fishing vessel and fisher. DOF is encouraging the capacity building of fisher and crew.	

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
<p>Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or indirect food security (fish exported with money then available for food imports)</p>	<p>Yes. DOF operates several programs to ensure food safety with the farm-to-table approach such as; Control Program on drugs and chemicals in aquaculture, bivalves/molluscs production and sanitation program, shrimp import control, fishery establishment monitoring program, and product surveillance program. Details of the programs relating to fish processing and fishery products are as follows: Fishery Establishment Monitoring Program Fish processors whom wish to be registered and approved by DOF must institute a quality control program based on General Principle on Food Hygiene and Good Manufacturing Practices (GMP). Every approved processor shall develop and implement an effective Hazard Analysis Critical Control Point (HACCP) Program specific for their individual products. DOF inspectors will audit the implementation of HACCP activities on a yearly basis. Processors will be subjected to DOF full plant inspection on a regular basis. The inspection involves observation, taking measurements, interview, record review and sample collections, as necessary. Product Surveillance Program Besides the regular plant inspection, DOF also monitors the products from the approved processors to verify their food safety management system. The monitoring program also aims to check the product quality, safety and compliance to the DOF criteria or criteria specified by the import authorities. Legislation and Cabinet Resolution The legislation and cabinet resolution involved in the post-harvest policy under food safety program are as follows: Food ACT B.E. 2522 (1979) was promulgated under the authority of Ministry of Public Health in order to control the quality and safety of food. To have food quality assurance measures prescribed for food standards and consumer protection for food safety, Thai FDA, under Ministry of Public Health, notified 2 notifications as follow; - <i>Notification of Ministry of Public Health No. 193/2543 (2000) - Production Processes, Production Equipments and Foods Storages</i> - <i>Notification of Ministry of Public Health No. 239/2544 (2001)- Amendment of the notification of Ministry of Public Health No. 193/2543</i> The notifications are aimed at having food processors of 54 types of food to constitute a quality control program based on Good Manufacturing practices (GMP). The Thai Cabinet Resolution of March 4, 2003 announced the year 2004 as Food Safety Year with a view to improving the quality and standard of Thai agricultural and food products, including fishery products. The Ministry of Agriculture and Cooperatives (MOAC) is responsible for controlling quality and safety of agricultural products for export, whereas the Ministry of Public Health is responsible for controlling and inspecting food sold in domestic markets. Therefore, Department of Fisheries (DOF) is designated to control fish and fishery products destined to export. Moreover, DOF is also responsible for, as authorized by the Cabinet Resolution and in accordance with the Food Act B.E. 2522 (1979), controlling and inspection of imported tuna and shrimp for further processing and re-export</p>	

Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	Yes, 2006 policy directions document has a section on social assistance and mentions - Program for alternative job training in practice and on the success site visit	2006 policy directions
5. Overall impression of policy trends		
<p>In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.</p> <p>Fisheries policy in Thailand depicts major fisheries policies development and implementation in the year 2006 - 2008, when appropriate. It also includes policy decision undertaken in 2007 entering into effect in 2008. The key policy changes during these 2 years are the followings:</p> <ul style="list-style-type: none"> • The Code of Conduct for Responsible Aquaculture (COC) Standard addresses the key issues for sustainable management and the Good Aquaculture Practise (GAP) standard addresses the basic management for food safety, environment impacts, social responsibility animal health and welfare and traceability. • There are several operational activities in promoting environmental friendly aquaculture production in Thailand. • Marine capture fisheries sector, the development concentrates to reduce fishing capacity. The fishery co-management or community-based fisheries management will be promoted to create self reliable livelihood. 		

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, cpue, MSY, etc	Yes. DoF has applied the logbook system to collect the catch data from the fishing boat.	
Is the MSY concept applied and how old are the most recent MSY estimates?	Yes. MSYs were estimated for group species/ some species, which support for tropical species in this region. The up-to-date MSYs were 2007.	DOF. 2010. Status of marine fisheries in Thai Waters, 47 pages.
Are there any species-specific management plans in place? If so for which species	Yes. Anchovy fisheries, Indo-Pacific mackerel, Blue Swimming Crab	
Which of the following input fisheries management are used if any <ul style="list-style-type: none"> • <u>limited</u> licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) • effort management e.g. days at sea restrictions • closed areas 	<ul style="list-style-type: none"> • <u>limited</u> licensing. Most fisheries remain open access, and previous attempts to introduce limited licensing systems have failed • effort management. No. • closed areas. Yes • MPAs. Yes • closed seasons. yes 	Banks 2010 in press. FAO Country Summary

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
<ul style="list-style-type: none"> • MPAs • closed seasons • gear restrictions (banned gear) • other (specify) Pls provide as much detail as possible for different fisheries/fleets	<ul style="list-style-type: none"> • gear restrictions. Yes (trawl, push net and anchovy cast net with light luring) • other (specify) 	
Which of the following output fisheries management are used if any if any: <ul style="list-style-type: none"> • TACs • minimum landing sizes • bycatch minimisation • fish escapement rates • other (specify) Pls provide as much detail as possible for different fisheries/fleets	<ul style="list-style-type: none"> • TACs. No • minimum landing sizes. No • bycatch minimisation. No • fish escapement rates. No • other (specify) 	Banks 2010 in press. FAO Country Summary
Which of the following technical fisheries management are used if any <ul style="list-style-type: none"> • Mesh-size restrictions • Other Pls provide as much detail as possible for different fisheries/fleets	<ul style="list-style-type: none"> • Mesh-size restrictions. yes • Other 	BOBLME 2.3 assessment report
What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc	The 2006 Fishery Policy Directions of Thailand Statement notes that rights-based fisheries management is being actively promoted by government and will replace open access arrangements over time (it is now pending since the draft of new Fisheries Act is in the approval process from the cabinet). Under the Thai Fisheries Act 1947, rights can be granted to individuals through licences to fish in a "reserved" area, or to individual leaseholders bidding for rights to a "leasable" area who then have total rights to that area for the assigned period. The draft New Fisheries Law B. E. 2545 provides for "designated communities" to have rights to harvest aquatic resources within a designated community fishery area, or to	FAO country summary

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
	be given the authority to manage and implement measures related to aquatic resources within a designated community fishery area.	
Which of the following payments/charges (if any) are imposed on the private sector <ul style="list-style-type: none"> · landings charges · licence fees · harbour dues · import duties · export duties · other and what are the levels of charges involved?	<ul style="list-style-type: none"> · landings charges, Fishing Market Organization is authority. · licence fees, DOF is authority. · harbour dues, Fishing Market Organization is authority. · import duties, Customs Department · export duties, Customs Department 	Banks 2010 in press. FAO Country Summary
Are any subsidies provided to fishermen in the form of: <ul style="list-style-type: none"> · fuel tax/price reductions · import/export duty waivers · vessel construction funds · other i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity	<ul style="list-style-type: none"> ○ The Board of Investment (BOI) has a long list of priority activities and fish products for investment promotion. ○ The government also provides subsidized credit and price support for the tuna fishers. There is a special interest credit scheme for target fishers to buy and renovate boats, fishing gear, cages and ponds at a lower than market rate of interest (9%). ○ Fuel subsidies for small scale fisheries (only for economic crisis period) 	Macfadyen 2006 DOF, Thailand
Are any subsidies provided to fishermen in the form of grants/funds in support of <ul style="list-style-type: none"> · improved gear selectivity · reduced environmental impacts · quality improvements · product innovation · other i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives	There are 2 funds provide to fishermen as follow; <ul style="list-style-type: none"> · Farmer Aid Fund · Fund for Assistance to Agriculturist <ul style="list-style-type: none"> · The government implements activities to promote gear selectivity to push net fishers. 	MOAC, Thailand DIT, Thailand

2. Constraints to effective policy implementation	
For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc	
<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	3
Budgets for operations of Ministries/departments (i.e. For activities)	1
Budgets for enforcement of management measures e.g. For MCS operations	2
Capacity levels of staff in Ministries/departments	3
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	3
Supportive regulations/laws giving effect to policy content	3
Coherence with other sectoral and national policies	2
A monitoring and evaluation (M&E) system to check on policy implementation	3
Other (add bullets as necessary, specify)	
To what extent, how well, and how are policies communicated and disseminated	

Marine environmental policy content and implementation

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
<p>Please list all relevant marine environmental policy documents and items of legislation? E.g. documented policy, master plans and action plans.</p>	<ul style="list-style-type: none"> • Policy and Prospective Plan for Enhancement and Conservation of National Environmental Quality (1997 - 2016): endorsed by the Government in 1996. • National Policy on Marine and Coastal Resources (2006). In 2002, the Thai Cabinet approved the National Policy on Marine and Coastal Resources, which was submitted by the Office of Natural Resources and Environmental Policy and Planning (ONEP). An updated version of this policy, prepared by the MONRE Department of Marine and Coastal Resources (DMCR) is currently under review. The new draft policy sets forth a framework and calls for a master plan for the use of marine and coastal resources. <i>The draft Policy is under revision of sub committee on Marine and Coastal Resources.</i> • Thai Government's Biodiversity Policy (2009). This focuses on the protection and restoration of conservation areas that are important to the preservation of ecology in support of biodiversity conservation. The policy is implemented through surveys, database development, conservation and development. Biodiversity is used in order to secure food, energy and health, and to bring about economic benefits. Its use is based on traditional knowledge and culture and the equal sharing of benefits while ensuring biosafety. • Country Management Plan (2008 – 2011). The 4th policy on land, natural resources, and the environment promotes conservation, development, and sustainable utilization of biodiversity in order to yield better economic benefits. As its goal, the policy seeks a balance between biodiversity conservation and biodiversity development. Key indicators are based on a biodiversity and natural resources database that supports economic development and promotes strong and self-reliant communities, particularly with regards food and health, as result of sustainable bio-resources use and management. • Policy, Measure, and Plan for Sustainable Biodiversity Conservation and Utilization (2008 – 2012). This instrument seeks to enhance the abundance of biodiversity as a secure foundation for the Thai way of life. It also promotes biodiversity research to raise its economic value and to formulate mechanisms so that benefits resulting from biodiversity development are shared throughout the country, based on equality and fairness. The ultimate goal is to significantly reduce the rate of biodiversity loss by maintaining the health of associated types of ecology, different animal and plant species, and important genetic sources, and also by protecting related biodiversity components in a sustainable manner. This instrument is composed of five measures and 17 action plans that support the objectives and goals of the Convention on Biological Diversity. <p>In addition to the above natural resource policies, many sector policies apply. Relevant sector policies include those for fisheries, agriculture, industries, towns and cities, land transportation, and tourism development. At the same time, policies for land use zoning, coastal erosion, and marine based pollution control remain lacking. Continuity and consistency of the national policies and the sector policies is necessary for an effective management of marine and coastal resources.</p>

<p>Please list the key legislation covering the following areas:</p> <ol style="list-style-type: none"> Marine and coastal habitat conservation Endangered threatened and protected species Land-based pollution control Marine-based pollution control Environmental impacts assessment Environmental standards (e.g. water quality) 	<p><i>Marine and coastal habitat conservation:</i></p> <ul style="list-style-type: none"> Marine and Coastal Resources Management Act, drafted by DMCR, is designed to provide an integrated approach to coastal and marine resources management through an Area-Function Participation approach. It would establish coordination mechanisms to help integrate plans and activities and also establish Marine and Coastal Resources Funds (MCRF) at the national and provincial levels. The Act would further establish zoning for marine and coastal resources (preservation, conservation, restoration, and development), promote awareness and education, and ensure effective control of pollution and support for sustainable tourism. Integral to the plan are the establishment of a national committee, provincial and local committees, and “coastal communities.” <p><i>Endangered threatened and protected species</i></p> <ul style="list-style-type: none"> National Park Act (1961): objectives being to protect, control, and oversee the ecology and natural habitat of plants and animals in national park areas, inc. MPAs. Forest Act (1941): Concession of mangroves was stopped in 1990s and all concession activities were ceased in 2003. National Reserved Forest (1964): Controls the use and protection of forest areas and resources, including mangroves. Wildlife Conservation and Protection Act (1992): revised version of the Wildlife Conservation and Protection (1960) is concerned with wildlife conservation areas, with a view to protecting natural habitats. It lists 15 types (formerly nine types) of rare wildlife. It seeks to improve the Act and make it in harmony with the current situation, in accordance with the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). Fishery Act (1947): Governs fishing and aquaculture development through the protection of fishing habitats and nursery grounds, control of fishing gears and fishing methods, registration of fishing boats, protection of marine species, and research and development. Plant Storage Act (1964) Second Plant Storage Act (2008) Animal Species Maintenance Act (1966) Export and Import to the Kingdom Act (1979) National Environment Enhancement and Conservation Act (1992): provides authority to the Minister of Science, Technology and Environment to regulate ministerial regulations for specific vulnerable areas that contain natural ecology and to consider these as environmental protection areas that need particular management and appropriate protection, depending on conditions in the concerned areas. Plant Species Protection Act (1999). <p><i>Land-based pollution control:</i></p> <ul style="list-style-type: none"> Building Control Act (1979)
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	<ul style="list-style-type: none"> • Public Health Act (1992) • Municipality Act (1953) • Sub-District Administrative Organisation Act (1994) • Royal Irrigation Act (1942) • Hazardous Substances Act (1992) <p>Marine-based pollution control:</p> <ul style="list-style-type: none"> • The Navigation in Thai Waters Act (1913) • Petroleum Act (1971): Controls oil and gas exploration. <p>Environmental impacts assessment:</p> <ul style="list-style-type: none"> • The Enhancement and Conservation of National Environmental Quality Act (1992): see next. <p>Environmental standards</p> <ul style="list-style-type: none"> • The Enhancement and Conservation of National Environmental Quality Act (1992): Enhance and conserve natural resources and environmental quality through environmental policies and planning. The Act regulates and calls for the creation of Provincial Environmental Management Plans (PEMP), Environmental Impact Assessments (EIA), Environmental Protected Areas (EPAs) and Pollution Control Zones (PCZs), as well as standard setting and monitoring, public participation and environmental education, and an environmental fund for investment. • Factory Act (1992): Controls factory operations by setting standards and regulating waste disposal 		
<p>Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy.</p> <p><i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</i></p>	<p><i>Stakeholder group</i></p> <ol style="list-style-type: none"> 1. Political government staff at national level 2. Political government staff at provincial or state level 3. Political government staff at local level 4. Technical government staff in environmental ministry/department at national level 5. Technical government staff in environmental ministry/department at provincial level 6. Technical government staff in environmental ministry/department at local/district level 7. Technical government staff in other sectoral ministries / departments 8. Public sector industry 	<p><i>Active involvement in policy development (yes/no)</i></p> <p>yes</p> <p>yes</p> <p>yes</p> <p>yes</p> <p>yes</p> <p>no</p> <p>yes</p> <p>yes</p>	<p><i>Ranking of importance in determining policy (1 being the most important)</i></p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>1</p> <p>-</p> <p>1</p> <p>2</p>

	9. Private sector industry	yes	1
	10. Non-governmental organizations from civil society	yes	1
	11. Donors and/or consultants funded by them	No	-
	12. Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	The Constitution and Government policy recognises the concept of community-based management but it is not widely implemented by law (Hutomo, Nontji & Dirhamsyah (2009))		
When are the dates for the next major revisions/re-specifications of key policy documents?	Never revise the first document, The second document is still revising.		
Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> • what the policy change was • when the change occurred, and • which stakeholder group was the driver of change. 	No		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> • available research to inform policy, and • the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> • Thailand's Environmental Quality Act clearly states that environmental quality must be based on good science and thus must involve science and research in their formulation. <p>Weaknesses</p> <ul style="list-style-type: none"> • MPA designation is only through official mechanisms (Governors and Tambon Administration Organisation) and legal bind mechanism (National Committee and Cabinet). It is not involve the general public. 		

