

Climate Change Vulnerability Assessment of the Verde Island Passage, Philippines

Summary of Key Findings
Marine Climate Change Program
Conservation International

The Verde Island Passage in the Philippines has been described as the center of the world's marine biodiversity. This 1.14 million hectare (2.82 million acre) marine area is a major tourist destination and one of the richest fishing grounds in the Philippines. The rich marine diversity of this area includes habitats such as coral reefs, mangroves and seagrass beds, together with species such as sea turtles, giant groupers, whale sharks, dolphins, and giant clams.

Climate change will fundamentally alter this important region. Rising ocean temperatures, shifting ocean currents, sea level rise, and changing storm patterns will all have major impacts on fish populations and vital coastal ecosystems such as mangroves, seagrasses and corals. At the same time, these changes will directly impact the 7 million people living around the Verde Island Passage, through erosion and coastal flooding, impacts on critical fisheries, and the local tourism industry.

The marine habitats and species of the Verde Island Passage are already exposed to numerous other human impacts such as overfishing, pollution, coastal development. Climate change will amplify these pressures, greatly increasing the impact on marine ecosystems, the risk of extinctions and the threat to human well-being in the region.



Restoring Mangroves to Increase Coastal Resilience

Mangroves provide critical coastal protection, firewood and important habitat for commercially important fisheries throughout the Verde Island Passage. These habitats will be vital to providing protection against the impacts of climate change in the region such as erosion, sea level rise and threatened food resources. However, increasing pressures from coastal development – including salt bed, fishpond development and reclamation of land for tourism - have resulted in major loss of mangrove areas.

In 2009, Conservation International and local partners initiated a community-based mangrove rehabilitation project in Calatagan - one of the largest coastal municipalities of the Verde Island Passage. Restoring mangrove fringes in this area will ensure that mangroves will continue to support fisheries while reducing the damage of storm surges and erosion to coastline. The strong community involvement in this program has not only provided the local community with the resources to effectively manage their marine resources in the face of climate change, but also increased political will for measures to conserve and sustainably manage mangroves.



The Vulnerability Assessment

Conservation International—in cooperation with the Government of the Philippines, the provincial Governments of Batangas, Oriental and Occidental Mindoro, Marinduque and Romblon and the University of the Philippines recently completed a climate change vulnerability assessment of the Verde Island Passage. The goals of this initiative were to assess 1) the potential impacts of climate change on the marine ecosystems and the human communities dependent upon them, 2) the expected response of given species and ecosystems to those impacts, and 3) the actions needed to increase the resilience and adaptive capacity of the biodiversity and community.

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Key Recommendations

- Ensure the longterm well-being of coastal communities through the diversification of livelihoods, promoting joint commercial-artisanal fisheries management, sustainable use of water resources.
- Regulate artificial reef development, channel dredging, and seaweed farming through zoning activities to ensure the climate change resilience of critical marine resources.
- Establish and strengthen coastal management within the local Marine Protected Area networks to protect habitats critical to maintaining important species in the face of climate change. For example, extend protection to include seagrass beds, seaweeds, mangroves and habitats important as larval sources for the entire region. Promote best management practices for fishing in coral reefs, seagrass beds and mangrove areas.
- Implement outreach programs to create awareness & community engagement on climate change and its impacts on the local communities.



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