

## Developing Herbal Education in Northeast Thailand in the Lower Mekong River Basin

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**Abstract:** Encouraging factors of managing herbal education in the area of lower Mekong river Basin are the context of the region where the natural environment, economic and social culture has a high potential in regards to the abundance and diversity of many indigenous herbs have many knowledgeable people in herbal knowledge and an abundance of fertile natural sources such as local indigenous herbs, mountains, forests and rivers. The Thai government has also been promoting health care through means of alternative medicine by bringing into law, the royal ACT of protection and promoting indigenous knowledge of Thai traditional medicine. The results of managing herbal education consists of the application of herbal health care, reducing the use of modern medicine to be <5% annum<sup>-1</sup>, reducing expenditure, increasing personnel income, increase opportunities in health care, development of a quality environment, create awareness in conservation of natural resource, good cultural values, good conservation and rehabilitation knowledge and the creation of new occupations in regards to herbal health and beauty products and services. There are many projects to raise the public's awareness in conservation and protection, but the fact is that local indigenous herbs are still disappearing. Further development plans are needed to achieve successful conservation, rehabilitation and sustained development of herbal education. Proposed development plans include personnel development to create quality staff, development of sources of herbs in communities, development of herbal education in communities and the development of public relations and distribution of knowledge.

**Key words:** Herbal education, herbal studies, development, natural environment, Northeast Thailand, Mekong

### INTRODUCTION

Herbs are important and relevant to the lives of humans. The history of herbs and spices is as long as the history of mankind (Peter, 2004). Because herbs are a part of the four necessity's of life. Which are clothing, food, shelter and medicine (herbal medicines). As human communities advance from villages into civilizations, the process and curiosity has created a learning process and the knowledge of transforming and applying natural resources, especially herbs to support their livelihood and towards their health. Herbal medicines can replace some of the conventional synthetic drugs used to treat patients with chronic diseases, such as chronic fatigue syndrome and multiple morbidity syndromes (Kraft and Hobbs, 2004). The first known herbal, said to have been written by the legendary Chinese emperor, Shen Nung, nearly 5,000 years ago, only part of the text survived long enough to be recorded by subsequent writers though many later Chinese herbals were based upon it (Garland and Lincoln, 2004).

The environmental situation in the world has changed due to economic and social development. Human's have taken advantage of the many benefits of herbs and transformed them into products or sold them as raw material in local markets. The amount of herbs sought and utilized in modern commerce is increasing every day. At least 1,500 variants of herbs are transformed into health foods, sold to pharmacies and individuals who are looking for alternative medicine. The expansion of the interest in herbal medicines and remedies has also created environmental problems where there are limited regulations and resources of herbs in rural areas. Many indigenous herbs in the past are hard to find and some have disappeared. Conservation methods, effective utilization and monitoring methods must be put in place.

### MATERIALS AND METHODS

The research area consists of the provinces of Mukdahan, Amnat Charoen and Ubon Ratchathani, which are located in the lower Mekong River Basin. This

research applies survey and qualitative research methods and the area was purposively chosen due to supporting factors with the highest potential of herbal education in Northeast Thailand. The data was obtained by using the non-probability sampling, purposive sampling and snowball sampling techniques. The sample consisted of key informants, casual informants and general informants. A total of 75 individuals were included in the sampling group and the research study was conducted during April to December 2008. The instruments used for gathering data were survey, interview, observation, field note taking, focus group note-taking forms and a guideline for workshop. Data were gathered from documents, survey, interview, observation, workshop and focus group discussion. The data were analyzed using the analytical statistics using inductive analysis.

## RESULTS AND DISCUSSION

**Herbal benefits:** Herbal products and herbal treatments are local indigenous knowledge of health care and medical treatment of communities in the past. Key herbal products such as herbal compressed balls have similar characteristics with other herbal remedies, which are applied for health treatments and service to patients where the compressed herbal balls are applied or massaged to the body with heat or hot press, to alleviate the muscular pain, reduce inflammation, swelling of muscle, tendon problems and joint problems. Herbal sauna packages are mainly produced by hospitals to sell, or treat patients, resolve the pain body ache, nausea and skin treatment. Both herbal compressed balls and the popular herbal sauna packages are popular in Spa's and beauty businesses. One of the fastest growing markets is herbal medicine in the past 15-20 years has been capsules and tablets (Goldberg *et al.*, 2004). Popular herbal products that produced in other characteristics include oils or tinctures such as Zingiberaceae oil, yellow oil (mixed herbs), which are used to relieve muscular pains, tendon problems, indigestion, digestive disorders, constipation, eating disorder, gestation problems. The local indigenous herbs that are applied to these symptoms are often produced from *Curcuma longa* Linn., cinnamon, *Tinospora crispa* (L.) Miers ex Hook. F. et. Thoms, lemon grass and *Classia alata* Linn.