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
Does policy contain specific marine environmental management targets or indicators in the following areas: <ol style="list-style-type: none"> 1. Inter-tidal and sea areas under formal MPA protection 2. Marine species to be brought under formal protection 3. Coastal, estuarine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) 	As part of Strategy 1 (Protect the component of biodiversity) there are the following targets: <ul style="list-style-type: none"> • At least 20% of marines and coastal areas in Thai waters have been designated as protected areas in 2010 and 25% in 2012. • At least 15% of unprotected islands in Thai waters should be effectively managed. • At least one site of sea grass beds and dugong habitats has 	ONEP, 2009 ONEP, 2008

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
<p>4. Pollution/effluent control targets</p> <p>5. Any other quantitative environmental targets (pls specify)</p>	<p>been designated as protected area</p> <ul style="list-style-type: none"> • At least 5 sites of wetlands of international importance have been designated as Ramsar sites • 50,000 Rais (approx. 8,000 ha.) of mangrove exist • A total of 80 km² of mangrove will be well effectively managed <p>Department of Marine and Coastal Resources has drafted the strategic and action plans on coral reef, sea grass and mangrove management. DMCR's targets include:</p> <ul style="list-style-type: none"> • 96,000 rais (approx. 15,400 ha.) of coral reefs effectively managed within 5 years period • 93,000 rais (approx. 14,880 ha.) of sea grass bed ecosystems and dugong habitats effectively protected and restored within 5 years period • Target areas for mangrove reforestation, with the total areas of 513,352 rais (approx. 83,000 ha.), covering mangrove forests in 23 coastal provinces • Aquatic animals protected areas zoning for the total areas of 336,634 rais (approx. 54,000 ha.) between 2004-2006 • Activities to safeguard and preserve mangrove forests and aquatic animals, by local villagers and communities for the total areas of 300,000 rais (approx. 19,500 ha.) • Activities to promote sustainable management of mangrove forests, with community's participation, implemented in 200 villages between 2004-2006 • Activities to breed and release 2,000,000 aquatic animals in every provinces with mangrove forests • Activities to develop and implant artificial corals, by local administrative authorities, for 10 sites in 2004 and 30 sites in 2005, and 10 sites annually <p>The above targets also include a number of work plans for management, awareness raising, improved legislative framework, monitoring and research with a common theme of community participation.</p>	

2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?	In recent years, a Decentralization Act and an Information Disclosure Act have also been promulgated, but their implementation has been slow. In 1999, Thailand started to decentralize at the local level. Article 283 of the Mandate for Decentralization provided localities the right to define their own self-Government.	
Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of: <ol style="list-style-type: none"> bycatch and discards? Interactions with endangered, threatened & protected species? Impacts on sensitive or vulnerable habitats Impacts on the trophic structure of marine ecosystems Introduction of alien or exotic species 	There is no 'marine environment' policy as such, although there is a draft Policy on Marine and Coastal Resources. The Framework of Policy and Prospective Plan for Enhancement and Conservation of National Environmental Quality for 1997-2016 consists of six main policy as areas follows: Policy 1 : Policy on Natural Resources Policy 2 : Policy on Pollution Prevention and Eradication Policy 3 : Policy on Natural and Cultural Environments Policy 4 : Policy on Community Environment Policy 5 : Policy on Environmental Education & Promotion Policy 6 : Policy on Environmental Technology It has little detailed content on coastal resources; apart from "Preserve at least 1 million rais (160,000 hectare) of mangrove forest. & (2) Conserve and rehabilitate all type of coastal resources in order to maintain the natural balance of this ecosystem.	
If these issues are not covered by environmental policy, are they covered in fisheries policy?	Yes (see above)	
Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?	Yes. <i>In situ</i> protection via the National Park Act as well as the 'Strategy 4: Ecosystem and Fishing Ground Rehabilitation to Safeguard Biodiversity and Marine Environmental Quality' of the 2006 Fishery Policy Directions of Thailand Statement	
Does policy for MPA development recognise the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.	No. But it is understood that IUCN has been approaching RTG to develop a PA system plan since 2000. As the reform of the RTG, now the proposal is with Ministry of Natural Resources and Environment. Ministry of Natural Resources and Environment has set up Multilateral Consultative Sub-committee on Protected Areas since 13 Dec.2010. The sub committee is under National Committee on	Bunpapong (2003)

	conservation and sustainable uses of Biodiversity	
Have MPAs been specifically developed to protect the following: <ul style="list-style-type: none"> g. Fish stocks (with no take zones, gear restrictions, etc) h. Critical habitats (e.g. coral reefs, mangroves, etc) i. Certain species Please give details where possible.	Yes, No take zones have been established in many marine areas under Fishery Act and National Parks Act. Fishing gears, fishing areas and seasons have been developed by the Fishery Act. Critical habitats, including coral reef, mangroves and sea grass beds are protected by various laws, as well as marine endangered species e.g. sea turtles, dugong, giant clams, dolphin, whales and whale sharks.	
Does marine environmental policy consider the impacts of land-based pollution on the marine environment?	Yes.	
Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,	Yes.	
Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Yes. As degradation of environment could impact to coastal ecosystem as well as impact from coastal development. The impact could influence on likelihood of coastal communities.	
Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details	Yes. The impact of climate issue has been concerning on sea level rise, sea surface temperature rise which impact to coral bleaching and other ecosystem.	
3. Overall impression of policy trends		
In summary, what are the main trends and changes in environmental policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.		

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference
C.1: Impact assessment		
<p><i>What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate):</i></p> <ul style="list-style-type: none"> a. <i>Restricted access (complete or partial by different groups?)</i> b. <i>Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year)</i> 	<p>Thailand currently has 22 Marine National Parks (MNP), 16 of which are located in the Andaman Sea (2006 data). Most of these parks are located offshore, are rich in coral habitats, and contribute to tourism and fishery industries. MNPs are critical for management and conservation of coral reefs, fisheries, and mangroves. MNPs are established through the National Park Act and</p> <p>are the responsibility of MONRE's Department of National Park, Wildlife and Plant Protection (DNP).</p> <p>Restricted areas for fisheries established under the Fishery Act include Fish</p>	

	sanctuaries (no take zones) and Fish refugia (Restricted uses), eg. Closed areas and seasons for the Indo Pacific chub mackerel spawning ground, coastal prohibited areas for trawling and push net 3 km along the shoreline.	
<p>What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate):</p> <ol style="list-style-type: none"> Land-based rangers/checks Sea-based patrols Remote monitoring (e.g. air, satellite & telemetry) Other? 	Monitoring mechanisms include: Rangers from Department of National Parks, Wildlife and Plants for Marine National Parks. Their duties include both on land sea. Mangroves, coral reefs, sea grass beds, including marine endangered species by rangers from Department of Marine and Coastal Resources and Department of Fisheries. Navy and Marine police also take part this activity. All have sea-based patrol. The Department of Fisheries and Department of Marine and Coastal Resources used to monitor by air.	
What forms of activity require an environmental impact assessment (EIA)?	<p>Proponents of proposed projects or business activities located near rivers, coastlines, lakes, beaches, natural parks, or historical parks are required to submit EIA reports if they involve the following, among others:</p> <ol style="list-style-type: none"> Dams or reservoirs, irrigation, commercial airports, hotels, or resorts Systems under the law related to expressways and railroad-based mass transportation Mining activities and industrial estates regulated by law Commercial ports Thermal energy-based electric power plants of 10 megawatts (MW) or higher at the time of installation <ul style="list-style-type: none"> Large industrial operations (i.e., those involving petrochemicals, petroleum refining, natural gas separation or conversion, the chlor-alkaline industry, steel production, cement production, ore processing, metal smelting, and pulp and paper) 	Institute for Global Environment Strategies (2006)
What are the main strengths and weaknesses of the EIA system?	<p>Strengths:</p> <ul style="list-style-type: none"> To ensure that the activities will have no or less impact to environments <p>Weaknesses:</p> <ul style="list-style-type: none"> Enforcement and lack of monitoring system. 	
Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details	Yes. In case of the development of big project such as industrial area or compact. But in general no cumulative environmental assessments.	
C.2 Marine environmental monitoring		
What are the main <i>monitoring</i> mechanisms for marine pollution control,	There are marine water quality monitoring program and marine	

its enforcement, and the prosecution of offenses a. <i>Land-based rangers/checks</i> b. <i>Sea-based patrols</i> c. <i>Remote monitoring (e.g. air, satellite & telemetry)</i> Other?	environment monitoring project are carried out by Pollution Control Department and Department of Marine and Coastal Resources respectively for along the coast line. The results of the program and project will reflect the general picture of coastline. But there is still lacks of monitoring program in local level. Except in the area of indentified as industrial area or marine port. The monitoring in the offshore is quite limited. It is monitored by the investor (in case of industrial) which is force by the law.	
Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?	A 'Thailand State of Environment' was last produced in 2005.	
Are there annual (or recurrent) reports on the following: a. Status of marine areas and habitats under formal protection b. Status of species under formal protection c. Status of coastal water quality d. Number of reported pollution incidents	The annual Thailand Environment Monitor address key issues affecting the environment. Recent Environment Monitors reviewed the state of air and water quality and the first Monitor surveyed Thailand's overall environmental situation, including the regulatory and management systems in place within the Government. The 2007 EM included a comprehensive assessment of Marine and Coastal Resources	World Bank (2007).
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment		
What are the strengths and weaknesses of marine & coastal environmental monitoring?	Strengths: · The potential of coastal management initiatives to increase revenue from eco-tourism is used as an incentive to sustain community participation (Panjarat 2008).	
C.3 Financial and economic mechanisms		
Are there any financial <i>support</i> for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?	Current policies and regulations in Thailand make little or no use of economic instruments, which have the potential to improve resources management while raising funds for conservation related activities.	
Are there any financial <i>incentives</i> for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?	There is a regulation and the law to enforce. But the processes are taken time and need a lot of information and data to support.	

C.4 Constraints

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	2
Budgets for operations of Ministries/departments (i.e. For activities)	1
Budgets for enforcement of management measures e.g.	2
Capacity levels of staff in Ministries/departments	3
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	1
Supportive regulations/laws giving effect to policy content	2
Coherence with other sectoral and national policies	1
A monitoring and evaluation (M&E) system to check on policy implementation	2
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated

Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
A.1: Policy and planning framework		
<p>Is there a specific policy at either national or state / provincial level, for integrated coastal management? If so, please provide a full reference.</p>	<p>In Thailand, there is no specific policy that has ICM terminology in it. However, the Natural Resource Exploitation Act groups several sectors and agencies under this Act which includes the Forest Act of 1941, the Fisheries Act of 1947, the Minerals Acts of 1967, the Petroleum Act of 1971, and the Tourism Act of 1979. The integration between multiple sectoral and coordination of various organisations makes this Act the closest referral to any policy related ICM initiatives.</p> <p>Tenth National Economic and Social Development Plan (NESDP) within the five-year span of 2007 to 2011: promotes community rights and participation in natural management e.g. community forest and community coastal management. Also, it increases the strength of communities and develops a co-management system for natural resource conservation. It emphasizes the decentralization of Provinces and local organizations. (It has been mentioned as well in 12th NESDP)</p> <p>An Environmental Quality Management Plan has mentioned to increase the number of ICM at provincial level at least 50% within 5 years (2012-2016).</p>	<p>WorldFish, 2010</p>
<p>What other strategy or planning documents have produced for ICM at either national or state / provincial levels?</p>	<p>Navigation Act (1913, 1992): Regulates navigation and water transportation, including the prohibition of waste disposal into waterways and the construction, registration, and operation of vessels.</p> <p>Building Code (1979) and City and Town Planning (1975): controls the construction and operation of buildings and land use in city & towns.</p>	

Please list all key legislation that has been produced to enact ICM.	<p>The National Parks Act B.E. 2504 (1961) has functions of ICM since it outlines the coordination of several agencies and across several coastal resources including fisheries, mangroves, coral reefs, to name a few. The Act prohibits any kind of fishing in the MNPs. In the Andaman coast, there are 16 MNPs. They are protected, managed and operated by the Department of National Park, Wild Life and Plant Conservation, Ministry of Natural Resources (Panjarat 2008).</p> <p>The west coast of Thailand was among the areas that were severely impacted by the 2004 Indian Ocean tsunami. In 2006, a specific Act was approved to rehabilitate the coastal resources that were affected due to the tsunami. The Notification of Environment Protection the Impact Area of Tsunami in Krabi, Trang, Phang-Nga, Phuket, Ranong and Satun Province, B.E. 2549 (2006; the "Notification") was established including 5 provinces, 3 are in Andaman Sea and other 2 are in the Gulf of Thailand (Phuket, Krabi, Phang-Nga, Chonburi (focus on Pattaya area) and Petchaburi) by the Ministry of Natural Resources and Environment with the purpose to rehabilitate the coast and its environment impacted by the tsunami (Panjarat 2008). While the Act naturally requires the coordination of several agencies to implement relevant rehabilitation activities, nothing in the Act itself stipulates the name of those coordinating agencies.</p>	
A.2 Development of ICM planning		
For national & state / provincial ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	Form of involvement (if any)	Level of involvement (low, medium or high)
Ministry of Natural Resources and Environment	Yes	High
Ministry / Dept of Fisheries (or equivalent)	Yes	High
Ministry of Tourism (or equivalent)	Yes	Medium
Ministry of Interior	Yes	High
Private sector interests	Yes	Medium
NGOs	Yes	Medium
Civil society	Yes	Medium

Foreign donor driven projects	Coastal Habitats and Resource Management (CHARM) project with cooperation between Royal Thai Government and the European Union. The five year project between 2002 and 2007 with the objective of establishing communities' skills in fisheries management self-organization and with a strong, committed and enlightened local Government.	Medium
Others (please specify)		
Is there any specified requirement in law with regards to who should be involved with ICM formulation?	Yes. Following Thai Constitution, should have agreement with stakeholders meeting.	
When are the dates for the next major revisions/re-specifications of key policy documents?	Now it is in the process of revision from 2012.	
Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	Yes. There is the policy to improve environmental health impact assessment before establishing a mega project following the pressure by stakeholders who get impact from those projects.	
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform ICM, and · the extent to which those research outputs are in informing policy 	Strengths <ul style="list-style-type: none"> · Yes Weaknesses <ul style="list-style-type: none"> · Bias on the result of ICM study in Thailand from the consultant company or university. In case of the development organization hire them to study. Some of the result will be support for the Coastal zone development. 	

Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Fisheries	High		
Aquaculture	High		
Tourism & recreation	High		
Port & industrial development	High		
Urban development	High		
Coastal defence development	High		
Transport	High		
Military use	Medium		
Environmental conservation	High		
Other (please specify)			
Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.	Master Plan of Marine Fisheries has implemented. The Master plan of Aquaculture will be preparing and finalize soon.		
Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.	There are some specific areas which implement ICM in their development plans e.g. Trang Province (Andaman Sea Coast) and Koh Tao (Gulf of Thailand), Chonburi Province (PEMSEA project). In some provinces, there is the policy for marine and coastal use zoning e.g. Phuket, Phang-Nga, Krabi, Petchaburi, Prachuab Khirikhan and Pattaya.		

Are there specific provisions for co-management, what are these?	<p>The government of Thailand drafted its first policy on the decentralisation of coastal resources management in 1992. The policy came into effect in 1997 (Nasuchon 2009). Based on Article 283, it should be noted that the decentralisation process was solely institutionalised for power sharing between the federal and local government and not between government agencies and local communities. The Article provided a mandate to local government agencies to independently formulate policies; and formulate administration, finance and personal management procedures. It was a process of decentralisation from the federal level to the state and/or provincial level.</p> <p>In Thailand there is no specific policy on community-based management or co-management arrangements between government agencies and communities. However, the country's Eighth National Economics and Social Development Plan (NESDP 1997-2001) emphasises community involvement in the management of natural resources (Nasuchon and Charles 2010; Tokrisna 1999).</p>	WorldFish Centre 2010
What level / levels is ICM set at:	Comment	Supporting Reference
International (e.g. transboundary cooperation)	Yes. South China Sea Large Marine Ecosystem Project (UNEP/GEF); ended 2008	
National	No.	
State / Province	Yes. The Provincial Administration Act (1997) has mandated the Provincial Administration Organization (PAO) to protect, take care and maintain/enhance the natural resources and the environment. As proposed in the draft on Promotion of Marine and Coastal Resources Management Act, the Provincial Marine and Coastal Resources Committee would be led by the Governor as Chairman and the Head of Provincial Office as the Vice-Chairman with qualified members coming from the main department regional offices. It will be in charge of the preparation and submission of Provincial Marine and Coastal Resources Management Plans complying with the national policy while the Provincial Natural Resource and Environment Officer would act as member and secretary.	Henocque & Tandavanitj
Municipality	Yes. Some municipalities have designed the ICM in their development plan. E.g. SriRacha Municipality, Pattaya.	

Other (please specify)	The Tambol Administrative Organisation (TAO) plays an important role in representing community concerns at higher levels in the government. The TAO is represented by two community members from each village within the Province and they serve a four year term. The function of TAO is to represent community problems to the federal or provincial government (depending on the issue) and to conduct community-based projects that are relevant to the development of the communities.	WorldFish Centre 2010
Does the plan specify mechanisms for user conflict management?	Yes. Mentioned in the Master Plan of Marine Fisheries and Environmental Quality Management Plan	
Does the plan specify mechanisms for user zoning?	Yes. Mentioned in the Master Plan of Marine Fisheries and Environmental Quality Management Plan	
Does the plan specify mechanisms for stakeholder consultation?	Yes. Mentioned in Master Plan of Marine Fisheries and Environmental Quality Management Plan	

Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
<i>Who are the main implementing authorities at:</i>		
International level	Yes. Ministry of Natural Resources and Environment and Department of Fisheries	
National level	Ministry of Planning, Ministry / Dept of Fisheries, Ministry of Tourism, Ministry of Natural Resources and Environment	
State / Province level	Ministry of Planning, Ministry / Dept of Fisheries, Ministry of Tourism, Ministry of Natural Resources and Environment, Ministry of Interior	
Municipality level	Local Administrative Organization, Private sector interest, NGOs, Civil society	
Other levels (please specify)		
Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?	Yes Still in research level and applied to the small-scale level.	
How is coastal zoning used in the development planning process?	Yes. Coastal zoning has been used as a tool for ICM implementation such as controlling activities in each zone.	

