

# Early Warning Systems: Community Based Monitoring



Photo: CoralWatch Website

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# Early Warning Systems

## Community Based Monitoring: Section Outline

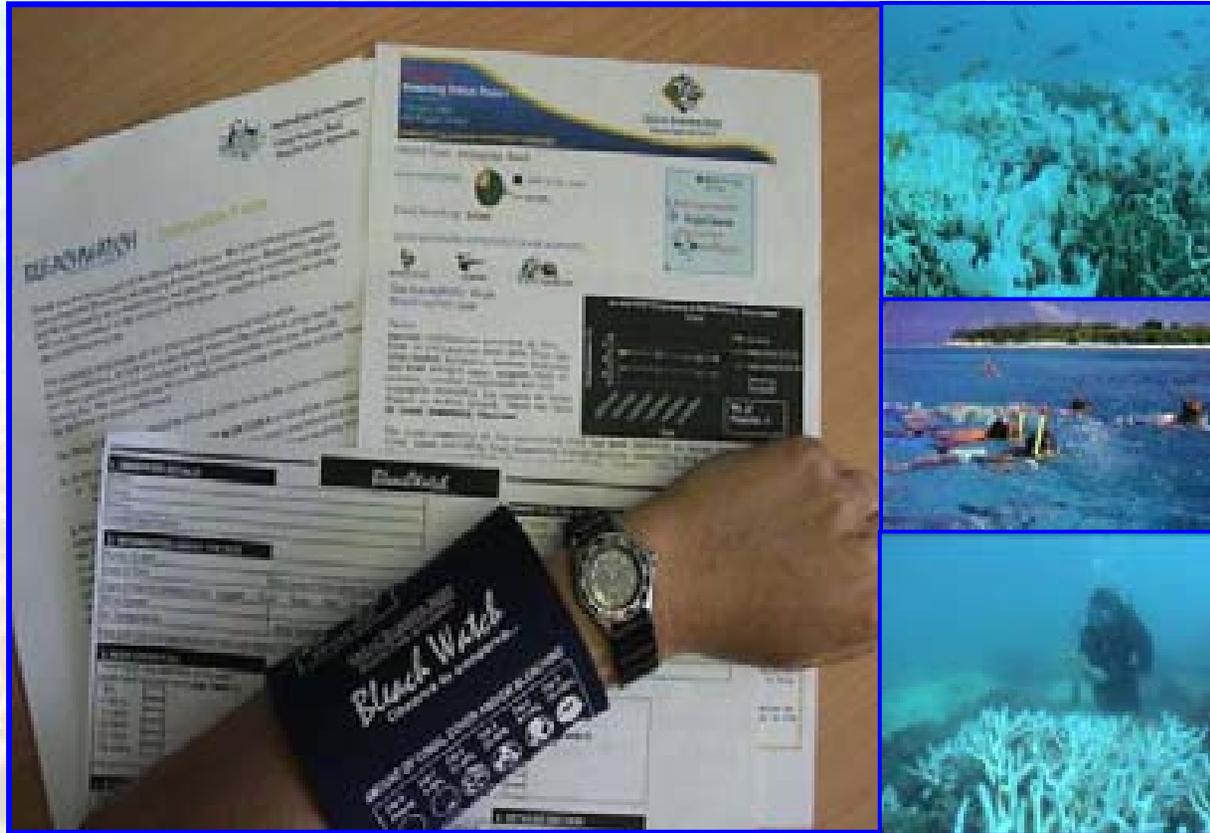
- Why Community Based Monitoring?
- Examples of Community Based Monitoring Programs
- In Depth: Florida Keys NMS BleachWatch
- Making the Data Available Globally - Reefbase

# Why Support Community-based Monitoring for Bleaching or other Impacts to Coral Reefs?

- Engage the Community in Education and Conservation
- Many eyes on the Reef vs just yours!
- Provides “early warning” of Bleaching and other events
- Inexpensive way of Monitoring over large area
- Opportunity for Communication
- Promotes Awareness & Stewardship



