

PABITRA in Palau

From August 7-11, 2006, an initial synthesis meeting of PABITRA (the Pacific-Asia Biodiversity Transect) Network was held in the island Republic of Palau. The PABITRA Coordinator for Micronesia, Dr. Harley Manner, with the cooperation of Ms. Tarita Holm, Chairperson of the Palau Natural Resources Council, organized the workshop. In addition to Dr. Manner, two overseas PABITRA core members, Dr. Dieter Mueller-Dombois (Emeritus Professor of Botany and Ecology) and Dr. Curtis Daehler (expert on invasive species), were invited to explain the PABITRA concept under the capacity building and training project funded by APN (the Asia-Pacific Network for Global Change Research CAPaBLE Grant CBA 2006-01NSY-Manner).

The first day, August 7, was spent on a field trip to the Rock Islands, a relatively pristine limestone forest that contains a large number of endemic species. The morning of the second day, August 8, was spent in official meetings, first with the Minister of Resources and Development, Fritz Koshiha, who delegated Ms. Vicki Riungel to assist with the logistics of the PABITRA workshop. A meeting with the Board of the Palau Conservation Society (PCS) followed. The mission of PABITRA was scrutinized in this meeting as there was some suspicion as to PABITRA's motives. We were asked (1) what can PABITRA add to ecosystem knowledge in Palau that is not already known, and (2) what is PABITRA's motivation by coming to Palau. After providing apparently reasonable answers, the PCS Board Members decided to collaborate with PABITRA. Also on that day we visited the Palau Automated Land and Resources Information System office (PALARIS). PALARIS is the National GIS unit of the Government of Palau. The remaining day was spent on a reconnaissance tour along Babeldaob's new compact road.

The third day, August 9, was spent in a seminar with 26 local professionals. They included members of several Palauan government departments, representatives of NGOs, environmental consultants and two Palau State Governors. Ms. Tarita Holm acted as the MC. A welcome address was given by the Minister for Resources and Development, all attendees were introduced, and the three PABITRA core members each made presentations. The presentations covered PABITRA's history, goals and prior accomplishments in other Pacific Islands and the need for biodiversity science in managing ecosystems and the threats of global change. The task of biodiversity assessment and monitoring as a fundamental learning activity was discussed with introduction of the PABITRA Manual. The afternoon session was devoted to presentations by the core members on methods of analyzing vegetation, displaying ecosystem features, on analyzing ecosystem threats, and agroecosystems. Informal and lively discussions accompanied each of the seminar topics.

Following the seminar day, a smaller group of workshop participants met for an all day fieldtrip to Ngardok Lake on August 10. After a trail walk aiming at entitiation (recognition of vegetation patterns) attendees were shown with hands-on experience how to determine the minimal plot size for a relevé. A seasonal swamp forest was selected for this exercise. It was found that the minimal area for the analysis of this forest type exceeded 64 m² by far. Time constraints prevented completion of the species/area analysis. A rapid method for structuring vegetation cover vertically by horizontal strata was also demonstrated. In the morning of that day, the PABITRA core members and Ms. Tarita Holm were invited to a radio talk show. Meetings were also arranged with the Vice-President of Palau, Mr. Elias Camsek Chin and the President's Chief of Staff, Mr. Billy G. Kuartei, representing the President who was currently off Island.

August 11 was used as a second seminar day. Professor Mueller-Dombois began by leading a general discussion on the factors affecting vegetation. An ecological world climate map on a CD was shown as

analyzed by Walter-type diagrams and discussed with regard to the world position of Palau's rain forest. It was pointed out that on a world scale Palau's forest should be classified as a lowland tropical rain forest since Babeldaob's highest elevation is not even reaching 300 m. The term upland forest (as used for the same forest) is locally acceptable since this forest serves primarily as watershed cover.

A first attempt was made to synthesize existing information of Palauan ecosystems and to define potential PABITRA transects and landscape segments from the central mountain range inland to the coast. The following watersheds were considered as potential sites for long-term study: (1) the Ngerikiil watershed, a highly impacted watershed which all participants considered to be important for study. This watershed has previously been selected already as an EBM (Ecosystem Based Management) site; (2) the Meskelat river area (within the Ngerdorch watershed), a low impact site that has the largest contiguous patch of UP2H forest class with trees > 30cm dbh and 70% crown closure of the main canopy, and rain gage stations; (3) the Diongradid watershed, an area previously mined for bauxite, which still contains healthy upland forest. This watershed is the site of an EBM project for the next two years; (4) the Ngeremeduu watershed where a CA (Conservation Alternative) project was proposed.

The Palau PABITRA group selected the Ngerikiil and Diongradid watersheds as PABITRA study sites for the 2007 Joint Analysis Workshop planned for 28 March-5 April, 2007. As preparation for this second and more field intensive workshop, the group decided to prepare climate diagrams (both manually and using GIS) for the two watersheds and to list and collect the available information on the two watersheds (e.g. plant checklists, air photos, maps, climatic records). PALARIS offered to prepare three dimensional profile diagrams of the two watersheds. In addition, a list of supplies (up to \$1000) in terms of field survey equipment was suggested to be prepared soon so that this material will be available for the 2007 workshop.

