



INTERNATIONAL
CORAL REEF INITIATIVE

South East Asia Factsheet

**Communicating the Economic and Social Importance
of Coral Reefs for South East Asian countries**

This fact sheet will provide you with information extracted from economic studies

BASICS

Coral reefs are among the most productive ecosystems on the planet. They cover less than 1% of the ocean floor but support 25% of ocean life.



Coral reefs provide beautiful seascapes which allow for a range of recreational activities and improve the attractiveness of the country for international tourism markets.

Coral reefs absorb a huge amount of swell energy from waves, protecting lives, coastal properties and beaches from flooding events and hurricanes.



Many fisheries exist only due to the presence of coral reefs, whether as nurseries or adult habitats. This sector provides food and incomes for fishers and associated industries.

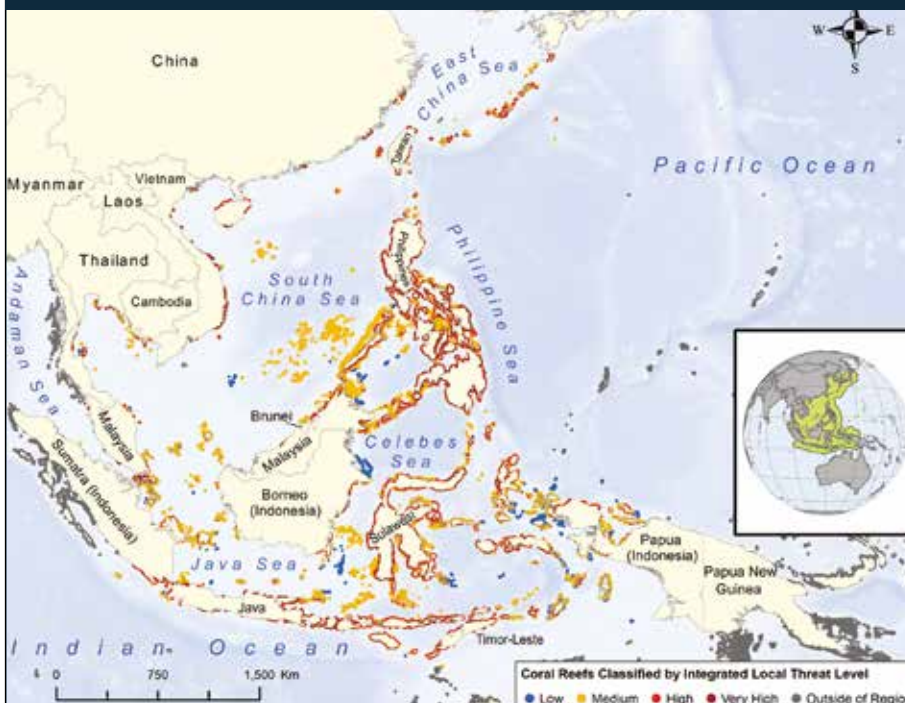
More than 65% of reefs in the region are at risk from local threats, with one-third rated at high or very high risk.

Primary threats are man made - unsustainable fishing, land based sources of marine pollution (including sedimentation) and more recently Global Climate Change.

Local solutions exist !!

Developing networks of Marine Protected Areas, implementing sustainable fishing practices (*especially protecting herbivores*) and improving water quality are local actions that could increase the resilience of coral reefs to global threats.

Major Coral Reef Regions of the World as Defined for the Reefs at Risk Revisited Analysis



REGIONAL DATA

Estimates show the **70,000 km²** of reefs in the region provide tangible benefits of **US\$10.6b** annually to the economies of the countries.

Tourism benefits represent almost **55%** of this value with Fisheries representing the remainder.

