

Appendix IV: Areas of Concern, Ecosystem Quality Objectives, Actions, Targets and Indicators for the Strategic Action Programme

Four major Areas of Concern have been identified through the MEDA/TDA/SAP process. These are: 1) Water Quality Degradation; 2) Habitat and Community Modification; 3) Declines in Living Marine Resources and 4) Unpredictable environmental variability and extreme events. Associated with these are Ecosystem Quality Objectives (EQO), Targets (5/20 years), Actions and Indicators. Each of these is summarised in the tables below.

It is acknowledged that projects, programmes and national institutions are currently addressing, or planning to undertake, some of the actions listed below. At the time of implementation of this SAP, it is intended for the actions to be reviewed again to determine which still need to be addressed, and to fully engage relevant partners and stakeholders.

Key to colours in the Proposed Actions column:

GEF partner project: Action to be undertaken together with / led by the WIO-LaB Project
GEF partner project: Action to be undertaken together with / led by the SWIOF Project
Monitoring and Indicators category activity
Capacity Building and Training category activity
Science-based Governance category activity

Area of Concern 1: Water Quality Degradation;

Issue 1.1 Alteration to natural river flow and changes to freshwater input and sediment load

EQO: Environmental flow requirements are taken into account for future development planning.

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Capacity for monitoring is improved.	Ensure that capacity exists within at least 50% of countries to establish and monitor environmental flow requirements (EFR) (including sediment loads).	Ensure that capacity exists within 100% of countries to establish and monitor environmental flow requirements.	<div style="background-color: #4CAF50; color: white; padding: 2px;">Carry out a capacity assessment in terms of EFRs for each country.</div> <div style="background-color: #4CAF50; color: white; padding: 2px;">Design and implement a capacity building programme for EFR</div> <div style="background-color: #4CAF50; color: white; padding: 2px;">Implement a regionally standardised, national monitoring system for EFR.</div>	The existence of a monitoring system for EFR
Future development planning takes into account environmental flow requirements.	Develop an inventory of catchments which have been assessed for EFR (obtain the EFR reports and long term data sets where available).	Establish environmental flow requirements for all major drainage and coastal ecosystems.	<div style="background-color: #4CAF50; color: white; padding: 2px;">Commission a study to establish an inventory of EFR data (national + regional team).</div> <div style="background-color: #4CAF50; color: white; padding: 2px;">Commission a study to establish EFRs for all major drainage systems where they do not already exist.</div>	An inventory of catchments
Sediment loads are reduced to acceptable limits.	<i>To Be Negotiated During SAP Implementation</i>			
Legislation is implemented appropriately.	<i>To Be Negotiated During SAP Implementation</i>			
Improve capacity to implement integrated coastal	All countries have appropriate legislation in place to guide industry, mining and		Undertake a review of existing legislation (if not already done).	Results of the assessment are available

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
zone and river basin management.	agricultural development.		Identify gaps at a national level and start the process of addressing these gaps in each country through harmonising existing legislation or developing new legislation.	Legislation in place
Where possible, restore or improve natural river flow regimes.	Determine the level of compliance with legislation (appropriate legislation in place to guide industry, mining and agricultural development).	Ensure that compliance with legislation is improved.	Undertake a study to determine current levels of compliance.	
			Design strategies to improve national levels of compliance.	Incidences of non-compliance, as compared to a baseline
		Environmental monitoring and evaluation systems are in place in all countries to measure compliance.	Review the existence and status of monitoring and evaluation systems.	
			Design monitoring and evaluation systems.	
			Implement evaluation systems.	
	Implement restoration programmes at four pilot sites.		Two island + two mainland sites chosen, programmes designed and implemented.	Number of programmes implemented
	Identify critical areas in need of restoration or immediate attention (critical areas in need of restoration).	Natural habitat in catchments is restored in key catchments to a level that prevents erosion and excessive sediment loading.	Assess basic information and collect new information on critical areas in need of restoration (national studies with regional reporting).	
Select catchments for restoration programmes.				
Implement restoration programmes.			Amount of habitat per catchments (number) restored	

Issue 1.2 Ground and surface water quality (estuarine/fresh, not marine)

EQO: Restore ground and surface water quality and prevent further degradation occurring in the future

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Establish regional standards for water quality.	Water quality guidelines and standards reviewed or established	Ensure that capacity exists within 100% of countries to establish and monitor and ensure compliance with water quality standards.	National water quality guidelines and standards reviewed.	National water quality guidelines and standards reviewed
			Regional standards developed.	
			National standards developed where necessary.	Existence of national water quality guidelines complying with regional specifications
Improve water quality through addressing sources of pollution.	Water quality status established for all countries, and hotspots of pollution identified		Review of national water quality status undertaken.	Status established of national water quality
			Pollution hotspots identified.	Pollution hotspots identified.
	Sources of pollution identified in key hotspots.		Sources of pollution in hotspots identified.	Sources of pollution in hotspots identified.
			Capacity is built to deal with sources of pollution from agriculture, industry, mining and tourism (eg treatment facilities in	Review existing infrastructure and identify needs for improvement.

		place).		
Improve policies and legislation relating to water quality management		All countries have appropriate legislation in place to guide waste water treatment.	Undertake a review of existing legislation (if not already done).	review of existing waste water treatment legislation (if not already done) undertaken
			Identify gaps at a national level and address these gaps in each country through harmonising existing legislation or developing new legislation.	Legislation is in place
Build capacity for water quality monitoring and management (in government).	Ensure that capacity exists within at least 50% of countries to establish and monitor and ensure compliance with water quality standards.	Environmental monitoring and evaluation systems are in place in all countries to measure compliance.	Undertake an assessment of capacity in each country and design a capacity building programme to address gaps.	Capacity review carried out of Environmental monitoring and evaluation systems
			Review the existence and status of monitoring and evaluation systems.	Capacity exists in 5 countries.
			Design monitoring and evaluation systems.	Evaluation and monitoring systems designed where they do not exist
			Implement evaluation systems.	Evaluation and monitoring systems in place
	Ensure capacity exists for Strategic Environmental Assessment development in each country and that SEAs are completed for the coast in each country and address planning for wastewater, effluent and sewage.	Ensure that compliance with legislation is improved	Review existing national capacity for SEAs.	existing national capacity for SEAs reviewed
			Design and implement training for SEAs where gaps exist.3a5	SEAs carried out for each country
			Carry out Strategic Environmental Assessments for the coast in each country, where not already done, at an appropriate scale.	Capacity exists for managing SEAs
			Design strategies to improve national levels of compliance	Compliance with legislation (infringements etc).

Issue 1.3 Microbiological contamination from land based and marine sources (considering coastal water)
EQO: Reduce microbiological contamination in coastal waters

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Reduce incidence of human and animal water borne diseases in the coastal zone.	Operationalise existing sewage treatment plants	Sewage treatment systems effective.	Inventory of existing treatment plants undertaken in coastal municipalities.	Inventory produced of the status of existing sewage treatment plants
			Needs identified to operationalise existing plants.	Workplan and budget produced for the operationalisation of existing plants
			Undertake work on existing plants.	Number of sewage treatment plants revived
		Ensure that domestic sanitation is addressed (in all countries)	Assess requirements for the development of new sewage treatment facilities.	Requirements for new sewage treatment plants assessed - assessment produced
			Build capacity to raise finance to address these needs - civil works (proposal writing)	
			Identify appropriate technology - Appropriate technical solution need to be chosen for particular problems.	

