

Tsunami Damage to Coral Reefs: Guidelines for Rapid Assessment and Monitoring

How should current coral reef surveys be adapted to appropriately respond to the December 2004 tsunamis and other similar events in the future?

This question has been answered by a group of coral reef scientists working under the auspices of the International Coral Reef Initiative (ICRI) who reviewed existing methods and selected/adapted those that would be most useful for assessing immediate damage and for monitoring long-term changes. It is hoped that these methods will be used consistently by scientists in the region so that data from different areas can be readily compared.

The protocol is designed for use by scientists or others experienced with coral reef monitoring and underwater observation. However, much of the needed information can be collected by willing volunteers on land or by snorkeling. The authors recommend strongly that a socioeconomic

component such as SocMon or SocCheck is added to the survey as the methods described are purely biophysical.

The first step involves the design of the monitoring programme. The local impacts of the tsunami should be described as the impacts may be highly variable even along adjacent parts of the coastline. Information such as wave height, number of waves, time of impact, duration of inundation, distance the sea receded, distance traveled inland, weather conditions at the time and in the week following, coastal geomorphology, human development patterns, and severity of damage is all useful.

A collection of background data needs to be made to know the context of the assessment sites. Although this information should be used to select assessment sites, it is sometimes not feasible to do so as rapid assessments should proceed as soon as possible.

A staged approach is suggested starting with wide-scale surveys to assess overall levels of damage (rapid assessments) followed by more focused and detailed surveys at a smaller number of carefully selected sites. The details of the methods for site selection, rapid assessment and detailed assessment are provided fully in the text.

The benefits of using the methodology described will be enhanced if the work is coordinated and the results are shared. A full list of regional and country contacts is provided. These persons can also assist with any questions on the methodology.

The full text of the document is available from the following websites:
 UNEP: http://www.unep-wcmc.org/latenews/emergency/tsunami_2004/coral_ass.htm
 ICRI: <http://www.icriforum.org/>
 ReefBase: <http://www.reefbase.org/>

