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Western Pacific Seagrass-Watch

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Welcome to the very first Newsletter for the Western Pacific branch of Seagrass-Watch. In the Western Pacific, Seagrass-Watch works in conjunction with SeagrassNet, a scientific global seagrass monitoring program. Both SeagrassNet and Seagrass-Watch in the Western Pacific are supported through the University of New Hampshire (USA) by funding from the David and Lucile Packard Foundation. Regular newsletters will be produced with updates on Seagrass-Watch activities and progress. Contributions of articles from participants is most welcome. Members of the Marine Plant Ecology Group (DPI Queensland Australia) are available for any information or requests participants may have concerning Seagrass-Watch.

What is Seagrass-Watch?

Seagrass-Watch is a community-based monitoring program developed by the Marine Plant Ecology Group (MPEG) four years ago in Queensland (Australia), in collaboration with community (citizen) groups. The aims of Seagrass-Watch are:

- To raise awareness and provide educational opportunities on the importance of seagrass ecosystems.
- Collect information on changes in seagrass meadows and possible human impacts for coastal management.
- To integrate with existing education and scientific programs for the benefit of people and organisations who participate.

The Seagrass-Watch program has a strong scientific underpinning with an emphasis on consistent data collection, recording and reporting. Scientific, statistical, logistic and GIS support underpins all monitoring efforts. Simple yet scientifically rigorous monitoring techniques include measurement at fixed sites of percentage seagrass cover, seagrass species composition and algal cover. Photo-calibration sheets used by community members ensure consistency in seagrass cover estimates between groups. All data collected is entered onto the Seagrass-Watch database and GIS mapping systems. This information provides assessments on the status of seagrass meadows, and a broad measure of change.

Soon community members from the Federated States of Micronesia, Palau, Philippines, Malaysia, Indonesia, Papua New Guinea and Fiji will join Queensland communities as part of a global network conducting regular Seagrass-Watch monitoring.



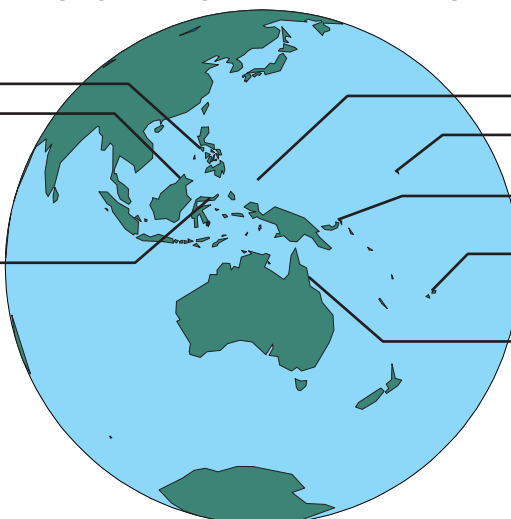
Philippines
East Malaysia

Indonesia

Republic of Palau
Federated States
of Micronesia
Papua New Guinea

Fiji

Queensland
(Australia)



NEWS



Papua New Guinea

Seagrass Monitoring, southern New Hanover

John Aini (Allan Awareness) reports

On the 13th & 14th March, a trip was undertaken to southern New Hanover (northern New Ireland) to visit local communities and introduce the Seagrass-Watch program.

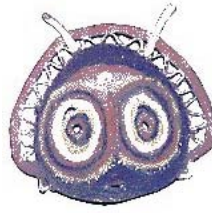
More than 35 people, mostly youths, attended the awareness sessions. Participants were educated about the importance of seagrass, and the background to the SeagrassNet and community based Seagrass-Watch monitoring programs.

The trip to southern New Hanover took about 2.5 hours from New Ireland by boat. The awareness session commenced soon after lunch. The program was divided into:

- general awareness on seagrass importance,
- awareness on the community based seagrass monitoring program Seagrass-Watch and SeagrassNet
- theory on seagrass species identification
- theory on Seagrass-Watch / SeagrassNet monitoring procedures.

After the awareness session, practical training was conducted in the field on Seagrass-Watch monitoring procedures. Due to logistic problems, 21 youths attended the training.

The program continued on until 01:00hrs (one o'clock) in the morning. The reason for this was because we had to wait for the



Quiz time What is the name of this seagrass?



Some of the 21 participants that attended the field training

right tide to carry out the practical session of the program. On arrival back at the village the participants were given the chance to closely observe the various seagrass species. A quiz was held to test who could identify most of the seagrass. The winner was given an additional cup of coffee!! Another run through on monitoring procedures was conducted that night and the remaining of the time until 0130 am was given for questions.

Two sites were identified for monitoring, one for Seagrass-Watch and the other for SeagrassNet. The approximate distance between the sites is 10 kilometres. Both sites are situated near two villages, Lavongai and Metermaram, respectively.

The Seagrass-Watch site at Lavongai was marked out on the 30th March 2001 (Easter Saturday) and a full monitoring exercise was undertaken while at the same additional training was provided. The same will also be



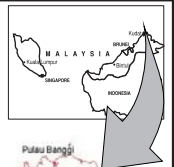
done for the SeagrassNet site at Metermaram. Four other local communities have lately expressed interest and have requested monitoring sites to be established in their areas. Awareness and training for these groups has not been able to commence due to limited resources.

