



Australian Government

**Department of the
Environment and Heritage**



Thai Government

**Department of Marine
and Coastal Resources**

**ANNEX 6. ANALYSIS OF ELEMENTS FROM IOSEA TURTLE MOU CONSERVATION
MANAGEMENT PLAN POSSIBLY RELEVANT TO DUGONG CONSERVATION**

Programme	Activity
Objective 1. Reduce direct and indirect causes of dugong mortality	
1.1 Identify and document the threats to dugong populations and their habitats	<ul style="list-style-type: none"> a) Regularly update existing data on threats to dugong populations and their habitats b) Establish baseline data collection and monitoring programmes to gather information on the nature and magnitude of threats c) Determine those populations affected by subsistence harvest, incidental capture in fisheries, and other sources of mortality
1.2 Determine and apply best practice approaches to minimising those threats to dugong populations and their habitats	<ul style="list-style-type: none"> a) Identify and document best practice protocols for conserving and managing dugong populations b) Adapt and adopt the best conservation and management practices for dugong populations
1.3 Implement programmes to correct adverse social and economic incentives that threaten dugong populations	<ul style="list-style-type: none"> a) Conduct socio-economic studies among communities that interact with dugongs and their habitats b) Identify desired modifications to the social and economic incentives in order to reduce threats and mortality, and develop programmes to implement the modifications c) Facilitate the development of alternative livelihoods to minimise resultant adverse social and economic impacts d) Identify resources and sources of funding for the programmes
1.4 Reduce to the greatest extent practicable the incidental capture and mortality of dugongs in the course of fishing activities	<ul style="list-style-type: none"> a) Develop and use gear, devices and techniques to minimise incidental capture of dugongs in artisanal and commercial fisheries, such as the use of alternative gears and spatial closures b) Develop procedures and training programmes to promote implementation of these measures c) Exchange information and, upon request, provide technical assistance to other signatory States to promote these activities d) Liaise and coordinate with fisheries industries, fisheries management organisations and community groups to develop and implement these activities e) Support the UN General Assembly resolution 46/215 concerning the moratorium on the use of large-scale driftnets on the high seas f) Develop and implement net retention and recycling schemes to minimise the disposal of fishing gear at sea and on beaches g) Provide and ensure the use of port facilities for the disposal of ship-borne waste
1.5 Ensure that subsistence harvest is sustainable in areas where it is allowed	<ul style="list-style-type: none"> a) Assess the level and impact of subsistence harvest on dugongs at ecologically relevant scales b) Reduce as much as possible all other human impacts on dugongs and their habitats in areas that sustain subsistence harvest

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	<ul style="list-style-type: none"> c) Determine the cultural and subsistence values and uses of dugongs (both consumptive and non-consumptive) d) Establish culturally appropriate management programmes to ensure that subsistence harvest is sustainable taking account of the temporal and spatial variability of dugong reproductive rates and other impacts on the species in a precautionary manner e) Ensure that such programs do not have adverse unintended consequences e.g. increase harvest of other threatened species such as marine turtles f) Facilitate the development of alternative livelihoods in areas where the management of the subsistence harvest of dugongs has adverse cultural, social and economic impacts g) Negotiate, where appropriate, management agreements on the sustainable level of subsistence harvest, in consultation with other concerned States, to ensure that such harvest does not undermine conservation efforts h) Ensure that the management of other species (including fisheries) does not have adverse unintended consequences on the subsistence harvest of dugongs
<p>1.6 Prohibit the direct harvest (capture or killing) of, and domestic trade in, dugongs, their parts or products, whilst allowing exceptions for subsistence harvest as outlined in 1.5</p>	<ul style="list-style-type: none"> a) Enact, where not already in place, legislation to prohibit direct harvest and domestic trade other than subsistence harvest under 1.5 b) Establish management programmes to enforce such legislation c) Negotiate, where appropriate, management agreements in consultation with other concerned States
Objective 2. Protect, conserve and rehabilitate dugong habitats	
<p>2.1 Establish necessary measures to protect and conserve dugong habitats</p>	<ul style="list-style-type: none"> a) Identify areas of critical habitat such as seagrass beds and migratory corridors, using rapid assessment techniques where appropriate b) Designate and manage protected/conservation areas, sanctuaries or temporary exclusion zones in areas of critical habitat, or take other measures (e.g. modification of fishing gear, banning destructive fishing practices, restrictions on vessel traffic) to remove threats to such areas, involving the local community as much as possible c) Consider protecting dugong habits as part of ecosystem based management e.g. networks of marine protected areas d) Develop incentives for adequate protection of areas of critical habitat outside protected areas e) Assess the environmental impact of marine and coastal development and other human activities on dugong populations and their habitats at a catchment scale f) Monitor and promote the protection of water quality from land-based and maritime pollution, including marine debris, that may adversely affect dugongs g) Strengthen the application of existing bans on the use of poisonous chemicals and explosives in the exploitation of marine resources
<p>2.2 Rehabilitate degraded dugong habitats</p>	<ul style="list-style-type: none"> a) Enhance recovery of degraded seagrass, mangrove and coral reef habitats used by dugongs