Herbal products for respiratory symptoms such as sore throats, fever, coughs, dizziness and mouth odor can be soothed by using local indigenous herbs such as andrographis paniculata Wall ex Nees and *Eugenia caryophyllum* Bullock and Harrison. Teas are the most commonly used method for administering herbs. Generally called tisanes in herbal practice, herbal teas are prescribed

for headaches, insomnia, colds, chills, shock, fever and stomach disorders (Alexander and Parker, 1994). Herbal tea products consists of large varieties of instant teas such as *Aegle marmelos* tea, *Thunbergia laurifolia* tea, *Hibiscus sabdariffa* L. tea and *Pandanus odoratus* Ridi tea.

Agricultural benefits from using local indigenous herbs include utilizing indigenous herbs in fermentation processes, which are used directly as natural bio safe insecticides, organic fertilizers, reduce production costs, reduce risks from toxic substances and improve the environment.

### **The potential and general context of the research area:**

Northeast Thailand in the lower Mekong Basin consists of the provinces of Mukdahan Amnatcharoen and Ubon Ratchatani. The three provinces share a similar historical development. Since prehistoric period about 3,000-2,000 years ago, archaeological evidence of palm paintings, ceremonial bronze drums and stone tools show that the region was inhabited by prehistoric human communities. During, the historic period, there existed fiefdoms and kingdoms with the region. Several of the earliest kingdoms in the region include the ancient kingdom of Sri Kohtaraboon (Laos-Northeastern Thailand) and the Chenla kingdom of Cambodia. The start of state building has lured and attracted many ethnic groups to the region. Key ethnic groups that migrated into the region include the Pu Thai, Soh, Saek, Brue, Kalerng thereafter with China, Vietnam and many more people of ethnic groups that have migrated from another place is brought into knowledge with indigenous knowledge especially on herb is critical to being And health care as is essential also in the lower Mekong Basin is an important source of herbs, all with an area is 29,976.17 km<sup>2</sup> with an area of approximately 3,520,078 Rai forest population of 2,487,416 people.

The area of Northeast Thailand in the lower Mekong river Basin is an area with many ethnic groups that have had settlements in this area and groups that have migrated from other areas bringing with them indigenous knowledge in regards to subsistence, prosperity, health care and many more cultural values and knowledge that had been imparted from the older generations. Each of these ethnic groups had their own indigenous customs and methods for health care, but share similarity in utilizing herbal medicine and herbal treatment. The potential in regards to knowledgeable people in the herbal education, found in the lower Mekong river Basin is very high and there are many herbal experts and credible individuals and local indigenous healers in the area. The area also has the largest herbal farmers and other herbal societies and organizations such as herbal processors and

transformers. The last groups are academic organizations and institutions of private and state. Overall, the three districts in the area of lower Mekong river Basin have about 3,619 people that have and are engaged in various aspects of Thai traditional medicine. The department of Thai traditional medicine and alternative medicine of the ministry of public health have surveyed and registered credible individuals directly with knowledge in Thai traditional medicine since 1998. The province of Mukdahan has 45 certified people, the province of Amnatcharoen has one person listed and the province of Ubon Ratchatani has 54 certified individuals.

**Current status of managing herbal education in the lower Mekong river Basin area:** The current format of managing herbal education in the area of lower Mekong river Basin, have found that private organizations are the main source of learning local indigenous garden herbs. These groups are also responsible for producing herbal products by processing or transformation of raw herbs to sell. Small herbal gardens and herbal organizations specialize in teaching herbal education and courses are made available to the general public who pay a fee to attend classes, with the final goal of taking government exams to obtain Thai traditional medicine licenses. Other herbal organizations such as those located in temples and monasteries have done so to promote the conservation of local indigenous herbs. Other groups such as private enterprises pursue herbs to be transformed into products and sold commercially. Private groups have different issues in regards to herbs, most are commercially motivated, but there are also those who want the local indigenous herbs to last and the knowledge and benefits of Thai traditional medicine to be passed on to the next generation.

**Development approach and the appropriate form of herbal education:** Development approach and the appropriate format of herbal education in the lower Mekong river Basin involve the responsibilities and roles of many individuals and groups. Regulating, the collection and commercial trade of wild-collected medicinal plants is a formidable task. Treaties, international guidelines and local regulations have been developed for some species, but enforcement is difficult. Ultimately, local human populations must support conservation efforts if they are to be successful. Government agencies are simply understaffed and the problem is too diffuse for tight control (Susan and Fougère, 2006).

