The MangroveWatch Approach

1. Bi-annual collection of geo-tagged video imagery data by trained community members and organisations.

2. Scientists at the Mangrove Hub use criteria-based analysis to determine mangrove ecosystem extent, condition, values and threats from video footage.

3. Imagery and data are uploaded onto the MangroveWatch website. Images can be viewed in ShoreView, allowing comparisons between current imagery and historical assessments to monitor changes in mangrove extent and condition over time.

4. Information presented back to local community and natural resource managers in conjunction with mangrove awareness raising events, such as Mangrove Art Shows.

MangroveWatch Hub

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Issue 3
December 6th, 2010

Advantages of the MangroveWatch approach

- Community data collection across a broad spatial scale at frequent intervals and low cost. Allows for whole of system assessment.
- Imagery acquisition does not require expert knowledge of mangrove ecosystems.
- Scientific assessment by mangrove researchers reduces observer error.
- Many diverse applications: so far, this data has been used to assess coastal erosion and mangrove loss in Vietnam; mangrove forest carbon storage and sea level rise risk in the Solomon Islands; and post-drought and post-flood mangrove recovery in Australia.

Key Objectives

1. Establish a long-term visual record of mangroves.
2. Improve understanding of mangrove ecosystem function, values, key threats, and processes at a local and regional scale.
3. Generate community awareness of mangroves and encourage local environmental stewardship.
4. Provide a standardized method to assess shoreline mangrove condition and change over time.

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Why MangroveWatch?

Mangroves are important

No mangroves, no fish!
If you like seafood, you like mangroves. These ecosystems provide habitat for 80% of seafood species.

Super carbon storage!
Mangroves are exceptional carbon stores, storing 50 x more soil carbon than their terrestrial counterparts.

Healthy Mangroves = Healthy Catchments
Mangroves are highly visible end of catchment indicators for sediments, nutrients, and pollutants.

Shoreline stabilizers
Mangroves provide shoreline stabilization and protection during extreme weather events.

Coastal Kidneys
Mangroves act as a buffer filtering nutrients, pollutants and sediments from terrestrial runoff before it enters marine ecosystems (such as coral reefs and seagrass beds).

Mangroves are threatened

Coastal development, aquaculture, pollution, and overharvesting have led to a 30% loss of mangroves globally.

Human impacts reduce the capacity of mangrove ecosystems to withstand other environmental change such as erosion, severe storm activity, or sea level rise.

Healthy Mangroves = Healthy Catchments
Mangroves are highly visible end of catchment indicators for sediments, nutrients, and pollutants.

Do your local mangroves need watching? Becoming a MangroveWatcher is easy!

Visit our website at www.mangrovewatch.org.au to find out more.

Contact the MangroveWatch Hub (mangrovewatch@gmail.com) if you are interested in getting involved.

MangroveWatch is looking for corporate sponsors to help establish a MangroveWatch group in your local area.

MangroveWatch can help reduce these threats in the following ways:

- Getting “eyes on the ground” and increasing participants’ knowledge of mangrove ecosystems and local waterways.
- Assessing and detecting change over time.
- Monitoring the success of restoration/rehabilitation activities and management strategies.
- Identifying areas requiring greater protection and restoration.
- Increasing scientific understanding of mangrove ecosystem function and resilience.