			Evaluate domestic sanitation issues.	Review report on domestic sanitation issues in the region	
			Implement appropriate solutions (eg the WASH programme).	Percentage of people with access to latrines; Incidence of water borne diseases	
			Implement outreach and awareness programmes.	Outreach and awareness programmes designed and implemented	
	Ensure Strategic Environmental Assessments are completed for each country and address planning for wastewater, effluent and sewage.		Review existing national capacity for SEAs.	Capacity for undertaking SEAs is reviewed for each country.	
			Design and implement training for SEAs where gaps exist.	Training and capacity building programmes to support SEAs are designed and implemented.	
			Carry out Strategic Environmental Assessments for the coast in each country, where not already done, at an appropriate scale.	SEAs are completed for each country	
Build capacity for water quality monitoring and management (in hotspots – urban areas, ports etc).	Water quality status established for all countries, and hotspots identified.		National water quality status established and hotspots of pollution identified.	Water quality status established for all countries and pollution hotspots identified	
	Sources of pollution identified in key hotspots		Sources of pollution identified.	Sources of pollution identified	
	Develop zoning plans for mariculture development (to ensure that development is sited at appropriate locations)		Review where mariculture zoning plans have already been developed.	Number of countries with zoning plans in place after 5 years	
			Develop plans (Strategic Environmental Assessments) in areas where they do not already exist.		
	Ensure that capacity exists within at least 50% of countries to establish, monitor and ensure compliance with water quality standards.	Ensure that capacity exists within 100% of countries to establish, monitor and ensure compliance with water quality standards.		Review existing national capacity for water quality monitoring.	Compliance exists for water quality monitoring / Number of stakeholders complying.
				Review the existence and status of monitoring and evaluation systems.	Review is produced of existing monitoring and evaluation systems
				Design and implement training for water quality monitoring where gaps exist.	Training and CB plans developed for WQ monitoring
				Design monitoring and evaluation systems.	Monitoring and evaluation systems have been designed
				Implement evaluation systems.	Evaluation systems have been implemented.
		Institutional capacity established within the responsible authorities in each country to assess EIAs, and ensure Environmental Management Plans are implemented.		Undertake a review of existing legislation (if not already done).	Report of a review of existing legislation. Capacity in place to assess EIAs and implement EMPs. Numbers of EIAs effectively assessed. EMPs implemented. Numbers of trained EIA officers
			Review capacity for EIA development and EMP implementation.	Results of a capacity review for EIA development and EMP implementation.	
			Develop appropriate training courses for EIAs and EMPs.	Training courses developed	
Mariculture guidelines and standards reviewed or established.			Mariculture guidelines reviewed.	A review of mariculture guidelines produced	
			Mariculture guidelines established where necessary.	Mariculture guidelines established	

	Monitoring programmes established and implemented for microbial contamination in coastal waters.	Environmental Impact Assessments are carried out for all new aquaculture facilities.	Ensure that EIA legislation is in place.	EIA legislation in place; record of EIA reports delivered / approved
			Ensure that aquaculture is included in national regulations.	A review of national legislation with regard to mariculture is carried out.
		Environmental monitoring and evaluation systems are in place in all countries to measure compliance.	Review the existence and status of monitoring and evaluation systems.	A review of number and quality of Environmental monitoring systems in place, has been carried out.
			Design monitoring and evaluation systems.	Monitoring and evaluation systems designed
			Implement evaluation systems.	M&E systems implemented.
		Ensure that compliance with legislation is improved.	Design strategies to improve national levels of compliance.	Report on a review of compliance with legislation

Issue 1.4 Solid Waste

EQO: Reduce solid waste (marine debris) from shipping and land based sources in coastal water

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Ensure compliance with IMO shipping regulations in terms of waste.		IMO regulations and Nairobi Convention adhered to 100%	Ratify and domesticate relevant IMO protocols.	Review of relevant protocols and conventions; Number of countries that have ratified the conventions.
			Identify areas of weakness where capacity needs to be built to ensure compliance is possible.	Review of capacity requirements produced.
			Implement capacity building programmes to address those needs.	Implementation of capacity building programmes.
		Waste reception facilities in all the major ports.	Evaluate what waste reception facilities already exist.	
			Review requirements.	
			Develop plans for new facilities and build as required.	Number of ports per country with waste reception facilities
Improve management of solid waste (reduce, recycle, re-use)	National incentives (subsidies) put into place for recycling and re-use.		Determine appropriate incentives at national level for recycling and re-use.	
			Implement incentives.	National incentives in place; Percentage of waste recycled
	Establish the volume of solid waste generation from land based and marine sources.		Undertake a study to establish the volume of solid waste generation.	Volume established
	Waste management plans put in place by local authorities in coastal cities.	Waste management facilities up and running in major urban areas.	Review which waste management plans have already been developed / are in place.	
			Develop such plans where necessary.	Waste management plans in place
	Awareness and education campaigns are implemented for recycling and re-use.		Develop and implement an awareness and education campaign.	campaigns implemented (number), Education material produced.

Issue 1.5 Oil Spills

EQO: Develop the capacity to prevent and mitigate the effects of oil spills at regional and national level.

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators		
Oil spill contingency plans and capacity in place for all countries.	Vulnerability assessment for oil spills in place for all countries.		Review existing vulnerability assessments for oil spills.	Vulnerability assessments carried out.		
			Prepare/update assessments as necessary.			
	50% countries should have ratified conventions related to marine pollution / oils spills.	Relevant IMO convention ratification & compliance to 80%	Ratify and domesticate relevant IMO protocols.	Number of countries having ratified conventions		
			Identify areas of weakness where capacity needs to be built to ensure compliance is possible.			
			Implement capacity building programmes to address those needs.	Ratification and compliance levels		
	All countries will have carried out an assessment of contingency and port facilities for dealing with oil spills. Contingency plans developed where they do not exist.		Undertake national assessments of contingency and port facilities for dealing with oil spills.	Assessment carried out and contingency plans developed.		
			Waste oil reception facilities in all the major ports.	Evaluate what waste reception facilities already exist.		
				Review requirements.		
				Develop plans for new facilities and build as required.	Number of ports with waste reception facilities.	
			All countries should have contingency plans, measures, equipment and human capacity in place to respond to oil spills and leaks.		Develop a plan for strengthening this capacity.	Countries with contingency plans, measures and infrastructure in place.
					Implement a capacity building plan for contingency plans, and TEST the contingency plans to ensure adequate preparedness.	
					Evaluate existing EIA capacity, including scientific capacity and government capacity to review EIAs.	
	All countries should have built capacity to assess EIAs and to monitor activities in the oil industry and ports.		Develop a capacity building programme as required.			
Implement capacity building.			Capacity for EIA assessment			
Oil companies must have plans in place for dealing with oil spill incidents. (Need to be in concession agreements).		Check with relevant national ministries.	Plans in place			
		Prepare regional guidelines that can be included in concession agreements.				
		Work with oil companies to develop oil spill management plans.				
Regional support for oil spill disaster management established.	One of the countries has agreed to coordinate an oil spill response regional coordination centre.		Review and support the ongoing process to identify an appropriate country to host a regional facility.	Country identified and responsibility accepted.		

Table 2: Habitat and Community Modification

Issue 2.1: Shoreline change, due to modification, land reclamation and coastal erosion

EQO: Effective mitigation and management of shoreline change.

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Increased understanding of shoreline status within	Quantitative assessment and mapping of shoreline change at	Anthropogenic causes of shoreline change mitigated	Identification of priority shorelines for inclusion as demonstration sites	

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
the region	demonstration sites in all countries within 5 years		Develop standardised protocols for assessing and mapping of shoreline change	Shoreline assessment and mapping protocols
			Training in standard protocols for assessing and mapping of shoreline change	# people trained
			Complete the assessment and baseline mapping at demonstration sites	Shoreline change maps; National reports on demonstration projects
Strengthen regional collaboration on monitoring and reporting on shoreline status, and improve understanding of the causes and severity of shoreline change.	Shoreline degradation, as a result of anthropogenic causes, reduced by x % within all countries in the region within 20 years	Results of long term monitoring of shoreline change informing mitigation and management measures in all 9 countries within 20 years	Develop standardised protocols for monitoring of coastal erosion, shoreline change and sea level rise	Standardised method for monitoring coastal erosion, shoreline change, and sea level rise developed and implemented in all countries within 5 years
			Training in monitoring methods coastal erosion, shoreline change, and sea level rise and analysis and interpretation of results	# people trained / # workshops
			Establish long term monitoring stations in each country (e.g. beacons)	Monitoring sites established (including beacons); National reports on monitoring results
			National and regional databases established	Regional database; Regional reports
Improved definition and zoning of coastal set-backs	Coastal vulnerability assessments completed using a standardised method in all countries within 5 years	Coastal set back definitions enforced and 90% compliance on set-back regulations for new developments in all countries within 20 years	Develop standardised method for coastal vulnerability assessments	
			Provide training in standardised method for coastal vulnerability assessments to relevant institutions	
			Implement coastal vulnerability assessments in each country	National coastal vulnerability assessment reports
			Reports on coastal vulnerability assessment and recommendations for new coastal set-back definitions submitted to ICZM Committee for consideration and inclusion in ICZM plan	
Effective mitigation and management measures to address anthropogenic and natural causes of shoreline change implemented.	Best practice guidelines for mitigation of coastal erosion within 5 years	Guidelines for mitigation measures adopted by national institutions and utilised for new developments within 20 years	Identify, capture best practice guidelines and lessons learnt from within the region (e.g. IUCN guidelines, IOC-UNESCO shoreline change, DANIDA vulnerability assessment implemented under NEMA) and globally for mitigation methods for coastal erosion	Best practice guidelines in coastal erosion mitigation methods
			Distribute / disseminate best guidelines within the region	
			Training needs and capacity assessment of the relevant institutions with the mandate for shoreline management	
			Training provided in best practice shoreline management methods	
National legal and policy frameworks for the protection of shoreline management strengthened	Review and update of institutional, policy and legislative frameworks in all countries to reduce shoreline degradation within 5 years	ICZM plans implemented within 20 years	Review and develop policy and legislative frameworks for shoreline management and coastal set-backs	

