

ANNEX 1_: RESULTS FRAMEWORK FOR ESTABLISHMENT OF A REGIONAL SYSTEM OF FISHERIES REFUGIA

Component	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
1. Identification and management of fisheries and critical habitat linkages at priority fisheries <i>refugia</i> in the South China Sea and Gulf of Thailand	1. Reduced stress on fish stocks and coastal habitats via improved national management of key anthropogenic threats to fisheries and critical habitat linkages in the South China Sea and Gulf of Thailand	Status of formal designation, management plan adoption, and community engagement in implementation of agreed management measures, including enforcement, for priority sites	Rate of coastal habitat loss from SCS basin is high (e.g., 30% per decade for seagrass) Fishing identified as a key threat to coastal habitats	Effective management of key threats to 14 fisheries <i>refugia</i> sites [269,500 ha], including ~50 percent reduction in fishing pressure within sites at times critical to the life-cycles of fished species of transboundary significance	Adopted management plans Regular reports of meetings of national and regional project management bodies Reports of independent mid-term and terminal project evaluations	Adequate local cooperation to compile and analyze information to establish baselines and standardized procedures to measure and monitor the effectiveness of agreed stress reduction measures
	1.1 Fisheries and critical habitat linkages at 14 priority sites in the South China Sea and Gulf of Thailand safeguarded via the delineation of fisheries <i>refugia</i> boundaries and the setting of priorities for <i>refugia</i> management	Status of boundary delineation and agreement on proposed management interventions	<i>Refugia</i> site locations identified regionally although need to work with stakeholders, locally including academe and researchers, to delineate boundaries	Agreement among stakeholders on the boundaries of fisheries <i>refugia</i> , key threats to <i>refugia</i> , and priority management interventions for 14 sites in the South China Sea and Gulf of Thailand	14 fisheries <i>refugia</i> profile reports, including maps and site characterisations, published for 14 priority sites	Adequate local cooperation to agree boundaries and compile and analyze information to identify threats and agree management actions
	1.2 Amelioration of key threats to fish stock and critical habitat linkages via the adoption and implementation of community-based <i>refugia</i> management plans at 14 sites	Status of adoption and implementation of the management plans Total area of fisheries <i>refugia</i> (ha) under management	Guide to planning of <i>refugia</i> management developed and published in inter-governmentally endorsed regional guidelines and a need exists to apply this at the local level	Community-based <i>refugia</i> management plans that are consistent with the FAO and ASEAN-SEAFDEC Guidelines for Responsible Fisheries developed, adopted, and under implementation at 14 fisheries <i>refugia</i> sites	14 published management plans and annual implementation reports	Sufficient local buy-in from local officials to ensure management plan implementation
	1.3 Catalysed community action for fisheries <i>refugia</i> management at 14 sites	Status and effectiveness of the management board and volunteer networks	Efforts to strengthen monitoring, control, and surveillance capabilities in all countries are ongoing, although need exists to refine scope of work to support <i>refugia</i> management	Networks of management boards and community-based fisheries and habitat management volunteers for <i>refugia</i> management established at 14 fisheries <i>refugia</i> sites	224 quarterly reports of network meetings and activities [including list of participants and results of work]	Fisherfolk and resource users willing to participate in management on a voluntary basis
	1.4 Empowered fishing communities, particularly artisanal	Increase in the proportion of target community members	Capacity building programmes at the community level focus	Enforcement programmes at 14 fisheries <i>refugia</i> sites,	14 operational enforcement	Training materials are sufficiently well

	fishermen and women involved in inshore gleaning and processing, for enforcement of agreed management rules at 14 priority <i>refugia</i> sites in the South China Sea and Gulf of Thailand	[minimum of 30 percent women] participating in <i>refugia</i> management, including enforcement, at the site level	on seafood quality and capacity issues with little emphasis on links between fisheries and environment	including participatory activities for monitoring, control and surveillance	programmes at priority sites	designed to engage target audience
	1.5 Strengthened civil society and community organisation participation in fisheries <i>refugia</i> management	Number of GEF Small Grants Programme projects commissioned and implemented in support of <i>refugia</i> management objectives	Low level mobilization of civil society, community organization and the private sector in site-based fisheries and habitat management	Operational partnership with the GEF Small Grants Programme to strengthen civil society and community organisation participation in the management of fisheries <i>refugia</i> at 14 sites	4 annual reports of <i>Refugia</i> -SGP partnership	There will be sufficient number of civil society and community based organizations in priority sites to act as GEF SGP project proponents

