

Coral reefs and associated habitats occupy thousands of square kilometers of coastal areas in more than 30 countries and territories of the Wider Caribbean or Tropical NW Atlantic Coastal Biogeographic Province.



## CORAL REEFS PROVIDE:

- **Products** (*seafood, raw materials and medicines*)
- **Ecosystem regulation** (*erosion and storm control, land build up, genetic resources*)
- **Cultural** (*spiritual and religious values, knowledge, inspiration, aesthetic views*)

## Marine populations connectivity units



Bustamante, G. and C. Paris. 2008. Mar. Sanct. Cons. Ser. NMSP-08.

## COASTAL CAPITAL<sup>1</sup>

**Reef-related tourism and fisheries** are major sources of revenue, and the main livelihood of most coastal communities for many Caribbean areas such as the US Florida Keys, The Bahamas, the islands of the Greater and Lesser Antilles, the Caribbean Mexico and Belize. **Shoreline protection** is a critical service for the entire region as storms become more frequent and intense.

**Coral reef values decrease as the ecological functions deteriorate due to overuse and global climate change**



## FISHERIES PRODUCTS

Snappers, groupers, grunts, wrasses, lobsters and conchs provide food and income for local people and tourists. The severe decline of reef fish fisheries after decades of overfishing has deduced the reef fishery production of many Caribbean countries.

Still, fisheries constitute an important source of revenue for coastal communities. For example, the estimated direct and indirect contribution of these seafood products during 2006 was **US\$0.8-1.3 millions for Tobago**, and **US\$0.7-1.6 millions for St. Lucia**. These figures were calculated using regional data on reef productivity, and so are probably higher than the real production<sup>1</sup>.

Research data suggest that:

- Marine population connection is more restricted than previously thought;
- There are several connectivity units or enclaves, with important implications to coastal resources management;
- If a unit is located within the country, national policy measures could suffice; and
- For countries sharing a unit, transnational policy agreements are necessary.

Estimated economic losses from coral reef degradation in the wider Caribbean (from 2000 to 2015)		
Good or service	Est. annual benefit (US\$ millions)	Estimated annual losses
Fisheries	312	Fisheries productivity could decline by an estimated 30-45% by 2015
Dive tourism	2100	Dive tourism growth rate will decrease 2-5% by 2015.
Shoreline protection	700-2200	10-20% reduction of shoreline protection by 2050.
<b>Total</b>	<b>3100-4600</b>	<b>US\$ 380-870 million</b>

<sup>1</sup>Burke et al., 2008. <http://www.wri.org/publication/coastal-capital>

## TOURISM

The economic contribution of coral reef-related tourism to Wider Caribbean islands is high. The South Florida counties, the estimated incomes in 2000-2001 were as follows: **US\$142 millions in Palm Beach; US\$547 millions in Broward, US\$419 in Miami-Dade, and US\$ 107 millions in Monroe (Florida Keys).**<sup>2</sup> In Tobago and St. Lucia tourism is a growing sector that contributed over **one half of the islands GDP in 2005**. The total (direct plus indirect) economic impact of reef-related tourism and recreation was **estimated as US\$101-130 million in Tobago (2006), and US\$160-194 millions, in St. Lucia (2006).**<sup>1</sup> In addition, local residents use of reefs and coralline beaches was estimated as **US\$13-44 million in Tobago, and US\$52-109 million in St. Lucia.**<sup>1</sup>

Reef-associated expenditures in Tobago	US\$ millions
Accommodation	24.7
Diving	1.3
Snorkeling and glass-bottom boats	1.5
Miscellaneous visitor expenses	16.0
Indirect economic impact	58-86
Local use	13-44

**Fisheries production could increase if reef became healthier through better management**



In Tobago, about 40% of visitors come at least in part due to coral reefs<sup>1</sup>.

## SHORELINE PROTECTION

Coral reef reduction of wave induce-erosion and property damage is significant. A valuation project showed that it contributes to the protection of 40-50% of St. Lucia and Tobago shorelines, with a potential annual value of avoided damage of **US\$18-33 millions, for Tobago, and US\$28-50 millions for St. Lucia<sup>1</sup>**.

Developers and government agencies should consider this service as an **INSURANCE TO REDUCE THE COSTS OF STORM DAMAGE**.

## STEPS FOR A BETTER COASTAL RESOURCE MANAGEMENT<sup>3</sup>

- Improve integration of management, both geographically, and across administrative departments and management targets;
- Build better understanding and promulgate the true value of goods and services of sustainably managed environments so communities know what is at stake if the environment is degraded; and
- Tackle the many reasons for management failure that comprise what is known as “lack of political will”.

# Economic value of coral reefs in the Wider Caribbean



<sup>1</sup> Sale et al., 2008. <http://www.inweh.unu.edu/inweh/Cosaatal-Policy-Brief.pdf>