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
			Review ICZM plans to include new coastal set backs (as defined by coastal vulnerability assessments) and update where necessary.	ICZM plans include coastal vulnerability assessments and coastal set-back definitions
Awareness of the importance of shoreline change increased	Education and awareness programmes include coastal vulnerability and shoreline change		Prepare an education and awareness raising campaign	List and engagement of local stakeholders
			Prepare education materials for inclusion in schools' (primary and secondary) curricula	
			Support govt level campaign to include environmental education materials in school curriculum	
			Establish a regional programme at MSc and PhD level, with students working on coastal research (eg University of Seychelles, Uni Mauritius, IMS)	
			DLIST participation	
			Media programmes, schools campaign and workshops	# of workshops, TV/Articles on local papers
			Brochures/information leaflet produced in local languages	Leaflet/brochure in local language
			Participatory shoreline monitoring (e.g. stakeholder engagement in Sandwatch programme)	# of participants in monitoring activities

Issue 2.2: Disturbance, damage and loss of coastal habitats (beaches, dunes, coastal vegetation and flood plains (to 10 m elevation))

EQO: Status and ecosystem services of coastal habitats protected and effectively managed

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Increased understanding of the distribution and ecosystem services provided by coastal habitats	Critical coastal habitats identified, assessed and mapped in the different countries	Coastal habitat maps showing the ecosystem services (value) of critical habitats	Develop protocol for assessing and mapping of coastal habitats.	Mapping protocol available
			Provide training in coastal habitat assessment and mapping protocols	Number of people trained
			Implement coastal habitat mapping in all countries	National reports and maps showing distribution of critical coastal habitats
			Training in ecosystem services valuation methods	Number of people trained in ecosystem service valuation
			Implement ecosystem services valuation for coastal habitats	Ecosystem service valuation report (for critical coastal habitats)
Strengthen regional collaboration on monitoring and reporting on mangrove habitat status.	Long term monitoring programme established in all countries	Improved long term understanding of the dynamics of coastal habitats and the potential impacts of climate variability and change	Establish protocol for the long term monitoring for critical coastal habitats	Monitoring protocol
			Provide training in long term monitoring protocols and analysis	Number of people trained
			Identify suitable locations for long term monitoring	Number of monitoring sites established

			Implement national monitoring programmes for critical coastal habitats, including participatory monitoring by different stakeholders	Monitoring reports available / # stakeholders participating in monitoring
			Monitoring reports submitted to ICZM committees and relevant authorities	Minutes of ICZM committee
Improve the sustainable use of critical coastal habitats	Best practice guidelines developed for the sustainable use of critical coastal habitats	Reduce disturbance, damage and loss of coastal habitats by x %	Review and capture best practice guidelines and lesson learnt on sustainable use of coastal resources / habitats	Literature review
			Develop best practice guidelines for main sectors (e.g., tourism, mining, energy, fresh water).	Best practice guidelines for main sectors available and adopted
			Provide training to main stakeholder groups in the best practice guidelines.	Number of people /stakeholders trained
			Prepare habitat management strategies for critical coastal habitats	Critical coastal habitat management strategies
			Implement management strategies at demonstration sites	Workplans to implement strategy
			Critical coastal habitat management strategies presented to ICZM Committee for inclusion in ICZM plan	Critical coastal habitats included in ICZM plan.
National legal and policy frameworks for the protection of coastal habitats strengthened	At least 10 % of all coastal habitats protected (Aichi target)	At least 30 % of all coastal habitats protected	Institutional, legislative and policy framework reviewed in all countries	Institutional, legislative and policy framework review
			Recommendations for reforms / improving institutional collaboration / communication	Report with recommendations for institutional, legislative and policy framework
			Institutional, legislative and policy framework updated in all countries	Updated policy and legislative framework
			Training in enforcement for relevant mandated authorities	Number of people trained
Increased awareness of the importance of coastal habitats	Education and awareness programmes include coastal habitats	x % reduction in the loss of critical coastal habitats	Awareness raising meetings / workshops	Education and awareness materials
			Education and awareness materials developed	Education through mass media
			Prepare education materials for use in schools (primary and secondary)	School curriculum to include environmental awareness of critical coastal habitats
			Support govt level campaign to include environmental education materials in school curriculum	Number of meetings and workshops
			Establish a regional programme at MSc and PhD level, with students working on coastal research (University of Seychelles, Uni Mauritius, IMS??)	# MSc students ; # PhD students

			Participatory education and awareness activities (e.g. Monitoring, surveying, planting etc)	Number of people involved in participatory activities
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Issue 2.3: Disturbance, damage and loss of mangrove habitats

EQO: Mangrove habitats sustainably managed and the health and ecosystem services protected

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Improved knowledge and understanding of the status and distribution of mangrove habitats (area coverage, biomass and species composition) within the region	Maps showing the area coverage, species composition and biomass of mangrove habitats within the region	Disturbance and damage to mangrove habitats reduced by x % in 20 years	Establish standardised regional baseline assessment protocols for mangroves	Standardised mangrove assessment protocols / Area of mangrove (ha)
			Regional training on mangrove survey protocols, taxonomy and mapping of mangrove habitats	# of people trained
			Complete national baseline assessments and mapping for mangrove habitats	National report and maps of mangrove distribution and composition, area of mangrove (ha), number of species, biomass
			Publish a comprehensive regional report on the status of mangroves and develop a regional ATLAS	Regional report / Regional mangrove atlas
			Establish a regional database	Database established, area coverage of mangrove, number of mangrove species , mangrove biomass
Strengthen regional collaboration on monitoring and reporting on mangrove habitat status.	Regional mangrove network established, including wide range of stakeholders	Regional mangrove network sustained and operational	Identify relevant institutions and local stakeholders;	Regional mangrove network
			Appoint focal institution and focal points, and establish network; strengthen the existing regional mangrove network.	Focal points identified
			Establish standardised regional monitoring protocols for mangrove	Standardised mangrove monitoring protocols
			Regional training on mangrove monitoring protocols	# of people trained
			Identify and establish permanent long term monitoring sites	Map showing distribution of monitoring sites
			Establish regional database with national nodes	Regional mangrove database
			Complete national (biannual) monitoring for mangrove habitats (over a minimum 3 years two seasons - winter summer)	National report on mangrove monitoring programme
			Regional report on mangrove monitoring programme	Regional mangrove monitoring report
			Regional workshops for sharing information	

Improved understanding of the ecosystem services provided by mangrove habitats and their value within the region.	mangrove ecosystem service valuations, including carbon storage capacity, completed for countries within the ASCLME	Ecosystem services from mangrove habitats understood and valued (and included in carbon trading schemes)	Standardised protocol for valuing ecosystem services	
			Regional training on mangrove ecosystem service valuation methods, including methods to measure carbon storage capacity	# of people trained
			Complete national surveys to assess ecosystem services for mangrove habitats	National report on mangrove ecosystem services
			Regional report on mangrove ecosystem services	Regional mangrove ecosystem services
			Regional workshops for sharing information	
Mangrove rehabilitation / restoration methods trialled within the region	Successful method for rehabilitation established	X% of ha of mangroves rehabilitated (or mangroves area increase by X%)	Review of mangrove rehabilitation / restoration methods and create a guidelines for restoration	Best Practice Guidelines on mangrove rehabilitation / restoration techniques
			Identify suitable demonstration sites in each country	List and description of demonstration sites
			Identification and participation of stakeholders including communities to be included in training;	# of people (including stakeholders) trained
			Training in mangrove rehabilitation/restoration techniques	# people trained
			Establish mangrove nurseries at demonstration sites	
			Implementation of mangrove rehabilitation methods at demonstration sites	
			Monitor outcomes of mangrove rehabilitation at demonstration sites	Reports on the demonstration projects / Area (ha) of mangrove rehabilitated / restored
National legal and policy frameworks strengthened for the protection of mangrove habitats strengthened	At least 10 % of all mangrove habitats protected (Aichi target)	At least 30 % of all mangrove beds protected	Identify gaps in policy and legislative frameworks	Policy and legislative framework produced
			Identify threats and recommend methods to reduce the loss of mangrove beds	Produce best practice guidelines for different sectors
			Review and update legal and policy frameworks to improve the protected of mangroves	Policy and legislative framework produced
			Establishment of new MPAs or extend boundaries of existing MPAs to include mangroves	Area (ha) of mangrove habitats protected / % mangrove habitat protected
			Conduct enforcement training	# of people trained / # court cases
Awareness of the importance of mangrove habitats increased	Stakeholders sensitised about the importance and function of mangroves within 5 years	Mangrove destruction significantly reduced by x% (# of organization participating in mangrove restoration)	Prepare education and awareness raising campaign	List and engagement of local stakeholders