Table 2 Results framework for project component 2

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
2. Improving the management of critical habitats for fish stocks of transboundary significance via national and regional actions to strengthen the enabling environment and knowledge-base for fisheries <i>refugia</i> management in the South China Sea and Gulf of Thailand	2. Increased institutional capacity in the 6 participating countries for the designation and operational management of fisheries refugia via the transformation of enabling environments and the generation of knowledge for planning	<i>Status of enabling environment reform, including extent of behavioural change among small-scale fisherfolk at priority sites</i> <i>Extent of use of available environmental state and socio-cultural information in policy and planning frameworks</i>	<i>Weak enabling environments and limited knowledge within national fisheries and environment departments and ministries with respect to the implementation of measures aimed at managing threats to fish stock and critical habitat linkages</i>	<i>National and regional policy, legal and planning frameworks for demarcating boundaries and managing fisheries refugia, resulting in, inter alia, a 20 percent increase in small-scale fishing vessels using fishing gear and practices designed to safeguard fish stock and critical habitat linkages at priority sites</i>	<i>Endorsed policies and plans</i> <i>Regular reports of meetings of national and regional project management bodies</i> <i>Reports of independent mid-term and terminal project evaluations</i>	<i>Willingness of fisheries and environment sectors to agree on guidelines promoting cross-sectorial cooperation and make joint commitments to the reform of national policy, legal and regulatory frameworks governing the management of fisheries refugia</i>
	2.1 Strengthened enabling environments for the effective management of the effects of fishing on fisheries and critical habitat linkages in the South China Sea and Gulf of Thailand	Status of policy revision and endorsement	Environmental impacts of fishing and aquaculture reflected in national and regional fisheries policies although minimal attention to effects of fishing on critical fish habitats	Measures for the fisheries sector's sustainable use of fish habitats and biodiversity, and based on site-level models of ecosystem carrying capacity, incorporated in the fisheries policies of participating countries	6 endorsed revised policies	Willingness of the fisheries sector to engage on issues relating to environmental performance
	2.2 Cross-sectorial agreement on national guidelines for the use of fisheries <i>refugia</i> for integrated fisheries and habitat management	Status of endorsement of national guidelines	ASEAN-SEAFDEC regional guidelines endorsed	National guidelines on the use of fisheries <i>refugia</i> in integrating fisheries and habitat management developed and endorsed by heads of national government departments responsible for fisheries and environment in the participating countries	6 published national guidelines on establishing and operating fisheries <i>refugia</i>	Willingness of the fisheries and environment sectors to agree on guidelines promoting cross-sectorial cooperation
	2.3 Endorsed policy, legal, and planning frameworks, both and national and regional	Status of endorsement of national fisheries <i>refugia</i> policies, enactment of	Absence of clear and effective policies, laws, and plans relating to the	National policy, legal and planning frameworks for demarcating boundaries	6 national reports on policy, legal and institutional aspects of <i>refugia</i> establishment	National and provincial government

