

## WORKSHOP HIGHLIGHTS

### Inaugural session

Venue : Bangladesh Forest Research Institute, Chittagong

### Introduction

A "Sub-regional Training Workshop on Applied Ethnobotany" was held in Bangladesh Forest Research Institute (BFRI), Chittagong, from 17-22 December, 1997. It was jointly organized by BFRI and International Centre for Integrated Mountain Development (ICIMOD), UNESCO-WWF-Royal Botanic Gardens, Kew and People & Plants Initiative supported programme.

Acknowledging the biological and ethnical diversities, pronounced interaction between forest and hill people of Chittagong Hill Tracts, the importance of ethnobotany towards biodiversity assessment, conservation and sustainable development was realized. So a Sub-regional Training Workshop on Applied Ethnobotany was planned for field level researchers, foresters, university teachers, community development workers and planners from Bangladesh and Bhutan under the collaborative partnership of ICIMOD, WWF, UNESCO, RBG Kew, People & Plants Initiative project of Hindu-Kush. Himalayas (HKH).

The theme of the workshop was: *application of ethnobotany in participatory biodiversity assessment, conservation and sustainable utilization of bamboo and other non-timber forest products.*

### Objectives of the workshop

Following are the major objectives of the workshop :

- (i) Understand the concept and historical development of ethnobotany.
- (ii) Provide training on the documentation of traditional botanical knowledge and ethnobotanical inventory.
- (iii) Application of systematic approach, institutional approach, participatory approach, field techniques and community based research on ethnobotany.
- (iv) Discuss and demonstrate methodologies, field techniques and tools that can be used for community based ethnobotany, development and conservation studies.
- (v) Assessment of the impact of human interactions between use and management of plant resources.
- (vi) Capacity building in designing and implementing applied ethnobotany projects for community based sustainable resource management and development.

## The Programme

It was a six-day workshop. There were three-days in-house lectures, discussions and interactions among the participants; two-days field visits to conduct field exercise and interaction with the people, and a final-day for discussion, wrap up, recommendation and follow up activities of the workshop. A programme of the workshop is enclosed in Appendix I.

Other than the first general session (including the inaugural session) and last plenary session, the whole workshop was structured into five technical sessions.

The inaugural session was presided over by Dr. M. A. Sattar, Director, BFRI. Dr. Zahurul Karim, Executive Chairman, Bangladesh Agricultural Research Council, Dhaka graced the occasion as the chief guest and inaugurated the workshop. Dr. M. Sayeedul Huq, Director, Bangladesh Council for Scientific and Industrial Research Laboratories, Chittagong and Prof. Pei Shengji from ICIMOD were present as special guests.

The chief guest in his address pointed out that ethnobotany is an important issue but remained neglected. He stated that ethnobotanical knowledge had large potential for development. He emphasized on exploring potentiality and fix priority of the species for integration with other sub-sectors of agriculture. He also emphasized the need of commercialization and establishment of proprietary intellectual rights of farmers, commercial products and patents.

Dr. Sayeedul Huq in his speech emphasized the importance of ethnobotany and informed the participants about the status of medicinal plant works in BCSIR Laboratories.

Prof. Pei Shengji in his address as a special guest conveyed greetings from ICIMOD and from himself. He briefly stated the objectives of the workshop, his experience on ethnobotany from South China and other Hindu-Kush Himalayan (HKH) region. He also informed the gathering

about the various activities undertaken by the ICIMOD ethnobotany project and its probable extension to the second phase.

Dr. M.A. Sattar, Director, BFRI and Chairman of the session thanked ICIMOD for funding the workshop. In welcoming the participants from home and abroad he wished success of the workshop. He also hoped that the workshop would give a new directives in ethnobotanical research in the sub-region.

After the formal inauguration Dr. Ratan Lal Banik, the Workshop Co-ordinator and Dr. M.W. Baksha, the Training Co-ordinator of BFRI gave introductory speeches on the workshop and its programmes.

From ICIMOD side, Mr. Ajay Rastogi gave a brief introduction about the HKH ethnobotany project, its status and development. He stated that it was the last workshop of the first phase of the project.

The programme was then followed by the introduction of the participants and resource persons among themselves. Each of them in brief introduction introduced themselves, their affiliated organizations, their job nature, involvement with ethnobotanical work and their expectations from the workshop.