Do any particular coastal users or sectors have priority in terms of resource allocation?	No.	
What mechanisms are there for reviewing coastal development priorities?	EIA and IEE are the mechanism used for reviewing priorities.	

Acronyms

- CDM Clean Development Mechanism
- CHARM Coastal Habitats and Resource Management
- DMCR Department of Marine and Coastal Resources
- DNP Department of National Park, Wildlife and Plant Protection
- MNP Marine National Parks
- MONRE Ministry of Natural Resources and Environment
- ONEP Office of Natural Resources and Environmental Policy and Planning
- RTG Royal Thai Government

Appendix I: Malaysia

Section A. FISHERIES POLICY PROCESSES	
Question	Answer
<p>Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation</p>	<ul style="list-style-type: none"> • Sarawak Fisheries Development Study, 1994, Ministry of Agriculture Malaysia • Fisheries Act 1985, revised 1993 • Fisheries Objectives and Functions, 2006 Malaysia Fisheries Department (http://www.myaquatic.com/Department/Objectives.htm) • National Fisheries Strategic Plan 2011-2020 • Agro Food Policy 2011-2020 • EEZ Act 1984 • National Biodiversity Policy 1998 • National Plan of Action on Conservation and Management of Sharks (revised 2012) • National Plan of Action on Conservation and Management of Sea Turtles • National Plan of Action Management of Fishing Capacity In Malaysia • National Plan of Action on Sea Cucumber • National Plan of Action on Dugong • National Plan of Action on Invasive Alien Species • National Plan of Action on IUU Fishing (draft) • National Policy on Climate Change 2010 • Malaysian Maritime Enforcement Agency Act (MMEA) 2004 • Merchant Shipping Ordinance 1952 (Amendment and Extension Act 2007)
<p>Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralisation</p>	<ul style="list-style-type: none"> – Fisheries Act 1985 sec 41-45 – Fisheries (Marine Culture System) Regulations 1990 – Fisheries (Maritime) Regulations 1967 – Fisheries (Maritime) Regulations (Sarawak) 1976 – Establishment of Marine Parks & Marine Reserves Order 1994 – Fisheries (Cockles Conservation & Culture) Regulations 2002 – Fisheries (Prohibition of Methods of Fishing) Regulations 1980 – Fisheries (Licensing of Local Fishing Vessels) Regulations 1985 – Fisheries (Close Season for the Catching of Grouper Fries) Regulations 1996 – Fisheries (Prohibited Fishing Methods for the Catching of Grouper Fries) Regulations 1996 – Fisheries (Prohibited Areas) Rantau Abang Regulations 1991 – Fisheries (Prohibited Areas) Regulations 1994 – Fisheries (Prohibition of Import etc. of Fish) Regulations 1990 – Fisheries (Control of Endangered Species of Fish) Regulations 1999 – Fisheries (Quality Control of Fish for Export to EU)Regulation 2009 – Fisheries (Conservation Areas for Sea Cucumber)Regulation 2010

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
	<ul style="list-style-type: none"> · Coastal Management Act – Fisheries (Riverine)Rules 1990-State of Perlis – Fisheries (Riverine Waters)Rules 1999-State of Penang – Perak Fisheries (Riverine)Rules 1992-State of Perak – Fisheries (Riverine)Rules 1976-State of Negeri Sembilan – Fisheries (Riverine)Rules 1984-State of Johore – Fisheries (Riverine)Rules 1991-State of Pahang – Terengganu Riverine Fisheries Rules 1988-State of Terengganu – Fisheries (Riverine)Rules 1997-State of Kelantan · Hydrology Act · Environmental Quality Act 1974 · ADB-RETA funded project on coastal zone management in the north-west region of West Malaysia 1998 –2003 · National Agro-Food Policy 2010-2020 · National Policy on Biodiversity (1998) · Environmental Depository (1998) · National Policy on Environment (2002) · Wetland National Policy 2003 · National Conservation Strategy · A Common vision on Biodiversity (in Government and the Development process) NRE 2008. 2nd edition 2010. · MALAYSIA <i>National Plan of Action</i> CTI-CFF Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security 2010-2020 · National Ecotourism Policy 1996 · National Ocean Policy 2010 (Draft) 		
<p>Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy?</p> <p><i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</i></p>		<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	Political government staff at national level	NO	
	Political government staff at provincial or state level	NO	
	Political government staff at local level	NO	
	Technical government staff in fisheries ministry/department at national level	YES	1
Technical government staff in fisheries ministry/department at provincial level	YES	2	

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
	Technical government staff in fisheries ministry/department at local/district level	YES	3
	Technical government staff in other sectoral ministries/departments	YES	4
	Catching sector representatives from large-scale/industrial sector	YES	5
	Catching sector representatives from small-scale/artisanal sector	YES	5
	Processing/marketing sector representatives	YES	5
	Non-governmental organizations from civil society	YES	6
	Donors and/or consultants funded by them	YES	6
	Other (Aquaculture sector representatives)	YES	5
	Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?	No but under Section 6 of the Fisheries Act 1985, it is clearly stated that the DG of Fisheries shall prepare Fisheries Plan.		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?	4 to 10 years.		
When are the dates for the next major revisions/re-specifications of key policy documents?	National Agro Food Policy in 2019, National Fisheries Strategic Plan in 2019 others not specific.		
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details of: what the policy change was when the change occurred, and which stakeholder group was the driver of change.	Export of fish product to the EU which requires certification by competent authority. Importing country requirement with regards to export of fish and fish products (eg. EU). 2009 Fish processors/exporters and fishermen		
Is there a documented fisheries research plan? If so what period does it cover?	Yes. Strategic Direction for Fisheries Research and Development (2010-2015)		
What are the main strengths and weaknesses with regards to: available research to inform policy, and the extent to which those research outputs are used in informing policy	Strengths Researchers : 114 7 Research Centres SEAFDEC-MFRDMD 2 Research Vessels		

Section A. FISHERIES POLICY PROCESSES	
Question	Answer
	<p>Research findings being utilized</p> <p>Current FRIM research work focuses on:</p> <p>Stock assessment of demersal resources using VPA</p> <p>Assessing the impacts of fishing methods on stocks, applying Risk Based PSA (Productivity Susceptibility Analysis)</p> <p>Evaluating the impact of JTEDs (Juvenile Turtle Exclusion Devices)</p> <p>Assessing the impact of the Scrap and Build scheme on stocks and employment</p> <p>Evaluation of Set net impacts on benthos</p> <p>Weaknesses</p> <p>Lack of funding</p> <p>Lack of man power due to expansion of research scope</p> <p>Lack of expertise in stock assessment</p> <p>No modern research vessels</p>

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets/Indicators		
Does policy contain specific development <u>targets</u> for capture fisheries? Eg. Fisheries production, employment no's, etc. If so, pls elaborate?	To meet the targeted food fish production of 2.5584 million tonnes through the increment of 1.7637 million tonnes from marine capture fisheries and 794,700 tonnes from aquaculture. To achieve an average annual growth rate of 10% and 12% respectively for seaweeds and ornamental fish.	http://www.dof.gov.my/visi_on
Does policy contain specific management <u>targets</u> for capture fisheries? e.g. area under MPAs, etc? If so, pls elaborate?	Mariculture The Marine Protected Area Policy (draft) will take into account the need for coherent network of integrated MPAs with a targetted number of MPA's to be established.	
Does policy contain any other specific <u>targets</u> or <u>indicators</u> e.g. value of exports? If so, what are they? (List all)	To ensure the net income of groups involved in the fisheries activities exceed RM1,500 per month. Additional public investment to achieve RM10 billion by 2020 Commercialise five (5) R&D output per year and develop 10 new technologies by 2020. The development of the fisheries subsector under the National Strategic Fisheries Plan (2010-2020) will focus on the development of the aquaculture industry and to modernise and transform the	http://www.myaquatic.com/ http://www.dof.gov.my/visi_on

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
	capture fisheries sector. Six strategic thrusts were identified under this plan to address the challenges faced towards the realisation of the vision, mission and objectives of the Department of Fisheries.	
2. Fisheries Management		
Does policy contain a clearly articulated statement of long-term objectives? If so what.	This refers to Malaysia National Fisheries Strategic Plan) the National Agro Food Policy 2010-2020 refers to production and sustainability of the resources Optimise fishing capacity by 2020	Master Plan NAP (New objective 2010-2020 - Draft 2011)
Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of management powers and responsibilities?	Decentralization intention under consideration (In fact FAO TP 488 suggests that strong central control has been one of the reasons for management success).	FAO TP 488
Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? if so, is such expansion at the expense of any foreign fishing interests currently operating in the country?	Yes Yes. Department is in the process of training locals to be tekongs (skippers) of deepsea boats so that they can replace foreign tekongs	Macfadyen 2006
Does policy specifically refer to small-scale fisheries and if so, in what way?	Government will undertake efforts to unify individual entrepreneurs including small and medium enterprises (SMEs) engaged in processing, to form consortia led by corporate leaders to venture into commercial fishing and develop and manage integrated processing complexes and mega-fishing ports. This will secure economies of scale, modernise operations, enhance ventures into export markets and also attract foreign vessels to land their catches in Malaysia	NAP
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	Yes, by having exit plan for coastal fishermen to go into aquaculture. And Management of Fishing Capacity by setting a moratorium on issuance of new licenses for the coastal areas, setting fishing zones for conservation, and limiting vessels size and fishing gears;	3 rd National Agriculture Policy FAO TP 488
Does policy refer to and/or deal with IUU fishing? If so, in what way?	DoFM prevents illegal, unregulated and unreported (IUU) fishing through colour-coding, code zone, and registration number for vessels.	Banks 2010 in press country summary
Does policy refer to the use of VMS?	Yes. Large section on department website on VMS	http://www.dof.gov.my/
Does policy refer to need for integration/co-ordination with other sectoral policies?	A stated objective of National Agro-food Policy is 'to deepen linkages with other sectors'	NAP

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
Does policy mention eco-systems management? If so, what measures are suggested?	Not specifically in context of being mentioned in over-riding policy objectives as one might expect. But there are specific management measures in place to deal with issues such as turtle bycatch, critical habitats, and endangered species.	http://www.dof.gov.my/
Does policy include specific measures related to conflict management? If so, what are they?	Use of zoning system Also Department has a Client's charter which include the following (which should serve to reduce conflicts) 'To ensure that all public complaints are attended to and public actions within 3 days'.	Banks 2010 in press country summary http://www.dof.gov.my/
Does policy include the use of fishery co-management and/or community management?	No explicit policies but CBFM-like initiative being implemented. For example in marine fisheries, the Fisheries Resources Management Group of Kuala Triang, Langkawi. Yes. e.g. Sabah has already successfully implemented the Sabah Tagal System: A sustainable Community based (Co-management) riverine fisheries management. Because of the depleting riverine fisheries resource in Sabah. The Sabah Fisheries Department and the local community (especially the indigenous community) are interested and committed in the system.	It is incorporated in the Sabah Inland Fisheries & Aquaculture Enactment 2003
3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	Yes. We have implemented traceability system through catch documentation and issuance EU Catch Certificate.	http://www.dof.gov.my/
Does policy refer to increasing value-added? If so, how is this to be achieved?	Yes Encouraging more downstream processing on most of the fish production. Section of Department website on fish product and product development	3 rd National Agriculture Policy http://www.dof.gov.my/
Does policy refer to tariff barriers and/or free trade areas in the region?	No import tariff but chargers incurred on services charge (5 cent per kg of the fish and fisheries product) at the entry point under Marketing Regulation 1973. AFTA will commence in 2015.	LKIM
Does policy seek to increase exports?	Yes, see targets	
4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty	Yes, to ensure fishermen incomes exceed poverty level, is a stated objective of Department Catch incentive 10 cent per kg for every fish landed by all licensed vessels Diesel and petrol subsidy	http://www.myaquatic.com/Department/Objectives.htm

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
reduction strategies, etc	Monthly incentive allowance per registered fisherman (RM200.00)	
Does policy include mention of, or provide for, micro-finance?	Yes, through the Agro Bank, other government agencies Fisheries Development Authority of Malaysia (FDAM) provide loans and credit to registered fishers with Fisherman Association.	3 rd National Agriculture Policy
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing / maximizing employment?	No but programme is available (Exit Plan and Fishermen Transformation Programme). KUNITA Programme (Fishermen Wives Group) under FDAM to increase economic status of the family.	
Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or indirect food security (fish exported with money then available for food imports)	Yes, a stated objective of National Agro Food Policy is 'to enhance food security' There is also a specific section of the Department's website dealing with food security	NAP http://www.dof.gov.my/home
Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	Under the Development Programs for Fishing Communities are the following programmes: associations to venture into alternative, tourism related, livelihoods; Farmer's Resolution (Azam Tani) for poor and hardcore poor fishermen.	Banks 2010 in press country summary
5. Overall impression of policy trends		
<p>In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.</p> <p>More towards increasing aquaculture production and minimizing fishing pressure in the coastal areas.</p> <p>Increasing trend on complying with International Standards and Instruments (e.g. IUU Fishing).</p> <p>Increase consultation with stakeholders for policy and legal framework formulation.</p>		

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	<p>Economic Transformation Programme (2011-2015) Business Opportunities Programme (2011-2015)</p>	<p>Government Transformation Programme (2010)</p>
Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, cpue, MSY, etc	<p>There is input control through limited access licensing policy. Minimum harvest size for marketing of cockles not less than 25mm. Close season for grouper fries from November to December in Kelantan and Terengganu.</p>	
Is the MSY concept applied and how old are the most recent MSY estimates?	<p>Yes. Estimate of MSY from Surplus Production Model in 2009.</p>	
Are there any species-specific management plans in place? If so for which species	<p>Small Pelagic Fisheries Management Plan of West Coast Peninsular Malaysia. National Plan of Action on Conservation and Management of Sharks National Plan of Action on Conservation and Management of Sea Turtles National Plan of Action for the of Management of Fishing Capacity in Malaysia National Plan of Action on Sea Cucumber National Plan of Action on Dugong National Plan of Action on Invasive Alien Species</p>	<p>Fisheries Act</p>
<p>Which of the following input fisheries management are used if any limited licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) effort management e.g. days at sea restrictions closed areas MPAs closed seasons gear restrictions (banned gear) other (specify) Pls provide as much detail as possible for different fisheries/fleets</p>	<p>Fisheries (Cockles Conservation & Culture) Regulations 2002 This regulation is for the management, control and licensing of collection of adult cockles and cockle spats from natural spatfall areas and cultured areas. The minimum size for collection of adult cockles and cockle spats is also determined in this regulation, and there is also a fee charged for the license to collect cockles. Fisheries (Prohibition of Methods of Fishing) Regulations 1980 This regulation prohibits unsustainable fishing practices, such as use of explosives, poison and electric fishing, pair trawls, beam trawls and drift gill nets of more than 10 inches for catching rays, etc. Fisheries (Licensing of Local Fishing Vessels) Regulations 1985 This regulation is for the licensing of local fishing vessels. It provides the procedures to license fishing vessels, with conditions for marking of vessel, fees and deposits payable. Fisheries (Close Season for the Catching of Grouper Fries) Regulations 1996 This regulation is applicable in the state of Kelantan and Terengganu only. Fishing of grouper fries during the month of November to December is prohibited unless permitted by the Director-General. Fisheries (Prohibited Fishing Methods for the Catching of Grouper Fries) Regulations 1996 This regulation prohibits the collection of grouper fries in the lagoon and estuary of rivers unless licensed</p>	<p>Fisheries (Maritime) (Sarawak) Regulation 1976 Fisheries Maritime Regulation 1967 Fisheries (Cockles Conservation and Culture) Regulation 2002 Fisheries (Prohibited Areas) Regulation 1994 Fisheries (Prohibited</p>