	levels, for the establishment and management of fisheries <i>refugia</i> , including the reduced use of destructive fishing gear and practices in areas of critical habitats	supporting laws, and plan implementation	demarcation of boundaries, formal designation, and operational management of fisheries <i>refugia</i>	and managing <i>refugia</i> assessed and required reforms endorsed in the participating countries and reflected in an updated regional action plan	and management published Endorsed policy and executive orders, provincial/local ordinances and by-laws 6 endorsed National Action Plans for the management of priority fisheries <i>refugia</i> and associated biodiversity 1 endorsed Regional Action Plan for fisheries <i>refugia</i>	commitment to reform Commitments of national governments to cooperate and jointly plan actions relating to management of fish stock and critical habitat linkages for fish stocks of transboundary significance
	2.4 Enhanced access to information relating to status and trends in fish stocks and their habitats in waters of the SCS	Volume of new and additional information compiled on: biomass trends; recruitment; fish size; fish habitat area and quality; and volume and value of landings by fishing area and fishing gear use	Review of fisheries and their habitats on the SCS coast prepared for Cambodia, Indonesia, the Philippines, Thailand and Viet Nam during 2004-2006	Annual synthesis reports of new and additional information and data relating to the stocks of priority fish, crustaceans and molluscs and their habitats published in each country and disseminated at national and regional levels	96 quarterly and 6 annual reports on fish stocks and habitats published online	Adequate coordination with provincial and municipal fisheries officers to access required information
	2.5 Improved national and regional-level management and sharing of information and data on fish early life history in the waters of the SCS	Status of national and regional databases and the number of datasets contained therein	Access to data generated from fish early life history research constrained both nationally and regionally by a lack of central repository	Establishment and population of 6 online national databases, and 1 regional database, of fish egg and larvae distribution and abundance in national waters and the SCS basin	6 databases online and populated with datasets	Willingness of individual scientists and data holders to share information for inclusion in a national repository
	2.6 Enhanced access to information relating to the locations and status of coastal habitats and management areas in the SCS and GoT	Status of the national and regional GIS and the number of sites presented and characterised	Information relating to fisheries and their habitats contained a number of national databases and the SCS project website although need for improved access to	National and regional online Geographical Information Systems on fisheries and marine biodiversity featuring information on locations and management status of	6 national and 1 regional Geographical Information System online and populated with site-based information	Internet connectivity in provincial and local offices of departments of fisheries and environment adequate to support online updating of database

			information regarding management areas	coastal habitats, fisheries <i>refugia</i> , MPAs, and critical habitats for threatened and endangered species		
	2.7 Strengthened information base for the planning, monitoring and evaluation of management at priority fisheries <i>refugia</i> sites in the South China Sea and GoT.	Completeness of site characterisations for 14 priority <i>refugia</i>	Information collection largely focuses on volumes with little attention to species & size selectivity of gear, size frequency and maturity, role of habitats in production	Fisheries and habitat data collection programmes operational to characterise 14 priority <i>refugia</i> sites in the South China Sea and Gulf of Thailand	Characterisations for 14 <i>refugia</i> sites accessible online	Consistent use of standardised data collection methods and procedures
	2.8 Improved basin-wide understanding of linkages between ocean circulation patterns, nutrient/chlorophyll concentrations, and sources and sinks of fish larvae in the South China Sea	Status of modelling system and extent of its use in decision-making and planning	Absence of information regarding links between circulation patterns, biochemistry and fish early life history in the South China Sea and Gulf of Thailand	Modelling system linking oceanographic, biochemical, and fish early life history information developed applied to improve regional understanding of fish early life history and links to critical habitats	1 regional modelling system online	Available information is sufficient to model linkages
	2.9 Regionally and locally appropriate best practices generated to address the effects of trawl and motorised push net ¹ fishing on seagrass habitat, and the capture of juveniles, pre-recruits and fish in spawning condition	Status of demonstration activities Number of best practice fishing methods and practices demonstrated	Few regionally or locally appropriate examples of practical solutions to key threats to fisheries <i>refugia</i>	Best practice fishing methods and practices to address key threats to fish stock and critical habitat linkages demonstrated at priority <i>refugia</i>	4 published reports of the results of demonstrations	Willingness of fisherfolk to engage in activities focused on development of more responsible fishing gear and methods