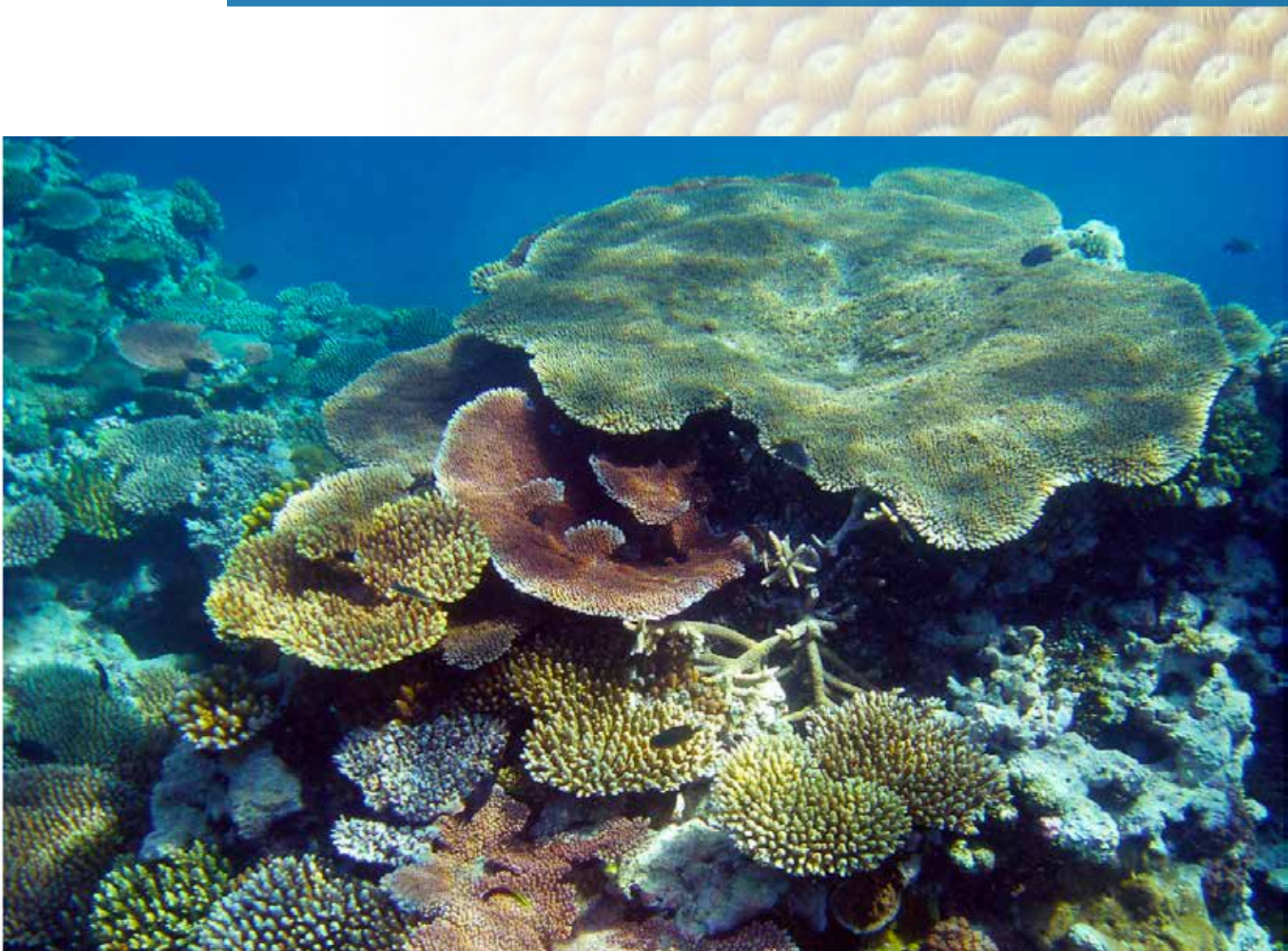
Almost **8,000 businesses** depend directly or indirectly on coral reef health.

At least **3 million persons** rely on fisheries for their livelihood.

Annually, more than **35M visitors** enjoy the beauty of coral reefs (and pay for it).