Objective 3. Improve understanding of dugong ecology and populations through research, monitoring and information exchange	
3.1 Conduct studies on dugongs and their habitats targeted to their conservation and management	<ul style="list-style-type: none"> a) Conduct baseline studies or gather secondary information on dugong populations and their habitats using cost effective techniques, including community-based monitoring b) Initiate and/or continue long-term monitoring of priority dugong populations at appropriate spatial scales in order to assess conservation status, using a combination of traditional, community-based and western science techniques where appropriate c) Characterise the genetic identity of dugong populations d) Identify migratory routes through the use of techniques such as genetic studies and/or satellite tracking e) Carry out studies on dugong population dynamics and survival rates f) Conduct research on the frequency and pathology of diseases of dugongs g) Promote the use of traditional ecological knowledge in research and management studies h) Involve local communities at all stages of the research and monitoring programs with training as required i) Review periodically and evaluate research and monitoring activities
3.2 Conduct collaborative research and monitoring	<ul style="list-style-type: none"> a) Identify and include priority research and monitoring needs in regional and sub-regional action plans b) Conduct collaborative studies and monitoring on genetic identity, conservation status, migrations, and other biological and ecological aspects of dugongs
3.3 Analyse data to support mitigation of threats and to assess and improve conservation practices	<ul style="list-style-type: none"> a) Prioritise populations for conservation actions b) Identify population trends using local information where appropriate c) Use research results to improve management, mitigate threats and assess the efficacy of conservation activities (e.g. habitat loss, etc.)
3.4 Exchange information	<ul style="list-style-type: none"> a) Standardise methods and levels of data collection and adopt or develop agreed protocols for <i>inter alia</i> monitoring of dugong populations and their habitats, genetic sampling, and collection of mortality data b) Determine the most appropriate methods for information dissemination e.g. internet and community fora c) Exchange at regular intervals scientific and technical information and expertise among nations, scientific institutions, non-governmental and international organisations, in order to develop and implement best practice approaches to conservation of dugongs and their habitats d) Disseminate traditional knowledge on dugongs, their habitats and traditional practices for conservation and management in a culturally appropriate manner e) Update on a regular basis data on dugong populations of regional interest e.g. country status reports
Objective 4. Increase public awareness of the threats to dugongs and their habitats, and enhance public participation in conservation activities	
4.1 Establish public education, awareness and information programmes	<ul style="list-style-type: none"> a) Collect, develop, co-ordinate and disseminate education materials e.g. dedicated regional web site b) Establish community learning / information centres c) Develop and implement accurate mass media information programmes d) Develop and conduct focused education and awareness programmes for target groups (e.g. policy makers, teachers, schools, fishing communities, subsistence hunters, media)

	<ul style="list-style-type: none"> e) Identify champions to help disseminate messages about the need to conserve dugongs and their habitats f) Encourage the incorporation of dugong biology and conservation issues into school curricula g) Organise special events related to dugong conservation and biology (e.g. Dugong Day, Year of the Dugong, symposia, community education workshops)
4.2 Develop alternative livelihood opportunities for local communities to encourage their active participation in conservation efforts	<ul style="list-style-type: none"> a) Identify and facilitate alternative livelihoods (including income generating activities) that are not detrimental to dugongs and their habitats, and are sustainable in nearshore regions, in consultation with local communities and other stakeholders
4.3 Promote public participation	<ul style="list-style-type: none"> a) Involve stakeholders, including key policymakers, subsistence hunters, and local communities in particular, in planning and implementation of conservation and management measures b) Encourage the participation of Government institutions, non-governmental organisations, the private sector and the general community (e.g. students, volunteers, fishing communities, local communities) in research, conservation and management efforts c) Implement, where appropriate, incentive schemes to encourage public participation (e.g. T-shirts, public acknowledgement, certificates)
Objective 5. Enhance national, regional and international cooperation	
5.1 Collaborate with and assist signatory and non-signatory States to regulate and share information on trade, to combat illegal trade, and to cooperate in enforcement activities relating to dugong products	<ul style="list-style-type: none"> a) Encourage signatory States that have not already done so to become Parties to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) b) Review at a national level compliance with obligations under CITES relating to trade in dugong parts or products c) Facilitate better compliance with CITES through training of relevant authorities in cooperation with other signatory States, the CITES Secretariat and other relevant organisations d) Identify routes of international illegal trade through monitoring, and seek cooperation to take action to prevent, deter and, where possible, eliminate illegal trade e) Exchange and discuss information on compliance and trade issues at regular intervals, such as through annual reporting to the MoU Secretariat and at meetings of the signatory States f) Identify, prevent, deter and, where possible, eliminate domestic illegal trade through monitoring, implementation of legislation, identification of gaps in enforcement capabilities in each country, and training of enforcement officers
5.2 Assist signatory and non-signatory States, upon request, to develop and implement national, sub-regional and regional action plans for the conservation and management of dugongs and their habitats	<ul style="list-style-type: none"> a) Develop a set of key management measures that could be used as a basis for action plans, through consultation with concerned Government authorities, research institutions, NGOs, local communities and other stakeholders b) Identify existing action plans that could be used as models c) Identify specific local management issues where cooperation among States is required for successful conservation and management d) Review action plans at regular intervals to take into account recent advances in skills and knowledge regarding dugong conservation and management, as well as changes in conservation status of dugong populations