			Prepare education materials for use in schools (primary and secondary)	
			Support govt level campaign to include environmental education materials in school curriculum	
			Establish a regional programme at MSc and PhD level, with students working on mangrove research studies (University of Seychelles, Uni Mauritius, IMS??)	# MSc students; # PhD students
			Media programmes, schools campaign and workshops	# of workshops, TV/Articles on local papers
			Brochures/information leaflet produced in local languages	Leaflet/brochure in local language
			increased participation of community in mangrove activities (e.g. open days, workshop, planting etc)	# of people participating in activities

Issue 2.4: Disturbance, damage and loss of coral reef habitats

EQO: Corals reef health and ecosystem services protected and sustainably managed

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Improved knowledge and understanding of the status and distribution of coral habitats (area coverage and connectivity) within the region	Assessment of the status of coral reefs, including identification of potential refugia (e.g. mesophotic reefs) and connectivity patterns within the region within 5 years.	A comprehensive regional assessment and atlas of coral reef (and non-reefal coral communities) produced and updated	Compile existing sources of information on the current status of coral reefs within the region, and conduct a meta-data analysis and gap analysis.	
			Review existing maps of the distribution of coral reefs (e.g. Millennium Coral Reef, ReefBase, UNEP-WCMC), and evidence for potential refugia.	
			Establish standardised regional baseline assessment protocols for coral reefs (including non-reefal coral communities and mesophotic reefs)	Standardised coral reef assessment protocols / Area of coral reef (ha) / % hard coral cover / % <i>Acropora</i> cover
			Regional training on coral habitat survey protocols, taxonomy and mapping of coral dominated habitats	# of people trained
			Complete national baseline assessments and mapping for coral dominated habitats	National report and maps of coral dominated habitat distribution and composition, area of coral dominated habitats (ha), number of species
			Establish a regional database with national nodes	Database established, area coverage of coral dominated habitats, number of coral species etc
			Publish a comprehensive regional report on the status of coral reefs and develop a regional ATLAS	Regional coral reef atlas (updated and ground verified)

			Review the evidence for connectivity within the region and design specific scientific study to improve understanding of connectivity within the region.	
Strengthen regional collaboration on monitoring and reporting on coral habitat status.	Regional coral reef monitoring network established, including wide range of stakeholders, and results informing management.	Regional mechanism for collaboration and reporting on the status of coral reef health maintained.	Identify relevant institutions and local stakeholders;	List of relevant stakeholders and institutions
			Review national coral reef monitoring programmes and identify gaps, make recommendations for the standardisation of coral reef monitoring programmes and the addition of new metrics where necessary.	Recommendations for standardisation of metrics, including rates of recruitment, coral reef diseases, invasives, and other emerging threats, rapid assessment protocols (e.g. for coral bleaching) etc.
			Appoint focal institution and focal points, and establish network	Regional coral reef monitoring network
			Establish standardised regional monitoring protocols for corals	Standardised coral reef monitoring protocols
			Develop a workable user friendly regional database for coral reef monitoring data.	Regional coral reef monitoring database
			Provide training on coral reef monitoring protocols and data management and analysis (Train-the-Trainers)	# of people trained / # of regional trainers
			Provide support and help countries to identify and establish permanent long term monitoring sites (following balanced hierarchical survey design)	Map showing distribution of monitoring sites
			Complete national monitoring for coral reefs (over a minimum 3 years two seasons - winter summer)	National report on coral reef monitoring programme
			Regional report on coral reef monitoring programme Regional workshops for sharing information	Regional coral reef monitoring report
Improved understanding of the ecosystem services provided by coral reef habitats and their value within the region.	Coral reef ecosystem service valuations completed for countries within the ASCLME	Ecosystem services from coral reef habitats understood and valued	Standardised protocol for valuing ecosystem services	
			Regional training on coral reef ecosystem service valuation methods	# of people trained
			Complete national surveys to assess ecosystem services for coral reef habitats	National report on coral reef ecosystem services
			Regional report on coral reef ecosystem services	Regional coral reef ecosystem services
			Regional workshops for sharing information	
Coral reef rehabilitation methods trialled	Coral reefs rehabilitation methods implemented and trialled at x demonstration sites within x countries.	Widespread application of rehabilitation / restoration techniques (Area of degraded coral habitats restored)	Literature review of all coral reef rehabilitation / restoration methods, and capture best practice lessons from rehabilitation methods trialled within the region and globally	Best Practice Guidelines on coral reef rehabilitation / restoration techniques (may already exist from GEF project output)
			Identify suitable demonstration sites in each country	List and description of demonstration sites
			Identification and participation of stakeholders including communities to be included in training;	# of people (including stakeholders) trained

			Training in coral reef rehabilitation/restoration techniques	# people trained
			Establish coral nurseries at demonstration sites (or novel larval rearing methods if deemed more appropriate)	
			Implementation of coral reef rehabilitation methods at demonstration sites	
			Monitor outcomes of coral reef rehabilitation at demonstration sites	Reports on the demonstration projects / Area (ha) of coral reef rehabilitated / restored
National legal and policy frameworks strengthened for the protection of coral reef (and non-reefal coral communities) habitats strengthened	At least 10 % of all coral reef habitats (including non-reefal coral communities) protected (Aitchi target)	At least 30 % of all coral reef habitats (including non-reefal coral communities) protected	Identify gaps in policy and legislative frameworks	Policy and legislative framework produced
			Identify and recommend methods to reduce the loss of coral reefs	Produce best practice guidelines for different sectors
			Review and update legal and policy frameworks to improve the protected of coral reefs	Policy and legislative framework produced
			Establishment of new MPAs or extend boundaries of existing MPAs to meet the CBD targets,	Area (ha) of coral reef habitats protected / % coral reef habitat protected
Awareness of the importance of coral reef habitats increased	Marine environmental education included in school curriculum, and increased awareness of corals reefs among all stakeholders, including the local communities.	Coral reef destruction significantly reduced by x % (# of organization participating in coral reef restoration)	Prepare education and awareness raising campaigns	List and engagement of local stakeholders
			Prepare education materials for inclusion in schools (primary and secondary)	
			Support govt level campaign to include environmental education materials in school curriculum	
			Establish a regional programme at MSc and PhD level, with students working on coral reef research studies (University of Seychelles, Uni Mauritius, IMS??)	
			Media programmes, schools campaign and workshops	# of workshops, TV/Articles on local papers
			Brochures/information leaflet produced in local language	Leaflet/brochure in local language
			Participation in coral reef monitoring and rehabilitation trips (stakeholder engagement - practical)	# of stakeholders participating in activities

Issue 2.5: Disturbance, damage and loss of seagrass habitats

EQO: Seagrass habitats sustainably managed and the health and ecosystem services protected

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
Improved knowledge and understanding of the status and distribution of seagrass habitats (area coverage, biomass and species composition) within the region	Maps showing the area coverage, species composition and biomass of seagrass habitats within the region	Disturbance and damage to seagrass habitats reduced by x % by 2040	Establish standardised regional baseline assessment protocols for seagrass	Standardised seagrass assessment protocols
			Regional training on seagrass survey protocols, taxonomy and mapping of seagrass habitats	# of people trained
			Complete national baseline assessments and mapping for seagrass habitats	National report and maps of seagrass distribution and composition, area of seagrass (ha), number of species, biomass
			Regional report on distribution, composition and biomass of seagrass	Regional report and maps of seagrass distribution and composition
			Establish a regional database with national nodes	Database established, area coverage of seagrass, number of seagrass species, seagrass biomass
Strengthen regional collaboration on monitoring and reporting on seagrass habitat status.	Regional seagrass network established, including wide range of stakeholders	Regional seagrass network sustained and operational	Identify relevant institutions and local stakeholders;	
			Appoint focal institution and focal points, and establish network	Focal points identified
			Establish standardised regional monitoring protocols for seagrass	Standardised seagrass monitoring protocols
			Regional training on seagrass monitoring protocols	# of people trained
			Identify and establish permanent long term monitoring sites	Map showing distribution of monitoring sites
			Establish regional database with national nodes	Regional seagrass database
			Complete national (biannual) monitoring for seagrass habitats (over a minimum 3 years two seasons - winter summer)	National report on seagrass monitoring programme
			Regional report on seagrass monitoring programme	Regional seagrass monitoring report
			Regional workshops for sharing information	
			Standardised protocol for valuing ecosystem services	
Improved understanding of the ecosystem services provided by seagrass habitats and their value within the region.	Seagrass ecosystem service valuations, including carbon storage capacity, completed for countries within the ASCLME	Ecosystem services from seagrass habitats understood and valued (and included in carbon trading schemes)		