# Examples: GBRMPA BleachWatch



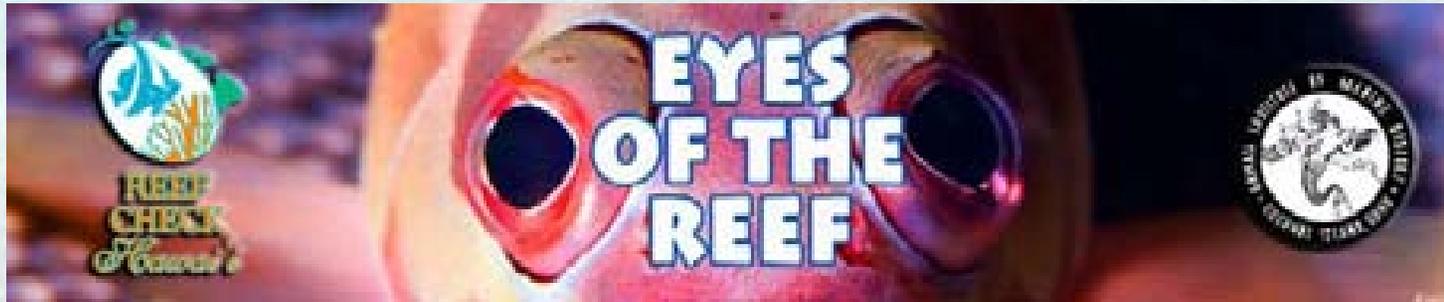
Australian Government  
Great Barrier Reef  
Marine Park Authority



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# Examples: Hawai'i Eyes on the Reef



## EOTR Hawai'i Goes Beyond Bleaching

- Coral Bleaching
- Coral Disease
- Crown of Thorns (COTS) Outbreak
- Invasive Species