The group was asked to review the PABITRA Manual and to begin a consultation process with the local communities about the 2007 workshop and the potential study sites, and to recruit students from PCC (Palau Community College) and interested villagers in an effort to build capacity for ecological biodiversity assessment. Potential sources of funding for future activities were also discussed. These included: APN Capable grants, the U.S. Forest Service (equipment, fire & invasive species), The Nature Conservancy, Conservation International, USAID, EPA (Environmental Protection Agency), GEF (Global Environmental Facility), UNESCO, and UNCBD-GTI (United Nations Convention on Biological Diversity-Global Taxonomic Initiative).

The participants also suggested that the following scientists be invited: Dr. Margie Falanruw (Biology and Agroforestry), Dr. Jim Juvik (Climatology/ Hydrology), Dr. Art Whistler (Botany), and Dr. Kim Bridges (Quantitative Ecology). Expertise on photography and methodology for data management was also suggested. Dr. Manner noted that social-cultural-economic aspects of landuse needed to be incorporated.

Following the radio talk show, the PABITRA core members and Ms. Tarita Holm were interviewed by reporters of the Palau Newspapers (Palau Horizon and Tia Belau). Articles on PABITRA appeared on August 11, 2006.

Report submitted by
Dr. Harley Manner
August 24, 2006

MEETING AGENDA

6 August 2006, Sunday evening: Arrival of overseas participants. Contacts: Sirino Hideo of the Palau International Coral Reef Center (PICRC) and Tarita Holm (Forestry)

7 August 2006, Monday

10:00 AM Departure from PICRC dock to Rock Islands field trip: German Lighthouse Trail.

8 August 2006, Tuesday

9:00 AM Meeting with Minister of Resources and Development: Fritz Koshiba..

10:30 AM Meeting with Palau Conservation Society Board of Directors

11:00 AM Reconnaissance visit to Babeldaob watersheds. Return to Koror by 6 pm.

9 August 2006, Wednesday

9:00 AM	Opening Remarks	Penthouse Conference Room Minister Fritz Koshiba
9:30 AM	Greetings and Introduction to PABITRA	Prof. Harley Manner
10:00 AM	History and goals of PABITRA	Prof. Dieter Mueller-Dombois
	Self-Introductions of Palau Participants	
10:30 AM	Morning Tea	
10:45 AM	Need for Understanding Ecosystems & Global Change	Prof. Curtis Daehler
11:15 AM	Introduction to the PABITRA Manual	Prof. Mueller-Dombois
11:45 AM	Q&A session with participants	
12:00 PM	Interview with local newspapers	Manner, Mueller-Dombois, Daehler, Tarita Holm

12:00-1:30 PM Lunch (provided at Penthouse)

1:30 PM Informal discussion on how to analyze vegetation and ecosystems (Discussion leader Prof. Mueller-Dombois)

2:30 PM Informal discussion on threats to natural ecosystems and how to cope with them (Discussion leader Prof. Curtis Daehler). Afternoon Tea available

3:30 PM Informal discussion on how to evaluate agroecosystems (Discussion leader Prof. Harley Manner)

4:30 PM General follow up discussion and planning for next day's field visit to selected sites

10 August 2006, Thursday

8:00 AM Radio talk show at Eco-Paradise (Public Radio Station) in Meyuns

10:00 AM FIELD VISIT to Babeldaob Potential PABITRA Transect Sites: Ngardok Lake
Presentation of field techniques including minimal area concept, relevé method

11 August 2006, Friday Penthouse Conference Room

9:00 AM Assembly of existing Palau maps: Topographic base maps, soil, geology, climate, vegetation, landuse, including air photos and climatic data

10:00 AM Pinpointing potential transect sites on existing maps. Morning Tea available

11:00 AM Establishing research gaps: including how to make ecological climate diagrams and how to portray ecosystem features

11:45 AM Meeting with Vice President of Palau, Elias Camsek Chin

12:00-1:00 PM Lunch (provided at Penthouse)

1:00 – 4:00 PM Discussion on Site Selection Finalization

2:00 PM Meeting with Billy Kuartei, Chief of Staff of President Remengesau
Afternoon Tea available.

4:00-5:00 PM Preparation for future meeting and collaboration

12 August 2006, Saturday Departure

**LIST OF PARTICIPANTS AND AGENCIES PRESENT AT THE FIRST PABITRA SEMINAR
AUGUST 9, 2006**

Name	State/Agency/ Organization	Phone #	Email Address
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PARTICIPANTS AT THE PABITRA SEMINAR IN PALAU AUGUST 9, 2006



Ms. Tarita Holm kneeling in front. Professor Harley Manner (with glasses) seated behind. The lady Governor Akiko Sugyama seated on H. Manner’s right. Seated on his left is the Minister of Resources & Development, Mr. Fritz Koshiba. Professor Mueller-Dombois seated at his left (with hat). Dr. Curt Daehler, the third core member of PABITRA, standing at door. Other names on the above list.

Fieldtrip participants on August 10 to Ngardok Lake on Babeldaop

Name	Title
Ann Kitalong	Environment Consultant
Sarah Klain	Peace Corps
Leilani Rechellul	Extension Agent
Vicky Riungel	Administrative Assistant
Tarita Holm	Forest Management Coordinator
Larry Mamis	Forest Extension Agent
Ebais Sadang	Forester II
Chris Kitalong	Environment Officer
Michael Balick	Botanical Consultant
Rafael Maior	

Fieldtrip group resting at Ngardok Lake



Second Seminar Sign up Sheet, August 11, 2006

Name	State/Agency/Organization	Phone #	E-mail Address
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