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Announcements

1. Map of Marine Managed Areas in the Pacific



The Secretariat of the Pacific Regional Environment Programme (SPREP), in cooperation with WWF and the WorldFish Center's ReefBase Pacific Project, has documented and reviewed the marine managed areas (MMAs) in the South Pacific. The study has specifically focused on the status and potential of locally-managed marine areas (LMMAs) in meeting food security, nature conservation and sustainable livelihood targets.

This map presents a summary of data published in that report, as well as additional information that illustrates linkages between coastal communities & livelihoods, critical habitats & biodiversity and MMAs of Pacific Island Countries and Territories. For further information go to <http://pacific.reefbase.org>.

To download the full report visit: http://www.sprep.org/att/publication/000646_LMMA_report.pdf.

To download the map visit: http://www.reefbase.org/resource_center/publication/main.aspx?refid=27462.

1. Doom and Boom on a Resilient Reef: Climate Change, Algal Overgrowth and Coral Recovery

- Coral reefs around the world are experiencing large-scale degradation, largely due to global climate change, overfishing, diseases and eutrophication. Climate change models suggest increasing frequency and severity of warming induced coral bleaching events, with consequent increases in coral mortality and algal overgrowth. Critically, the recovery of damaged reefs will depend on the reversibility of seaweed blooms, generally considered to depend on grazing of the seaweed, and replenishment of corals by larvae that successfully recruit to damaged reefs. These processes usually take years to decades to bring a reef back to coral dominance.

Diaz-Pulido, G., L.J. McCook, S. Dove, R. Berkelmans, G. Roff, D.I. Kline, S. Weeks, R.D. Evans, D.H. Williamson and O. Hoegh-Guldberg. 2009. Doom and Boom on a Resilient Reef: Climate Change, Algal Overgrowth and Coral Recovery. PLoS ONE 4(4): e5239. doi:10.1371/journal.pone.0005239

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27456

2. Framework for an Ecosystem-based Management Plan Addu Atoll, Republic of Maldives

- This document is the outcome of an AusAID Public Sector Linkage Program with the Government of the Maldives and the Centre for Marine Studies, the University of Queensland. The project was designed to be both instructional through seminars and mentoring using the University of Queensland's technical expertise. This document can be used as a template for Maldivian counterparts to develop their own Ecosystem-based Management Plan, and incorporates the initial Addu Vision into an Atoll Management Plan. This approach reduces the dependency of local counterparts on foreign advisors in the future and allows for a flow of information and techniques between the University of Queensland and the Ministry of Environment, Energy and Water in the Maldives. The Ecosystem-based Management Plan (EBMP) sets out a plan and a trigger for addressing environmental issues for development of the atoll. EBMP connects the various natural biophysical elements that go to make up the atoll ecosystem whilst recognising the limitations of the natural system to support human activities that are not sustainable. EBMP relies on the precautionary principle which is an expression of need by the decision-makers to anticipate harm before it occurs.

Kenchington, R., H. Naeem, S. Abdulla, A. Abdulla, M. King, D. Harris, N. Fathimath, O. Hoegh-Guldberg and R. Neller. 2009. Framework for an Ecosystem-based Management Plan Addu Atoll, Republic of Maldives. AusAID Public Sector Linkage Program, 17pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27458

3. Baselines and Degradation of Coral Reefs in the Northern Line Islands

- Effective conservation requires rigorous baselines of pristine conditions to assess the impacts of human activities and to evaluate the efficacy of management. Most coral reefs are moderately to severely degraded by local human activities such as fishing and pollution as well as global change, hence it is difficult to separate local from global effects. To this end, we surveyed coral reefs on uninhabited atolls in the northern Line Islands to provide a baseline of reef community structure, and on increasingly populated atolls to document changes associated with human activities. We found that top predators and reef-building organisms dominated unpopulated Kingman and Palmyra, while small planktivorous fishes and fleshy algae dominated the populated atolls of Tabuaeran and Kiritimati. Sharks and other top predators overwhelmed the fish assemblages on Kingman and Palmyra so that the biomass pyramid was inverted (top-heavy). In contrast, the biomass pyramid at Tabuaeran and Kiritimati exhibited the typical bottom-heavy pattern. Reefs without people exhibited less coral disease and greater coral recruitment relative to more inhabited reefs. Thus, protection from overfishing and pollution appears to increase the resilience of reef ecosystems to the effects of global warming.

Sandin, S.A., J.E. Smith, E.E. DeMartini, E.A. Dinsdale, S.D. Donner, A.M. Friedlander, T. Konotchick, M. Malay, J.E. Maragos, D. Obura, O. Pantos, G. Paulay, M. Richie, F. Rohwer, R.E. Schroeder, S. Walsh, J.B.C. Jackson, N. Knowlton and E. Sala. 2008. Baselines and Degradation of Coral Reefs in the Northern Line Islands. PLoS ONE 3(2): e1548.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27459

4. The impact of artisanal fishing on coral reef fish health in Hat Thai Mueang, Phang-nga Province, Southern Thailand

- This study investigates whether there has been a decline in fish stocks of a coral reef in Thailand, and if so, whether that decline is due to small-scale fishing. The research methods used included fish sampling by UVC, interviews and questionnaires with key informants and artisanal fishers. The results confirmed that there has been a decline in piscivores and carnivores (though not herbivores), and the main perceived threat came not from artisanal but from commercial fishing. Recommendations are to replace the largely unrestricted fishery with a more regulated regime backed by effective enforcement.

Jonesa, E., T. Gray and C. Umponstirad. 2009. The impact of artisanal fishing on coral reef fish health in Hat Thai Mueang, Phang-nga Province, Southern Thailand. Marine Policy, Volume 33, Issue 4, 544-552 pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27460

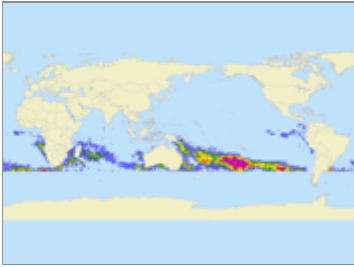
5. A Decade of Reef Check Monitoring: Indonesian Coral Reefs, Condition and Trends

- Indonesia is situated in the centre of coral diversity (Veron, 2000), which is often referred to as the Coral Triangle. Indonesian coral reefs are estimated to cover around 51,000 km² or around 18% of the global coral reef area, and around 60% of coral species are found in this country. Sadly, environmentally damaging fishing practices (such as the use of cyanide and explosives), overfishing, sedimentation, waste disposal (Burke et al., 2002), and coral bleaching (Hughes et al., 2003) have been identified as the major threats to this ecosystem.

Habibi, A., N. Setiasih and J. Sartin (eds). 2007. A Decade of Reef Check Monitoring: Indonesian Coral Reefs, Condition and Trends. The Indonesian Reef Check Network, 36pp.

http://www.reefbase.org/resource_center/publication/main.aspx?refid=27461

1. April 2009 NOAA Coral Reef Watch's Satellite Monitoring Products



This map shows the global observations of coral bleaching occurrences combined with NOAA Coral Reef Watch's satellite monitoring products including Sea Surface Temperature, Sea Surface Temperature Anomaly, Bleaching HotSpot and Degree Heating Weeks. These datasets are added into ReefBase Online GIS each month.

To view the latest April 2009 maps, click here.

<http://reefgis.reefbase.org/redirect.aspx?urlid=24525>

ReefBase::A Global Information System For Coral Reefs

Website: <http://www.reefbase.org> Email: reefbase@cgiar.org