Section C: FISHERIES POLICY IMPLEMENTATION		
<p>1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues</p>	<p>Economic Transformation Programme (2011-2015) Business Opportunities Programme (2011-2015)</p>	<p>Government Transformation Programme (2010)</p>
	<p>to do so. Only fish traps can be used to catch grouper fries in the lagoon and estuary of rivers.</p> <p>Fisheries (Prohibited Areas) Rantau Abang Regulations 1991 This regulation has gazette areas in Rantau Abang, Terengganu as a prohibited area for fishing unless specifically permitted. The purpose of this regulation is to protect the turtles that beach in Rantau Abang to lay eggs, and this area is a turtle sanctuary.</p> <p>Fisheries (Prohibited Areas) Regulations 1994 The waters around the islands in Sarawak have been gazetted as fisheries protected area. Collection of shells, molluscs and coral is prohibited. Fishing is prohibited unless licensed to do so.</p> <p>Fisheries (Prohibition of Import etc. of Fish) Regulations 1990 This regulation lists the species of piranha fish that are prohibited, and cannot be imported, exported, sold or kept in captivity unless permitted by the Director-General.</p> <p>Fisheries (Control of Endangered Species of Fish) Regulations 1999 This regulation lists all the species of fish and mammals that are protected, and includes the dugong, whale, dolphin, whale shark and the giant clam, which are included in the list of endangered species in Convention on International Trade of Endangered Species (CITES). It is an offence to fish for, harass, catch, kill, possess, sell, buy, export or transport any endangered fish as specified in this regulations. Any of the listed endangered fish species caught unintentionally shall be released immediately or disposed of as directed by a Fisheries Officer.</p> <p><u>limited</u> entry for any fishing Only limited to daylight hours in some areas. Harvesting of cockles limited only to daylight hours. 2 boat "kenka" (seine nets) only in designated area of operation in Kerian district, Perak state during daylight hours. Closed areas for certain species and zoning system. The main strategies are the establishment of fishing zones and licensing of gears and vessels. The DOFM employs a management zone system to provide for equitable allocation of resources and reduce conflict between fishing groups. The marine waters are divided into 4 zones; A, B, C and C2. Banks country summary) The DoFM also established Fisheries Prohibited Area (FPA) to protect coastal resources such as in Pulau Talang Talang and Pulau Satang, Sarawak and Tanjung Tuan and Pulau Besar, Malacca. The protected area differs between 1 to 3 nm according to sites (Banks country summary) Closed seasons. Yes. Close season for grouper fries from November to December in Kelantan and</p>	<p>Areas)(Rantau Abang) Regulations 1991 Banks 2010 in press country summary</p> <p>Fisheries (Closed Season to Catch Kerapu Fry) Regulations 1996</p> <p>Fisheries (Prohibition of Method of Fishing) Regulations 1980</p> <p>Establishment of Marine Park Malaysia Order 1994 under Fisheries Act 1985 Fisheries (Prohibited Areas) Regulation 1994 Fisheries (Prohibited Areas)(Rantau Abang) Regulations 1991 Taman-Taman Sabah</p>

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Economic Transformation Programme (2011-2015) Business Opportunities Programme (2011-2015)	Government Transformation Programme (2010)
	Terengganu. Gear restrictions. Yes MPAs. Yes other (specify)	
Which of the following output fisheries management are used if any if any: § TACs § minimum landing sizes § bycatch minimisation § fish escapement rates § other (specify) Pls provide as much detail as possible for different fisheries/fleets	§ TACs : No § minimum landing sizes : Cockles (minimum harvest size for cockles seeds and adults) § bycatch minimisation : TED, JTED, 38mm, cod-end mesh size of trawl net § fish escapement rates : No	Fisheries (Cockles Conservation and Culture) Regulation 2002 Fisheries Maritime Regulation 1967
Which of the following technical fisheries management are used if any § Mesh-size restrictions § Other Pls provide as much detail as possible for different fisheries/fleets	Mesh-size restrictions. Yes Other	Fisheries Maritime Regulation 1967
What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc	None	
Which of the following payments/charges (if any) are imposed on the private sector § landings charges § licence fees § harbour dues	§ landings charges : Yes. RM0.01 per kg (local landing). RM0.05 per kg (foreign vessel) § licence fees : Yes. For vessel, fishing appliances and taking of cockles. § harbour dues : Yes. Berthing charge from RM2.00 – RM10.00. § anchoring dues : Yes. Different rates imposed by port authority. § import duties : Yes. Royal Customs and Excise Department.	Fisheries Maritime Regulation 1967 Fisheries Sarawak Maritime Regulation 1976 Fisheries Sabah

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Economic Transformation Programme (2011-2015) Business Opportunities Programme (2011-2015)	Government Transformation Programme (2010)
<p>§ import duties § export duties § other and what are the levels of charges involved?</p>	<p>§ export duties : Yes. Royal Customs and Excise Department.</p>	<p>Maritime Regulation 1964 Fisheries Maritime Licensing of Local Fishing Vessel Regulation 1985 Fisheries (Cockles Conservation and Culture) Regulation 2002</p>
<p>Are any subsidies provided to fishermen in the form of: § fuel tax/price reductions § import/export duty waivers § vessel construction funds § other i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity</p>	<p>Malaysia retains its support for fuel subsidies, following their introduction in 2006. The Fisheries Development Authority of Malaysia (FDAM/LKIM) administers the scheme. LKIM also provides for some incentives under Fishermen Transformation Programme for the introduction of new technology transfers – buy and try, under supervision, including GPS, echo sounders, and materials are sold to the investor at discounted rates.</p>	<p>Banks 2010 in press country summary</p>
<p>Are any subsidies provided to fishermen in the form of grants/funds in support of § improved gear selectivity § reduced environmental impacts § quality improvements § product innovation § other i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives</p>	<p>LKIM also provides for some incentives for the introduction of new technology transfers –TEDs, JTEDs, circle hooks, are sold to the investor at discounted rates.</p>	<p>Banks 2010 in press country summary</p>

2. Constraints to effective policy implementation

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	5
Budgets for operations of Ministries/departments (i.e. For activities)	1
Budgets for enforcement of management measures e.g. For MCS operations	1
Capacity levels of staff in Ministries/departments	2
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	4
Supportive regulations/laws giving effect to policy content	2
Coherence with other sectoral and national policies	3
A monitoring and evaluation (M&E) system to check on policy implementation	3
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated:

Fairly good. Stakeholders e.g. Industrial Consultation Council (capture, aquaculture, fishery products and ornamental fish). Recent directive by the Government in 2012 to have mandatory requirement on public comments, engagement and participation by stakeholders

Marine environmental policy content and implementation

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES		DOE Review/Recommendations
<p>Please list all relevant marine environmental policy documents and items of legislation? E.g. documented policy, master plans and action plans.</p>	<ul style="list-style-type: none"> • National Policy on Biological Diversity (NPBD) which was published in 1998. The vision of this policy is to “Transform Malaysia into a world centre of excellence in conservation, research and utilisation of tropical biological diversity by year 2020.” Operationalised by A ‘Strategic Action Plan’ (the NBSAP). It provides a clear direction for the management of biodiversity in the country. Various measures to conserve and sustainably utilize. As a member of the Convention on Biological Diversity (CBD), Malaysia is committed in promoting and implementing the objective of the Convention domestically, regionally and International. A review has been initiated with funding from the Global Environment Facility (GEF) A National Steering Committee has been formed comprising of various government agencies and NGOs. • Common Vision on Biodiversity The Common Vision, adopted by the MBBN in 2009, focuses on the operationalisation of the NPBD in the nation’s planning and development process. Developed by NRE under the biodiversity component of the Malaysia-Denmark cooperation programme, the Common Vision contains three main elements: strengthening the protected areas system, application of the ecosystem/landscape approach, and mainstreaming biodiversity within national policies, plans and programmes. • National Policy on the Environment (2002): A broad-based strategic approach is adopted to promote environmental soundness through research and development, economic efficiency, social equity, responsibility and accountability. The key strategy of the policy that is relevant to biodiversity is Strategy 2. Effective Management of Natural Resources and the Environment. This includes “Seas, coastal zones, lakes, rivers, mangroves and other wetlands, islands, sea grass and coral reefs shall be managed in an environmentally sound manner; including the prevention of ecologically unsustainable harvesting of living marine and aqua.” • National Forestry Policy (1992) • National Wetlands Policy (2004): aims to ensure conservation and wise-use of the wetlands to benefit from its functions and to fulfil its obligation under the Ramsar Convention. <ul style="list-style-type: none"> • The National Agro-food Policy (2010-2020): NAP3 sets the strategic directions for agricultural development to the year 2020. These focus on new approaches to increase productivity and competitiveness, deepen linkages with other sectors, venture into new frontier areas as well as conserve and utilise natural resources on a sustainable basis. • Action Plan for the Conservation and Sustainable Use of Fishery Resource Biological Diversity of Malaysia (2006): This document was prepared by the Department of Fisheries Technical Committee on Biodiversity. The Action Plan for the Conservation and Sustainable Use of Fishery Resource Biological Diversity of Malaysia consists of 62 actions that are grouped into nine strategies as follows: <ul style="list-style-type: none"> ○ 1. Effective Fishery Resource Conservation and Management ○ 2. Reduce Loss of Biological Diversity 	<p>Refer to Exclusive Economic Zone Act, 1984 (EEZ) & Environmental Quality Act, 1974.</p>

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	DOE Review/Recommendations
<ul style="list-style-type: none"> ○ 3. Strengthen Research on Fishery Resource Biological Diversity ○ 4. Improve Capacity Building ○ 5. Enhance Information Dissemination and Networking ○ 6. Control and Management of Fish Trade ○ 7. Control and Management of Invasive Alien Species ○ 8. Regulation in Biosafety Management ○ 9. Control and Management of Bio-piracy <ul style="list-style-type: none"> • National Action Plan for the Management of Coral Reefs in Malaysia (2008): formulated by the Department of Marine Park Malaysia to guide efforts in the management of marine parks and at the same time conserve and protect marine biodiversity. • National Plan of Action for Conservation and Management of Sea Turtles in Malaysia (2008) – Formulated by the Department of Fisheries, Ministry of Agriculture and Agro-based Industry, this plan contains six primary objectives, including reducing direct and indirect causes of sea turtle mortality and protecting, conserving and rehabilitating sea turtle habits. The plan lists eighty-five specific activities organised into twenty-one programmes of work, with lead agencies and timelines for implementation. A particular strength of the plan is its concise and frank assessment of the factors that have contributed to the decline in Malaysia’s turtle populations, such as inadequate regulation and management. • National Plan of Action on Conservation and Management of Sharks • National Plan of Action on Sea Cucumber • National Plan of Action on Dugong • National Plan of Action on Invasive Alien Species • Fisheries (Control of Endangered Species of Fish) Regulations 1999 • Fisheries (Quality Control of Fish for Export to EU)Regulation 2009 • Fisheries (Conservation Areas for Sea Cucumber)Regulation 2010 • A Common vision on Biodiversity (in Government and the Development • A Common vision on Biodiversity (in Government and the Development process) NRE 2008. 2nd edition 2010. • NPoA CTI Malaysia 2010-2015: Malaysia National Plan of Action encompass fully the 12 guiding principles of the CTI RPoA, <ul style="list-style-type: none"> ○ Sustainable development ○ Precautionary approach ○ Public participation ○ Respect for culture and Indigenous Heritage 	

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	DOE Review/Recommendations
	<ul style="list-style-type: none"> ○ Right to develop ○ Informed decision making ○ Integrated approach ○ International cooperation and coordination ○ Beneficiary pays ○ CBD ○ Ecosystem Approach ○ Equitable benefit <ul style="list-style-type: none"> • National Ecotourism Policy 1996 • National Physical Plan 2005; The management of Environmentally sensitive Areas whereby, ESA shall be integrated in the planning and management of land use and natural resources to ensure sustainable development.
<p>Please list the key legislation covering the following areas:</p> <ul style="list-style-type: none"> a. Marine and coastal habitat conservation b. Endangered threatened and protected species c. Land-based pollution control d. Marine-based pollution control e. Environmental impacts assessment f. Environmental standards (e.g. water quality) 	<p><i>Marine and coastal habitat conservation:</i></p> <ul style="list-style-type: none"> • Protected Areas & Protected Places Act (1959, revised 1983) • Land Conservation Act 1960 • National Land Code 1965 • National Parks Act 1980 • National Forestry Act 1984 • National Ecotourism Act • Environmental Quality Act 1974 (Act 127) – Fisheries Act 1985, Establishment of Marine Parks Order 1994 – Fisheries (Prohibition of Methods of Fishing) Regulations 1980 – Fisheries (Prohibited Areas) Regulations 1994 • <p><i>Endangered threatened and protected species</i></p> <ul style="list-style-type: none"> • Animal Act 1953 (Amended 2006) • Wild Life Conservation Act 2010 • International Trade in Endangered Species Act 2008 • Customs Act 1964 (Amendment 1988) – Fisheries (Cockles Conservation & Culture) Regulations 2002 – Fisheries (Closed Season for the Catching of Grouper Fries) Regulations 1996 – Fisheries (Prohibited Fishing Methods for the Catching of Grouper Fries) Regulations 1996 – Fisheries (Prohibited Areas) Rantau Abang Regulations 1991 – Fisheries (Prohibition of Import etc. of Fish) Regulations 1990 • Fisheries (Control of Endangered Species of Fish) Regulations 1999
	<p><i>Land-based pollution control:</i></p> <ul style="list-style-type: none"> • Environmental Quality Act,(EQA) 1974 i. Environmental Quality (Prescribed Activities) Environmental Impact Assessment) Order 1987 ii. Environmental Quality (Industrial Effluent) Regulations 2009 iii. Environmental Quality (Control of Pollution from Solid Waste Transfer Station and Landfill) Regulations 2009 iv. Environmental Quality (Sewage) Regulations 2009 v. Environmental Quality (Scheduled Wastes)

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES				DOE Review/Recommendations
<ul style="list-style-type: none"> • Fisheries (Quality Control of Fish for Export to EU) Regulation 2009 • Fisheries (Conservation Areas for Sea Cucumber) Regulation 2010 <p>Land-based pollution control:</p> <ul style="list-style-type: none"> • Waters Enactment, 1920 <p>Marine-based pollution control:</p> <ul style="list-style-type: none"> • National Oil Spill Contingency Plan • Malaysia has adopted the International Convention for the Prevention of Pollution from ships, 1973, and the Protocol of 1978 (MARPOL 73/78) which Malaysia ratified on 28 Jan 1997. • Merchant Shipping (Oil Pollution) Act 1994 <p>Environmental impacts assessment:</p> <ul style="list-style-type: none"> • Environment Quality Act 1974 • Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 <p>Environmental standards</p> <ul style="list-style-type: none"> • Environmental Quality Act 1974 				Regulations, 2009 Marine-based pollution control: <ul style="list-style-type: none"> • Environmental Quality Act, 1974 Section 27, 29 and 31. • Oil Spill Beach Clean Up Action Plan Environmental impact assessment: <ul style="list-style-type: none"> • Environmental Quality Act, 1974 under Section 34A. • Environmental Quality (Prescribed Activities) Environmental Impact Assessment) Order 1987 Environmental standards: Standard A or B in EQA mainly applied for effluent discharge and sewage whilst marine water quality criteria and interim standard is a planning tool for development.
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy?	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>	
<i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder</i>	1. Political government staff at national level	YES		
	2. Political government staff at provincial or state level	YES		
	3. Political government staff at local level	NO		
	4. Technical government staff in environmental	YES		

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES				DOE Review/Recommendations
<i>group, etc</i>	ministry/department at national level			
	5. Technical government staff in environmental ministry/department at provincial level	YES		
	6. Technical government staff in environmental ministry/department at local/district level	YES		
	7. Technical government staff in other sectoral ministries / departments	YES		
	8. Public sector industry	YES		
	9. Private sector industry	YES		
	10. Non-governmental organizations from civil society	YES		
	11. Donors and/or consultants funded by them	NO		
	12. Other (please specify)			
Is there any specified requirement in law with regards to who should be involved with policy formulation?	The first National Steering Committee on Biodiversity (NSCB) was formed in 1993, one year after signing the CBD, in order to address policy matters relating to the Convention, in particular to arrive at a national position on biodiversity. Chaired by the Secretary-General of the then Ministry of Science, Technology and Environment (MOSTE), it comprised a wide range of ministries, agencies and NGOs. Representatives from the state governments were also invited to sit in as and when required.			
When are the dates for the next major revisions/re-specifications of key policy documents?	The NPBD has not been revised in the twelve years since its inception. This is largely due to the fact that the policy fell under the responsibility of a number of different ministries over the period. Malaysia's Fourth National Report to the CBD (2009) suggested that a review be carried out. Following this, a rapid review of the NPBD was initiated by NRE. The review, which is ongoing, will provide recommendations			

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES		DOE Review/Recommendations
	on the appropriate consultative process and studies required for the revision exercise, as well as the particular aspects of the NPBD that need to be improved or updated. It is anticipated that the review will focus on recommendations pertaining to operationalisation aspects, as the NPBD did not set targets and timeframes, or delegate duties of implementation to relevant agencies.	
Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> what the policy change was when the change occurred, and which stakeholder group was the driver of change. 		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> available research to inform policy, and the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> Consult stakeholders thoroughly <p>Weaknesses</p> <ul style="list-style-type: none"> Insufficient time given for consultation 	

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
Does policy contain specific marine environmental management targets or indicators in the following areas: <ol style="list-style-type: none"> Inter-tidal and sea areas under formal MPA protection Marine species to be brought under formal protection Coastal, estuarine, marine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) 	The NPBD did not set any time-linked targets, save for its 'vision' – "To transform Malaysia into a world centre of excellence in conservation, research and utilisation of tropical biological diversity by the year 2020". Other than that, the Prime Minister's pledge made at the 1992 Rio Earth Summit to maintain 50 per cent forest cover is widely accepted to be a general target for forest	<p>CBD COP10 CTI</p> <p>Refer to Malaysia's Green Strategy in National Policy of Environment (Effective Management of Natural Resources and the Environment).</p>

