# **ReefBase Newsletter – October 2010**



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# Announcements

# 1. Coral bleaching updates

During the past several years, we have witnessed a major threat to coral reefs—the threat of coral bleaching is the issue which is now being report widely. In Caribbean, NOAA coral reef watch monitoring system on coral bleaching observed that coral bleaching likely to happen in this area this year. With temperatures aboveaverage all year, NOAA's models show a strong potential for bleaching in the southern and southeastern Caribbean through October that could be as severe as in 2005 when over 80 percent of corals bleached and over 40 percent died at many sites across the Caribbean. Scientists are already reporting coral bleaching at several Caribbean sites and severe bleaching has been reported from other parts of the world.

In SE Asia, many reefs are dead or dying across the Indian Ocean and into the Coral Triangle following a bleaching event that extends from the Seychelles in the west to Sulawesi and the Philippines in the east and include reefs in Sri Lanka, Burma, Thailand, Malaysia, Singapore, and many sites in western and eastern Indonesia.

International Marine Scientist reported that this phenomenon is the worst since the bleaching event in 1998. "It is certainly the worst coral die-off we have seen since 1998. It may prove to be the worst such event known to science," says Dr Andrew Baird of the ARC Centre of Excellence for Coral Reef Studies and James Cook Universities. "So far around 80 percent of Acropora colonies and 50 per cent of colonies from other species have died since the outbreak began in May this year". To get more information about coral bleaching in this region, please clink the links below:

http://www.coralcoe.org.au/news\_stories/regionalbleaching.html http://www.wcs.org/new-and-noteworthy/aceh-coral-bleaching.aspx

In order to get a better global picture of the status and severity of coral bleaching, ReefBase would like request the contribution for any information related to coral bleaching event in your region or area. Kindly refer our offline form at "http://www.reefbase.org/contribute/bleachingreport.aspx" for further details. The collected data will be available for access through ReefBase global coral bleaching database. It will be also used to update the new Reefs At Risk report. Please send your information to ReefBase through our online contribution page (http://www.reefbase.org/contribute/bleachingreport.aspx) or email the observation data to reefbase@cgiar.org. Your contribution will be fully acknowledged.

Below are few useful online resources on current coral bleaching event. If you knew any relevant link to other coral bleaching website, you are welcome to share it with us:

- NOAA coral reef watch monitoring system on coral bleaching in Caribbean http://coralreefwatch.noaa.gov/satellite/bleachingoutlook/outlook\_messages/ bleachingoutlook\_20100907\_for\_2010sepdec.html#webinar
- Reef Check http://www.reefcheck.org
- Coral Reef Alliance http://www.coral.org
- NOAA coral reef conservation program http://coralreef.noaa.gov/education/educators
- Great Barrier Reef Marine Park Area http://www.gbrmpa.gov.au/corp\_site/key\_issues/climate\_change/management\_responses/ bleach\_watch2.html
- Marine Park Malaysia (Website in Malay language) http://www.dmpm.nre.gov.my/585-senarai\_kawasan\_yang\_ditutup.html
- Philippines Coral Bleaching Watch http://phcoralbleaching.crowdmap.com/main
- COREMAP Indonesia (website in Indonesia language) http://www.coremap.lipi.go.id

Kindly contact ReefBase if you need any further information.

# 2. The Proceedings of the 11th International Coral Reef Symposium, 2008

All papers from various topics from Volume I to Volume II of the Proceedings of the 11th International Coral Reef Symposium, 2008 have been updated into the ReefBase publications database and are available as downloadable PDFs.

Link to the publications:

http://www.reefbase.org/resource\_center/publication/icrs.aspx?icrs=ICRS11&linksource=nl

# 1. Resilience Assessment of coral reefs assessment protocol for coral reefs, focusing on coral bleaching and thermal stress

The need for rapid methodologies for measuring coral reef resilience and their application in assessing the effectiveness of coral reef conservation management measures is becoming increasingly acute. This document outlines a protocol that defines some basic resilience indicators for rapid assessment methods. The protocol is designed to provide a rapid assessment of coral bleaching resistance and resilience at an individual site level. This is intended to facilitate assessment of any past management actions in maintaining the resilience of coral reefs, and the making of new management decisions against local MPA objectives.