Private operators that are engaged in herbal production and herbal education should create learning sources and develop their knowledge of tools and useful innovations.

Temples should be utilized as an important source of learning herbal education and can provide a good example of herbal conservation. Other sources of information such as the internet should be utilized to expand the knowledge base in herbal education. Printed documents should be supported and created so that herbal knowledge can be imparted to others conveniently and correctly. Clinics, hospitals and state organizations should develop their personnel so that there are many individuals with expert and efficient knowledge in herbal treatment and Herbal Education so that these individuals will also be able to reproduce or expand the quantity of local indigenous herbs in their communities. Herbal groups and enterprises should come together and create a network of cooperation between the organizations to exchange knowledge, information so that there are sufficient resources of herbal information available to those who are interested and want to participate in the activities of the various groups or herbal societies.

**Development plans for herbal education:** Personnel development plans. Consists of projects to increase the potential and quality of personnel, community leadership training programs, educational management programs, learning activities and training. Knowledge management process should be applied to herbal education, which will create better efficiency because Knowledge Management (KM) processes is very efficient in developing organizations (Chantarasombat and Srisa-ard, 2007).

**Herbal source community development plan:** The development plan, consists of projects of growing indigenous herbs in temple areas, schools, educational institutions, community forest, vacant public areas. Other projects include the survey of local indigenous herbs in temples, schools, community forest and public areas. Promoting local communities and individuals in growing herbal gardens or herbal kitchens.

**Development of community resources for herbal education:** Projects to promote the growing and gardening of local indigenous herbs and vegetables, development community resources of herbal education consists of; developing management standards of herbal educational resources, developing standards for herbal gardens, educational design and improving landscaping with herbal gardens in areas such as hospital grounds, designating signs and billboards with names, benefits, utilization and other useful information near the herbs to promote public awareness. Creating herbal museums to provide a source of knowledge and inspire youths and students to herbal benefits, conservation and herbal education.

**Development of public relations and knowledge distribution:** The plan consists of publishing and public relations programs and the distribution of knowledge in local indigenous herbs. Development activities should be created to encourage the production and growing of herbal variety's to service the public and for processing and transforming into useful products. Networking among herbal groups should be developed and maintained so that cooperation and the exchange of knowledge and ideas are always available.

### CONCLUSION

For the format of managing herbal education, most herbal professionals have applied their indigenous knowledge to the production of herbal products for health care, earning incomes, farming and herbal medicines. Knowledge management by using herbal knowledge for tourism promotion, medical treatment licensing and building lifelong informal education. The groups mostly involved in the management process are the state, private sectors, Thai traditional medical clubs, state hospitals, government agencies and local indigenous herbal healers. Most of the people showed higher satisfaction with herbal education and used more herbal medicines for health care. However, they could not reach the goal of substitute modern medicines at the rate of 5% year<sup>-1</sup>. Herbal education and medicines has helped families and individuals to decreasing expenses, increasing income, extending opportunities for health care of the people, develop environmental quality, building awareness, good social values, conservation and adhering to traditional culture of their ancestors.

Currently raw herbal materials used for production of medicine and other products are now decreasing. Some herbal products may violate the food and medicine act and humans have adapted new values in spending too much money on herbal treatments and remedies to beauty.

The appropriate pattern and operational guideline for developing appropriate herbal education is that there should be development of personnel, instruments, innovations, public relations, publicity of the many herbal names, genus's and types of medicinal herbs; development of learning network, production of documents and learning handbooks, increasing the numbers of traditional medicines, increasing the numbers of local indigenous medicinal herbs to be more diverse. For health centers, hospitals or state agencies, they must increase the numbers of types of medicinal herbs to be adequate and diverse numbers to produce more documents for public relations. Groups or clubs of local indigenous herbal medicines, producers should develop personnel, information technology equipment and

packaging development. They should develop product quality, learning sharing process, building the learning network and public relations.

### SUGGESTIONS AND RECOMMENDATIONS

Further research should be taken to develop the quality of community herbal products and herbal commerce. Researches into knowledge management and development of the potential of manufacturing products made from indigenous herbs should also be pursued and the study and development of apply herbal education to environmental development.

The roles and responsibilities of individuals responsible for herbal education, which are local indigenous healers, private organizations and government organizations should be developed so that they have a high potential and efficiency in managing herbal education. The development of herbal education in organizations, should emphasize on knowledge management capabilities have a systematic approach in the search for knowledge, the exchange knowledge with others and the assessment and evaluation of the learning results. Those who are already knowledgeable in herbal studies should continue their learning and research process as an example to others to keep up and maintain their efficiency. A system of quality assurance for herbal education can be performed by local clinics and government hospitals.

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