PACIFIC-ASIA BIODIVERSITY TRANSECTION JOINT ANALYSIS WORKSHOP
November 25 – December 4, 2003

Hosted by: National University of Samoa

Presented by: Mila Misa
PABITRA: is a collaborative program for investigating the function of biodiversity and the health of ecosystems in the tropical Pacific Islands.

Emphasis directed toward comparative analysis of indigenous upland & inland forest of volcanic islands and their roles as ecological reserves and watershed.
HISTORY OF PABITRA

Pacific Science Association (PSA) Committee on Ecology Conservation and Environmental Protection (ECEP) chaired by Dieter Mueller-Dombios

1999 – 19th PSA Congress Sydney Australia ECEP became the Division for Ecosystem Conservation in the PSA Task Force on Biodiversity.

PABITRA Network established in the same year.
RESEARCH STRATEGY

• **HORIZONTAL APPROACH**
  – comparing ecosystem across islands within the same biome.

• **VERTICAL APPROACH**
  – comparing ecosystem within the different layers of vertical strata. (Lowland, Upland, Montane Forest, Cloud Forest)
TARGETING THE PACIFIC ISLANDS

PABITRA Sites
List of Overseas Participants

- **Dieter Mueller-Dombois**: PABITRA Director
  - Marika Tuiwawa: PABITRA Coordinator (Fiji)
  - Art Whistler: Plant taxonomist
  - Jack Lockwood: Volcanologist
  - Jim Juvik: Climatologist
  - Gunnar Keppel: Plant biologist
  - Dan Gruner: Entomologist
  - Cedric Schuster: Conservationist
  - James Atherton: GIS Specialist
  - Harley Manner: AgroEcosystem
TRANSECT SITE: Big Island of Savai’i

- Types of ecological zones
- Preserved native ecosystem
- Vegetation ecosystems
  - Lowland
  - Secondary forests
  - Agricultural ecosystem
  - Freshwater wetlands
  - Coastal & Mangrove forest
  - Intertidal zones
  - Lagoons & Reef Ecosystems
- Native angiosperm flora
  - 468 species
Thursday, November 27, 2003
(Lealatele & Mt. Matavanu)
**NE SAVAI'I TOPOGRAPHIC PROFILE**

**Matāvanu Flow Transect**

![Graph depicting the topographic profile of Matāvanu Flow Transect.](image)

(D. Mueller-Dombois, 2003)
Mt. Matavanu

Slopes
- flat, gently rolling
- rolling, strongly rolling
- moderately steep
- steep
Friday, November 28, 2003
Mt. Mataoleafi - Aopo
NW SAVAI'I TOPOGRAPHIC PROFILE

A'opo Transect

Mt. Silisili 1866 m
Mt. Maloa le Afi 1700 m
1560 m Plot
1320 m Plot
1120 m Plot
800 m Plot

A'opo montane forest

Submontane 300-800 m

A'opo lowland and coastal forests

A'opo Village 200 m
Anini

(D. Mueller-Dombois, 2003)
Mt. Mataoleafi

Slopes
- flat, gently rolling
- rolling, strongly rolling
- moderately steep
- steep
Monday, December 2, 2003
Mt. Olomanu - Taga
Taga Transect

Only Submontane and lowland

Mt. Fatuafie 552 m

Along Va’oto Stream track goes to 360 m

Taga

Elev. (m)

0 100 200 300 400 500 600

North

South

0 2 km 4 km 6 km 7.5 km

(D. Mueller-Dombois, 2003)
Mt. Olomanu

Slopes
- flat, gently rolling
- rolling, strongly rolling
- moderately steep
- steep

Mt. Olomanu
Conclusions:

Lealatele – Lowland  -Lavaflow scrub ***
Mt. Matavanu – Upland – Lavaflow scrub
Mt. Mataoleafi – Montane rainforest
Mt. Olomanu – Lowland rainforest
What are the Research Methods?

- **Reconnaissance**
  - preliminary check or work by observation

- **Agroforestry Systems**
  - Point center method
  - 5x5m plot

- **Forestry Systems**
  - 5x5m plot
  - Measure tree dbh
  - Measure tree heights
Pros and cons of PABITRA Workshop

**PROS**
- Familiarize ourselves with research in the field
- Make connections with the scientists
- How to organize PABITRA in Am. Samoa
- Analyze the problems and put it in a better perspective

**CONS**
- Time consuming
- Unable to do research without the consent of the village
- A lot of money involved
- Better management & organization
Special Thanks to: Director of PABITA:
Dieter Mueller-Dombios

Scientist’s presented

All my brother’s and sister’s of SAMOA
Questions?

For more information about PABITRA visit:
www.botany.hawaii.edu/pabitra/

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