Obura, D.O. and G. Grimsdith. 2009. Resilience Assessment of coral reefs – Assessment protocol for coral reefs, focusing on coral bleaching and thermal stress. IUCN working group on Climate Change and Coral Reefs. IUCN, Gland, Switzerland. 70 pp. http://www.reefbase.org/resource\_center/publication/main.aspx?refid=72505&linksource=nl

# 2. Coral bleaching response plan: 2009-2010. Great Barrier Reef Marine Park Authority

Climate change is now recognized as the greatest long-term threat to the Great Barrier Reef. Climate-related events have already caused significant stress leading to severe mass coral bleaching events in 1998 and 2002, as well as a localized event in the southern Great Barrier Reef in 2006, all of which were caused by higher-than normal sea temperatures. Future bleaching events are inevitable and reef managers have a responsibility to monitor, assess and respond to the socio-ecological impacts of coral bleaching. This Response Plan is intended as a practical guide for coral reef managers to respond to the threat of climate-induced coral bleaching. It provides the detailed protocols and describes the decision-support tools that the Great Barrier Reef Marine Park Authority uses to monitor and understand coral bleaching. This updated version of the Coral Bleaching Response Plan also outlines a framework to guide implementation of management actions that can help build the resilience of coral reefs to coral bleaching events.

GBRMPA. 2010. Coral Bleaching Response Plan. Great Barrier Reef Marine Park Authority. 38 pp. http://www.reefbase.org/resource\_center/publication/main.aspx?refid=72516&linksource=nl

# 3. Marine managed areas what, why, and where

Human population is increasing. All over the world, people are moving toward the coasts. Wild marine fish landings have reached a plateau worldwide, but fishing effort is still rising. Marine and coastal resources and habitats are being used more intensively and in increasingly different ways and, thus, are degraded. Global climate change is affecting coasts and oceans through such phenomena as rising sea levels, changing habitats, migrating populations, and ocean acidification. Governance systems developed in the era of the "freedom of the seas" are struggling to keep up with modern technology and practices. Traditional single-sector management, in which human uses are managed separately, is inadequate and creates confusion and conflict. Together, these conditions have led in many cases to unsustainable development. The goal of marine conservation to address these challenges by promoting sustainable development and use of coastal and ocean resources.

Orbach, M and L. Karrer. 2010. Marine Managed Areas: What, Why, and Where. Science and Knowledge Division, Conservation International, Arlington, Virginia, USA. 16 pp.

http://www.reefbase.org/resource\_center/publication/main.aspx?refid=72503&linksource=nl

# 4. Reef Rehabilitation Manual

This manual captures the learning of worldwide research into reef rehabilitation and seeks to reduce the proportion of reef rehabilitation projects that fail. It provides detailed hands-on advice, based on lessons-learnt from previous experience, on how to carry out coral reef rehabilitation in a responsible and cost-effective manner.

Edwards, A.J. (ed.) .2010. Reef Rehabilitation Manual. Coral Reef Targeted Research & Capacity Building for Management Program: St Lucia, Australia. 166 pp. http://www.reefbase.org/resource\_center/publication/main.aspx?refid=72504&linksource=nl

# 5. GLOBE Action Plan for Coral Reefs

This action plan provides international legislators and policymakers with clear and targeted actions to build resilience in tropical shallow-water coral reef ecosystems and in the people that rely on them. The recommendations have been produced in close consultation with the coral reef scientific and conservation community to ensure the latest research and understanding of the coral reef crisis and the requirements to effectively address it are taken into account.

Globe International. 2010. Global Environment Facility (GEF) and the United Nations Environment Programme (UNEP). Report compiled in collaboration with the Zoological Society of London. 62 pp. http://www.reefbase.org/resource\_center/publication/main.aspx?refid=72519&linksource=nl

# **Online GIS**

### 1. September 2010 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 September 2010 maps, click here. http://reefgis.reefbase.org/redirect.aspx?urlid=50933&linksource=nl

ReefBase::A Global Information System For Coral Reefs Website: http://www.reefbase.org Email: reefbase@cgiar.org