In the end of the general session Prof. M. Salar Khan delivered a lecture on "Prospects of Ethnobotany and Ethnobotanical Research in Bangladesh".

## Participants

As it was a sub-regional workshop participants from Bhutan and Bangladesh attended the Workshop. Participants were from different organizations and disciplines. There were 29 participants in the workshop including two resource persons from ICIMOD and three resource persons from Bangladesh. Other than participants and resource persons, six guest speakers also delivered their valuable lectures in the workshop. List of participants, resource persons and guest speakers is in Appendix - II.

## Welcome address

**Dr. Ratan Lal Banik**

**Workshop Co-ordinator & Chief Research Officer**

**Bangladesh Forest Research Institute, Chittagong**

Honourable chief guest, special guests, chairman and distinguished participants from home and abroad.

I welcome you all for attending and participating this sub-regional ethnobotanical workshop. I remember that while I was in Nepal, I had a chance to interact with Prof Pei Shengji regarding research on ethnobotany at Chittagong Hill Tracts. We decided that initially we could arrange a workshop on ethnobotany for creating awareness among the researchers, planners and executives.

The word ethnobotany may be a new word to the participants but it is a very old branch of plant science. It had developed, improved through the participation and experience of local peoples and been orally transmitted from generations to generations.

The folk knowledge on plant use management and conservation can provide guide

lines for formulating future strategic plan to combat the alarming rate of depletion of plant resources and environmental degradation.

I am thankful to ICIMOD and Ministry of Environment and Forests of the People's Republic of Bangladesh and Chittagong Hill Tracts Development Board under the Special affairs Division of the Prime Minister's Office for making it possible to arrange this workshop at Bangladesh Forest Research Institute, Chittagong. I would also like to extend thanks to the ministry of Agriculture, Royal Government of Bhutan for nominating senior officials to participate in this workshop.

Today I am very happy that we could at last arrange this training workshop on ethnobotany. I thank you all for coming here. Hope that the participants will have a pleasant stay at Chittagong and the workshop will be fruitful to them. I wish success of the workshop.

## Address by the chief guest

Dr. Zahurul Karim

Executive Chairman, Bangladesh Agricultural Research Council  
Farmgate, Airport Road, Dhaka

Assalamu alaikum and good morning.

Mr. Chairman Dr. M.A. Sattar, special guests Dr. Sayeedul Huq, Director, Bangladesh Scientific and Industrial Research Laboratories (BSIR) and Prof. Pei Shangji, ICIMOD, Nepal, colleagues from the sub-regional countries, distinguished participants.

I feel extremely honoured to be here as chief guest and to have the opportunity to make few remarks on a very important issue which probably for long have been neglected in the region. If we recall the regional glory and history, the old civilizations started in this region and still continuing with the agriculture. Then it has gone to the mainstay and now is at the cross road of commercial venture. In the region, contribution of agriculture to GDP is more than 30 per cent and in some countries, it is near about 50 per cent. Agriculture has paramount importance as it is inter-linked with several other sub-sectors and contributes to the economy and development of the region. With the increase in population, we are developing our agricultural resources to cater the needs of the increasing population with the development of high yielding varieties replacing our own genetic resources.

This region is not vested with only hills and mountains. The soil is diverse even in small country like Bangladesh and has 30 agroecological zones and 88 sub-regions and over five hundred soil series that support wide range of flora and fauna. Similarly in other regions, the number of agroecological zones and sub-zones is even more and support varieties of species.

These treasure of resources provide immense wealth for the regional balanced development. In Bangladesh, we have around 14 per cent of the total area constituted by hills which is also the permanent home of the tribal people. They live either on the hills or in the terrace and their livelihood and economy are largely dependent on the natural resources around themselves. The ethnobotanical species are the perennial source of their income and livelihood. I would like to mention here that in India, there are over 9,500 plant species of which only 4,000 are known to the scientific community. The rest are yet to be explored and their uses need to be identified.

Plants play a vital role in the human welfare. It is reported that more than 3,000 million peoples around the world live on the botanical sources of medicines. Most of the drugs being used now have been originated from plant products. In recent years, 30 plant species have been patented for medicine by the developed countries. Plants have several other uses-the food, fibre and recreational activities. In the sub-continent we have 30 industrial drugs produced from these ethnic crops.