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
4. Pollution/effluent control targets 5. Any other quantitative environmental targets (please specify)	biodiversity. In addition, Malaysia is committed to achieving a provisional framework of goals, targets and indicators to assess progress towards the 2010 Biodiversity Target. A review of Malaysia's progress towards meeting the 2010 target is provided in the Fourth National Report (2009).	4. Pollution/effluent control targets <ul style="list-style-type: none"> · Target 100% compliance for effluent discharge. · Increase in the numbers of rivers targetted to be in class II
2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?		
Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of: <ol style="list-style-type: none"> a. bycatch and discards? b. Interactions with endangered, threatened & protected species? c. Impacts on sensitive or vulnerable habitats d. Impacts on the trophic structure of marine ecosystems e. Introduction of alien or exotic species 	The NAP invokes the sustainable development of fisheries in Malaysia: "The fisheries industry, particularly deep-sea fishing and aquaculture, will be further developed on a commercial and integrated basis. The development will focus on conservation and utilisation of fisheries resources on a sustainable basis". The Department of Fisheries, the Department of Marine Parks and other relevant national and state agencies have sought to realise this policy through the gazetting of marine protected areas, including marine parks, fisheries prohibited areas and turtle sanctuaries. A pilot community-driven ecosystem based fisheries management (EBFM) project is being tested at a site in Kedah in Peninsular Malaysia.	National Agro-food Policy (2010 - 2020) (NAP)
If these issues are not covered by environmental policy, are they covered in fisheries policy?		
Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?	Yes. The National Policy on Biodiversity (NPBD) states the requirement for in situ conservation measures. It specifically requires considerations: (i) the establishment of marine parks in Peninsular Malaysia that focus on aquatic considerations. Additional attention must be accorded to the adjoining terrestrial components as these too, if unduly disturbed, will have negative impacts on the marine ecosystem; and (ii) common marine and terrestrial biological resources (e.g. in transboundary areas) lack adequate regional and	MOSTE (1998)

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
	international cooperation in their conservation and management.	
Does policy for MPA development recognise the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.	Marine Park Department has drafted a Marine Protected Area Policy which will take into account the need for coherent network of integrated MPAs TIHPA (Turtle Islands Heritage Protected Area) - A joint management initiative exists between Malaysia and Philippines as part of the networking for turtle conservation and management.	NRE, 2006 NRE Strategic Plan 2011-2015
Have MPAs been specifically developed to protect the following: a. Fish stocks (with no take zones, gear restrictions, etc) b. Critical habitats (e.g. coral reefs, mangroves, etc) c. Certain species Please give details where possible.	All fishing and extractive activities are prohibited within two nautical miles around islands declared as marine parks (DOF-Malaysia, undated)	Fisheries Act 1985, sec,41-45
Does marine environmental policy consider the impacts of land-based pollution on the marine environment?	The National Policy on the Environment (NPE) covers all forms of point sources, although the specific impact of land-based pollution on the marine environment is not covered. It does call for an "An integrated master plan for the prevention and abatement of air, water and marine pollution.	Environmental Quality Act, 1974 under Section 34B
Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,	Yes	Yes, in reference to Section 27, 31, 47 and 48 in Environmental Quality Act, 1974.
Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Marine parks policy (draft) incorporates poverty reduction strategies.	
Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details	There is a national contingency plan for disaster response and climate change	NAHRIM Report on impact of sea level rise due to climate change

3. Overall impression of policy trends

In summary, what are the main **trends and changes** in environmental policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.

1. Devolution of EIA responsibility: Until very recently, environmental impact assessment in Malaysia has been a federal government responsibility. The situation is changing now with the States of Sarawak and Sabah having adopted independent impact assessment procedures for natural resource management and it is possible that other States may follow suit (Memon, 2003).
2. Some other departments are beginning to take ownership on environmental and conservation policy as opposed to leaving it entirely to the Ministry of Environment and Natural Resources.

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference	DOE Review/Recommendations
C.1: Impact assessment			
<p><i>What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate):</i></p> <p>c. <i>Restricted access (complete or partial by different groups?)</i></p> <p>d. <i>Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year)</i></p>	Yes.	Fisheries Prohibited Areas 1994	
<p><i>What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate):</i></p> <p>e. <i>Land-based rangers/checks</i></p> <p>f. <i>Sea-based patrols</i></p> <p>g. <i>Remote monitoring (e.g. air, satellite & telemetry)</i></p> <p>h. <i>Other?</i></p>	<ul style="list-style-type: none"> • Marine Park Rangers monitor land-based development on marine Park Islands • Marine Park Rangers (Department of Marine Park) and Maritime Enforcement Agency carry out sea-based patrol • National Remote Sensing Center occasionally carry out monitoring and Department of Agriculture monitor land use on the MPAs islands. Land use map is updated using the data from the above monitoring. 	DMPM A and B Enforcement Manual of Department of Marine Parks C Land use map	

<p>What forms of activity require an environmental impact assessment (EIA)?</p>	<p>Appendix 2 of the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 mentions the following activities requiring EIA:</p> <ul style="list-style-type: none"> • Land reclamation (> 50 ha) • Construction of fishing harbours. • Harbour expansion involving an increase of 50 percent or more in fish landing capacity per annum. • Land-based aquaculture projects accompanied by clearing of mangrove swamp forest covering an area of 50 hectares or more. • Conversion of mangrove swamps for industrial, housing or agricultural use covering an area of 50 hectares or more. • Clearing of mangrove swamps on islands adjacent to national marine parks. • Sand dredging (>50 ha) • Construction of coastal resort facilities or hotels with more than 80 rooms. • Development of tourist or recreational facilities on islands in surrounding waters which are gazetted as national Marine Park. • Toxic and Hazardous Waste production and treatment <p>http://doe.gov.my/v2/files/penilaian26/Appendix_2.pdf for more details.</p>	<p>Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987</p>	<p>There are 19 prescribed activities as listed in the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 that requires for EIA to be conducted and submitted to DOE. For details, refer to www.doe.gov.my</p>
<p>What are the main strengths and weaknesses of the EIA system?</p>	<p><i>Strengths:</i></p> <ul style="list-style-type: none"> • Increasing decentralisation of EIA responsibilities – The quality of EIA reports, and assessments of these reports, which fall under the purview of the Department of Environment (DOE) of the NRE, have improved in recent years, largely due to tighter regulatory, qualification and training 	<p>Harun, 1994 DOE EIA Guidelines</p>	<p><i>Additional information of EIA Strengths:</i></p> <ul style="list-style-type: none"> • Improvement in the EIA Procedures, decision making processes and EIA enforcement thru the following measures: <ul style="list-style-type: none"> - Reduced processing time for

	<p>requirements imposed on EIA consultants.</p> <p><i>Weaknesses:</i></p> <ul style="list-style-type: none"> • Lack of awareness of the strength of EIA as a planning tool. Many still perceive EIA as a stumbling block to development. • Perception that carrying out an EIA study would delay project approval and implementation. • EIA not carried out prior to final project design, so that issues such as siting and technology are not considered. • Lack of base-line data on environmental quality. <ul style="list-style-type: none"> • Lack of competent resource person and EIA consultant in EIA evaluation • Existing EIA prescribed by project size (quantum) not practical for certain project area (depend on technology) 		<p>EIA reports.</p> <ul style="list-style-type: none"> - Developed Specific Guidelines and Guidance Document for project proponent and EIA Consultants. (For listing, please refer to www.doe.gov.my) - Review of Sec 34A of EQA, 1974, - Reviewing of the 19 prescribed activities in the Environmental Quality (Prescribed Activities) (Environmental Impact Assessment) Order 1987 - Promulgation of EIA Regulations - Registration of EIA Consultants(2007) and EIA Auditors (2009) - Third Party Auditing. - Erosion and Sediment Control for EIA Projects - Series of seminars and information dissemination to project proponent, developer and EIA consultants to enhance the awareness of EIA as a planning tool.
<p>Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details</p>	<p>Because EIA is administered essentially as a project based tool, its ability to anticipate and manage cumulative impacts is limited.</p> <p>Although SEAs have not yet been adopted, pilot SEAs have been conducted on state structure plans as well as on the National Water Resources Strategy.</p>	<p>Menon, 2003</p>	<p>Yes. Industries were required to assess the cumulative impacts and address those impact as well as residual impacts on case by case basis.</p>

C.2 Marine environmental monitoring			
<p>What are the main <i>monitoring</i> mechanisms for marine pollution control, its enforcement, and the prosecution of offenses</p> <ol style="list-style-type: none"> <i>Land-based rangers/checks</i> <i>Sea-based patrols</i> <i>Remote monitoring (e.g. air, satellite & telemetry)</i> <p>Other?</p> <ol style="list-style-type: none"> Marine Water Quality Monitoring 	<p>Malaysia has had a programme of coastal monitoring carried out by DOE at 158 locations around the country. The important aspect of these programmes is that they are large-scale, covering a large number of sites and examining a range of variables.</p> <p>Sea based patrol conducted by Maritime Enforcement Agency and Department of Marine Park conducts patrol within marine parks</p> <p>Department Marine Park and MACRES occasionally monitor sea surface water temperature</p> <p>Malaysia has progressed with its River Basin Monitoring Programme that has been able to show improvements in pollution levels over a period of time.</p>	<p>Kaly, 2004</p> <p>Reference Environmental Quality Report 2009</p>	
<p>Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?</p>	<p>Malaysia produces an annual 'Malaysia Environmental Quality Report'. This includes details of air, noise, river water, ground water and marine (island) water quality monitoring. Marine water quality monitoring follows the Malaysian Marine Water Quality Criteria and Standards (MWQCS) and includes a comprehensive suite of physicochemical and biological parameters.</p>	<p>DoE, 2009</p>	
<p>Are there annual (or recurrent) reports on the following:</p> <ol style="list-style-type: none"> Status of marine areas and habitats under formal protection Status of species under formal protection Status of coastal water quality Number of reported pollution incidents 	<ol style="list-style-type: none"> Annual Reef Check report from 2006-2011 DOF Annual reporting to IOSEA on turtles conservation and the Department of Fisheries Annual Report Annual Environmental Quality Report (EQR) (1975 to present) As in (c) above. National stocktaking exercises for Biodiversity monitoring, such as the one carried out in the preparation of the Fourth National Report, is extremely useful as it provide a platform for a thorough review of the progress made in various sectors towards the implementation of 	<p>Prip et al, 2010</p>	<p>Yes for c. (refer to EQR) and d. (refer to Compendium 2010 – pg 42. Oil Pollution Incidents 2009)</p>

	the NPBD.		
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment	No clear designation on the monitoring of fisheries impact.		
What are the strengths and weaknesses of marine & coastal monitoring?	<p>Please note that the answer provided is pertaining only to water quality monitoring:</p> <p>Strengths:</p> <ul style="list-style-type: none"> · Condition of water quality status · As a planning tool for structural development (refer to - marine water quality criteria and interim standard) <p>Weaknesses:</p> <ul style="list-style-type: none"> · Monitoring is costly exercise · Time consuming · Wide area coverage (logistical issues) · Seasonal weather 		·
C.3 Financial and economic mechanisms			
Are there any financial <i>support</i> for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?	The potential of ecotourism as a significant source of funds for conservation is yet to be realized. Although a number of trust funds, such as the Marine Parks Trust Fund and the Taman Negara Trust Fund are in place to tap revenue from park entrance fees, the development of this source of funds is hampered by a common perception that additional charges on top of entrance fees, hotel room rates, etc will affect visitor numbers.		

<p>Are there any financial <i>incentives</i> for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?</p>	<p>Incentive measures are yet to be fully developed. Although financial incentives have previously been offered in the form of development budgets for the establishment of national parks and Ramsar sites, these incentives are generally deemed not politically expedient or economically worthwhile to the states. Although it has been explored in a number of studies, and some state governments have voiced interest, the payment for ecosystem services (PES) concept has yet to be implemented. At the ground level, however, monetary rewards are available to members of the public who provide accurate tip-offs of wildlife crimes e.g. illegal logging.</p>		<p>Polluter Pay Principle</p> <ul style="list-style-type: none"> • Industrial premise install treatment system (land-based) • Oil spillers responsible for the cost of clean up process.
<p>C.4 Constraints For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc</p>			
<p><i>Potential constraint</i></p>			
<p>Budgets for salaries to allow for sufficient staff numbers in Ministry/Department</p>	<p>7</p>		
<p>Budgets for operations of Ministries/departments (i.e. For activities)</p>	<p>6</p>		
<p>Budgets for enforcement of management measures e.g.</p>	<p>5</p>		
<p>Capacity levels of staff in Ministries/departments</p>	<p>1</p>		
<p>Clarity in the specification of roles and responsibilities between different parties responsible for implementation</p>	<p>2</p>		
<p>Supportive regulations/laws giving effect to policy content</p>	<p>8</p>		
<p>Coherence with other sectoral and national policies</p>	<p>3</p>		
<p>A monitoring and evaluation (M&E) system to check on policy implementation</p>	<p>4</p>		
<p>Other (add bullets as necessary, specify)</p>			
<p>To what extent, how well, and how are policies communicated and disseminated</p>			<p>Fairly good. A recent directive by the Government in 2012 to have mandatory requirement on public comments, engagement and participation by stakeholders</p>

Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
A.1: Policy and planning framework		
Is there a specific policy at national or state / provincial level, for integrated coastal management? If so, please provide a full reference.	<p>National Physical Plan II (2010): It contributes towards the conservation of the Country's biodiversity through its fourth objective to secure spatial and environmental quality and diversity for a high quality of life. Includes various relevant policy statements e.g.:</p> <ul style="list-style-type: none"> · NPP 22: Environmentally sensitive areas shall be integrated in the planning and management of land use and natural resources · NPP 24: Sensitive coastal and marine ecosystem shall be protected and managed in a sustainable manner <p>States that: The coastal zones of Peninsular Malaysia have generally been experiencing rapid development including large-scale reclamation for tourism and urban purposes. Policies are needed to control and guide these developments so that the potential threats to the marine and coastal ecosystems such as alteration and loss of habitat, coastal pollution, over exploitation and coastal erosion and deposition can be minimised and monitored.</p> <p>National Urbanisation Policy (2006)</p> <p>Common Vision on Biodiversity in Government and the Development Process (2008)</p> <p>Draft Policy on Marine Parks</p>	
What other strategy or planning documents have produced for ICM at either national or state / provincial levels?	<p>The National Physical Policy:</p> <p>We now have the National Physical Plan-2 (2010)</p> <p>The National Coastal Zone Physical Plan has been finalized and approved by the National Physical Planning Council in 2012.</p>	Town and Country Planning Department
Please list all key legislation that has been produced to enact ICM.	<p>No key legislation to enact integrated coastal management policies. However, the Town and Country Planning Department has provisions for producing the National Physical Plan-2 (2010) including CZM. The National Coastal Zone Physical Plan has been approved for implementation by the National Physical Planning Council in 2012.</p> <p>Fisheries Act 1985 cover provisions to gazette marine parks and marine reserves and also fisheries prohibited areas.</p>	Town and Country Planning Department
A.2 Development of ICM planning		
For national & state / provincial ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	Form of involvement (if any)	Level of involvement (low, medium or high)

Ministry of Planning (or equivalent) Federal and State Economic Planning Unit	Participates in consultative process	Medium
Ministry / Dept of Fisheries (or equivalent)	Participates in consultative process	High
Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
Ministry of Tourism (or equivalent)	Participates in consultative process	Medium
Ministry of Natural Resources and Environment (or equivalent)	Participates in consultative process	Medium
Other Ministries (please specify) Ministry of Transport	Participates in consultative process	Medium
Private sector interests: Industries/Processors/Supply Chain/Traders/Fishermen	Participates in consultative process	Medium
NGOs (eg. WWF/Fishermen Association)	Participates in consultative process	Medium
Civil society	Participates in consultative process	Low
Foreign donor driven projects		
Others (please specify)		
Is there any specified requirement in law with regards to who should be involved with ICM formulation?	No legal requirement but Town and Country Planning Department takes the lead	
When are the dates for the next major revisions/re-specifications of key policy documents?	National Physical Plan II 2010 to be reviewed in 2015 (every 5 years)	
Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 		

What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform ICM, and · the extent to which those research outputs are in informing policy 	Strengths . Weaknesses .	
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Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Fisheries	High		National Physical Plan II 2010
Aquaculture	High		
Tourism & recreation	High		
Port & industrial development	High		
Urban development	Medium		
Coastal defence development	Medium		
Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Transport	Medium		
Military use	Medium		
Environmental conservation	High		
Other (please specify)			
Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.	Yes (e.g. coastal fishing grounds, sustainable aquaculture through aquaculture industry zone, mangrove which serves as nursery grounds)		
Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.			
Are there specific provisions for co-management, what are these?	No		

What level / levels is ICM set at:	Comment	Supporting Reference
International (e.g. transboundary cooperation)	Low priority- No international program/projects in ICM	
National	High priority -	
State / Province	High priority	
Municipality	High priority	
Other (please specify)		
Does the plan specify mechanisms for user conflict management?	Poor. This mechanism is not well spelt out	Local Council Plan at the states
Does the plan specify mechanisms for user zoning?	Yes	
Does the plan specify mechanisms for stakeholder consultation?	Yes (revised every 5 years)	

Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
<i>Who are the main implementing authorities at:</i>	No specific implementing authority	
International level	Town and Country Planning Department	
National level	Town and Country Planning Department, State Economic Planning Unit, Local Councils	
State / Province level	Town and Country Planning Department, State Economic Planning Unit, Local Councils	
Municipality level		
Other levels (please specify)	Yes (Provision of EIA and detailed EIA under the Environmental Quality Act)	
<i>Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?</i>	Frequently referred in development planning process	
<i>How is coastal zoning used in the development planning process?</i>	Location dependent and dominance of economic activity in a particular location	
<i>Do any particular coastal users or sectors have priority in terms of resource allocation?</i>	No special mechanism except review of National Physical Plan II every 5 years.	
<i>What mechanisms are there for reviewing coastal development priorities?</i>	No specific implementing authority	

Acronyms

CEMD	Conservation and Environmental Management Division
DID	Department of Irrigation and Drainage
DMPM	Department of Marine Park Malaysia
DOA	Department of Agriculture
DOE	Department of Environment
DOFM	Department of Fisheries, Malaysia
DWNP	Department of Wildlife and National Parks
EKOMAR	Marine Ecosystem Research Centre at UKM
IOES	Malaysia Institute of Ocean and Earth Science at Universiti Malaya
JPBD	Town and Country Planning Department
JTED	Juvenile Turtle Exclusion Device
MACRES	Malaysia Center for Remote Sensing
MBBN	<i>Majlis Biodiversiti-Bioteknologi Negara</i> (National Biodiversity-Biotechnology Council)
MNP	Marine National Parks
MOA	Ministry of Agriculture and Agro-based Industries
MOSET	Ministry of Science, Environment and Technology
NAP	The National Agro-Food Policy
NBSAP	National Biodiversity Strategic Action Plan
NPBD	National Policy on Biological Diversity
NPE	National Policy on the Environment
NRE	Ministry of Natural Resources and Environment
PSA	Productivity Susceptibility Analysis
NPP II	National Physical Plan II
SEA	Strategic Environmental Assessment
VPA	Virtual Population Analysis

Appendix J: Indonesia

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
Please list all relevant formal sector-specific fisheries policy documents and items of legislation? E.g. documented policy, master plans and key legislation	<ul style="list-style-type: none"> • Law Number 31/2004 as partially amended by law no. 45/2009 concerning Fisheries • Law No.27/2007 concerning Coastal Management • Government Regulation No. 60/2007 concerning Fisheries Resources Conservation • Minister of Marine Affairs and Fisheries Regulation No 06/ 2010 concerning Strategic Plan of Ministry of Marine Affairs and Fisheries 2010 – 2014 • Minister of Marine Affairs and Fisheries Decrees, e.g.No. 01/2009 concerning Fisheries Management Area, No 05/2008 as amended Minister of Marine Affairs and Fisheries Decree No 12/2009 concerning Capture Fisheries Business, No 18/2010 concerning Fishing Logbook, No. 06/2010 concerning Fishing Gear in Fisheries Management Area of Indonesia, No. 02/2011 concerning Fishing Line and Fishing Gear Aids, No 30/ 2004 concerning Installing and Utilization of Fish Aggregate Device, No 06/ 2010 concerning Fishing Gear in Indonesia Fisheries Management Area, No. 16/2006 concerning Fishing Port, No. 13/2004 concerning control of Andon (temporary migrating) Fisherman 		
Please list all relevant <i>non-sectoral</i> policy documents of relevance to fisheries policy content and processes e.g. national development plans, national acts on decentralisation	<ul style="list-style-type: none"> • Law No. 32/2004 as partially amended by law No. 12/2008 concerning Local Government • Law No. 17/2008 concerning Shipping • Law No. 32/2009 concerning environmental protection and management • Law No. 41/1999 concerning forestry • National Midterm Development Plan 2010-2014 		
Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of fisheries policy. <i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</i>	<i>Stakeholder group</i>	<i>Active involvement in policy development (yes/no)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Political government staff at national level	Yes	1
	2. Political government staff at provincial or state level	Yes, particularly for their provincial/district waters	4
	3. Political government staff at local level	Yes, particularly for their provincial/district waters	6
	4. Technical government staff in fisheries ministry/department at national level	Yes	2
	5. Technical government staff in fisheries ministry/department at provincial level	Yes, particularly for their provincial/district waters	5
	6. Technical government staff in fisheries ministry/department at local/district level	Yes, particularly for their provincial/district waters	7

Section A. FISHERIES POLICY PROCESSES			
Question	Answer		
	7. Technical government staff in other sectoral ministries/departments	Yes – Ministry of Foreign affairs/trade and export /Transportation/ environment/ Forestry	8
	8. Catching sector representatives from large-scale/industrial sector	Usually through fisheries associations	10
	9. Catching sector representatives from small-scale/artisanal sector	Yes, usually Indonesia Fishermen Association (HNSI)	9
	10. Processing/marketing sector representatives	Yes, e.g. canning association	12
	11. Non-governmental organizations from civil society	Increasingly involved e.g. WWF, TNC, TELAPAK, TERANGI, etc participating in developing NPOAs and Fisheries Management Plans	11
	12. Donors and/or consultants funded by them	No	
	13. Academic representatives	Yes, e.g. IPB, UNDIP, UNHAS, UNBRAW, STP, UNPAD, etc	3
Is there any specified requirement in law with regards to who should be involved with policy formulation?	-		
How often does over-arching policy (e.g. national natural resource development) normally get reviewed/re-specified?	5 years		
When are the dates for the next major revisions/re-specifications of key policy documents?	2014		
Are there any examples in the last 5 years of government policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details of: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 	Development of Integrated fishing based industry, 2006, MPA as part of fisheries management tools, 2007, industry/government/political situation,		
Is there a documented fisheries research plan? If so what period does it cover?	Yes		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> · available research to inform policy, and 	Strengths <ul style="list-style-type: none"> · number of researchers 		

Section A. FISHERIES POLICY PROCESSES	
Question	Answer
<ul style="list-style-type: none"> the extent to which those research outputs are used in informing policy 	Weaknesses <ul style="list-style-type: none"> limited budget

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets/Indicators		
Does policy contain specific development <u>targets</u> for capture fisheries? Eg. Fisheries production, employment no's, etc. If so, pls elaborate?	Yes, 5.50 million tonnes in 2014	Strategic Planning for Development of Marine and Fisheries Affairs from 2010 – 2014 (MMAF, 2010)
Does policy contain specific management <u>targets</u> for capture fisheries? e.g. area under MPAs, etc? If so, pls elaborate?	Yes, targeted to add 4,5 million ha MPA's within 2010-2014, for a total MPA 15,5 million ha by 2014	MMAF, 2010
Does policy contain any other specific <u>targets</u> or <u>indicators</u> e.g. value of exports? If so, what are they? (List all)	Yes, e.g value of export USD 5,0 billion in 2014, fish consumption 38,67 per capita per year in 2014	MMAF, 2010
2. Fisheries Management		
Does policy contain a clearly articulated statement of long-term objectives. If so what.	Yes Vision: Indonesia as the largest producer of Marine and Fisheries product in 2015 ²¹ Mission: To increase the welfare of Marine and Fisheries Community Objectives: The key objectives for fisheries management as contained in the Fisheries Management Plan: I. To strengthen an integrated Marine and Fisheries' Human Resources and institution; II. To sustainably manage marine and fisheries resources; III. To increase scientific based productivity and competitiveness IV. To extend the access of the Domestic and International Market	MMAF, 2010
Does fisheries policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of management powers and responsibilities?	· Yes, as mandated in Law No. 32/2004 as partially amended by law No. 12/2008 concerning Local Government	
Does policy include attempts to expand national offshore fisheries e.g. through the use of larger vessels? if so, is such expansion at the expense of any foreign fishing interests currently operating in the country?	Yes	

²¹ MMAF Strategic Planning Document

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
Does policy specifically refer to small-scale fisheries and if so, in what way?	Yes, as mandated in Law Number 31/2004 as partially amended by law no. 45/2009 concerning Fisheries, provide support e.g capacity building, fisheries general infrastructure.	
Does policy specifically recognize and address any issues of over capacity? If so, what and how?	Yes, e.g assessment of fishing capacity and Indonesia fisheries fleet restructure,	
Does policy refer to and/or deal with IUU fishing? If so, in what way?	<i>Yes, e.g establishment of DG Control and Surveillance in 1999, strengthen MCS legislation through amendments of Law Number 31/2004 as partially amended by law no. 45/2009 concerning Fisheries</i>	
Does policy refer to the use of VMS?	Yes	
Does policy refer to need for integration/co-ordination with other sectoral policies?	Yes	
Does policy mention eco-systems management? If so, what measures are suggested?	Yes, as mandated in Law Number 31/2004 as partially amended by law no. 45/2009 concerning Fisheries, MMAF should establish, e.g fisheries management plan, conservation area, rehabilitation of fish stock and their environment	
Does policy include specific measures related to conflict management? If so, what are they?	Not clear	
Does policy include the use of fishery co-management and/or community management?	Yes, in accordance with Law Number 31/2004 as partially amended by law no. 45/2009 concerning Fisheries, fisheries management should consider local customary law, local wisdom and community involvement	
3. Financial/economic and marketing issues		
Does fisheries policy include mention of the need to support the traceability and/or certification of products	Yes, e.g. establishment of Indonesia catch certification system, fish product certification system	
Does policy refer to increasing value-added? If so, how is this to be achieved?	Yes. To increase fisheries (incl. aquaculture) productivity and profitability of fishers & fish-based producers, efforts are needed to increase market demand for value-added fish and aquaculture products.... <i>Strategic productivity improvement efforts should focus on post-capture handling, storing, value-added processing technologies and marketing of fish & aquaculture products</i>	NMTPF 2010-2014 (Gol, 2009a)
Does policy refer to tariff barriers and/or free trade areas in the region?	No	
Does policy seek to increase exports?	Yes	

Section B: FISHERIES POLICY CONTENT	Answer	Supporting Reference
4. Socio-economic and poverty issues		
Does policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Yes. MMAF Development (Pro Poor, Pro Job, Pro Growth and Pro Sustainability)	(MMAF, 2010)
Does policy include mention of, or provide for, micro-finance?	Yes, Small scale fisheries empowerment and business development	(MMAF, 2010)
Does policy include reducing the number of those engaged in fishing maintaining current numbers, or increasing/maximizing employment?	Policy guided to maintain production from capture fishery and increasing product from aquaculture activities	(MMAF, 2010)
Does policy refer to food security? If so, to what extent (if at all) is policy specific about whether fisheries should provide direct food security (i.e. fish being consumed domestically) or indirect food security (fish exported with money then available for food imports)	Yes, include in MMAF food security priority	(MMAF 2010)
Does policy include assistance to fishers to leave the fisheries sector or to supplement livelihoods from non-fishing activities?	Yes	
5. Overall impression of policy trends		
<p>In summary, what are the main trends and changes in fisheries policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations.</p> <p>Stronger devolution of centred fisheries management to decentralization system under purview of Law No. 32/2004 as partially amended by law No. 12/2008 concerning Local Government. Stronger effort to prevent, deter and eliminate IUU activities through amendment of Law Number 31/2004 as partially amended by law no. 45/2009 concerning Fisheries. Stronger effort to conserve fishery resources through Government Regulation number 60/2007 on Fishery Resources Conservation</p>		

Section C: FISHERIES POLICY IMPLEMENTATION		
1. Management strategies giving effect to policy intent with respect to environmental sustainability, economic efficiency and social issues	Answer	Supporting Ref'
Are there any harvest control rules with documented trigger points after which point they would be applied e.g. target reference points relating to biomass, cpue, MSY, etc	There are global TACs set for group of species (demersal, small pelagic, large pelagic, shrimp, lobster and reef fish)	National commission for fish stock assessment, 2010
Is the MSY concept applied and how old are the most recent MSY estimates?	0.8 BMSY is a perceived TAC. Fisheries are managed across 11 Management areas, divided by Indonesian scientists based on bio-ecological approach, fisheries biodiversity, bathymetry, as well as considering FAO statistical numeration, IMO and IHO water areas. 2010.	Arrangement of Indonesia FMA, book 1 (2007)
Are there any species-specific management plans in place? If so for which species	Yes, eg. Lemuru of Bali Strait	
Which of the following input fisheries management are used if any <ul style="list-style-type: none"> • <u>limited</u> licensing (i.e. licence numbers are limited as opposed to meaning that having a licence is a requirement to fish) • effort management e.g. days at sea restrictions • closed areas • MPAs • closed seasons • gear restrictions (banned gears) • other (specify) Pls provide as much detail as possible for different fisheries/fleets	<ul style="list-style-type: none"> • Limited licensing through application of licensing system (Yes, there are specific licence moratoriums for some fisheries - they are call Decrees, but only applied at National level, > 30 GT) • Effort management: No • Closed areas: Yes through fishing zone application • MPAs: Yes . Districts now declaring their own MPAs, and already have community-based mgt areas, and traditional/indigenous MPAs • Closed seasons: No • Fishing gear restrictions and fishing gear zone application. • other (specify): fishing log-book, FAD 	Richard Banks, pers. comm., 1 June 2011

<p>Which of the following output fisheries management are used if any if any:</p> <ul style="list-style-type: none"> · TACs · minimum landing sizes · bycatch minimisation · fish escapement rates · other (specify) <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<p>Not applicable</p>	
<p>Which of the following technical fisheries management are used if any</p> <ul style="list-style-type: none"> · Mesh-size restrictions · Other <p>Pls provide as much detail as possible for different fisheries/fleets</p>	<ul style="list-style-type: none"> · Mesh-size restrictions. Yes e.g, in Arafura shrimp fishery, mesh size limitation for Bunt · Other: Application of BRD and TED in Arafura Shrimp fisheries 	
<p>What form of rights based management measures are in operation if any e.g. Individual quotas, community quotas, individual transferable quotas, etc</p>	<p>Not applicable</p>	
<p>Which of the following payments/charges (if any) are imposed on the private sector</p> <ul style="list-style-type: none"> · landings charges · licence fees · harbour dues · import duties · export duties · other <p>and what are the levels of charges involved?</p>	<ul style="list-style-type: none"> - Landing charges for service rendered in fishing port - Licence fees applied - harbour dues for service rendered in fishing port - import duties applied according to trade regulation - export duties applied according to trade regulation 	

<p>Are any subsidies provided to fishermen in the form of:</p> <ul style="list-style-type: none"> • fuel tax/price reductions • import/export duty waivers • vessel construction funds • other <p>i.e. these subsidies might be considered 'bad subsidies' not compatible with environmental sustainability due to their ability to increase fishing capacity</p>	<p>Limited fuel subsidies for small scale fishing business</p>	
<p>Are any subsidies provided to fishermen in the form of grants/funds in support of</p> <ul style="list-style-type: none"> • improved gear selectivity • reduced environmental impacts • quality improvements • product innovation • other <p>i.e. these subsidies might be considered 'good subsidies' and compatible with sound policy objectives</p>	<p>Other: Government support on alleviating poverty for coastal community</p>	

2. Constraints to effective policy implementation	
For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc	
<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	2
Budgets for operations of Ministries/departments (i.e. For activities)	2
Budgets for enforcement of management measures e.g. For MCS operations	1
Capacity levels of staff in Ministries/departments	1
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	3
Supportive regulations/laws giving effect to policy content	2
Coherence with other sectoral and national policies	3
A monitoring and evaluation (M&E) system to check on policy implementation	2
Other (add bullets as necessary, specify)	
To what extent, how well, and how are policies communicated and disseminated	
To the extent of duty and operational budget	

MARINE ENVIRONMENTAL POLICY CONTENT AND IMPLEMENTATION

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES	
<p>Please list all relevant marine environmental policy documents and items of legislation? E.g. documented policy, master plans and action plans.</p>	<ul style="list-style-type: none"> • National Strategies and Wetland Management Action Plan • Biodiversity Action Plan for Indonesia (BAPI) 1993 • Indonesian Biodiversity Strategy and Action Plan 2003 - 2020 (IBSAP) 2003. • Sectoral Strategic Plans (2005 - 2009) • National Development Plan 2000 - 2004 (PROPENAS) • Medium Term Development Plan (Presidential Regulation No.7/2005 on the National Medium Term Development Plan) • National Action Plan for Climate Change (RANPI=Rencana Aksi Nasional Perubahan Iklim)
<p>Please list the key legislation covering the following areas:</p> <ol style="list-style-type: none"> a. Marine and coastal habitat conservation b. Endangered threatened and protected species c. Land-based pollution control d. Marine-based pollution control e. Environmental impacts assessment f. Environmental standards (e.g. water quality) 	<p><i>Marine and coastal habitat conservation</i></p> <ul style="list-style-type: none"> • Act on the conservation of biological resources and their ecosystems (Act No. 5 of 1990) • Decree No. 1 of the Minister of Agriculture on the Conservation of the Riches of the Fish Resources of Indonesia • Law on Forestry (Law No. 41 of 1999) • Act No. 27/2007 on management of coastal zone and small island • Government Regulation No. 19/1999 on Coastal and Marine Pollution and Degradation Control • Minister of Environment Decree No. 4/2001 on Criteria of Coral Reef Degradation • Minister of Environment Decree No. 51/2004 on Marine Water Quality Standard • Minister of Environment Decree No. 200/2004 on Criteria of Sea-grass Degradation • Minister of Environment Decree No. 201/2004 on Criteria of Mangrove Degradation • Law no. 27/2007 concerning Coastal and Small Islands Management • Government Regulation (GR) no. 64/2010 concerning Disaster Mitigation • GR no. 62/2010 concerning Utilisation of Small Islands In The Border Area • Ministerial Regulation (MR) no. 16/2008 concerning Management Plan of Coastal and Small Islands • MR no. 17/2008 concerning Conservation Area In Coastal and Small Islands • MR no. 20/2008 concerning Utilisation Small Islands <p><i>Endangered threatened and protected species</i></p> <ul style="list-style-type: none"> • Act No. 5/1990 on Conservation of Biological Resources and its Ecosystem <p><i>Land-based pollution control</i></p> <ul style="list-style-type: none"> • Act-No.18/2008 concerning Waste Management • Government Regulation No. 82/2001 on Water Management and Pollution Control • Decree of the Minister of Energy and Mineral resources No. 1457 K/28/MEM/2000 on the Technical Guidance for environmental management in the mining and energy sector

