

## Philippine Seas

*Our seas are among the world's most diverse...but they are also among the most threatened.*

The Philippine archipelago is located in the Pacific Ocean. It is composed of more than 7,100 islands with a coastline stretching over 36,289 km.

The country has one the most populous and diverse aquatic ecosystems in the world. The marine waters of the Philippines contain significant marine habitats – coral reefs, seagrass beds, mangrove forests and the deep seas. These habitats are estimated to host at least 2,000 species of fish, 5,000 species of clams and other mollusks and crustaceans, 22 species of whales and dolphins, more than 900 species of seaweed, and more than 400 species of corals. Because of this rich diversity in marine life, some experts have acknowledged the Philippines as the global center of marine biodiversity.

More than 30 million Filipinos depend on these marine resources for survival. But the very seas that provide them livelihood and subsistence are under serious threat. Important fragile marine ecosystems around the country are being destroyed at an alarming rate. Toxic chemical pollution from industries, human sewage and plastic garbage from cities suffocate what were once pristine waters.

Destructive fishing activities such as dynamite and cyanide fishing, *muro-ami*, bottom trawling and overfishing are depleting our sea's resources without giving it time to recover. Marine life is also being threatened by climate change which causes coral bleaching and acidification.

On a national scale, fishing is next to farming in terms of livelihood, and around 80% of Filipinos rely on marine products as a daily source of protein. Fishing is a major industry in the Philippines, contributing about 4% of the country's GNP. With an annual production volume of 2.4 million metric tons of fish, fishing directly provides livelihood and employment to over one million Filipinos. The Philippines as a nation is reliant on the health of marine waters and oceans surrounding the country for national development.

The Philippine marine environment is faced with a host of problems and increasing pressures such as pollution, destructive fishing practices, habitat destruction and

climate change. Only 5% of the country's coral reefs remain in good condition. Of the 450,000 hectares of mangroves recorded in 1914, only around 100,000 hectares remain. According to the National Statistical Coordination Board, the maximum sustainable yield (MSY) for fishing was already reached in back in 1986.

### **Climate Change: Altering our Oceans**

Carbon emissions on land damage marine life. Climate change, caused by burning fossil fuels, is increasing sea water temperatures and acidity, melting glaciers, raising sea levels, and changing ocean currents. The effects are already beginning to be felt. Whole species of marine animals and fish are at risk due to temperature rise—they simply cannot survive the changed conditions. Increased water temperatures are responsible for massive episodes of coral bleaching where corals turn white and eventually die. In 1998, 16% of the world's corals including those in the country were severely damaged by coral bleaching.

The bases of the marine food supply, plankton and krill, are also already being adversely affected by climate change and acidification, a process which is akin to pulling the rug out from under the entire food chain.

There are over 34,000 square kilometers of coral reefs in the country, some of which have grown since the Ice Age. Over a third of the 2,300 known fish species in the Philippines are reef-associated. But coral bleaching events in Southeast Asia and the Pacific are set to increase in frequency and intensity if greenhouse gas emissions increase unabated.

In 1998, a massive bleaching event was reported to have killed up to 30 to 70 percent of hard corals in major reefs in the country. Aside from contributing to local tourism, Philippine reefs contribute at least 15 percent to the total annual fishery production. Bleaching events triggered by warming temperatures would obviously translate to significant economic losses for the Philippines.

### **Pollution: Unacceptable Ocean Dumping**

Another significant impact of human activity on the marine environment is pollution. Almost half of the pollution found at sea comes from the land. Aside from oil spills, pollution comes in the form of domestic sewage, industrial

discharges, urban and industrial run-off, accidents, spillage, explosions, sea dumping operations, mining, agricultural run-offs and pesticides, waste heat sources and radioactive discharges.

Plastics and other solid wastes also often end up floating in our seas. It can take up to 1,000 years for plastic to break down in the water and it is often found embedded in the skin or stomachs of birds, fish, turtles and marine mammals. Even a tiny cigarette can take two years to break down.

In the Philippines plastics are common visible wastes that pollute our seas. In August 2012 for example, in Manila Bay, the Metropolitan Manila Development Authority (MMDA) reported they collected as much as 1,800 tons of trash—mostly plastic bags and wrappers—washed ashore by heavy rains. Waste audits conducted by Greenpeace and EcoWaste Coalition in 2006 and 2010 showed that more than 70% of Manila Bay rubbish consist of plastic bags and packaging.

The country's coastlines are also under threat by harmful chemicals such as oil spills and toxic mine spills. One of the biggest toxic mine spills was the 1995 Marcopper mine spill in Marinduque which killed the province's rivers and polluted its coastal waters. Heavy metal poisons from the spill ruined the health of nearby communities and caused deaths. The amount of coastal fisheries income lost due to the toxic spill was estimated at PHP 9.2 million in 1996.

In 2006, the Philippine seas were dealt a double blow with the Rapu Rapu mine tailings spill, and the Guimaras oil slick disaster which came at the high cost of community health and livelihood. Coal spills are also a threat. In 2008, a massive coal spill occurred off the coasts of Bolinao, Pangasinan, an important fishing town. The environmental damage it inflicted was estimated at PHP 55 million.

### **Unsustainable Commercial Fishing: Emptying our Seas**

Unsustainable commercial fishing activities are a key threat faced by our seas. Overfishing and destructive fishing particularly illegal, unreported and unregulated fishing (IUU) by commercial fishing fleets within the Philippines Exclusive Economic Zone (EEZ) is a major problem.

Commercial fishing operations are banned within the 15 kilometer limits of municipal waters. However, a large number of commercial vessels operate within these limits with impunity, deploying highly destructive fishing methods that finish off the fish stocks and leave little for local fishermen.

The most common form of unregulated commercial fishing is conducted at night with the use of powerful lights that attract everything including iconic mega fauna such as the whale shark. There are reports nearly every year of whale sharks washed ashore, dead with either gunshot wounds or with their fins removed.

Out of the country's 13 major fishing grounds surveyed by the Bureau of Fisheries, ten are already overfished. In 2011 the country saw the very first fishing ban for sardines, the second most important commercial species after tuna. A similar ban was enforced in 2012 to help restore dwindling sardine stocks.

Along with a broad range of stakeholders, Greenpeace is calling on the Aquino administration to immediately act against the twin crises of overfishing and marine ecosystem degradation by:

- Ensuring that the protection, rehabilitation, and conservation of our seas are a national priority; and
- Creating and immediately implementing a roadmap that eliminates overfishing and allows the recovery of fish stocks.

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