			Regional training on seagrass ecosystem service valuation methods, including methods to measure carbon storage capacity	# of people trained
			Complete national surveys to assess ecosystem services for seagrass habitats	National report on seagrass ecosystem services
			Regional report on seagrass ecosystem services	Regional seagrass ecosystem services
			Regional workshops for sharing information	
Seagrass rehabilitation methods trialled within the region	Rehabilitation techniques for seagrass beds trialled at demonstration sites	Widespread application of rehabilitation (x% of degraded seagrass habitat restored)	Review of seagrass rehabilitation methods and create a guidelines for restoration	Best Practice Guidelines on seagrass rehabilitation techniques
			Identify suitable demonstration sites in each country	List and description of demonstration sites
			Identification and participation of stakeholders including communities to be included in training;	# of people (including stakeholders) trained
			Training in seagrass rehabilitation/restoration techniques	# people trained
			Establish seagrass nurseries at demonstration sites	
			Implementation of seagrass rehabilitation methods at demonstration sites	
			Monitor outcomes of seagrass rehabilitation at demonstration sites	Reports on the demonstration projects / Area (ha) of seagrass rehabilitated
National legal and policy frameworks strengthened for the protection of seagrass habitats strengthened	At least 10 % of all seagrass habitats protected (Aichi target)	At least 30 % of all seagrass beds protected	Identify gaps in policy and legislative frameworks	Policy and legislative framework produced
			Identify and recommend methods to reduce the loss of seagrass beds as a result of destructive fishing practices and other threats	Produce guidelines for effective fishing methods
			Review and update legal and policy frameworks to improve the protected of seagrass beds	Policy and legislative framework produced
			Establishment of new MPAs or extend boundaries of existing MPAs to include important seagrass beds	Area (ha) of mangrove habitats protected / % mangrove habitat protected
Awareness of the importance of seagrass habitats increased	Stakeholders aware of the importance of seagrass beds	Seagrass destruction significantly reduced by x% (# of organization participating in seagrass restoration)	Prepare education and awareness raising campaign	List and engagement of local stakeholders
			Media programmes, schools campaign and workshops	# of workshops, TV/Articles on local papers
			Brochures/information leaflet produced in local language	Leaflet/brochure in local language

			Planting trips (stakeholder engagement in seagrass planting - practical)	-#of planting activities
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Issue 2.6: Disturbance damage and loss of upland / watershed habitats (>10 m)

EQO: Watersheds ecosystem protected, rehabilitated, ecosystem function restored, and sustainably managed

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
1. Status of watershed habitats assessed	1. Assessments of the status of watersheds and identification priority watersheds for rehabilitation within all countries within 5 years.	1. Assessments of the status of all watersheds within all countries within 5 years.	1. Assess the status of watersheds in all countries	Watersheds assessment report
2. Watershed monitoring programme established	2. Identify and implement rehabilitation within x priority watersheds within 5 years.	2. x % of degraded watersheds restored / rehabilitated within 20 years	2. Identification of priority watershed for rehabilitation	Rehabilitation plan for the priority watersheds
3. Degraded watersheds rehabilitated and restored	3. Monitoring programme for selected watersheds (rainfall, riverflows, sediment loads, vegetation cover) implemented within 5 years.	3. Results of long term monitoring programme showing a reduction in sediment loads by 50 % of the baseline within 20 years.	3. Appropriate rehabilitation methods identified for each country, in consultation with stakeholders, including local communities.	Number of stakeholders consulted
4. National legal and policy frameworks strengthened	4. Review the national policy and legal frameworks for the protection of watersheds and revision where necessary within 5 years.	4. Review the national policy and legal frameworks for the protection of watersheds and revision where necessary within 5 years.	4. Provide training in rehabilitation methods for local community.	Number of local people trained in rehabilitation methods
5. Improved management and sustainable use of watersheds	5. Develop watershed management plans for inclusion in ICZM plans within 5 years.	5. Watershed management plans integrated into ICZM and implemented in all countries and x % of watersheds protected within 20 years	5. Implement rehabilitation methods in partnership with local communities.	% of priority watershed rehabilitated
6. Awareness of the importance of watersheds increased	Education and awareness plan.	6. Increased awareness of the importance of watershed management	6. Develop standardised protocols for monitoring of watersheds, including participatory monitoring of certain	Monitoring method
			7. Establish target sediment loads and nutrient levels for priority watersheds	Monitoring sites established
			8. Training in monitoring methods and analysis and interpretation of results	Targets for sediment loads
			9. National database for each country established	Targets for nutrient levels
			10. Establish long term monitoring stations for selected watersheds in each country	Number of people trained in monitoring methods
			11. Training needs and capacity assessment of the relevant institutions with the mandate for watershed management	Monitoring data available at the national level (within relevant institution)

			12. Review and develop policy and legislative frameworks for shoreline management	National monitoring reports
			13. Review ICZM plans to include watershed management plans and update where necessary.	Regional database for monitoring data
			14. Awareness meetings with the local communities.	Training needs and capacity assessment reports
				Updated policy and legislative frameworks
				ICZM updated to include watershed management plans
				Number of awareness meetings / workshops
				Number of stakeholders attending meetings / workshops

Issue 2.7: Disturbance, damage and loss of deep water habitats (including sea mounts)

EQO: Health and ecosystem services of deep water habitats protected and effectively managed

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions
1. Improved understanding of deep water habitats and seamounts within the region	1. Inventory of the different types of deep water habitats and distribution of seamounts and species within the region		1. Literature review of existing information on deepwater habitats and biodiversity within the region
2. Increased understanding of deep water species found within the region	2. Improved mapping of deepwater habitats including seamounts,		2. Biodiversity and habitat surveys on deepwater habitats, including seamounts
3. Reduce disturbance and damage of deep water habitats	3. Marine spatial plans to include sensitive deepwater habitats		3. Multi-beam acoustics surveys to map selected deepwater habitats / seamounts areas
4. National legal and policy frameworks for deepwater habitats strengthened	4. National legal and policy frameworks include deepwater habitats		4. Generate marine spatial plans that include sensitive deepwater habitats
Awareness of the importance of deepwater habitats increased	Improved management and sustainable use of deepwater habitats		5. Review national legal and policy frameworks and revise to include monitoring control and surveillance of deepwater habitats.
			6. Guidelines and recommendations for exploration and extraction of deepwater resources (minerals, fish etc).
			Training and capacity building for EIA, with a specific focus on deepwater habitats.

Issue 2.8: Introduction or spread of exotic non-native species, invasive and nuisance species

EQO: Eliminate or minimize the risk of the introduction or spread of exotic non-native species, invasive and nuisance species.

Objectives	Five-year Targets	Twenty-year Targets	Proposed Actions	Indicators
1. Improved understanding of the species and distribution of exotic non-native, invasive and nuisance species within the region	1. Map showing the distribution and incidents of exotic non-native, invasive and nuisance species within the region within 5 years.	1. Spread in exotic non-native, invasive and nuisance species over 20 years	1. Review the literature for reports on non-native, invasive and nuisance species	Number of exotic non-native species / Number of incidents reported

