In Belize, coral reefs, mangroves and beaches are the cornerstone of the tourism industry. In addition, coastal communities rely on mangrove and reef-based fisheries for food security and income. Tourism industry growth is viewed as inherent to economic development in Belize, but is often accompanied by habitat degradation. Land and mangrove clearance, sedimentation and pollution directly threaten the resources upon which the industry depends. The challenge faced by decision-makers is how best to move forward with tourism development whilst maintaining healthy, functional ecosystems that support the tourism industry, sustain livelihoods and provide resilience to climate change.

To illuminate the trade-offs between different climate adaptation strategies, an ecosystem service and cost-benefit analysis was conducted on Placencia, an emerald peninsula that is now a major Belizean tourist destination, and its adjacent lagoon system. This analysis acknowledges coastal-marine ecosystem services, like protection from storms and sea level rise, to make better informed decisions.

The analysis helped to provide strong social and economic justification for communities and stakeholders to place more emphasis on conserving and restoring the natural ecosystems. Efforts to preserve mangrove stands along the lagoon’s banks came alongside endeavours to replant mangroves in cleared areas experiencing notable erosion. Some land developers and shrimp farmers have also requested to donate mangrove-covered areas on their property to the proposed Placencia Lagoon protected areas system. In addition, increased attention was paid to the use of green vs grey infrastructure to stabilise private property shorelines (particularly on the lagoon side), despite land development continuing to alter the face of the peninsula. Overall, the analysis translated climate risks into business-relevant language thereby building an “architecture of participation” (e.g. for corporate engagement and action), climate action, “resilience wedges” and enhanced adaptive capacity.

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