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NURTURING NATURE
Livelihood Sovereignty Alliance

SPERI
Action research for development in agro-ecology in Mekong region

Case study: Ethno-botany knowledge of indigenous communities in the Mekong

Structure of presentation

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- Purpose
- Background
- Data collection
- Findings
- Conclusions
- Plan for action

Purpose

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1. To find out & record local (indigenous) practices/methods in using and preserving ethno-botanical plants/forest herbal species.
2. To explore relationship between uses of species and practices of conservation in order to find out species of vulnerability, hence propose actions for conservation (in-situ and ex-situ)
3. To lobby government to allocate forestland to households and community so that to contribute to species/cultural preservation and healthy eating for EMs.

Background

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- 'Development' projects undertaken in Vietnam largely top down, not fully respect the choice and participation of ethnic minorities (to reduce poverty, conserve nature/biodiversity and empowering knowledge - lacking).
- Local knowledge and experience of EMs (an effective mechanism for sustainable use and conservation of biodiversity) yet recognized.
- Role of EMs play in conservation of biodiversity in Vietnam yet recognized.
- Human Ecology theory as the guiding framework for ethno-botany studies/empirical works.

Data collection

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- Careful balance of genuine endogenous participation and scientific rigor and robustness.
- Two forest sites for field work and records
  - HEPA (400 hectares) – 1st series published
  - Long Lan (~ 10,000 hectares) – on-going
- Two sets of questionnaires developed by traditional healers/elders, research team, & EM youths; but flexibly adapt to actual context.
- Full engagement of traditional healers, EM youths; Participant observation; Walking in the forests; Free-listing; Principle of pursuing the surprising.
- Hypothesis & variables defined; each species with a code & care was taken to ensure the same code was recorded on the template, photograph, herbarium, GPS location and Latin name.

Findings (1)

- Average use of species per person was 18.5
- Men used fewer species per person, 7.8 species per person with 7.6 uses per species.
- Women used far more species 18.3 species per person but fewer uses (5.7 uses per species).

Table 1. SPECIES AND USES BY ETHNIC GROUP

Ethnic Group	Species	Uses
Tày	55	409
Dao	45	135
Sách	36	269
Kinh	25	165
Thái	14	119
Mã Liềng	12	101
H'mong	10	100
Xinh Mun	6	47
Lư - Lào	1	9
Total	204	1354

Findings (2)

- Strong positive correlation for the variables ‘Conservation’ and ‘Use’; and also ‘Vulnerability’ and ‘Conservation’; and ‘Vulnerability’ and ‘Use’.

Table 2. PEARSON'S PRODUCT-MOMENT CORRELATIONS (p-values < 0.05)

	Use	Conservation
Conservation	0.801	-
Vulnerability	0.530	0.622

Findings (3)

- 21 most commonly mentioned species or the species with the greatest diversity of uses.
- Each of the species had over 24 different uses and attracted on average 10.5 different conservation practices.

Table 3. 21 SPECIES WITH THE MOST USES

Latin Name	Uses	Conservation
Blumea balsamifera (L.) DC., *Compositae*	194	30
Dioscorea crirrhosa Lour., *Dioscoreaceae*	114	12
Homalomena occulta (Lour.) Schott,. *Araceae*	93	38
Alpinia Globosa Zingiberaceae	44	8
Aralia armata (Wall. ex G. Don) Seem., *Araliaceae*	44	6
Bauhinia Leguminosae (Caesalpinioideae)	44	8
Sterculia lanceolata Cav., *Sterculiaceae*	42	6
Aglaonema Araceae	39	6
Momordica cochinchinensis (Lour.) Spreng., *Cucurbitaceae*	39	18
Ficus hirta var. roxburghii (Miq.) King, *Moraceae*	37	8
Smilax glabra Wall. ex Roxb., *Smilacaceae*	33	9
Bowringia callicarpa Champ. ex Benth., *Leguminosae (Papilionoideae)*	32	8
Solanum torvum Swartz, Solanaceae	32	4
Arenga westerhoutii Griff., *Palmae*	30	6
Maesa membranacea A. DC., Ardisiaceae	30	6
Schefflera heptaphylla (L.) Frodin, Araliaceae	30	6

Conclusions (1)

- Actual uses are much more evenly spread between all communities though data seems to suggest Tay and Dao healers (in Vietnam) use a greater portion of the species described. The Lu minority in Lao PDR use only one species but for 9 different uses.
- Statistically positive correlation between use and conservation implies ‘the cultural use of a species leads to the conservation of that species’.

Conclusions (2)

- Positive correlation between vulnerability and conservation would mean that the more a species was perceived as being vulnerable in the community, the more likely they were to have practices to promote the species and to take actions for the preservation (in-situ and ex-situ);
- Positive correlation between vulnerability and use indicates that as the number of uses for a plant increases so do the perceived pressures on the plant population. EM healders care and that the role of customary law in this.

Plan of action

- More follow up research is needed to make this case a robust and useful collection for (1) Ethnic minority people, and (2) conservation of forest species, herbal plants and edible vegetables (totally can fall under the agro-ecology development framework)
- Replication of the research process and methodology conducted in HEPA is already now repeated in Hanh Dich commune, Nghe An province (pass on skills, search for new forms of knowledge, contribute to the current collection of ethno-botany knowledge in Vietnam – Lao).