

## Chapter 9

# Exclusive Economic Zones and the Management of Fisheries in the South China Sea

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## 1. INTRODUCTION

The 1982 United Nations Convention on the Law of the Sea (LOSC), with the provisions for defining an Exclusive Economic Zone (EEZ), is the international agreement that has had the greatest influence on the structure of fisheries policies in national and international arenas. It had the profound effect of increasing the contribution of fisheries to the national gross domestic product or GDP. It brought about a redistribution of benefits from fishing from distant water fishing fleets to the coastal states. Investments flowed in to the fisheries sector. Countries that had fisheries resources but limited capacity to exploit them established joint ventures with states that owned fishing fleets (ADB, 1997). The end result was a substantial increase in the contribution of fisheries to the national GDP especially in developing countries and the overall shift in total capture fisheries production from the developed to the developing world (Delgado et al., 2003).

The LOSC and the EEZ are strongly associated with ownership and the implication that fisheries will be better managed within some property rights regime. These concepts were modified by coastal states to apply to fisheries management policies at the scale of local governments and even communities. Shortly after the Third United Nations Conference on the Law of the Sea ended in 1982, community-based initiatives to define fishing rights and effectively manage fisheries proliferated. There was a stronger effort to move national policy toward devolution of fisheries management to local government units and encourage co-management and stakeholder participation in the management of coastal resources. There were several efforts to develop Integrated Coastal Zone Management (ICZM) Plans and establish Community Based Coastal Resource Management (CBCRM) strategies in the Philippines first, and later in Indonesia, Thailand, Malaysia and Vietnam.

In this paper, we present case studies where there is a poor institutional fit between the EEZs of coastal states and the natural structure of fisheries resources. This has led to the formulation of inadequate fisheries policies, difficulties in monitoring and controlling the overexploitation of fish stocks, and a massive degradation of fish habi-

tats vital to the survival and sustainability of stocks. In the first two decades of the LOSC, states have focused on implementing Articles 55-56 and 61-62, which detailed their jurisdiction and right to exploit resources optimally. In this next decade of implementing the LOSC, states will need to consider the provisions for transboundary cooperation detailed in Articles 63 to 67 of Part V of the LOSC. We highlight the importance of knowledge of institutional interplay in fisheries management at the local, sub-national, national and regional scales, and how this relates to the structure of fish stocks and national jurisdiction. We also suggest some research priorities and institutional adjustments required to increase the chances of devising a successful fisheries policy, embody a broader regional perspective of the needs and aspirations of fisheries, as well as national goals. The case studies presented are derived from the experiences of coastal states that border the South China Sea.

## 2. GEOGRAPHICAL CONTEXT

The South China Sea and its extensions, the Gulf of Thailand and the Gulf of Tonkin, cover an area of  $3.8 \times 10^6$  km<sup>2</sup>. Over 270 million people, or about 5% of the total world population, live in the coastal sub-regions of the South China Sea. The South China Sea extends northwards from the equator to about 22°N and is bounded by the coastline of Taiwan and China to the north, Thailand, Vietnam and Cambodia to the west, Malaysia, Singapore, Indonesia and Brunei Darussalam to the south and the Philippines to the east. These countries are among the most densely populated in the world and, until recently, their economies have been the fastest growing worldwide (Talaue-McManus, 1999). Table 9.1 provides some basic information pertaining to these countries.

The South China Sea embraces a wide variety of habitats such as mangroves, sea grasses, soft bottom shelves and coral reefs. It has the highest species diversity in the world. The natural diversity of flora and fauna probably accounts for the high natural rates of production in the area (Morton and Blackmore, 2001). However, over 120 rivers that carry with them nutrients and pollutants from the land drain into this sea.

In 1995, close to 10% of the world's total landed catch from capture fisheries was estimated to have come from the South China Sea. In 1996, the total fisheries production was 10.4 million metric tons valued at US\$6.1 million (SEAFDEC, 1999). Five of the eight top shrimp producers in the world border the South China Sea – Indonesia is first, Vietnam is second, China is fourth, Thailand is sixth, and the Philippines is eighth. The countries of the region produce 23% of the world catch of tuna, including three-quarters of the world's production of canned tuna (Talaue-McManus, 1999).

The oceanic conditions in the South China Sea are dominated by alternating monsoons. The Northwest monsoon from November to March brings with it strong dry winds that create an anti-clockwise circulation pattern in the major basin. In May to September, the Southeast monsoon season is characterised by rain-bearing winds that create clockwise currents, flowing from the south in the Java Sea northward towards Taiwan. During the period of the Southeast monsoon, low-pressure cells frequently build up and eventually manifest as typhoons moving through the Philippines toward Taiwan and Japan to the north or westward towards Vietnam and the southern provinces