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
<ul style="list-style-type: none"> • Decree of the State Minister for Environment No. 133/2004 on the standard quality of emission for activities of the fertilizer industry Marine-based pollution control • Presidential Decree No. 46/1986 on Ratification of MARPOL 73/78 Annex 1 • Presidential Regulation No. 109/2006 concerning National Oil Spill Contingency Plan • Minister of Environment Regulation No. 05/2009 on Reception Facilities Environmental impacts assessment • Government Regulation No. 27/1999 on Environmental Impact Assessment • Government Regulation of the Republic of Indonesia regarding environmental impact assessment (No. 51 of 1993) • Strategic Environmental Assessment (KLHS = KajianLingkunganHidupStrategis) Act No. 32/2009) Environmental standards • Government Regulation No. 19/1999 on Coastal and Marine Pollution and Degradation Control • Minister of Environment Decree No. 4/2001 on Criteria of Coral Reef Degradation • Minister of Environment Decree No. 51/2004 on Marine Water Quality Standard • Minister of Environment Decree No. 200/2004 on Criteria of Sea-grass Degradation • Minister of Environment Decree No. 201/2004 on Criteria of Mangrove Degradation Other • Government Regulation No. 38/2007 on Task division between Central, Provincial, and Kabupaten Governments. – Act number 32/2004 as amended by act number 12/2008 on concerning local goverment 			
<p>Which of the main stakeholder groups are typically <u>actively</u> involved in the specification of marine environmental policy.</p> <p><i>Please provide a ranking in terms in terms of their <u>influence</u> on policy content, with 1 as the most important stakeholder group, 2 the second most important stakeholder group, etc</i></p>	<i>Stakeholder group</i>	<i>Active involvement in policy development (y/n)</i>	<i>Ranking of importance in determining policy (1 being the most important)</i>
	1. Political government staff at national level	Yes	1
	2. Political government staff at provincial or state level	Yes	2
	3. Political government staff at local level	Yes	2
	4. Technical government staff in environmental ministry/department at national level	Yes	2
	5. Technical government staff in environmental ministry/department at provincial level	Yes	2
	6. Technical government staff in environmental ministry/department at local/district level	Yes	2
	7. Technical government staff in other sectoral ministries/departments	Yes	2

Section A: MARINE ENVIRONMENTAL POLICY PROCESSES			
	8. Public sector industry	Yes	2
	9. Private sector industry	Yes	2
	10. Non-governmental organizations from civil society	Yes	2
	11. Donors and/or consultants funded by them	Yes	2
	12. Other (please specify)		
Is there any specified requirement in law with regards to who should be involved with policy formulation?			
When are the dates for the next major revisions/re-specifications of key policy documents?	It depends on the important subject to be reviewed; usually every five years should be reviewed.		
Are there any examples in the last 5 years of government environmental policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> • what the policy change was • when the change occurred, and • which stakeholder group was the driver of change. 	Yes <ul style="list-style-type: none"> • Act 32/2009 Environmental Protection and Management • Year 2009 • House of Representative 		
What are the main strengths and weaknesses with regards to: <ul style="list-style-type: none"> • available research to inform policy, and • the extent to which those research outputs are in informing policy 	Strengths <ul style="list-style-type: none"> • Baseline data to develop or review policy • Stronger policy (scientific based policy) Weaknesses <ul style="list-style-type: none"> • To some extent, the capacity of the country (provinces, local level and industries) cannot meet the requirement as written in the policy. • In some cases, research outputs are too sophisticated to be implemented. • High cost 		

Section B: MARINE ENVIRONMENTAL POLICY CONTENT	Answer	Supporting Reference
1. Policy Targets / Indicators		
<p>Does policy contain specific marine environmental management targets or indicators in the following areas:</p> <ol style="list-style-type: none"> 1. Inter-tidal and sea areas under formal MPA protection 2. Marine species to be brought under formal protection 3. Coastal, estuarine & river water quality targets (i.e. proportion achieving a recognised Good Environmental Status) 4. Pollution/effluent control targets 5. Any other quantitative environmental targets (pls specify) 	<p>Objectives, goals, and indicators under the IBSAP were established prior to the 2010 targets launched through COP 7 (decision VII/30) in 2004, therefore substantial content under the IBSAP does not reflect the 2010 targets; however, the new strategy addresses biodiversity challenges in Indonesia. However, several indicators under the IBSAP apply the indicators under the UNCBD and national indicators for measuring the 2010 target achievement.</p> <p>The 2010 Biodiversity targets are largely non-quantitative, with the exception of the aim to that the national marine conservation area will be expanded from 4.7million ha in 2003 to 10 million ha in 2010, and will be increased to 20 million ha in the year 2020</p> <ol style="list-style-type: none"> 1. See MPA on fisheries section 2. Yes (renstra ditjen. KP3K) 3. Not clear (dit.pesisir ditjen.KP3K) 4. Yes, under effluent standards and discharges permits 5. Not clear 	Gol, 2009
2. Marine environmental management		
Does marine environmental policy (as opposed to national non-sectoral policy) specifically provide for decentralisation / devolution of environmental management powers and responsibilities?	<ul style="list-style-type: none"> • Yes, as mandated in Law No. 32/2004 as partially amended by law No. 12/2008 concerning Local Government 	Gol, 2009; Gol, 2007
<p>Does marine environmental policy specifically focus on the impacts of fishing on the marine environment in terms of:</p> <ol style="list-style-type: none"> a. Bycatch and discards? b. Interactions with endangered, threatened & protected species? c. Impacts on sensitive or vulnerable habitats d. Impacts on the trophic structure of marine ecosystems e. Introduction of alien or exotic species 	<ol style="list-style-type: none"> a. No b. Yes c. Yes d. Not clear e. Yes 	
If these issues are not covered by environmental policy, are they covered in fisheries policy?	Partially covered in the fisheries policy	

Is there any policy with regard to the use of MPAs or other spatial mechanisms for marine environmental management or conservation?	Yes	
Does policy for MPA development recognize the need for a <i>coherent network of integrated MPAs</i> rather than simply isolated MPAs created for vulnerable habitats? If so, briefly state how this has been achieved.	Yes. - The government of Indonesia has develop national plan for MPA networks - Through The Coral Triangle Initiative, Indonesia / Philippines /Malaysia/Timor Leste/Papua New Guinea/Solomon Islands committed to work collaboratively toward effective management of MPAs and networks in the region. - In 2002, the then IUCN WCPA South-east Asia Marine Working Group (WCPA SEA Marine) developed a Regional Action Plan to Strengthen a Resilient Network of Effective MPAs in Southeast Asia 2002-2012 (RAP) (Fortes et al., undated)	
Have MPAs been specifically developed to protect the following: a. Fish stocks (with no take zones, gear restrictions, etc) b. Critical habitats (e.g. coral reefs, mangroves, etc) c. Certain species Please give details where possible.	a. Yes, designation of no take zone and limited/sustainable fisheries zone in MPA management system b. Yes, initial designation of MPA partially based on need to conserve critical habitat c. Yes, e.g. marine mammal, endemic species and threatened species (cetaceans, turtles, dugongs, Banggai Cardinal Fish)	
Does marine environmental policy consider the impacts of land-based pollution on the marine environment?	Yes	
Does marine environmental policy consider the impacts of marine activities and related pollution on the marine environment? E.g. oil and gas, vessel discharges, marine debris,	Yes	
Does environmental policy refer to issues of poverty? If so, in what capacity e.g. references to PRSPs, non-fisheries sector poverty reduction strategies, etc	Yes The Gol's Poverty Reduction Strategy (PRS) is incorporated into the Medium Term Development Plan, with a programme designed to enhance community empowerment through a strong focus on bottom-up policy design and implementation. PNPM Mandiri (National Program on Community Empowerment) was launched in 2007. The main objective is to increase community involvement in the development, to increase community independency, especially to the poor community. The implementation of PNPM Mandiri also aims to help achieve MDGs' targets.	

<p>Is climate change and the impact on the marine and coastal environment specifically mentioned in environmental policy? If so, please provide brief details</p>	<p>Yes. National Action Plan on Climate Change (2008) includes coastal and marine environment in special chapter. One of the local programs under PNPM Maritime & Fishery is the program of coastal community empowerment, which is integrated with The Ministry of Marine Affairs and Fisheries' program. Under this program, biodiversity considerations have been included which is the monitoring of marine and fishery resources.</p>	
<p>3. Overall impression of policy trends</p>		
<p>In summary, what are the main trends and changes in environmental policy over the past 10 years. Please also consider that the seriousness with which a certain policy is pursued can often be measured by the share of the budget allocated to it, or by whether it finds expression in specific legislation or regulations. Environmental management has already shifted from national responsibility to local government under purview of Law No. 32/2004 as partially amended by law No. 12/2008 concerning Local Government.</p>		

Section C: MARINE ENVIRONMENTAL POLICY IMPLEMENTATION	Answer	Supporting Reference
<p>C.1: Impact assessment</p>		
<p><i>What are the main management mechanisms for MPAs (please provide a brief description of each where appropriate):</i></p> <ul style="list-style-type: none"> a. <i>Restricted access (complete or partial by different groups?)</i> b. <i>Restricted use (seasonal e.g. certain activities are prohibited at all or certain times of year)</i> 	<p>Zoning system is the main management mechanisms, where MPA divided into zones reflected to its purposed (core zone/no take zone, sustainable fisheries zone, limited utilization zone)</p>	
<p><i>What are the main monitoring mechanisms for MPAs (please provide a brief description of each where appropriate):</i></p> <ul style="list-style-type: none"> a. <i>Land-based rangers/checks</i> b. <i>Sea-based patrols</i> c. <i>Remote monitoring (e.g. air, satellite & telemetry)</i> d. <i>Other?</i> 	<ul style="list-style-type: none"> a. Yes b. Yes c. Not yet d. Community based surveillance 	

<p>What forms of activity require an environmental impact assessment (EIA)?</p>	<p>Biodiversity has been considered in AMDAL. Act No. 5/1990 on Conservation of Biological Resources and its Ecosystem is used in considering types of activities that are requiring AMDAL. These considerations are legally binding through Environmental Ministerial Decree. Sectors that are requiring AMDAL such as mining and energy, health, public works, agriculture, tourism, transmigration and forest-cleared settlement, industries, transportation, trade, defence, nuclear development, forestry, and hazardous control. In addition, based on Government Regulation No. 27/1999 on Environmental Impact Assessment and Ministerial Decree No. 08/2006, one of the environmental components that should be evaluated in determining the importance of impact is biodiversity.</p>	
<p>What are the main strengths and weaknesses of the EIA system?</p>	<p>Strengths:</p> <ul style="list-style-type: none"> • Clear identification of environmental impacts by sectors. • Evaluation of EIA in the commission reviewed by experts and key stakeholders. • Public involvement <p>Weaknesses:</p> <ul style="list-style-type: none"> • Effective public participation is hindered by ineffective procedures of public access to get the information, the lack of human resources available to support information management and service to the public, and the lack of awareness of the public on their right of access to information. 	<p>Indonesian Centre for Environmental law (ICEL), Access to Information, Participation and Justice in Indonesia, 05/04/2005 and Indonesian NGO Movement for Public Access to Information & The Struggle for Enactment of a Freedom of Information Act, Josi Khatarina (ICEL), Conference on Freedom of Information and Civil Society in Asia held by Information Clearinghouse Japan in 13-14 April 2001</p>
<p>Is there any requirement to conduct cumulative environmental assessments? E.g. the impacts of multiple developments must be considered in combination. If yes, please provide brief details</p>	<p>The Government Regulation on the Analysis of Environmental Impacts (1999) includes a requirements to assess the "cumulative nature of impacts" of any particular business or activity..</p>	

C.2 Marine environmental monitoring		
What are the main <i>monitoring</i> mechanisms for marine pollution control, its enforcement, and the prosecution of offenses <ol style="list-style-type: none"> a. <i>Land-based rangers/checks</i> b. <i>Sea-based patrols</i> c. <i>Remote monitoring (e.g. air, satellite & telemetry)</i> 	<ul style="list-style-type: none"> • Local government monitoring program for industrial effluent discharges. • The enforcement is base on the monitoring report and active public participation. 	
Has a comprehensive 'State of the Environment' report been produced that includes coastal and marine areas? If so, when was this produced and when was it last updated (or is scheduled)?	Yes. Annually. The report year 2009 is the last updated. The state of environment report for 2010 is being prepared.	
Are there annual (or recurrent) reports on the following: <ol style="list-style-type: none"> a. Status of marine areas and habitats under formal protection b. Status of species under formal protection c. Status of coastal water quality d. Number of reported pollution incidents 	Yes Yes Yes, but not all coastal areas Yes, but not all pollution incidents	
Is there a clear designation of institutional responsibilities for the monitoring of fisheries impacts on the marine environment	Not clear	
What are the strengths and weaknesses of marine & coastal environmental monitoring?	<p>Strengths:</p> <ul style="list-style-type: none"> • Base line data • Scientific proof for pollution incidents that can be used for enforcement <p>Weaknesses:</p> <ul style="list-style-type: none"> • High cost • Availability of the certified environmental lab. 	
C.3 Financial and economic mechanisms		
Are there any financial <i>support</i> for coastal users to control pollution e.g. subsidies for treatment & control mechanisms?	No	
Are there any financial <i>incentives</i> for coastal users to control pollution e.g. a polluter pays approach, penalties for infringements or need to pay for clean up and restoration costs?	Yes.	

C.4 Constraints

For all factors below potentially acting as a constraint to the implementation of policy, please rank their importance in relation to each other, assign a '1' to the most important constraint, a '2' to the second most important constraint, etc

<i>Potential constraints</i>	<i>Scale of constraint 1 – 5 with 1 as very important</i>
Budgets for salaries to allow for sufficient staff numbers in Ministry/Department	2
Budgets for operations of Ministries/departments (i.e. For activities)	1
Budgets for enforcement of management measures e.g.	2
Capacity levels of staff in Ministries/departments	1
Clarity in the specification of roles and responsibilities between different parties responsible for implementation	1
Supportive regulations/laws giving effect to policy content	4
Coherence with other sectoral and national policies	2
A monitoring and evaluation (M&E) system to check on policy implementation	3
Other (add bullets as necessary, specify)	

To what extent, how well, and how are policies communicated and disseminated

Note: Different definitions in different laws can be a major issue. For example, "protected area" (kawasan lindung) is differently defined in the Fishery Act No. 9 of 1985, Conservation of Biodiversity and Eco-system Act No. 5 of 1990, Forestry Act No. 41 of 1999, and the Spatial Act No. 24 of 1992. Definition of "fish" (ikan) is also different. In the Fishery Act No. 9 of 1985, it is widely defined as "harvested" and includes marine turtles, marine mammals, shellfish, and so on, and, Biodiversity and Ecosystem Act No. 5 of 1990 protects endangered fish and wild life.