# Lots of Options



Reef Check



Mesoamerican Coral Reef Watch Program



Project AWARE  
Divers Conserving Underwater Environments™



*ReefBase :: A Global Information System For Coral Reefs*

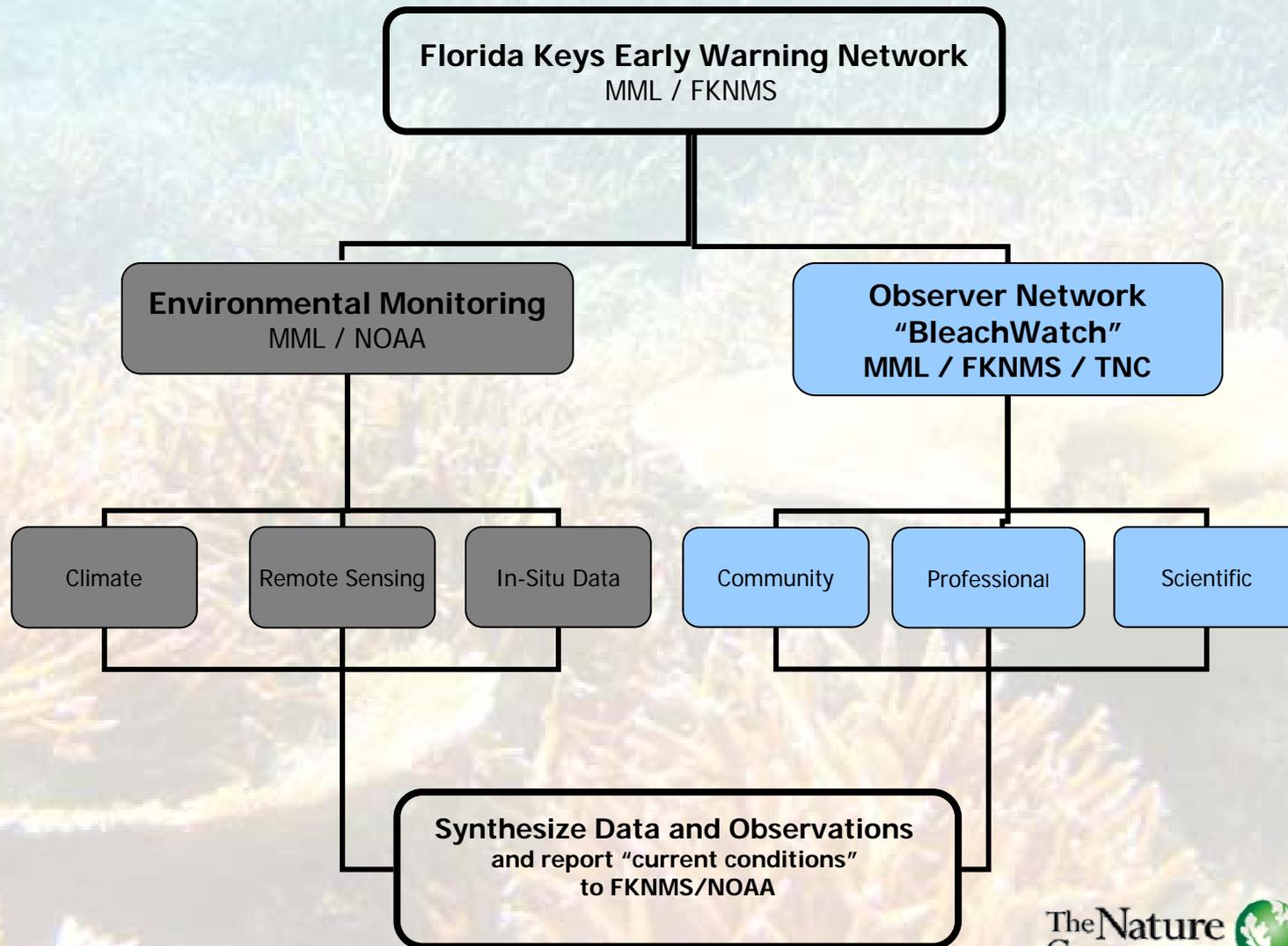


# One Goal

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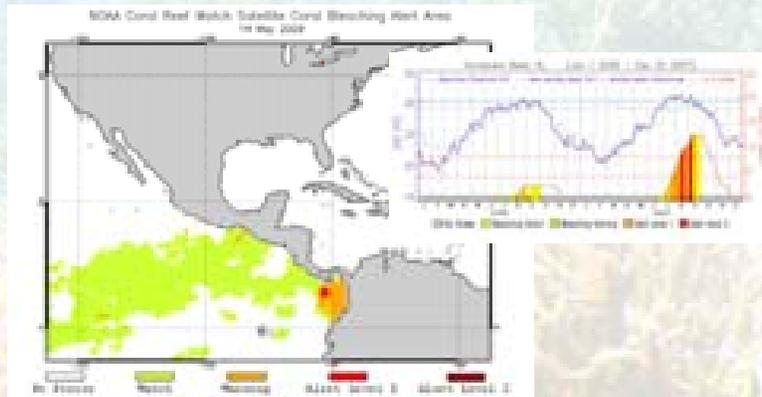


# In Depth Example: FKNMS - BleachWatch



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## Goal 1: Monitor Environmental Conditions



Satellite Information



## Goal 2: Provide Alert when Bleaching Conditions Occur

# In Depth Example: FKNMS - BleachWatch

Goal 3: Involve the Community in Monitoring Coral Reef Health  
BleachWatch Observers Network

## **Community**

Anyone that reports bleaching/no bleaching  
(residents, tourist, pilots, any eyes on the water)

## **Professional**

Observers who complete a short training session  
(FKNMS Team Ocean & Reef Medics, OA Boy Scouts,  
dive operators, dive clubs, marine life collectors)

