

effective implementation of international instruments and agreements. To boost the regional approach and to facilitate cooperation, options should be explored in finding common ground for the management of fishing capacity and in enhancing efforts to combat IUU fishing in the region. Moreover, cooperation among such organizations as the Association of Southeast Asian Nations (ASEAN), the Asia-Pacific Fisheries Commission (APFIC), Southeast Asian Fisheries Development Center (SEAFDEC), and the Secretariat of the RPOA to Promote Responsible Fishing Practices (including Combating IUU Fishing), should be enhanced in order to improve the working relationship with the countries based on the respective on-going and planned initiatives that would secure benefits for the countries and ensure the sustainable utilization of the fishery resources in the Southeast Asian region.

4.2 By-catch Reduction and Management

At the international level, the term “discards” is frequently synonymous with “by-catch”, even considering that “by-catch” is usually the main source of discarded catch in many fishery activities, especially from industrial fisheries in the temperate countries. Since “discards” are generally regarded as an important result of the negative impact of fisheries, various attempts have been made around the world to minimize “by-catch”. Unfortunately, the term “by-catch” as used in tropical areas including the Southeast Asian region, could result in misunderstandings about fisheries of the region. The major part of fisheries in the Southeast Asian region can be categorized as small-scale coastal operations exploiting a large number of tropical species. Therefore, three factors could differentiate the fisheries in the region from those of the temperate zones. These are: (a) most fishery operations in tropical waters are small-scale and conducted from one to few days, taking into account the economic value of the catch; (b) by the characteristics of tropical ecosystem, individual species in tropical waters have relatively small stock size compared with those in temperate areas; and (c) the inherent flexibility of markets in tropical areas traditionally handle a wide range of catch species each of which is relatively in small volumes.

Therefore, the international definition of “by-catch” could be modified for it to be applicable to fisheries in Southeast Asia, but should not be understood as source of discards. Thus, for the Southeast Asian region, “by-catch” could be associated with the target catch although such term is not used in all fisheries in the region and “by-catch” could be used for industrial fisheries. However, a more appropriate working term for by-catch in the region could be “unwanted catch” or “trash fish” which comprised the low- and no-value species, and under-sized commercially valuable species. Another major issue that should be addressed is the estimation of the scale of discards by fisheries in the

region. For in general, the amount of discards in Southeast Asia could be relatively small, considering the nature of small-scale fishery operations, but the increasing demand for aquaculture feeds encourages fisheries to land non-edible small-sized catch.

The collection of data to estimate the scale of discards might not be a priority issue for the Southeast Asian region. However, since collection of accurate data on discards requires enormous efforts and still might give unreliable results due to the small volume, more practical and useful approach should be developed through the conduct of appropriate research directed towards the development of management actions to reduce discards. The first important step that could be immediately undertaken by the countries is to identify the fisheries with discards problems through research that focuses on the reduction of “by-catch” or “unwanted catch”.

Under the present fishery regime, it may be difficult to convince fishers to be responsible in their operations through the use of selective fishing devices or by-catch reduction devices such as the Turtle Excluder Devices (TEDs), and the Juvenile and Trash Excluder Devices (JTEDs) which have been specifically designed to reduce by-catch. Fishers should also be made aware that such devices are important for the development of practical selective fishing methods which, in conjunction with the implementation of right-based fisheries, will eventually minimize the “unwanted catch”.

Considering that reduction of by-catch is a new initiative in the Southeast Asian region, demonstrations on the use of JTEDs have been conducted in the region through the SEAFDEC and FAO collaborative programs on Responsible Fishing Technologies and Practices, and By-catch Reduction Technologies and Change of Management (REBYC) which exhibit the rationale for the adoption of JTEDs as technical tool and as platform to initiate other management measures. In order that the adoption of JTEDs in the region would be sustainable, the Southeast Asian countries are encouraged to develop their respective national policies on the use of JTEDs and other selective fishing devices or by-catch reduction devices.

4.3 Community-based Fishery Management Approach in the Southeast Asian Region

Fisheries in Southeast Asia are complex and any one single community-based fisheries approach may not be applicable, although it has been recorded that co-management approach has been progressing well in Malaysia, Thailand and Cambodia. The experiences of these countries indicate that effective and well-defined partnerships of NGOs and government take some time to establish, while the fisher groups or community