

Development and Operation of a Regional System of Fisheries Refugia for the South China Sea and Gulf of Thailand

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Increasing levels of fishing effort, coupled with continued decline in the total area of habitats critical to the life-cycles of most species, has raised serious concerns for the long-term sustainability of fisheries of the South China Sea and Gulf of Thailand. Given the feed back loops between fish stock and habitat quality on one hand, and fishing activities and habitat quality on the other, the UNEP/GEF South China Sea Project and SEAFDEC worked through its Regional Working Group on Fisheries (RWG-F) to develop a regional initiative aimed at improving the management of fish stocks and their habitats. Following a review of existing habitat management and biodiversity conservation initiatives in the region, the RWG-F identified that few of these adequately addressed fisheries issues and agreed to elaborate a system of fisheries management areas (fisheries refugia) in the South China Sea and Gulf of Thailand that focuses on the critical links between fish stocks and their habitats.

Fisheries refugia as defined by the RWG-F are, "Spatially and geographically defined, marine or coastal areas in which specific management measures are applied to sustain important species [fisheries resources] during critical stages of their life cycle, for their sustainable use." The foundational phase of the initiative to develop a regional system of fisheries refugia addressed key barriers to effective fisheries habitat management in the South China Sea and Gulf of Thailand including: limited information regarding fish life-cycle and critical habitat linkages and the role that marine habitats play in sustaining fisheries; low level understanding amongst stakeholders, including fisher folk, scientists, policy makers, and fisheries and habitat managers of the linkages between fish stocks and habitats; limited community acceptance of "protected" area-based approaches to marine management in Southeast Asia; and, limited experience in



national fisheries and environment departments and ministries with respect to the implementation of integrated fisheries and habitat management approaches.

The key results of these foundational activities include: regionally agreed ranked lists of fish, cephalopod, and crustacean species of transboundary significance; a regionally agreed list of 82 threatened and near threatened species for the South China Sea and Gulf of Thailand; national meta-databases and GIS data relating to available information on fish stock status, fish early life history science, role of habitats as fish nursery and spawning areas, and management; Intergovernmentally approved guidelines for the establishment and management of fisheries refugia that constitute part of the ASEAN SEAFDEC Regional Guidelines for Responsible Fisheries in Southeast Asia; identification and characterisation of 52 known fisheries refugia of which 14 have been accorded immediate priority for development as part of the initial system of refugia, and a further 9 that have been accorded high priority for development as refugia once the initial set have been approved; a set of 21 regionally agreed resource status and institutional indicators for use in assessing the effectiveness of fisheries habitat management measures in the South China Sea and Gulf of Thailand; and costed regional and national plans for the operation of the regional system of fisheries refugia from 2009-2013.

The agreed medium-term targets for the regional system of fisheries refugia have been agreed Intergovernmentally as part of the Strategic Action Programme for the South China Sea as:

- By 2012 to have established a regional system of a minimum of twenty refugia for the management of priority, transboundary, fish stocks and endangered species;
- By 2012 to have prepared and implemented fisheries management systems in the identified refugia based on, and consistent with, the ASEAN SEAFDEC Regional Guidelines for Responsible Fisheries in Southeast Asia.

Detailed national plans for the establishment of national refugia sites and the coordination of activities within the participating countries were developed during the period 2007 – 2008 for final review and approval of the Intergovernmental Project Steering Committee of the UNEP/GEF South China Sea Project in August 2008. These were subsequently endorsed by SEAFDEC's Governing Council in 2009. Regional level activities in support of the system include: improvements to regional policy for the management of critical habitats for fish stocks of transboundary significance; development of human resource capacity for the identification and management of fisheries refugia; improved information management and dissemination; promotion of improved regional fisheries management arrangements; and generation and uptake of effective coastal fisheries management practices. Further information on the fisheries refugia initiative can be accessed at <http://refugia.unepscs.org>.