2. National monitoring programmes include methods to record exotic non-native, invasive and nuisance species.	2. Review of national monitoring programmes and recommendations for including non-native, invasives and nuisance species adopted.	2. Decrease in the incidents of exotic non-native, invasive and nuisance species within the region within 20 years	2. Create maps showing the distribution of reported incidents within the region	Number of invasive species / Number of incidents reported
3. Regional reporting mechanism for exotic non-native, invasive and nuisance species established within the region	3. Regional reporting mechanism for exotic non-native, invasive and nuisance species established.	3. Regional reporting mechanism maintained.	3. National monitoring programmes (e.g. coral reef, seagrass, phytoplankton etc.) reviewed and recommendations for including non-native, invasive and nuisance species adopted.	Number of nuisance species / Number of incidents reported
4. Effective bio-security measures implemented throughout the region.	4. Increased capacity to implement bio-security measures	4. Effective bio-security measures maintained and upgraded as needed.	4. Identification guide for commonly known, or wide spread exotic non-native, invasive and nuisance species.	Map of exotic non-native, invasive and nuisance species.
5. Strengthened compliance with international maritime laws within all countries	5. National legislation reviewed to ensure compliance with international maritime laws	5. Increased compliance with international maritime laws	5. Training programmes for taxonomists to help in the identification of exotic non-native, invasive and nuisance species.	Identification guide
6. Awareness of the importance of exotic non-native, invasive and nuisance species increased	6. Education programmes to increase awareness about exotic non-native, invasive and nuisance species implemented.	6. Education programmes to increase awareness about exotic non-native, invasive and nuisance species implemented.	6. Identify a suitable mechanism / institution for regional collaboration, data sharing and reporting on the incidents of exotic non-native, invasive and nuisance species.	Number of taxonomists trained
			7. Establish regional reporting mechanism for exotic non-native, invasive and nuisance species.	Report with recommendations for monitoring the status non-native, invasives and nuisance species adopted.
			8. Assess current bio-security measures within all countries, and make recommendations for improving these measures, to include ballast water receiving facilities	Regional reports on status of exotic non-native, invasive and nuisance species.
			9. Training provided to Port Authorities to increase capacity to effectively implement bio-security measures	Report on the current status of bio-security measures
			10. Review and revise national legislation to ensure compliance with international maritime laws	Number of staff trained in bio-security measures
			11. Develop education programmes to increase awareness about exotic non-native, invasive and nuisance species.	National legislation reviewed to ensure compliance with international maritime laws
			12. Implement education programmes to increase awareness about exotic non-native, invasive and nuisance species.	Number of awareness raising meetings
				Number of schools where awareness lectures were provided to students
				Number of countries where school curriculum includes marine environmental education

Issue 3.1: Decline in populations of Sharks and Rays

EQO: Restoring the populations of sharks and rays to sustainable levels

EQO: Reduce fishing effort and capacity to match MSY or any other management reference point in key shark and ray stocks.

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
1. Rebuild populations to MSY or any other management reference points	1. Stock assessments of the key species of sharks and rays		1. Conduct Stock assessments on the key species of sharks and rays	1. Country stock assessment reports submitted to relevant RFMOs
2. Improve MCS and compliance to RFMO resolution on sharks	2. Establish sustainable catch levels of 50 % of the key sharks and rays	2. Establish sustainable catch levels of 100 % of the key sharks and rays	2. Consultation with key stakeholder to agree on sustainable catch levels of the key sharks and rays	2. Consultation meetings held
3. Development of NPOA in each country	3. Reduce finning in all fisheries by 25 %	1. Reduce finning in all fisheries by 80 %	3. Awareness campaign conducted to reduce finning in all fisheries, introduce regulations (e.g. eliminating the use of wire traces, shark finning) and monitor compliance	3. Compliance reports to the RFMOs ((e.g. eliminating the use of wire traces, shark finning)
4. Monitor and assess stocks of priority sharks/rays species (including bycatch)	4. Eliminate the use of wire traces in longline sharks fishing			4. Wire traces banned in all countries
5. Eliminate finning and discarding of carcasses	5. All countries have a NPOA for sharks and rays.		4. Develop NPOAs for sharks and rays in each country	5. NPOA developed implemented for sharks and rays.
6. Improved catch and effort, and biological data collection systems for priority species	6. 20 % of observers implemented in the commercial fisheries		5. Train and deploy observers commercial sharks fisheries	6. Number of observers trained and deployed in the commercial fisheries
7. Improve the participation of stakeholders in the management process	7. Improved reporting of shark and rays catch, effort and biological by 40% over the baseline	3. Improved reporting of shark and rays catch and effort by 100 % over the baseline	6. Develop database for shark and rays catch, effort and biological data, and coverage of landing	7. Database established for shark and rays catch, effort, biological and landings data
8. Understand the value chains/value addition in shark/rays meat	8. Improved monitoring of landings coverage by 40% over the baseline	4. Improved monitoring of landings coverage by 100% over the baseline		
9. Improve the selectivity of fishing gears (e.g. banned on wire traces)	9. Climate change impacts study carried out			
10. Understand the impacts of climate change on sharks and rays populations				

Issue 3.2: Decline in populations of large pelagics

EQO: Contributing to the rebuilding/restoration of the populations of large pelagics to sustainable levels

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
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Increase the awareness of sustainable fishing practices within the countries	Engage with all stakeholder groups	Engage with all stakeholder groups	1. Annual stakeholders meetings in each country	1. Annual stakeholders meetings held
Rebuild populations to MSY levels or any other management reference points	Stock assessment of all key species in large pelagic fisheries	Stock assessment of key species in large pelagic fisheries	2. Participation of all countries in the t-RFMOs.	2. 90% participation of all countries in the t-RFMOs.
Increase the participation of the countries in the IOTC and CCSBT in terms of science and management	At least 2 tuna fisheries certified	At least 5 of the tuna fisheries certified	3. Participation of country scientists and data submission to the scientific meeting of the t-RFMOs	3. 90 % country scientists participated in the scientific meeting of the t-RFMOs
Improve Monitoring Control and Surveillance (MCS) and compliance to IOTC and CCSBT resolutions including PSM	Improved compliance by 50% (landing monitored, number of inspections, PSM regulations in place)	Establish harvest control rules in 80% of the fisheries	4. Identify key fisheries for certification; support country to move towards certification.	4. Two certified fisheries
Improve data collection of large pelagics in artisanal, semi-industrial, recreational sectors	Establish harvest control rules in 20% of the fisheries	80% coverage of artisanal, semi-industrial and recreational sectors	5. Training of compliance/control officers	5. Number of compliance/control officers trained
Reduce bycatch of the vulnerable species	20% coverage of artisanal, semi-industrial and recreational sectors		6. Support for implementation of the FAO Port State measures in all countries	6. Number of countries implementing FAO Port State measures
Introduce harvest control rules and observer programmes	40 % reduction in sea birds by-catch in longline fisheries	80 % reduction in sea birds by-catch in longline fisheries	7. Updating of compliance regulations	7. Compliance regulations updated
	Bycatch adjusted to target levels	Bycatch reduced by 80%	8. Consultations to agree on harvest control rules at the t-RFMOs level.	8. Number of consultations meeting to agree on harvest control rules at the t-RFMOs level.
	20 % of observers implemented in the commercial fisheries	40 % of observers implemented in the commercial fisheries	9. Develop data collection protocol for landing points in the artisanal, semi-industrial and recreational sectors	9. Data collection protocol for landing points in the artisanal, semi-industrial and recreational sectors developed
			10. Conduct training courses to build awareness of sea birds mitigation measures with skippers.	10. Number of training courses conducted to build awareness of sea birds mitigation measures with skippers.
			11. Set by-catch targets levels.	11. By-catch targets levels set
			12. Further development of coastal anchored FADs	12. Number of observers trained and deployed by each country
			13. Training and deployment of observers by each country	

Issue 3.3: Decline Populations in Small pelagics

EQO: Rebuilding and restoration of the populations of small pelagic species to sustainable levels

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
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Development of Management plans (EAF) for the priority species and associated fisheries	60% of the small pelagic fisheries covered under management plans (EAF)	100% of the small pelagic fisheries covered under management plans (EAF)	1. Develop EAF management plans for the small pelagic fisheries in each country	1. Number of the small pelagic fisheries management plans
Monitor and assess stocks of priority species to agreed target level	60% of the priority species and stocks monitored and assessed and target levels agreed	100% of the priority species and stocks monitored and assessed and target levels agreed	2. Participate and submit data to the SWIOFC small pelagic assessment working group	2. Number of priority species monitored and assessed and target levels agreed
Reduce the use of destructive fishing methods	30% reduction in the use of destructive fishing methods	100% reduction in the use of destructive fishing methods	3. Annual reporting on status of stocks to the SWIOFC	3. Number of awareness meetings and regulations in place
Improved catch and effort, and biological data collection systems for priority species	50% of fisheries for which catch and effort, and biological data are collected for the priority species	50% improvement gear selectivity in the reef and demersal fisheries	4. Awareness session organised with key stakeholders on destructive fishing methods	4. Number of fisheries for which catch and effort, and biological data collected for the priority species and entered into database
Improve Monitoring, Control and Surveillance (MCS) and compliance	60% of landings monitored and recorded	90% of fisheries for which catch and effort, and biological data are collected for the priority species	5. Regulations implemented to combat destructive fishing	5. Number of small pelagics fisheries landings monitored
Improve the participation of stakeholders in the management process	Economic studies to determine economic level of fishing effort/fishing capacity	90% of landings monitored and recorded	6. Develop databases for catch, effort and biological data for priority species for monitoring	6. Economic study published
Introduction of harvest control rules	Introduction of harvest control rules	Inclusion of economic parameters in determination of TAC/TAE levels.	7. Conduct economic study on effort and capacity and options for harvest control rules	7. Harvest control rules protocols published and implemented
Artisanal fisher's rights protected and fair access	20 % of observers implemented in the commercial fisheries	50 % of observers implemented in the commercial fisheries	8. Awareness training on harvest control rules and country process for the introduction TAC/TAE in small pelagic fisheries.	8. Number observers deployed in the commercial fisheries
Understand the value chains/value addition in the small pelagic fisheries (including post harvest losses)	Policies and legislations in place for participation of artisanal fishers	Policies and legislations in place for participation of artisanal fishers	9. Observer training and deployment	9. Policies and legislations for participation of artisanal fishers gazetted
Improve the selectivity of fishing gears	30% of value chains/value addition in the small pelagic fisheries described	30% of value chains/value addition in the small pelagic fisheries described	10. Develop small scale fisheries policies and associated legislations	10. Report on value chains/value addition in the small pelagic fisheries published
Understand the impacts of climate change on the small pelagic fisheries		Mitigations and adaptation measures in place for climate change impacts on reef and demersal fisheries	11. Conduct study on value and value addition options for small scale pelagics	