We are hopeful these other sites could be set up with training provided in mid May.

The next Seagrass-Watch monitoring period will be mid May 2002. In August, Stuart, Len and Rob (MPEG) will be in the region from 18-24 August conducting training.



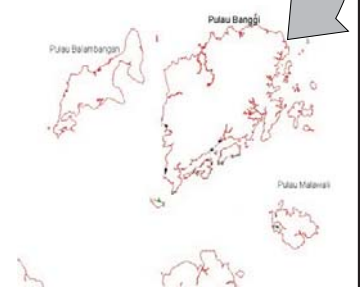
Malaysia

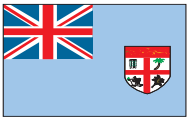


Leela Rajanmai, a Phd student from the Borneo Marine Research Institute (Universiti Malaysia) has recently been talking with local groups and schools about developing Seagrass-Watch in Sabah, Malaysia. Leela is investigating dugongs and seagrasses, to develop approaches to conservation and management of these marine resources.

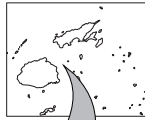
She is working closely with community groups to develop links between local knowledge of dugong, their cultural importance, and seagrass meadows. Her work is based on Pulau Banggii, an island off the north coast of Sabah.

In December 2001, Leela worked with the Seagrass-Watch team in Cairns to learn seagrass mapping and monitoring techniques. Rob, Len and Stuart hope to join Leela to develop the first Seagrass-Watch workshops at Pulau Banggii in August 2002.



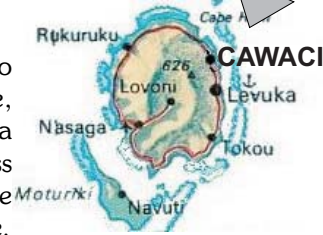


Fiji



Cawaci, Ovalau Island

Seagrass-Watch would like to welcome St. John's College, Cawaci (pronounced "the wa thee") to the global seagrass monitoring network. They are the first school in Fiji to participate.



St. John's College, located 5 km north of the historic town of Levuka (Old capital of Fiji), is on the island of Ovalau, which lies off the east coast of Viti Levu, Fiji's main island. The college was founded in 1894, by Bishop Vidal, to educate the sons of



Cawaci, Ovalau

ranking Fijian Chiefs, and sits on the grounds of St. John's Church, a Gothic Revival building, that is constructed of limestone and coral from the island's fringing reefs.

In early July 2002, the Seagrass-Watch team will be visiting the high school, where they will train the student run, "Environment and

Landscape group" in seagrass monitoring methods and provide necessary equipment for the on going monitoring process.

Under the guidance of teachers, Mrs Tou Rokoqera and Mr. Evan Naiqiolevu, students will monitor their first site, to be established on the fringing reef flats directly in front of the college.

The fringing reef has large intertidal meadows of *Halodule uninervis*, *Halodule pinifolia*, *Syringodium isoetifolium* and *Halophila ovalis ssp. bullosa*.

Green algae problem?

In March 2002 a filamentous green algae, *Cladophora*, was observed on the seagrass meadows and fringing reef opposite Cawaci. This algae occurs naturally under certain conditions, usually associated with calm conditions, good light availability and nutrients. The bloom could have been caused by a number of factors, however it's presence may have been exacerbated by recent extraction activities (earth works) on the fringing reef flats nearby.

Seagrass-Watch monitoring activities will assist with understanding the seasonal patterns, if any, of these algal blooms.



Earth works (see rocks piled in centre of picture) surrounded by seagrass meadows covered by a bloom of the green algae *Cladophora* sp., on Cawaci's fringing reef.



Philippines



Puerto Galera

In January 2002 the first Global Seagrass Monitoring Workshop was held in Puerto Galera, Philippines. The workshop reviewed the SeagrassNet methods currently being used to



conduct scientific seagrass monitoring across the Western Pacific and initiated Seagrass-Watch in the region.

Puerto Galera is located on the north shore of Mindoro Island, 130 kilometres south of Manila. Puerto Galera has an irregular coastline dotted by many coves of white sand beaches with crystal clear water, natural seawalls and rich marine life. It has a natural harbour providing sea vessels with safe anchorage.



Puerto Galera is very rich in history. The literal translations of its name is "Port of Galleons", which it received from the Spanish seafarers in the 16th Century, who used it as a safe haven during their journeys to the Orient. However its history as a galleon trade destination dates as far back as the prosperous years of the 10th century.

During the January workshop, several representatives from local community (citizen) groups and town council participated in a morning session with visiting members of the Marine Plant Ecology Group. Representatives were first given a presentation on the background of Seagrass-Watch and the techniques involved. This was followed by a field exercise. The community participants all showed remarkable enthusiasm and dedication to the task despite the poor tidal conditions on site.

