

Chapter 6

Towards the Bali MPA Network

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6.1 THE IMPORTANCE OF DATA FOR THE BALI MPA NETWORK

Throughout this report we have presented and explained the results of the Bali Marine Rapid Assessment Program 2011. Based on the status of its coral reefs and reef fishes alone, our conclusion is that Bali warrants a considerable effort with regard to marine conservation. Bali's coral reefs are divided into five major coral community types (Chapter 4) and are generally in good condition (Chapter 3). Bali's reef fish species richness is very high: the second highest in the Asia-Pacific (Chapter 5). On the other hand, the data showed a strong indication of serious overfishing in Bali: we only recorded three reef sharks and three Napoleon wrasses over more than 350 diving hours. All of the above, along with the discovery of 13 new fish species, one new coral species, and 13 coral species suspected to be new to Bali's waters warrants the immediate protection of Bali's marine resources.

Despite its apparent simplicity, the term "Marine Protected Area" (MPA) has several definitions. The International Union for Conservation of Nature (IUCN) defines an MPA as "Any area of intertidal or subtidal terrain, together with its overlying water and associated flora, fauna, historical and cultural features, which has been reserved by law or other effective means to protect part or all of the enclosed environment" (Kelleher 1999). Almost a decade later, the IUCN revised its definition of an MPA to "A clearly defined geographical space, recognized, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values" (IUCN-WCPA 2008). The Indonesian government has loosely translated the term MPA as an "aquatic conservation area", which is defined as "an aquatic area that is protected and managed with a zoning system to assist in the management of fisheries resources and its environment" (MMAF 2009, Article 1).

Bali as a province currently has one established MPA (the Bali Barat National Park in the Regency of Buleleng) and one declared MPA (the Nusa Penida MPA in the Regency of Klungkung, (see Darma et al.(2010)). Several village level MPAs have been initiated along the coasts of Bali, among others in the Tejakula District. These conservation areas, geographically so close to each other, cannot be managed separately without an understanding of the connectivity between them. To effectively manage such MPAs, the new concept of an "MPA Network" is introduced.

An MPA Network is defined as "A collection of individual MPAs or reserves operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve" (IUCN-WCPA 2008). An MPA Network should be designed "to restore marine ecosystems and associated populations to their full productivity and diversity" (IUCN-WCPA 2008, p. 24). Eight methods or steps necessary to develop an MPA Network have been identified as follows (UNEP-WCMC 2008):

1. Identify and involve the stakeholders
2. Identify goals and objectives
3. Compile data
4. Establish conservation targets and design principles
5. Review existing protected areas
6. Select new protected areas
7. Implement the network
8. Maintain and monitor the protected area network