Indigenous Knowledge in Northern Thailand: Equipped for Climate Change Effects ?

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Topics

- **Ethic minority groups in Northern Thailand**

- **Indigenous knowledge case studies**

- **Conclusions**

- **Recommendations**

Northern Thailand

http://upload.wikimedia.org/wikipedia/commons/e/e3/Thailand_North_six_regions.png

Ethnic groups

- An **ethnic group** (or **ethnicity**) is a group of people whose members identify with each other

    - a common language

    - a common culture

    - a tradition of common ancestry

6,909 languages in the world
(http://www.ethnologue.com)

Inta (2012)

Ethnic Minority Groups of Northern Thailand

- Native of the country
  - Lawa

- Immigrants from neighboring countries
  - From China
    - Akha and Hmong (Also in Laos)
  - From Myanmar (Burma)
    - Karen (Largest group in Thailand) and Tai Yai

Traditional knowledge (TK)

- Long-standing traditions and practices of certain regional, indigenous, or local communities

- Encompasses the wisdom, knowledge, and teachings

- Orally passed for generations from person to person

- Expressed through stories, legends, folklore, rituals, songs, and customary laws

Inta (2012)

Ethnobotany
(Usage of plants by local people)

- Food

- Medicine

- Fuelwood

- Construction

- Ceremony

- Etc.

The Importance of Ethnobotany

- Understanding traditional culture and local knowledge system

- Incorporate cultural traditions into biodiversity conservation

- Promotion cultural understanding among different cultures

- Documenting traditional knowledge on the use of plants and herbal medicine

Inta (2012)

Case Studies

A comparative study on medicinal plants used in Akha's traditional medicine in China and Thailand, cultural coherence or ecological divergence?

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Abstract

Aim of the study: : The survey aims to study the effect of geographic separation of ethnic groups on local knowledge of medicinal plants used by Akha people in Thailand and China, who were separated 100–120 years ago, to see how different the two geographically distinct but culturally similar groups were in this respect.

Materials and methods: : Interviewing 10 villagers in each of five Akha villages, three in Thailand and two in China, about which plants they used and how they used them.

Results: : A total of 95 medicinal plants registered in the five villages only 16 were shared between China and Thailand. Otherwise the use patterns were quite similar with respect to which plant families and plant growth forms were used and also in terms of in which habitats the Akha found their medicinal plants.
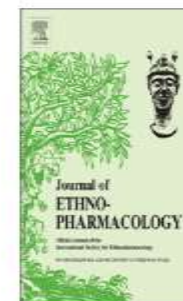
Conclusions: : The moving to a different site has forced the Akha to find a new set of species, but that when using these new species they have

Research Paper

Ethnobotanical study of medicinal plants used by Tai Yai in Northern Thailand

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ARTICLE INFO

ABSTRACT

Ethnopharmacological relevance: We studied traditional knowledge of medicinal plants used by Tai Yai people in Northern Thailand. We documented traditional medical practices and determined importance among the Tai Yai. This paper reports on knowledge in usage of medicinal plants of the Tai Yai people in

Karen and Lawa medicinal plant use: Uniformity or ethnic divergence?

CrossMark

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ARTICLE INFO

ABSTRACT

Ethnopharmacological relevance: We here tease apart the ethnopharmacological knowledge of plants in two Thai villages to determine to which degree the uses are particular to individual ethnic groups and to which degree they are part of a generalized and uniform set of widespread medicinal plants used over a large geographic range. We compared Karen and Lawa knowledge of medicinal plants in the Mae Cheam watershed of northern Thailand, where both ethnic groups have settled and share ecological conditions for resource extraction. We were interested in documenting the degree to which these two ethnic groups use the same or different medicinal plant species. The use of the same plant species by the two groups was considered a sign of uniform and cross-cultural local knowledge, whereas the use of different medicinal plants by each group was considered a sign of culturally specific local knowledge that developed within each ethnic group.

Materials and methods: We inventoried the plant species in different habitats around one Karen village and one Lawa village using stratified vegetation plots and using semi-structured questionnaires we interviewed 67 key informants regarding their use of plants for medicine. We then calculated the Fidelity level FL (FL values near 100% for a species indicate that almost all use reports refer to the same way of using the species, whereas low FL values indicate that a species is used for many different purposes) and cultural importance index CI (the sum of the proportion of informants that mention each of the use categories for a given species) to estimate the variation in medicinal plant use. We used Jaccard's Index JI (This index relates the number of shared species to the total number of species) to analyze the similarity of medicinal plant use between the two villages.

