



**The 2<sup>nd</sup> Regional Scientific and Technical Committee Meeting for  
the SEAFDEC/UN Environment/GEF Project on Establishment and Operation of  
a Regional System of Fisheries *Refugia* in the South China Sea and Gulf of Thailand**

21<sup>st</sup> – 23<sup>rd</sup> May 2019

Thansur Sokha Hotel, Kampot Province (Fisheries Refugia Site), Cambodia

**MANAGEMENT OF TRANSBOUNDARY SPECIES:  
SHORT MACKEREL, FRIGATE TUNA, ETC**

PROJECT CO-ORDINATING UNIT

**I. INTRODUCTION**

One of the valuable analyses of the problems of managing and conserving shared fishery resources was that prepared by John Gulland of the FAO, prior to the close of the UN Third Conference on the Law of the Sea (Gulland, 1980). In his paper, Gulland focuses on transboundary stocks, because of their then perceived importance. In any event, Gulland presents a biological/geographical categorization of transboundary fish stocks, which is useful in setting the stage for the discussion of the problems of managing the resources. He makes the following distinctions:

- I. stocks occurring within two or more EEZs, but showing no clear migratory pattern;
- II stocks occurring within two or more EEZs, and displaying a clear pattern of movement:
  - A. resulting from seasonal migration
  - B. according to development stages.

Change stocks occurring within two or more EEZs, in I and II, to stocks occurring within the EEZ and the adjacent high seas, and one has a description of **straddling and highly migratory fish stocks**<sup>1</sup>. In the case of (I), Gulland contends, it is not always clear that exploitation on one side of the relevant boundary will necessarily have a significant effect upon harvesting opportunities on the other side of the boundary. It is therefore needs to consider the cooperation on conservation and management of transboundary species as well as areas through our works on fisheries refugia concept.

**II. WHAT'S TRANSBOUNDARY FISH STOCK?**

Munro (1987) provides such an example in the form of the rich Georges Bank scallop fishery, shared by Canada and the United States. The resource was, and is, clearly a transboundary fish stock. It was, however, questionable whether Canadian (American) harvesting of scallops would have any significant impact upon American (Canadian) harvesting opportunities. Adult scallops are more or less stationary. Moreover, while there is some transboundary movement at the larval stage, there were, in 1987, extensive beds of larvae producing scallops, which were free from exploitation due to the sea bed terrain. These facts led to the argument that, since Americans and Canadians could harvest the resource without affecting one another's

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<sup>1</sup> The Straddling Fish Stocks Agreement (formally, the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks) is a multilateral treaty created by the United Nations to enhance the cooperative management of fisheries resources that span wide areas, and are of economic and environmental concern to a number of nations. As of December 2016, the treaty had been ratified by 84 parties, which includes 83 states and the European Union. Straddling stocks are fish stocks that migrate through, or occur in, more than one exclusive economic zone. The Agreement was adopted in 1995, and came into force in 2001.

harvest opportunities, cooperative fisheries management of this shared resource was largely beside the point (Munro, 1987).

### III. LEVELS OF COOPERATION IN RESOURCE MANAGEMENT AND CONSERVATION

There are, as Gulland points out, at least two levels of cooperation (Gulland, 1980).

- 1) The first level, or what we might term the primary level, consists of cooperation in research alone, without reference to coordinated management programmes. Since all parties should stand to benefit from improved information and data, the cooperation should be relatively easy to achieve. The emphasis is on the word relative, however. It is still possible that one or more parties may suspect that research information, which it shares, will serve to benefit its rival exploiters of the resource, at its own expense.
- 2) the secondary level - "active management" - involves, almost by definition, the establishment of coordinated joint management programmes. As Gulland (1980) informs us, this will require:
  - a. allocation of harvest shares among the participating states (or entities);
  - b. determination of an optimal management strategy through time, including inter alia, the determination of optimal global harvests over time;
  - c. implementation and enforcement of coordinated management agreements.

REGARDING THIS, the Report of the Norway-FAO Expert Consultation (FAO, 2002a) maintains that, in order to achieve all of this, it will be necessary to have:

- a cooperative management authority;
- a detailed joint management plan;
- a set of agreed upon common objectives;
- agreed upon tools for managers, including indicators and reference points to monitor performance;
- a joint scientific body to provide advice.

The detailed joint management plan should be expected, at a minimum, to contain: (i) a description of the fishery, (ii) objectives of management, (iii) measures to achieve the objectives, (iv) indicators and reference points to be used to measure actual performance against objectives, (v) decision rules on how to change management, when the objectives are not being reached, and (vi) information needs and research required to support management (FAO, 2002a).

### IV. THE SIGNIFICANCE OF TRANSBOUNDARY FISH STOCKS IN SCS AND GOT LMES

Difficulties of achieving effective cooperation in resource management to one side, the significance of the issue of cooperative management of shared fishery resources is dependent ultimately upon the importance of shared fishery resources in the region. No precise measures exist, but there is enough evidence to indicate that the significance of shared fish stock in regional fisheries is decidedly non-trivial.

SEAFDEC-Sweden project has attempted to support its member countries to come-up with the joint management plan or plan of actions for the **transboundary** fish stocks and /or shared fish stocks. The success on neritic-tuna Plan of Action in the Southeast Asia was adopted by ASEAN in 2015 together with the establishment of the Scientific Working Group for Stock Assessment. Other attempts are on the same practice to help member countries for development of the joint management plan for other small pelagic species particularly on short mackerel, anchovy, blue swimming crab and etc. In this connection, as one of the main tasks of the SEAFDEC/UNEP/GEF Project to establish the fisheries refugia for some transboundary species, the PCU therefore point out how importance of the conservation and management of transboundary fish stock for highest benefit to concerned country and for sustainable utilization of fish stock which finally the results will effect to the social wellbeing of fishing community. **As above mentioned, the RSTC2 is requested to provide comments, suggestion for achieving the project target.**