¹ Push netting is not found in Indonesia

Table 3 Results framework for project component 3

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
3. Information Management and Dissemination in support of national and regional-level implementation of the fisheries <i>refugia</i> concept in the South China Sea and Gulf of Thailand	3. Strengthened knowledge management and information sharing and access for enhanced uptake of good practice in integrating fisheries management and biodiversity conservation in the design and implementation of fisheries and environmental management systems, including Marine Spatial Planning	<i>Extent of demonstrable use of examples of good practice in guiding the replication, scaling-up and mainstreaming of good practices</i>	<i>Low-level ability of stakeholders to engage in meaningful dialogue regarding how broader multiple use planning can best contribute to improving the state of fisheries and biodiversity conservation</i>	<i>National and regional systems for knowledge management and sharing, including the development of indicator sets and standardized statistics to guide the replication, scaling-up and mainstreaming of good practices in the use of fisheries refugia as a spatial planning tool</i>	<i>Routine communications on progress and lessons learned prepared and shared Annual results reports published and disseminated National and regional web portals for knowledge management and information exchange accessible online</i>	<i>If insufficient good practices are documented and shared regionally, awareness building initiatives will be based on a limited number of local examples and may not be effective in engaging community members and resource users in the wider region</i>
	3.1 Enhanced uptake of best practices in integrating fisheries management and biodiversity conservation, in the design and implementation of fisheries management systems	Number of best practice approaches and measures tested and codified Number, scope and reach of communications to share best practices Demonstrable use of best practices in policy and planning	Lessons learned in coastal habitat management from the SCS project's network of 23 demonstration sites have been documented, although there are few regionally relevant examples of best practice in integrated fisheries and biodiversity management	Best practice approaches and measures for integrated fisheries and habitat management captured, documented and communicated nationally and regionally	6 online national and 1 regional catalogue of best practice approaches and measures 24 communications on best practices published and syndicated	Sufficient number of best practices will be generated at priority <i>refugia</i> sites
	3.2 Improved community acceptance of area based approaches to fisheries and coastal environmental management	Extent of community acceptance of the use of fisheries <i>refugia</i> in coastal fisheries management	Awareness programmes at the community level rarely address area based management approaches	Public awareness and outreach programme to promote local social, economic and environmental benefits of fisheries <i>refugia</i> implemented at 14 priority locations in the South China Sea and Gulf of Thailand	24 awareness materials published online 56 annual reports of outreach programmes at 14 priority locations, including tracking of extent of community acceptance	Awareness and outreach materials are sufficiently well designed to engage community members and resource users

	3.3 Knowledge generated and experiences from establishing and operating fisheries <i>refugia</i> , captured and shared nationally, regionally, and globally	Status of national web portals Status of publication of GEF IW experience notes	No existing mechanism for the capture, management and sharing of knowledge and experiences in the use of area based tools for fisheries management in the South China Sea region	National knowledge management systems on the use of fisheries <i>refugia</i> in capture fisheries management established and operational	6 online national web portals on fisheries <i>refugia</i> 7 published GEF IW experience notes (one per country and one regional) on application of fisheries <i>refugia</i> in the South China Sea and Gulf of Thailand	Internet connectivity at provincial and community-level offices of government agencies and other stakeholders adequate to support web-based information sharing
	3.4 Information and Education Campaigns for small-scale fisherfolk on the links between fisheries, habitats and biodiversity coordinated regionally through a Regional Education and Awareness Centre	Status of the Regional Education and Awareness Centre at SEAFDEC Volume of information and education material compiled, produced and made accessible	Access to information and training materials on integrated fisheries and habitat management limited to that produced through SCS project and accessible via SCS website	Regional Education and Awareness Centre on fisheries and critical habitats established and operating as a facility for the production and sharing of information and education materials for <i>refugia</i> management	Information and education materials accessible at SEAFDEC and online	Adequate commitment of regional executing agency to sustain longer-term operation of the facility as core function of its Training Department
	3.5 Standardised methods for collection and analysis of information and data, for use in assessing the impacts of <i>refugia</i> and in the design appropriate indicators for the longer-term operation of the regional system of fisheries <i>refugia</i>	Status of regional agreements Extent of demonstrated use of the agreed procedures in operation of site-level information and data collection programmes	Efforts to standardise reporting of regional fisheries statistics underway although little consideration given to issues relating to fish stock and habitat links	Regional agreement on standardised information and data collection procedures in support of longer-term operation of a regional system of fisheries <i>refugia</i> , including design of stress reduction and environmental state indicators for managed <i>refugia</i>	1 regionally endorsed report published online	Harnessing sufficient scientific and technical expertise to guide development of regionally and locally appropriate procedures