Issue 3.4: Decline in populations of reef and demersal fish

EQO: Rebuilding and restoration of the populations of reef and demersal fish species to sustainable levels

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
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Development of Management plans (EAF) for the priority species and associated fisheries (tourism, mining, urbanisation, agricultures, industry, agriculture impacts)	50% of the reef and demersal fisheries covered under management plans (EAF)	90% of the reef and demersal fisheries covered under management plans (EAF)	1. Develop EAF management plans for the key reef and demersal fisheries in each country	1. Number of reef and demersal fisheries management plans
Monitor and assess stocks of priority species to agreed target level	50% of the priority species and stocks monitored and assessed and target levels agreed	90% of the priority species and stocks monitored and assessed and target levels agreed	2. Participate and submit data to the SWIOFC demersal working group	2. Number of priority species monitored and assessed and target levels agreed
Reduce the use of destructive fishing methods	20% Reduction in the use of destructive fishing methods	90% Reduction in the use of destructive fishing methods	3. Annual reporting on status of stocks to the SWIOFC	3. Number of awareness meetings and regulations in place
Improved catch and effort, and biological data collection systems for priority species	30% of fisheries for which catch and effort, and biological data are collected for the priority species	90% of fisheries for which catch and effort, and biological data are collected for the priority species	4. Awareness session organised with key stakeholders on destructive fishing methods	4. Number of fisheries for which catch and effort, and biological data collected for the priority species and entered into database
Improve Monitoring, Control and Surveillance (MCS) and compliance	50% of landings monitored and recorded	90% of landings monitored and recorded	5. Regulations implemented to combat destructive fishing	5. Number of reef and demersal fisheries landings monitored
Improve the participation of stakeholders in the management process	Economic studies to determine economic level of fishing effort/fishing capacity	Harvest control rules introduced in 50% of the fisheries	6. Develop databases for catch, effort and biological data for priority species for monitoring	6. Economic study published
Introduction of harvest control rules	Introduction of harvest control rules	90% of value chains/value addition in the reef and demersal fisheries described	7. Conduct economic study on effort and capacity and options for harvest control rules	7. Harvest control rules protocols published and implemented
Artisanal fisher's rights protected and fair access	20 % of observers implemented in the commercial fisheries	Ornamental fisheries management plans in place	8. Awareness training on harvest control rules and country process for the introduction TAE in key reef and demersal fisheries.	8. Policies and legislations for participation of artisanal fishers gazetted
Understand the value chains/value addition in the reef and demersal fisheries	Policies and legislations in place for participation of artisanal fishers	Inclusion of economic parameters in determination of TAC/TAE levels.	9. Develop small scale fisheries policies and associated legislations	9. Report on value chains/value addition in the small pelagic fisheries published
Ornamental fisheries management improved	30% of value chains/value addition in the reef and demersal fisheries described	50% improvement gear selectivity in the reef and demersal fisheries	10. Conduct study on value chain and value addition options for key reef and demersal fisheries	10. Ornamental fisheries policies and regulations published
Improve the selectivity of fishing gears	Policies and legislations on ornamental fisheries in place	Mitigations and adaptation measures in place for climate change impacts on reef and demersal fisheries	11. Prepare policies and legislation to regulate ornamental fisheries	11. Published regulation on gear selectivity and climate change studies
Understand the impacts of climate change on reef and demersal fisheries	Regulations in place for gears selectivity		12. Develop Regulations on gears selectivity	
Understate the fisher migration in the region	Studies on the major impacts of climate change on reef and demersal fisheries		13. Conduct studies on the major impacts of climate change on reef and demersal fisheries	

Economic benefits of the reef and demersal fisheries			14. Migration study of fishers and impact on resources use (transboundary impact)
			15. Study of resource users and economic benefit of the reef and demersal fisheries in the all the countries (including recreational fisheries and tourism activities)

Issue 3.5: Decline in populations of sea cucumbers

EQO: Rebuilding and restoration of the populations of sea cucumber species to sustainable levels

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
Reducing the overcapacity in the fishery	50% of the sea cucumber fisheries covered under management plans (EAF)	100% of the sea cucumber fisheries covered under management plans (EAF)	1. Develop EAF management plans for the sea cucumber fisheries in each country	1. Number of sea cucumber EAF fisheries management plans
Introduction of TAC and/or TAE	50% of the sea cucumber stocks monitored and assessed and target levels (TAC and/or TAE) agreed	100% of the sea cucumber stocks monitored and assessed and target levels (TAC and/or TAE) agreed	2. Participate and submit data to the SWIOFC demersal working group	2. Number of sea cucumber fisheries monitored and assessed and target levels agreed
Building awareness on sustainable fishing practices (e.g. trampling on coral reefs, ecological benefits)	30% of fisheries for which catch and effort, and biological data are collected for the priority species	100% of fisheries for which catch and effort, and biological data are collected for the priority species	3. Annual reporting on status of stocks to the SWIOFC	3. Number of awareness meetings and regulations in place
Increase compliance to regulations in the fishery	50% of landings monitored, inspected and recorded	90% of landings monitored, inspected and recorded	4. Develop databases for catch, effort and biological data for priority species for monitoring	4. Number of fisheries for which catch and effort, and biological data collected for the sea cucumber species and entered into database
Introduction of Management plans (EAF)	Fishery awareness programme and training developed on sustainable fishing practices and implemented in each country	100% of the fishery with value chains described to improve economic returns	5. Conduct economic study on effort and capacity and options for harvest control rules	5. Number of sea cucumber fisheries landings monitored
Assessment of alternative livelihoods (e.g. tourism activities)	50% of the fishery with value chains described to improve economic returns	80% reduction of drug use among the sea cucumber fishers	6. Awareness training on harvest control rules and country process for the introduction TAC and /or TAE in sea cucumber fisheries.	6. Economic study published
Improved value addition	50% reduction of drug use among the sea cucumber fishers	80% reduction in diving accidents in sea cucumber fisheries	7. Training of inspectors	7. Harvest control rules protocols published and implemented
Assessment for potential ranching/mariculture to reduce effort on wild population	50% reduction in diving accidents in sea cucumber fisheries		8. Conduct study on value and value addition options sea cucumber fisheries	8. Report on value chains/value addition in the small pelagic fisheries published

Awareness of drug use among the sea cucumber fishers		9. Targeted drug rehabilitation programme for those affected	9. Number of sea cucumber fishers rehabilitated
Reduce diving accidents in sea cucumber fisheries		Introduce diver safety training	10. Number of diving accidents
			11. Diving safety training conducted

Issue 3.6: Decline in populations of prawns and shrimps

EQO: Rebuilding and restoration of the populations of prawns and shrimps fisheries to sustainable levels