## **Scientific**

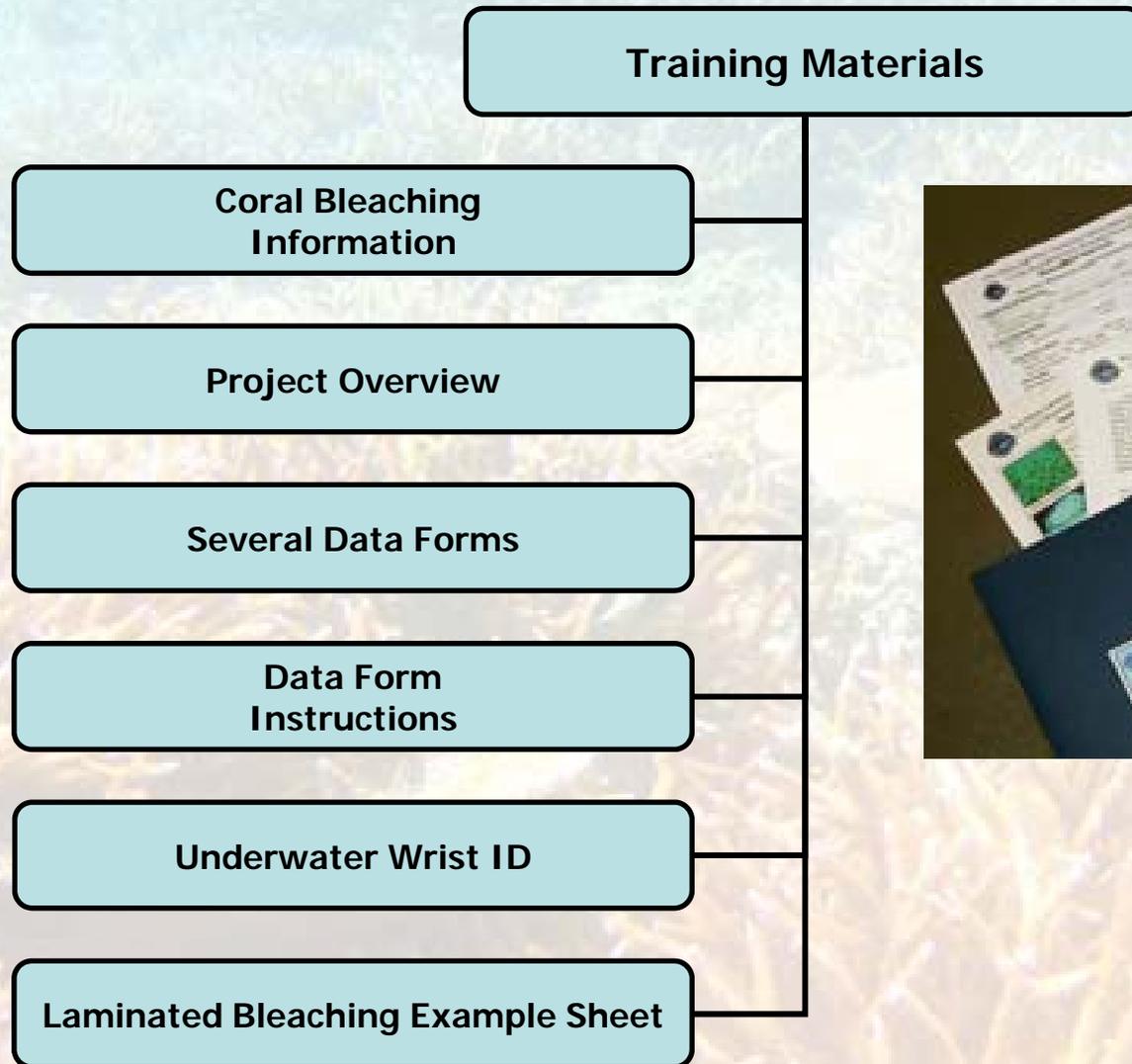
Federal, State, Private and Academic Researchers  
(Sanctuary DARP and other staff, FWRI, Continual  
scientific surveys, FRRP, etc...)

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# Goal 3: Involve the Community in Monitoring Coral Reef Health

## BleachWatch Observers Network



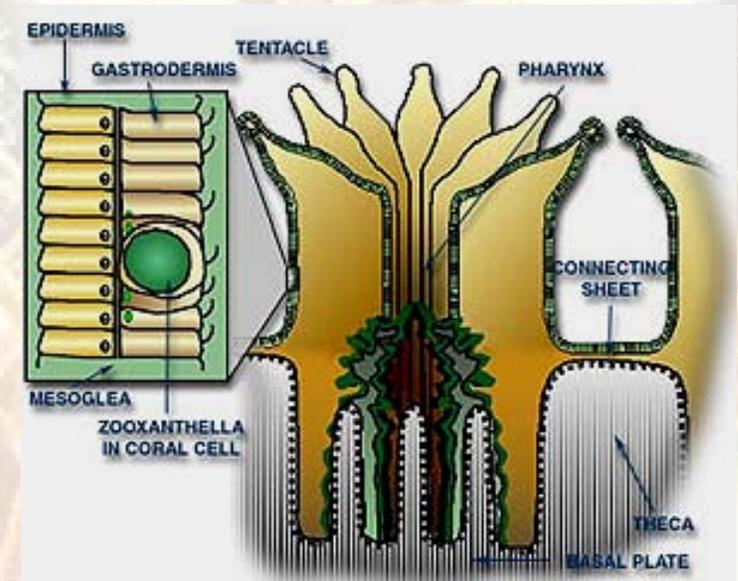
## Goal 3: Involve the Community in Monitoring Coral Reef Health BleachWatch Observers Network

- Explanation of Early Warning Program
- Short Coral Biology Lesson

What is a Zooxanthellae and its importance?