Integrated Coastal Management (ICM) policy and implementation

Section A: ICM POLICY PROCESSES	Answer	Supporting Reference
A.1: Policy and planning framework		
Is there a specific policy at either national or state / provincial level, for integrated coastal management? If so, please provide a full reference.	No national and policy framework on ICZM before 2007. It indicated by a sectoral approach. Act No 27/2007 the Coastal and Small Island Management (CSIM) Law regarded as a <i>de facto</i> ICZM policy framework with Ministry of Marine Affairs and Fisheries appointed as leading agency (Art. 53, with decentralised delegation at Provincial (Art. 54) and municipal (Art. 55) levels). Includes Marine Zoning (article 9) (obligation to provide access (social and economic) for local communities). Law No. 27, 2007 on Coastal and Small Island Management defines coastal as an area between the inland boundaries of coastal sub-district up to 12 miles to the sea. Like the decree, the law states that the management planning of the coastal area should employ integrated coastal management approach. This is done through the integration of regional sectoral plans, which emphasises harmonisation. This law also acknowledges the right of traditional communities to manage their coastal resources by traditional law/regulation. However, due to resistances from various stakeholders over some articles on the potential privatisation of the coast (Hak Pengusahaan Perairan Pesisir or HP3), the law is being legally reviewed.	WorldFish Centre, 2010
What other strategy or planning documents have produced for ICM at either national or state / provincial levels?		
Please list all key legislation that has been produced to enact ICM.	<ul style="list-style-type: none"> • Act No 27/2007 on management of coastal zone and small island • Law 32/2009 (Environmental Protection and Management) • Law 18/2008 (Municipal Waste Management Act) • Law 32/2004 established a decentralized coastal zone, under provincial administration that extends up to 12 nautical miles from the coastal shoreline and over one-third of the provincial waters, seaward from the island shoreline, under local government administration. • Decree on General Guidance for Integrated Coastal Management Keputusan Menteri Kelautan dan Perikanan No.10/MEN/200). As it is explicitly stated in the title, this decree adopts an Integrated Coastal Management approach. This decree is a response to both laws on decentralization and an anticipation for possible inter-sectoral and horizontal/vertical inter/intra governmental conflicts. The decree is meant to integrate sectoral planning, the planning of different level of government, land-based and marine-based ecosystems as well as to integrate science and management. • Law No. 24/1992 regarding Spatial Planning 	MFF, 2008

A.2 Development of ICM planning		
For national & state / provincial ICM, who are the main stakeholders, how are they involved in the development process and to what extent?	Form of involvement (if any)	Level of involvement (low, medium or high)
Ministry of Planning (or equivalent)		
Ministry / Dept of Fisheries (or equivalent)	The Ministry of Marine Affairs and Fishery (MMAF) is the responsible authority at central level, with offices dealing with marine and fishery issues at provincial and regency/city levels.	CSIM
Ministry of Tourism (or equivalent)		
Ministry of Environment (or equivalent)		
Other Ministries (please specify)		
Private sector interests		
NGOs		
Civil society		
Foreign donor driven projects	COREMAP and CTI have both been strong drivers for ICM in Indonesia. But are limited in geographic scope and time-limited. They are useful for demonstrating 'best practise' but their replication elsewhere is limited.	
Others (please specify)	After the MoMAF came into being, several regencies and cities such as Pesisir Selatan of West Sumatra Province, Bengkayang of West Kalimantan Province, Bontang city of East Kalimantan Province and North Minahasa of North Sumatra Province enacted coastal spatial plans.	Dahuri, R. (2006).
Is there any specified requirement in law with regards to who should be involved with ICM formulation?		
When are the dates for the next major revisions/re-specifications of key policy documents?		
Are there any examples in the last 5 years of government ICM policy being changed because of active lobbying for change by a particular interest group? If yes pls provide details: <ul style="list-style-type: none"> · what the policy change was · when the change occurred, and · which stakeholder group was the driver of change. 		

<p>What are the main strengths and weaknesses with regards to:</p> <ul style="list-style-type: none"> available research to inform ICM, and the extent to which those research outputs are in informing policy 	<p>Strengths</p> <ul style="list-style-type: none"> . <p>Weaknesses</p> <ul style="list-style-type: none"> Before the enactment of the CSIM Law, the coastal zone was managed through single-sector legislation governing at least 14 economic development sectors. Management of coastal areas had become a continuous conflict of interests among the government institutions whose authorities are named in each sectoral law. This fragmented coastal zone management resulted in overlapping policies, regulations, and planning, and the conflicts of authority led to legal uncertainty for stakeholders and investors and to degradation of coastal resources. An overlap remains between the central government's authority to designate protected areas and local governments' authority to demarcate coastline. It is still unclear what the authority of the local government really is. To address this issue, MMAF has compromised by initiating Local Marine Conservation Areas (LMCA). These efforts cannot, however, solve the problem of jurisdictional conflict between the national park authority, which is under the Ministry of Forestry, and local government, which means that the planning and implementation of a national marine protected area network remains problematic. 	
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Section B: ICM POLICY CONTENT	Answer		Supporting Reference
What are the main sectors covered by the ICM policy / plan and where does the main emphasis lie	State high, medium or low	Comment	
Fisheries			
Aquaculture			
Tourism & recreation			
Port & industrial development			
Urban development			
Coastal defence development			
Transport			
Military use			
Environmental conservation			
Other (please specify)			

Does the policy specifically include capture fisheries and aquaculture interests in ICM planning? If so, please elaborate.	MMAF created the National Committee for Marine Conservation (NCMC) prior to the adoption of the CSIM Law to promote coordination and collaboration among coastal zone stakeholders. The NCMC has three focus areas: establishing a marine protected area network; (b) conservation of biodiversity; and (c) sustainable fisheries. By establishing a focal area for sustainable fisheries, the MMAF has tried to reconcile fisheries within the conservation management framework.	
Are there any specific ICM development or management targets (or indicators) contained in the plan? If so, please list.	No?	
Are there specific provisions for co-management, what are these?	<p>Yes, in Law No. 31/2004 for fisheries. Some argue this is weak and that some legislation (e.g. Ministry Decree No 6/2008 on the permit of trawl and the Ministry Decree No 5/2008 on fisheries cluster) disadvantages community-based co-management.</p> <p>Two decrees issued prior to the adoption of the CSIM Law provide for co-management in small island development, explicitly grant management rights to coastal communities, allow management based on customary law, and enable the participation of local institutions in monitoring. A third decree, on decentralized coastal management planning, provides for consultation with civil society during the planning process and for public participation in implementing the plans. In spite of these Decrees, significant inequities remain, with the private sector maintaining advantages over coastal communities in coastal management and development. The CSIM Law was formulated to establish a balance between popular and pro-market approaches.</p> <p>The CSIM Law facilitates stakeholder participation by enabling the formation of a Marine Partnership program (<i>Mitra Bahari</i>) as a mechanism for cooperation among the central government, local government, universities, civil society, and the private sector, it does not explicitly require that the results of community participation must be documented.</p>	
What level / levels is ICM set at:	Comment	Supporting Reference
International (e.g. transboundary cooperation)		
National		
State / Province		
Municipality		
Other (please specify)		
Does the plan specify mechanisms for user conflict management?		
Does the plan specify mechanisms for user zoning?		
Does the plan specify mechanisms for stakeholder consultation?		

Section C: ICM POLICY IMPLEMENTATION	Comment	Supporting Reference
<i>Who are the main implementing authorities at:</i>		
International level		
National level		
State / Province level		
Municipality level		
Other levels (please specify)		
<i>Are there any mechanisms for estimating the environmental costs of coastal development and weighing these against the developmental benefits?</i>		
<i>How is coastal zoning used in the development planning process?</i>		
<i>Do any particular coastal users or sectors have priority in terms of resource allocation?</i>		
<i>What mechanisms are there for reviewing coastal development priorities?</i>		

Acronyms

BAPI	Biodiversity Action Plan for Indonesia
BAPPEDA	Regional Development Planning Agency
BAPPENAS	National Planning and Development Agency
COREMAP	Coral Reef Rehabilitation and Management Program
CSIM	Coastal and Small Island Management
CTI	Coral Triangle Initiative
DEPDAGRI	Ministry of Home Affairs
DEPDIKNAS	Ministry of National Education
DEPHUT	Ministry of Forestry
DEPKEH	Ministry of Justice and Human Rights
DEPKEU	Ministry of Finance
DEPTAN	Ministry of Agriculture
MMAF	Ministry of Marine and Fisheries (also DKP)
Gol	Government of Indonesia
IBSAP	Indonesian Biodiversity Strategy and Action Plan
IMCAM	Integrated Marine and Coastal Area Management
IPCC	International Panel on Climate Change
KKLD	Local Marine Protected Area
KNLH	State Ministry of the Environment
LIPI	Indonesian Institute of Sciences
MCRMP	Marine And Coastal Resources Management Project
MMF	Mangroves for the Future
MTDP	Mid Term Development Plan (2005)
NCCMC	National Committee for Marine Conservation
Pemda	Local Government
RTRW	Regional Spatial Planning
NMTPF	National Medium-Term Priority Framework
SEA	Strategic Environmental Assessment
SSME	Sulu-Sulawesi Marine Ecoregion
VPA	Virtual Population Analysis

Appendix K: Summary of individual table responses

In the table overleaf, a summary analysis is provided. In interpreting the table, the following points should be noted:

1. A figure '1' in the table indicates that policy contains a specific reference to the issue under consideration;
2. A figure '0' in the table indicates that policy is not thought to contain a specific reference to the issue under consideration. A figure '0' has been used in cases where policy documents may imply an issue might be included, but are not specific about its inclusion. For example, if policy refers to 'credit', but not specifically to 'micro-finance', a figure '0' has been used. And as noted above, a figure '0' does not necessarily mean that a country is not involved with concrete implementation activities related to the issue concerned;
3. Where it has not been possible to ascertain whether policy does, or does not, contain specific reference to a particular issue, the corresponding cell has been left blank. The column titled "Total Responses" therefore represents the number of columns with either a '1' or a '0' in them;
4. The furthestmost right-hand column titled "% of total responses" represents the total number of '1's in each row divided by the total number of responses; and
5. For each of the four sections A-D in the table, rows have been ranked/sorted by "% of total responses" in descending order, to provide an idea of where there is most consistency between policy in different countries in terms of policy including references to specific issues.

Table 8: Fisheries Policy - Summary of Regional Responses

Country/Issue included in Policy	Mald	Sri L	India	Bang	Myan	Thai	Malay	Indo	Total yes/1	Total Responses	% of Total Responses
A Targets											
Capture development targets	0	1	0	1	1	1	1	1	6	8	75%
Other targets	0	0	1	1	1	1	1	1	6	8	75%
Capture management targets	0	1	1	1	1	1	0	1	6	8	75%
B Fisheries Management											
Clearly articulated L-T objectives	0	0	1	1	0	0	0	1	3	8	38%
Decentralisation	1	1	1	0	1	1	0	1	6	8	75%
Aims to increase national offshore fleet	1	1	1	1	1	1	1	1	8	8	100%
Reference and recognition of SSF	0	1	1	1	1	1	0	1	6	8	75%
Recognition and strategies re overcapacity	0	0	1	1	1	1	1	1	6	8	75%
Reference to IUU	1	1	0	1	1	1	1	1	7	8	88%
Use of VMS	1	1	1	0	1	1	1	1	7	8	88%
Inter-sectoral coordination	0	0	1	1	1	0	1	1	5	8	63%
Ecosystems management	0	0	0	1	0	1	0	1	3	8	38%
Conflict management	0	1	1	1	1	1	1	0	6	8	75%
Co-mgt or community mgt	0	1	1	0	0	1	0	1	4	8	50%
C Financial/economic and marketing											
Traceability and certification	1	1	1	1	1	0	1	1	7	8	88%
Increasing value-added	1	1	1	1	1	0	1	1	7	8	88%
Tariff barriers and FTAs	0	1	1	0	1	0	0	0	3	8	38%
Increase exports	1	1	1	1	1	0	1	1	7	8	88%
D Socio-economic and poverty											
Poverty	0	1	0	1	1	0	1	1	5	8	63%
Micro-finance	1	1	1	1	1	0	1	1	7	8	88%
Increasing employment	1	0	1	1	1	1	0	1	6	8	75%
Food security	1	1	1	1	1	0	1	1	7	8	88%
Alternative livelihoods	0	1	1	1	0	1	1	1	6	8	75%
E. Management approach											
Harvest control rules	0	0	0	0	0	0	0	0	0	8	0%
MSY concept	1	0	1	1	1	1	1	1	7	8	88%
Species specific management plans	0	1	1	1	1	1	0	0	5	8	63%
F. Input controls											
Limited licencing	0	1	1	1	0	0	1	0	4	8	50%
Effort management (e.g. days at sea)	0	1	1	1	1	0	0	0	4	8	50%
Closed Areas	1	0	1	1	1	1	1	1	7	8	88%
MPAs	1	1	1	1	1	1	1	1	8	8	100%
Closed seasons	0	1	1	1	1	1	1	0	6	8	75%
Gear restrictions	1	1	1	1	1	1	1	1	8	8	100%
G. Output controls and technical measures											
TACs	0	1	0	0	0	0	0	0	1	7	14%
Minimum landing sizes	0	1	1	0	1	1	0	0	4	7	57%
Bycatch restrictions	0	1	1	1	1	0	1	1	5	7	71%
Mesh size restrictions	1	1	1	1	1	1	1	1	7	7	100%
H. Economic management											
Use of rights-based management	0	1	0	0	0	1	0	0	2	7	29%
Landings charges	0	1	1	1	1	1	1	1	7	8	88%
Licence fees	1	1	1	1	1	1	1	1	8	8	100%
Harbour dues		1	1	0	1	1	1	1	6	7	86%
Import duties	1	1	1	0	0	1	1	1	6	8	75%
Export duties		1	1	1	1	1	1	1	7	7	100%
I. Subsidies (bad)											
Fuel	1	0	1	1	0	1	1	1	6	8	75%
Import/export duties	1	1	1	1	0	1	1	1	6	7	86%
Vessel construction		1	1		0				2	3	67%
Other		1	1		0				2	3	67%
J. Subsidies (good)											
Gear selectivity		0	0	0	0		1		1	5	20%
Reduced environmental impacts		0	0	1	0			1	2	5	40%
Quality improvements		0	1	0	0				1	4	25%
Product innovation		0	0	0	1				1	4	25%
Other				1	1			1	3	3	100%

Table 9: Marine Environmental Policy - Summary of Regional Responses

Country/Issue included in Policy	Mald	Sri L	India	Bang	Myan	Thai	Malay	Indo	Total	Total Responses	% of Total Responses
A Marine Environment Targets											
MPA areas	1	1	0	1	0	1		1	5	7	71%
Species protection	1	1	0	0	1	0	1	1	5	8	63%
Coastal water quality targets	0	1	0	0			0	0	1	6	17%
Pollution control targets	0	1	0	1			1	1	4	6	67%
B Marine environment management											
Bycatch and discards	1	1	0	0	0	0	1	0	3	8	38%
ETP interactions	1	1	0	0	0	0	1	1	4	8	50%
Impacts on sensitive habitats	1	1	1	1	0	0	1	1	6	8	75%
Trophic impacts on marine ecosystems	0	0	0	0	0	0	0		0	7	0%
Introduction of alien species	0	1			0	0		1	2	5	40%
Use of MPAs	1	1	0	0	1	1	1	1	6	8	75%
Integration of MPAs	1	0	0	0		0	1	1	3	7	43%
Impact of land-based pollution	0	1	0	1	1	1	0	1	5	8	63%
Marine pollution	0	1	0	0	1	1	1	1	5	8	63%
Poverty		1	1	1	1	1	0	1	6	7	86%
Climate change	1	1	1	1	1	1		1	7	7	100%
C Impact assessment & monitoring											
MPA monitoring	0	0	1	0	0	1	1	1	4	8	50%
Coastal development EIA system	1	1	1	1	0	1	1	1	7	8	88%
Cumulative EIA	0	0	1	0	0	0	0	1	2	8	25%
Marine environmental monitoring & enforcement	0	0	1	1	0	1	1	1	5	8	63%
Recurrent 'SoE' reporting	1	0	1	0	0	1	1	1	5	8	63%
Financial mechanisms for pollution control		0	0	0	0	0	0	0	0	7	0%
Polluter pays or other fiscal deterrents		1	1	0	0	1	1	1	5	7	71%

Table 10: ICM Policy - Summary of Regional Responses

Country/Issue included in Policy	Mald	Sri L	India	Bang	Myan	Thai	Malay	Indo	Total	Total Responses	% of Total Responses
A. ICM policy and content											
Specific ICM policy development	0	1	1	1	0	0	1	1	5	8	63%
Specific legislative enactment of ICM policy		1	1		0	0		1	3	5	60%
Multi-sectoral stakeholder ICM planning	0	1	1	1	0	1		0	4	7	57%
Dynamic ICM policy development	0	1	1	0	0	0		0	2	7	29%
B Integrated coastal management											
Inc. of aquaculture & fisheries in ICM	0	1	1	1	0	1		1	5	7	71%
ICM development targets or indicators	0	1	0	0	0			0	1	6	17%
Environmental cost-benefit of development	1	1	0		0	1			3	5	60%
Integration into national development planning		1	1	1	0				3	4	75%



Bangladesh, India, Indonesia, Malaysia, Maldives, Myanmar, Sri Lanka and Thailand are working together through the Bay of Bengal Large Marine Ecosystem (BOBLME) Project and to lay the foundations for a coordinated programme of action designed to improve the lives of the coastal populations through improved regional management of the Bay of Bengal environment and its fisheries.

The Food and Agriculture Organization (FAO) is the implementing agency for the BOBLME Project.

The Project is funded principally by the Global Environment Facility (GEF), Norway, the Swedish International Development Cooperation Agency, the FAO, and the National Oceanic and Atmospheric Administration of the USA.

For more information, please visit www.boblme.org



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