<p>5.3 Enhance mechanisms for cooperation and promote information exchange</p>	<ul style="list-style-type: none"> a) Identify and strengthen existing mechanisms for cooperation at the sub-regional level b) Develop a website and/or newsletter to facilitate networking and exchange of information c) Develop a web-based information resource for dugong conservation (including data on populations, nesting, migration, on-going projects) d) Regularly update a directory of experts and organisations concerned with dugong conservation e) Develop networks for cooperative management of shared populations, within or across sub-regions, and, where appropriate, formalise cooperative management arrangements f) Cooperate where possible in the establishment of transboundary marine protected areas using ecological rather than political boundaries g) Develop a streamlined format for reporting and exchanging information (through the MoU Secretariat and among signatory States) on the state of dugong conservation at the national level h) Encourage MoU signatory States that have not already done so to become Parties to the Convention on Migratory Species (CMS) i) Encourage signatory States to become Parties to global fisheries agreements such as the UN Fish Stocks Agreement (1995) and the FAO Compliance Agreement (1993) and implement the FAO Code of Conduct for Responsible Fisheries (1995) j) Establish relationships with regional fisheries bodies with a view to obtaining data on incidental capture and encourage them to adopt dugong conservation measures within EEZs and territorial waters
<p>5.4 Build capacity to strengthen conservation measures</p>	<ul style="list-style-type: none"> a) Identify needs for capacity-building in terms of human resources, knowledge and facilities b) Provide training (e.g. through workshops) in conservation and management techniques for dugongs and their habitats to relevant agencies, individuals and local communities c) Coordinate training programmes and workshops d) Develop partnerships with universities, research institutions, NGOs, training bodies and other relevant organizations
<p>5.5 Strengthen and improve enforcement of conservation legislation</p>	<ul style="list-style-type: none"> a) Encourage and guide the establishment of legislation to protect dugongs and their habitats. b) Review domestic policies and laws to address gaps or impediments to dugong conservation c) Cooperate in law enforcement to ensure compatible application of laws across and between jurisdictions (including through bilateral/multilateral agreements and intelligence sharing)

Objective 6. Promote implementation of the MoU including the Conservation and Management Plan	
6.1 Broaden membership in the MoU, and ensure continuity of MoU activities	<ul style="list-style-type: none"> a) Encourage non-signatory States to sign the MoU b) Arrange sub-regional workshops involving non-signatory States to raise awareness of the MoU c) Consider at the first meeting of the signatory States the development of a timetable for regular revision of the MoU
6.2 Promote the role of the Secretariat and the Advisory Committee of the MoU in ensuring the objectives of the Conservation and Management Plan are met	<ul style="list-style-type: none"> a) Secure reliable sources of funding to support the MoU Secretariat b) Appoint at the first meeting of the signatory States the members of the Advisory Committee c) Establish lines of communication between the MoU Secretariat and the Advisory Committee to facilitate advice to the signatory States
6.3 Seek resources to support the implementation of the MoU	<ul style="list-style-type: none"> a) Prioritise conservation and management activities for funding b) Explore funding options with Governments and other donors such as the Asian Development Bank, World Bank, UNDP, European Union, UNEP, GEF, etc. c) Solicit funding and other contributions from industries that have impacts on dugongs and their habitats (e.g. fisheries, tourism, oil industry, real estate) d) Explore the use of economic instruments for the conservation of dugongs and their habitats by integrating with instruments to conserve coral reefs, seagrass and other marine wildlife e) Approach the private sector, foundations and NGOs that may have an interest in funding activities in particular countries to catalyse the creation of a small grants fund f) Generate funding for conservation and management activities through managed ecotourism and other self-supporting schemes (while benefiting local communities) g) Seek synergies (with respect to fund-raising, provision of institutional support, etc.) with other regional/global convention secretariats h) Explore international funding support and other incentives for signatory States that effectively manage populations.
6.4 Improve coordination among government and non-government sectors in the conservation of dugongs and their habitats	<ul style="list-style-type: none"> a) Review the roles and responsibilities of government agencies related to the conservation and management of dugongs and their habitats b) Designate a lead agency responsible for coordinating national dugong conservation and management policy c) Encourage cooperation within and among government and non-government sectors, including through the development and/or strengthening of national networks
6.5 Create links to the marine turtle MoU	<ul style="list-style-type: none"> a) Seek synergies with other regional global convention secretariats (the MoU for marine turtles especially) <p>Explore collaborative international funding support and other incentives for signatory states that also are involved with management of marine turtle populations.</p>