Overall, the workshop was a success and the mayor of Puerto Galera in the Province of Oriental Mindoro proclaimed by executive order the establishment of the "Bantay Isay [Seagrass-Watch] Task Force". Rochelle Balitaan, a local resident of Sabang and Univeristy of Philippines student, has volunteered to act as local Seagrass-Watch representative for the Puerto Galera region. Sites are planned to be established in July this year at La Laguna and other accessible locations.



SeagrassNet scientists and Puerto Galera community members participating in Seagrass-Watch training.



Australia



Northern Queensland (Townsville & Cairns regions)

The Yule Point monitoring sites north of Cairns were monitored by TAFE students in late February. Seagrass cover had increased since previous monitoring and appears to be following a seasonal trend, reaching a summer peak. A new monitoring site was also established at Ellie Point, near the city of Cairns. Students will monitor a meadow rather than a 50m x 50m site, by mapping the meadow boundary and estimating seagrass abundance from randomly chosen quadrats within the meadow.

At Shelley Beach, Townsville, the last monitoring was conducted under a full moon at 01:00hrs due to the tides. There was quite a turnout, despite the late hour. Equipped with head torches, volunteers monitored site SB2. Seagrass cover was observed to be still increasing since previous surveys, indicating that the meadow is well and truly on its way to recovering since the floods of the late 90s. The highlight of the evening was the number of starfish (*Astropecten harwicki*) actively moving around the seagrass meadow in search of their favourite prey - sand dollars (a type of sea urchin).

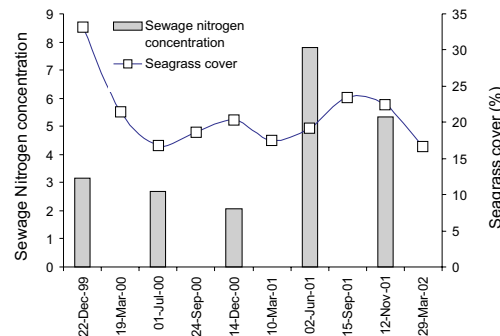
Central Queensland (Whitsunday region)

Monitoring has revealed a decline of up to 75% in the cover of seagrass at long-term sites in Dingo Beach, Pioneer Bay and Midge Point. The decline is indicative of a seasonal pattern. Strong winds, sand bank movement and high temperatures may also be impacting seagrass throughout the region.

Abundant dugong feeding trails were observed in the seagrass meadows of Pioneer Bay in March. It was the most concentrated patch of trails so far observed since monitoring began 3 years ago.

In other parts of the bay near the sewage outfall, high algae and epiphyte cover continues. Information on the poor condition of these seagrass meadows and the large amounts of algae smothering seagrass is now being used by the Great Barrier Reef Marine Park Authority in their assessment of sewage outfalls. Recent city council monitoring of the sewage outfall in Pioneer Bay has shown that the nitrogen from the outfall is contributing to the excessive growth of algae and epiphytes. This in turn is impacting the seagrass.

Information on other seagrass meadows at Laguna Quays, Shute Harbour and Boat Haven Bay are also being used to assess proposed developments.



Southern Queensland (Hervey Bay region)

Monitoring continued at most long-term sites in February. Several new monitoring sites were established and a couple of new groups joined the program. Seagrass cover generally showed little change from previous surveys, but at Boonooroo and Pelican Bay dramatic seasonal increases in cover were recorded. Most other sites within the region continued to show recovery since the devastating Mary River floods in February 1999.

Queensland Transport has adopted Seagrass-Watch monitoring techniques to monitor any impacts during the construction of a dredge material disposal area for Urangan Boat Harbour. With the assistance of a local high school and indigenous groups, monitoring "transects" were established at approximately 250m, 500m and 1000m distances from the proposed development. These transects will be monitored every 2 months during construction.

Do you want to get Involved?

Contact: Seagrass-Watch Coordinator

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Email: Seagrass@dpi.qld.gov.au
Phone (+61 7) 4035 0100

For more information:

<http://www.seagrasswatch.com/>
Queensland Seagrass-Watch website

<http://www.seagrassnet.org/>
website for the SeagrassNet scientific seagrass monitoring program

<http://www.reef.crc.org.au/>
Learn about seagrasses and the Seagrass-Watch program in an innovative and interactive way, including children's games, on the CRC Reef website

<http://www.bayconnect.com.au/seagrass/default.htm>
home site of the Seagrass-Watch volunteers from the Hervey Bay Dugong & Seagrass Monitoring Program

<http://www.ouchvolunteers.org/>
home site of the Seagrass-Watch volunteers from O.U.C.H. Whitsundays

<http://www.possum.murdoch.edu.au/~seagrass/subform.htm>
Seagrass forum: a global seagrass discussion list

Books:

McKenzie, L.J., Campbell, S.J. & Roder, C.A. (2001) *Seagrass-Watch: Manual for Mapping & Monitoring Seagrass Resources by Community (citizen) volunteers.* (QFS, NFC, Cairns) 94pp

Short, F.T. and Coles, R.G. (eds.) (2001). *Global Seagrass Research Methods.* Elsevier Science B.V., Amsterdam. 473pp.



Any comments or suggestions about the Seagrass-Watch program or contributions to the newsletter would be greatly appreciated.