

ISSUE FOCUS

Legal Protection of Indonesian Coral Reefs in Papua Province

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Coral reefs are a source of marine diversity that must be protected, not only for the relationship between their ecosystem and other biota, but also for their economic value. Indonesia is an archipelagic country with 116 small islands and groups of small islands that are susceptible to ecological damage. Indonesia possesses a great diversity of flora and fauna, including coral reefs. Indonesia's sea territory is two-thirds the size of its land territory, and much of the nation's ecological diversity lies within this water expanse. As coral reefs form a part of Indonesia's marine diversity, we must protect them. This paper will discuss Indonesian regulations pertaining to the protection of coral reefs with a particular focus on Raja Ampat, Papua. The principal sources of relevant Indonesian statutory law are Law No. 23 Year 1997, regarding Environmental Management, and Law No. 5 Year 1990, regarding Biological Diversity and Ecosystems. These laws may be used to protect marine environments, especially coral reefs. At the international level, the United Nations Convention on the Law of the Sea and the Convention on Biological Diversity complement the laws enacted by Indonesia. Raja Ampat is located in Papua Province, and is known as a premier diving site. Surveys have brought Raja Ampat's total number of confirmed species of coral to 537, representing an incredible 75% of all known coral species. Sadly, marine pollution in Raja Ampat is decreasing both the quality and quantity of coral reefs.

Keywords

Coral Reef, Marine Environmental Protection, Precautionary Principle, Pollute Pays, Biological Diversity, CITES

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I. Introduction

Indonesia is an archipelagic country with 116 small islands and groups of small islands, which are susceptible to ecological damage. Indonesia possesses a great diversity of flora and fauna, including coral reefs. Indonesia's sea territory is two-thirds the size of its land territory, and much of the nation's ecological diversity lies within this water expanse. Indonesian coral reefs lie at the centre of global coral reef biodiversity. Coral reefs are critically important for both the ecosystem and the goods and services that they make possible in maritime tropical and subtropical nations like Indonesia.

One national Profile of Indonesia states that: "As a world center of coral diversity (500 species), with 81,000 km of coastline and 5.8 million km² of marine area, Indonesia's important marine resources represent a significant management challenge to achieve sustainable levels of development."¹ Indonesia maintains a few national conservation parks, including *Radja Ampat* in western Papua, the biggest marine national park in Indonesia, with abundant ecological diversity. Nonetheless, the sad fact is that the quality and quantity of biodiversity in Indonesia is decreasing yearly, due to various causes, including industry, fishing, natural disasters, and tourism.

A coral reef is a reef consisting of coral consolidated into limestone. More broadly, a coral reef is comprised of aragonite structures produced by living organisms and found in marine waters containing few nutrients.² In most reefs, the predominant organisms are stony corals, which are colonial cnidarians that secrete an exoskeleton of calcium carbonate. Coral reefs by definition are composed predominantly of *scleractinian* corals (Phylum *Cnidaria*; Class *Anthozoa*; Order *Scleractinia*). Most *scleractinians*, and particularly those that build reefs, are colonial, anemone-like animals that house microscopic algae and secrete skeletal structures composed of calcium carbonate.³ Coral reefs most commonly live in tropical waters and have economic value in relation to food security, employment, tourism, pharmaceutical research, and shoreline protection.

Radja Ampat is rich in marine diversity, and scientific research has been taken to examine the reef. The scientists surveyed an area of about 3,700 square miles (6,000 square kilometers). The results revealed was allegedly an extraordinary wealth of marine biodiversity: 450 species of hard coral, more than 600 mollusk species, and possibly as many as 1,100 fish species. The question that immediately arises from this

¹ See Indonesia, *Country Profile*, available at <http://www.globaloceans.org/icm/profiles/Indonesia> (last visited on Aug. 20, 2009).

² See THE COLUMBIA ENCYCLOPEDIA (6th ed. 2008), available at <http://www.encyclopedia.com/doc/coral.html> (last visited on Aug. 20, 2009).

³ See Joanie Kleypas, *Coral Reef*, available at http://www.eoearth.org/article/coral_reef (last visited on Aug. 20, 2009).

situation is how to protect Indonesian biodiversity, especially coral reefs in *Radja Ampat*, from activities that will do further harm.

One method to protect the environment is by enacting regulations, either in the form of national legislation or international treaties. Indonesia has enacted Law No. 23 Year 1997, regarding Environmental Management, as an umbrella provision to protect the environment, and also Law No. 5 Year 1990, regarding Biodiversity. There are also international conventions that may be applied in Indonesia, including the United Nations Convention on the Law of the Sea (“UNCLOS”) of 1982 and the Convention on Biological Diversity of 1992.

This paper will discuss how Indonesian regulations may be used to protect coral reefs as an important marine ecosystem, and will also incorporate an analysis of UNCLOS and the Convention on Biological Diversity.

II. Principles of Marine Environmental Protection

There are several principals of international environmental law that may be used to protect the marine environment, including, the Precautionary Principle, the State Responsibility Principle, the Principle of Sustainable Development, and the Polluter Pays Principle.

A. Precautionary Principle

The Precautionary Principle is related to the Prevention Principle, which provides that States are to take action in the first instance and, if possible, before damage occurs. The Rio Declaration also states that in order to protect the environment, a precautionary approach shall be widely applied by States according to their capabilities: “Where there are threats of serious or irreversible damage, the lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.”⁴

The Precautionary Principle provides guidance in the development and application of international environmental law where there is scientific uncertainty. By this principle, States have to act carefully and with foresight when taking decisions that concern activities that may have an adverse impact on the environment.⁵

⁴ Rio Declaration on Environment and Development (“Rio Declaration”), Principle 15. See U.N. Doc. A/CONF.151/26 (Vol. I, 1992).

⁵ PHILIPPE SANDS, PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW I 209 (2003).