For some countries, these benefits can represent up to **0,5%** of their GDP.

The economic benefits from coastal protection are not visible in the GDP but obvious during storms and other extreme climate events.



COUNTRY DATA

Below is South East Asia economic and social data for the three main ecosystems services provided by coral reefs: Coastal Protection, Fishing, and Tourism.

How to read the table?

Example for Malaysia:

Estimates show the **3,600 km²** of reefs provide annually, a tangible contribution of **US\$1200M** to the GDP of Malaysia (0.4% of the GDP).

77,000 jobs and households and almost **600 businesses** depend directly or indirectly on coral reef health.

At least **2M visitors** directly observed the coral reef ecosystems of Malaysia.

Coral reefs contribute annually to more than **US\$2300M** in avoided damages on coastal infrastructures.

91% of the reefs are impacted by high or very high threat levels from human activities.



COUNTRY DATA

Country	Coral Reef Area (km ²)	Mangrove Area (km ²)	Annual Contribution to GDP	Direct contribution to GDP	Tourism ES	Fishery ES	Coastal Protection ES	Total jobs depending on reefs (inc. tourism and fishery)	Tourism Beneficiaries			Percentage of Reefs Under Threat
									Fishery and Tourism US\$ millions	in %	US\$ millions	
Brunei Darussalam	210	171	51	0,45	17	34		1 010	7 450	30	3,82%	100%
Cambodia	<50	851	68	0,34	11	57		15 444	83 000	360	0,87%	100%
Indonesia	39 538	42 550	4 126	0,44	1 858	2 268	15 654	1 663 757	19 000 000	2 000	7,80%	82%
Japan	2 900	4	1 054	0,02	707	347		33 876	1 824 000	1 100	0,49%	91%
Malaysia	3 600	6 424	1 200	0,40	689	511	2 360	76 860	2 185 000	620	3,36%	91%
Myanmar	1 870	3 786	313	0,46	7	306	139	124 436	1 720	230	0,97%	77%
Philippines	22 484	1 607	1 451	0,48	831	620	326	914 184	10 458 000	810	8,83%	97%
Taiwan	940	339	266	0,05	194	72		26 750	522 000	250	1,22%	88%
Thailand	2 130	2 641	1 792	0,44	1 446	346	620	105 687	958 000	1 960	5,65%	96%
Vietnam	1 270	2 525	300	0,15	82	218		206 046	60 874	500	1,52%	86%
SE Asia	69 637	60 420	10 619		5 842	4 777	19 099	3 168 050	35 100 044	7 860		88%

- The values are obtained from peer-reviewed, gray literature, and online sources.
- All references are available on www.icriforum.org
- Values have been harmonized and dollar values are presented in \$U.S. 2017.

POINTS TO NOTE

- In all scenarios, benefits of Marine Protected Area implementation outweigh the costs ranging between 3:1 and 20:1.
- Healthy reefs in the region could support a maximum sustained yield of 4 tons of fish per km² per year. Yields from degraded reefs were estimated as low as 0.7 per km² per year.
- In Indonesia alone, the cost of 'inaction' on blast fishing has been estimated at US\$ 3.8 billion over the last 25 years. These figures would have justified enforcement expenditures of around US\$ 400 million annually.
- People involved in nature-based tourism near an MPA had an annual per capita income that was 45% greater than those working in other sectors.
- Nearly 600 protected areas cover 17% of the regions reefs, however 70% were classified as not effective.
- Regions where an MPA have been established have seen an increase in catch per unit effort of 50%.
- The establishment of MPAs can increase annual visitations up to 5,000% over a period of seven years.
- 2004 post-tsunami assessments suggest that large mangrove forests can significantly mitigate the impact of tsunamis.

Funded with the support of the Government of Sweden and the Fondation pour la Recherche et la Biodiversité (FRB)



Government Offices of Sweden
Ministry of the Environment and Energy