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
Reducing the overcapacity in the fishery	50 % reduction of overcapacity in the fishery	80 % reduction of overcapacity in the fishery	1. Develop EAF management plans for prawns and shrimps fisheries (inshore and offshore) in each country as applicable (environmental friendly gear, zonation, artisanal versus industrial fisheries).	1. Number of prawns and shrimps EAF fisheries management plans
Improved assessment of the stocks	TAE introduced in 30 % of the fisheries	TAE introduced in 60 % of the fisheries	2. Conduct economic study on effort and capacity and options for harvest control rules	2. Number of vessels and effort applied in each fishery
Introduction of TAE	Awareness programme and training developed on sustainable fishing practices (improved management of mangroves areas, improved coastal spatial planning)	30% of area originally covered by mangroves restored	3. Participate and submit data to the SWIOFC demersal assessment working group	3. Number of prawns and shrimps fisheries monitored and assessed and target levels agreed
Building awareness on sustainable fishing practices (environmental friendly gear, zonations, artisanal versus industrial fisheries)	50% of the shrimps and prawns covered under management plans (EAF)	100% of the shrimps and prawns fisheries covered under management plans (EAF)	4. Develop databases for catch, effort and biological data for priority species for monitoring	4. Number of awareness meetings and regulations in place
Improve MCS and compliance	50% of vessels using BRDs/environmental friendly gears	At least two plans per country for coastal spatial planning prepared and implemented	5. Annual reporting on status of stocks to the SWIOFC	5. Number of fisheries for which catch and effort, and biological data collected for the sea cucumber species and entered into database
Introduction of BRDs in the fishery	50% of the shrimps and prawns species and stocks monitored and assessed and target levels agreed	100% of the shrimps and prawns species and stocks monitored and assessed and target levels agreed	6. Awareness session organised with key stakeholders on environment friendly fishing gears (using BRDs)	6. Number of vessels using environment friendly gears
Reduce post harvest losses	30% of fisheries for which catch and effort, and biological data are collected for the priority species	100% of fisheries for which catch and effort, and biological data are collected for the priority species	7. Regulations developed for reducing bycatch (environment friendly fishing gears/ BRDs)	7. Number of prawns and shrimps fisheries landings monitored
Reduce bycatch	80% of landings monitored and recorded and compliance improved	100% of landings monitored and recorded and compliance improved	8. Pilot studies carried out of key fishing fleets using environment friendly fishing gears/ BRDs)	8. Economic study published
Improved management of mangroves areas	Environmental fishing gears piloted on 20% of the fleet	Environmental fishing gears introduced in 100% of the fleet	9. Training of compliance/control officers	9. Harvest control rules protocols published and implemented

Improved coastal spatial planning	Assessment potential value addition of bycatch from shrimp and prawn fisheries	50% of bycatch used for value addition.	10. Awareness training on harvest control rules and country process for the introduction TAE in prawns and shrimps fisheries.	10. Report on value chains/value addition in the prawns and shrimps fisheries published
		100% of vessels using BRDs/environmental friendly gears	11. Study on feasibility of reducing post harvest losses including infrastructure development	
			12. Observer training and deployment on commercial vessels	
			13. Develop small scale fisheries policies and associated legislations	
			14. Conduct study on value and value addition options for prawns and shrimps fisheries	
			15. Study of resource users and economic benefit of the shrimps and prawn in all the countries (including recreational fisheries and tourism activities)	

Issue 3.7: Decline in populations of lobsters

EQO: Rebuilding and restoration of the populations of lobster species to sustainable levels

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
Development of Management plans (EAF) for the priority lobster species (for shallow and deepwater)	80% of the lobster fisheries covered under management plans (EAF)	100% of the lobster fisheries covered under management plans (EAF)	1. Develop EAF management plans for lobsters fisheries (shallow and deep water) in each countries as applicable	1. Number of the lobster fisheries management plans
Monitor and assess stocks of priority species to agreed target level	50% of the priority lobster species and stocks monitored and assessed and target levels agreed	90% of the priority lobster species and stocks monitored and assessed and target levels agreed	2. Participate and submit data to the SWIOFC demersal assessment working group	2. Number of priority species monitored and assessed and target levels agreed
Improved catch and effort, and biological data collection systems for priority species	60% of fisheries for which catch and effort, and biological data are collected for the priority species	90% of fisheries for which catch and effort, and biological data are collected for the priority species	3. Annual reporting on status of stocks to the SWIOFC	3. Number of awareness meetings and regulations in place
Improve Monitoring, Control and Surveillance (MCS) and compliance	60% of landings monitored and recorded	100% of landings monitored and recorded	4. Develop databases for catch, effort and biological data for priority species for monitoring	4. Number of fisheries for which catch and effort, and biological data collected for the priority species and entered into database
Improve the participation of stakeholders in the management process	Economic studies to determine economic level of fishing effort/fishing capacity	Inclusion of economic parameters in determination of TAC/TAE levels.	5. Conduct economic study on effort and capacity and options for harvest control rules	5. Number of lobster fisheries landings monitored
Improve selectivity in the artisanal and industrial fisheries	Introduction of harvest control rules	Harvest control rules introduced in 100% of the fisheries	6. Conduct gear selection study and recommend environmental friendly gear	6. Economic study published

Introduction of harvest control rules	20 % of observers implemented in the commercial fisheries	40 % of observers implemented in the commercial fisheries	7. Awareness training on harvest control rules and country process for the introduction TAC/TAE in small pelagic fisheries.	7. Harvest control rules protocols published and implemented
Economic benefit of the lobster fisheries	Policies and legislations in place for participation of artisanal fishers	30% of value chains/value addition in lobster fisheries described	8. Training of inspectors/PSM	8. Number observers deployed in the commercial fisheries
Understand the transboundary resource use conflict	30% of value chains/value addition in lobster fisheries described		9. Observer training and deployment	9. Policies and legislations for participation of artisanal fishers gazetted
Understand the impacts of climate change/ocean acidification			10. Develop small scale fisheries policies and associated legislations	10. Report on value chains/value addition in the lobster fisheries published
			11. Conduct study on value and value addition options for lobsters fisheries	
			12. Study of resource users and economic benefit (including socio economic) of the lobsters fisheries in the all the countries (including recreational fisheries and tourism activities) and resources use conflicts (transboundary)	

Issue 3.8: Excessive bycatch and discards

EQO: Maximise the value of bycatch and eliminate discards

Objectives, targets and actions here are duplicated across populations of concern, a short summary is provided below.

Objectives	Five-year Targets	Twenty-year Targets	Actions	Indicators
Development of Management plans (EAF) for the bycatch species and discards	50 % of fisheries with important bycatch species covered under management plans (EAF)	All fisheries with important bycatch species covered under management plans (EAF)	1. Bycatch and discards included in EAF management plans for all key fisheries in each country	1. Number of EAF fisheries management plans with bycatch and discards measures
Introduction of gear regulations	Gear regulations introduced in 50% fisheries with high bycatch and discards	Gear regulations introduced in all fisheries with high bycatch and discards	2. Participate and submit bycatch and discards data to the SWIOFC working groups	2. Number of bycatch and discard species monitored and assessed and target levels agreed
Monitor and assessment of bycatch and discarded species	50% of the priority bycatch species monitored and assessed and target levels agreed	100% of the priority bycatch species monitored and assessed and target levels agreed	3. Awareness session organised with key stakeholders on destructive gear and use of selective fishing methods	3. Study and recommendations on destructive gears and introduction of measures for selective gears
Improve Monitoring, Control and Surveillance (MCS) and compliance	100% of all fisheries with high level of bycatch and discards monitored and assessed		4. Regulations implemented to address introduction of selective gears and eliminate destructive fishing practices	4. Number of awareness meetings and regulations in place
Develop of policies and legislative framework and discards (e.g. levies)	30% of fisheries for which catch and effort, and biological data are collected for the bycatch priority species	80% of fisheries for which catch and effort, and biological data are collected for the bycatch priority species	5. Develop databases for bycatch and discarded species for monitoring	5. Number of fisheries for which bycatch and discards data collected and entered into database

Increase value addition initiatives on bycatch species			6. Conduct study on value chain and value addition options for bycatch (including utilisation of discarded species)	6. Number of fisheries landings with bycatch and discards monitored	
Reduce overcapitalisation in all fisheries with high bycatch and discards	Policies and legislations in place for bycatch reduction		7. Training of inspectors		7. Economic study published
Reduce the use of destructive fishing methods	20% reduction in the use of destructive fishing methods	80% reduction in the use of destructive fishing methods	8. Observer training and deployment in commercial fisheries		8. Number observers deployed in the commercial fisheries
Improved catch and effort, and biological data collection of bycatch species	20 % of observer coverage in the commercial fisheries	30% observer coverage in commercial fisheries	9. Economic study on the impact of bycatch and discard species on the relevant fisheries		9. Report on value chains/value addition for bycatch and discards species published
Understand the value chains/value addition of bycatch species	30% of value chains/value addition of bycatch and discarded species described	60% of value chains/value addition of bycatch and discarded species described			
Improve the selectivity of fishing gears					