Table 4 Results framework for project component 4

Components	Outcomes	Indicator	Baseline	Targets End of Project	Source of Verification	Risks and Assumptions
4. National and regional cooperation and coordination for integrated fish stock and critical habitat management in the South China Sea and Gulf of Thailand	<i>Cost-effective and efficient coordination of national and regional level cooperation for integrated fisheries and environmental management</i>	<i>Extent and continuity of stakeholder participation in meetings of project management bodies, including the scope and uptake of joint management and planning decisions</i>	<i>Lack of national and regional-level mechanisms to facilitate integration of fisheries management and biodiversity conservation</i>	<i>Effective multi-lateral and intergovernmental communication and joint decision-making, including the use of a consensual knowledge-base in planning ecologically and cost-effective management actions</i>	<i>Regular reports of meetings of national and regional project management bodies Reports of independent mid-term and terminal project evaluations</i>	<i>Consultative processes will elicit adequate stakeholder input and commitment of support from national networks to enable integrated management</i>
	4.1 Strengthened cross-sectorial coordination in the establishment and operation of fisheries <i>refugia</i> in the participating countries	Extent and continuity of national government agency participation in National Fisheries <i>Refugia</i> Committee meetings	Limited cross-sectorial engagement in the planning of coordinated actions to manage threats to fish stocks and critical habitat linkages	National Fisheries <i>Refugia</i> Committees (NFRC) established in 6 countries, functional and advising national decision-makers and regional <i>fora</i>	6 NFRC Terms of Reference and 48 biannual meeting reports (joint management decisions and participant lists)	Willingness of fisheries and environment sectors to engage in joint planning and decision-making via NFRC
	4.2 National scientific and technical expertise and knowledge harnessed to inform policy, legal and institutional reforms for fisheries <i>refugia</i> management in the participating countries	Status of the NTSC's and the uptake of the scientific and technical advice they provide	Lack of a formal mechanism for the sharing of science and technical knowledge between government agencies and other stakeholders involved in fish stock and coastal environmental management in all countries	National Technical and Scientific Committees (NTSC) established in 6 countries, functional and advising site-level management boards, the NFRC and the Regional Scientific and Technical Committee	6 NTSC Terms of Reference and 96 quarterly meeting reports (scientific and technical advice and participants lists)	Securing adequate and consistent inputs of expertise to work of NTSC may be compromised if incentives for national specialists to participate in work of the NTSC are inadequate
	4.3 Community-led planning of fisheries <i>refugia</i> management at priority locations in the South China Sea and Gulf of Thailand	Continuity of participation of community stakeholders in the planning, monitoring and evaluation of fisheries <i>refugia</i> management	Minimal stakeholder participation in planning of local actions to manage threats to fish stocks and critical habitats linkages	Local community action catalysed via establishment and operation of site-based management boards for fisheries <i>refugia</i> at 14 locations in the South China Sea and Gulf of Thailand	14 Management Board Terms of Reference and 224 quarterly meeting reports (joint management decisions and participant lists)	Existing tensions between local fisherfolk and government agencies may limit community leader participation in management planning
	4.4 Regional cooperation in the	Status of the RSTC and the uptake of the	Lack of a formal mechanism for the	Regional Scientific and Technical	1 RSTC Terms of Reference and 4	Harnessing sufficient scientific and technical

	integration of scientific knowledge and research outputs with management and policy making	scientific and technical advice it provides Continuity of participation of members in annual meetings	sharing of science and technical knowledge relating to fisheries <i>refugia</i>	Committee (RSTC) established and functioning as a bridge between the scientific community and decision-makers for operation of a regional system of fisheries <i>refugia</i> [biannual meetings]	annual meeting reports (documenting scientific and technical advice and participant lists)	expertise across disciplines including, <i>inter alia</i> , fisheries science, oceanography, coastal and marine ecology
	4.5 Regional cooperation in the establishment and operation of a regional system of fisheries <i>refugia</i>	Status of the PSC Continuity of participation of members in annual meetings	UNEP and GEF requirement for establishment of regional decision making and planning body for the project	Project Steering Committee established and functioning to oversee and act as a principal decision making body for the project	1 PSC Terms of Reference and 8 annual meeting reports (documenting joint decisions and participant lists)	Senior officials of national fisheries administrations acknowledge importance assigned to operation of such a body by UNEP & GEF
	4.6 Effective coordination of regional and national-level activities and reporting requirements of UNEP and GEF satisfied	Program coordination unit recruited and staff retained	Executing agency has managed components of larger FAO/GEF projects but is yet to act as executing agency for GEF project of this magnitude	Functioning regional Project Coordinating Unit (PCU) supporting the coordination of regional and national level activities associated with the establishment and operation of regional system of fisheries <i>refugia</i> and meeting reporting requirements of UNEP and the GEF	Terms of Reference and contracts for project coordination unit staff	Regional executing agency ability to recruit and retain appropriately qualified staff for project coordination unit