Results: A total of 103 species of medicinal plant species in 87 genera and 41 families were identified and they were used to cure 35 ailments. The FL of the medicinal plant species varied from 10% to 100%, was different for

Medicinal plant knowledge and its erosion among the Mien (Yao) in northern Thailand

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ARTICLE INFO

ABSTRACT

Ethnopharmacological relevance: We studied local knowledge and actual uses of medicinal plants among the Mien in northern Thailand, documenting traditional medical practices and its transfer between generations.

Aim of the study: With the assumption that discrepancies between knowledge and actual use represent knowledge erosion, we studied whether actual use of medicinal plants corresponded to people's knowledge of such uses.

Materials and methods: We used local knowledge from four specialist informants as the domain for semi-structured interviews with 34 randomly selected non-specialist informants. We calculated informant consensus, use value, and fidelity level for each species and use category and performed statistical analyses with Kolmogorov–Smirnov tests, Pearson correlation coefficient, Spearman's rank correlation coefficient, and paired-sample *t*-tests.

Results: We found significant discrepancies between knowledge and actual use of medicinal plants. The number of known and actually used plants increased with increasing informant age and decreased with

Fallow to forest: Applying indigenous and scientific knowledge of swidden cultivation to tropical forest restoration

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ARTICLE INFO

ABSTRACT

Rotational swidden cultivation systems, with fallow periods long enough for the regeneration of secondary forests are capable of maintaining forest cover and plant diversity in a dynamic balance in swidden cultivation landscapes. Regeneration of secondary forests through several successional stages and by a combination of coppicing and seedling development is still poorly understood, especially the influence of different swiddening practices and the role of animals as seed dispersers. Swidden cultivators possess a vast knowledge of plants growing in swidden fallows and of fallow dynamics as well. Forest restoration in Thailand has been carried out mainly on the basis of experimental research on the potential of indigenous tree species to promote natural forest regeneration and biodiversity recovery; the so-called framework species. Another viable source of knowledge for forest restoration can be the study of the semi-natural revegetation processes in fallows and the indigenous knowledge of swiddeners of these processes. The research presented here was carried out to attain a better understanding of forest regeneration on fallow swiddens under different swiddening regimes and how it may be applied to practical forest restoration, We investigated the vegetation characteristics of from various stages of secondary succession in fallow swiddens of the Karen and Lawa ethnic groups in the Mae Chaem watershed, Chiang Mai province, northern Thailand. Indigenous knowledge on the use of species and traditional ecological processes in swiddening was recorded by questioning key informants. The data were analyzed and discussed with

Indigenous Plants and CC

- Vulnerability Prediction of Medicinal Plants Used by Karen People in Chiang Mai Province to Climatic Change Using Species Distribution Model (SDM)

- PhD dissertation of Chiang Mai University

- Indigenous plants responded both negatively and positively in their habitat changes due to CC

- To be published

Conclusions

- Strong indigenous knowledge base on plant usages. The knowledge is, however, eroding.

- Strong ecosystem management skills on fallow (agroforestry) management.

- Vulnerable to climate change as many are in mountainous areas where effects of climate change are likely to be felt the most.
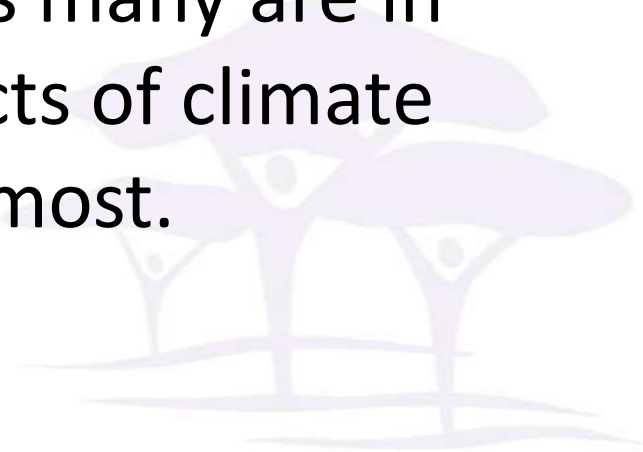
Recommendations

- Preserving the eroding knowledge
- Equipping the local communities with knowledge on CC and CC adaptation and mitigation

The Lawa or The Lua
(Native of Thailand)

http://2.bp.blogspot.com/-QAh1jTbNt6I/T7uDyU2137I/AAAAAAAAACC4/DF0uk5nRu9E/s1600/Slide1.TIF

The Akha (From China)

http://upload.wikimedia.org/wikipedia/commons/f/f2/MuangSing_ThatXiengTung4_tango7174.jpg

The Hmong (From China)

The Karen (From Myanmar)

http://www.mekongresponsibletourism.org/wp-content/uploads/2012/09/Karen-Hilltribe.jpeg

The Tai Yai (From Myanmar)

Typical Landscape of Northern Thailand

A Karen Village

A Lawa Village

Thank you very much