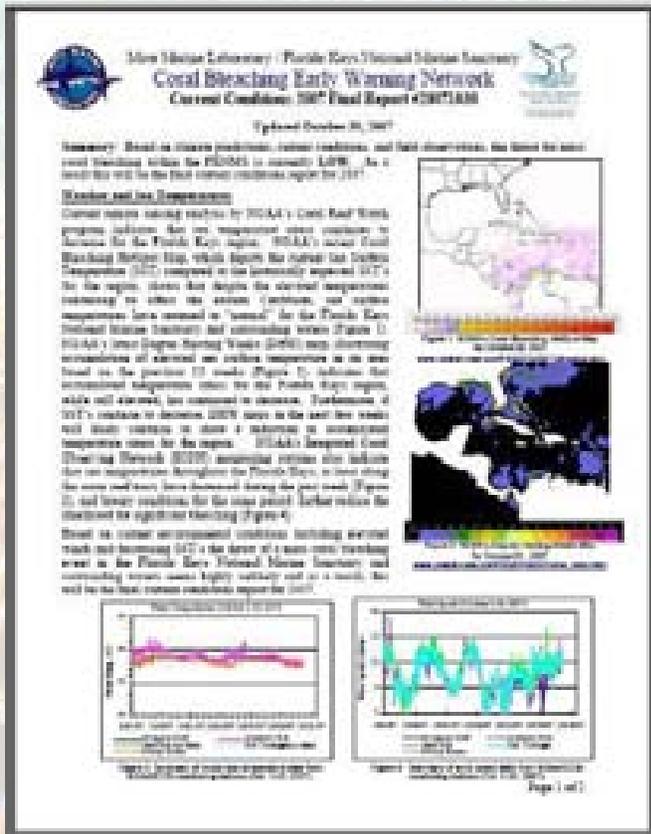
Difference between bleaching, disease, and predation

- How To Fill Out Data Form



# In Depth Example: FKNMS - BleachWatch

Goal 4: Provide *Current Conditions* Summarizing Community Feedback and Environmental Conditions

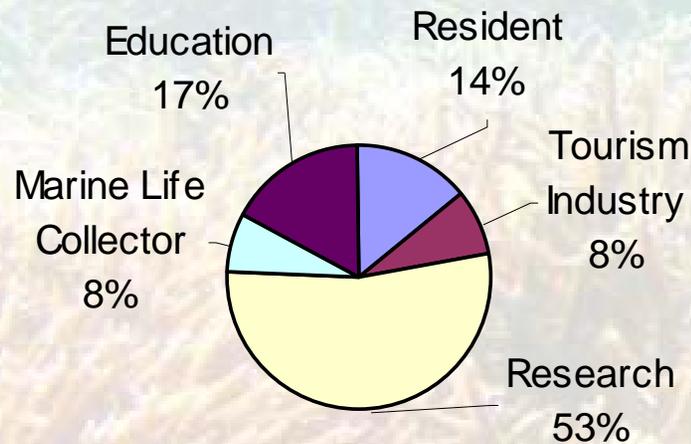


- Updated According to Environmental Conditions
- Outlook for future bleaching events
- Sea Temperature Information
- Relevant Weather Conditions
- NOAA's HotSpot Maps and DHW Maps
- Summary of Field Data from Observers

# In Depth Example: FKNMS - BleachWatch

## The 2007 Quick Summary

### Percent of Reports by Observer Type May 1 - October 18, 2007



- Received 264 reports
- Over 100 volunteers trained to date
- Over 50 volunteers reported for 2007
- At least 25 volunteers reported every 2 weeks
- 8 Current Conditions Reports distributed
- Great relationships with several organizations

# Making the Data Available Globally

The screenshot displays the ReefBase website interface. At the top, a green banner reads "ReefBase :: A Global Information System For Coral Reefs" with navigation links for "Log In | Register | Search | Contact Us". Below this is a navigation menu with "Home", "Projects & Partners", "Global Database", "GIS & Maps", "Key Topics", and "Resource Center". The main content area is titled "Resources - Overview" and features a map of the Pacific region labeled "ReefGIS Online Map". To the right of the map is a "Photo Gallery" with six placeholder images, each with a "Submit your photo here" button. Below the map and gallery are search filters for "Region" (set to "Global") and "Country" (set to "Costa Rica"), with a "Search" button. The search results section shows "Search Result: 1 records" and lists "1. Costa Rica" with a small flag icon. A text block below the list provides information about the Pacific coastline of Costa Rica and Panama, mentioning the effects of El Niño and terrestrial runoff on reef development.

[www.reefbase.org](http://www.reefbase.org)

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