With the increase in population the harvesting of such crops exceeds actual growth. There is thus, depletion of plant resources. Annual depletion is over 80,000 tons. If the rate of depletion continues the sustainability of the system will be jeopardize. Prof. Swaminathan quoted that in the tribal regions of the whole of the sub-continent there is fast degradation of the genetic resources due to the lack of *in situ* management. Moreover, with the introduction of high-tech for increasing

crop production, biodiversity is disturbed which is leading towards the disasters in future. The cost of losing biodiversity might be very high. The potentiality of biodiversity should be explored and attached priority immediately to salvage the loss made so far.

Assessment of genetic resources should therefore be the priority. Then set intellectual patent rights over the genetic materials to establish the right of the producer, right of the farmers and right of the tribal people. For the later part, we should create a way among our societies and ask them to conserve, to maintain and to improve the biodiversity for sustainable development of these resources.

We must have an inventory of these resources. The effort should be inter-institutional. I hope, the international organisation like ICIMOD can take some programmes for regional and national inventory the ethnobotanical practices and innovations addressing towards the development and sustainable management. There is also a large potential for application of modern sciences on the development and improvement of these treasure of ethnobotanical species. Genetic engineering in cereals has brought a breakthrough in production. Transgenic rice developed by Florida University and IRRI is noteworthy. So, it is possible to transfer the gene from the one particular

type of organism having some good characteristics to another species, an idiotype may be developed. I think, in that situation, ethnobotanical species could provide a wider resources for crop improvement and development. This will create utility and services and the employment for the farmers.

Sri Lanka, Myanmar, Thailand and Indonesia export plant products and by-products worth more than US \$ 200 million. India earns more than 100 million rupees a year from 10 drugs items of plant origin. This also provides employment to several peoples.

I would like to draw your attention on the present international negotiation on genetic resources. To negotiate we should identify our resources, ensure our ownership and put our national legislation on them so that these resources are declared as our products. We would appreciate if ICIMOD develops some of the collaborative programmes with the National Agricultural Research System of Bangladesh and develop human resources to work in this line especially with the people who maintain these resources. With these, I thank you all and I express my gratefulness to the organisers for inviting me to be here and I declare this workshop open.

Thank you. Allah Hafez.



**Address by the special guest**  
**Prof. Pei Shengji**  
**Head, MNR Division, ICIMOD, Nepal**

Distinguished chief guest Dr. Karim, distinguish special guest Dr. Huq and Dr. Sattar, Director of Bangladesh Forest Research Institute, distinguish participants from Bhutan and Bangladesh, ladies and gentlemen, it is my great pleasure to be here, to attend this sub-regional workshop on applied ethnobotany with a training focus. This has been planned for long time. Due to the uncertainty and multifarious situations this workshop has been delayed several times. Finally we succeeded to be here and to organise the workshop. So, first of all let me congratulate BFRI for holding the workshop and Dr. R.L. Banik for his hard work to reach the successful opening of the workshop. Of course, this the beginning of the workshop. I would like to extend my sincere thanks to the government of Bangladesh, and BFRI for providing the logistic support, and all the participants for coming to this workshop.

I would like to make use of the opportunity to brief you about a few points related to this workshop. First, why are we the organiser of the workshop? All of you know that the mountains makes up about 20 per cent of the total land of the world. The Hindu Kush-Himalayas being the largest and highest mountain ecosystem in the world is unique in diversity of the natural environment, biological species and also human culture.

It is a unique area to work not only for regional interest but also for global interest. This area is about 3500 km long from west to the east and from highest of the world to the low land like Chittagong. This area is spread over eight countries namely Afghanistan, Pakistan, India, Nepal, Bhutan, Bangladesh, Myanmar and

China. These eight countries are members of ICIMOD. The area has unique biodiversity which is about 10 per cent of the total world flora and about the same of world fauna. About the cultural diversity more than 150 ethnic groups are living in this unique mountain ecosystem. With this concern of Hindu Kush- Himalayas ICIMOD (International Centre for Integrated Mountain Development) was established in 1984 to work with the four major purposes: multisystem planning and documentation; dissemination of knowledge and training of the manpower; conduct applied research, and to provide expertise services to all the region.

Bangladesh shares small portion of the Hindu Kush-Himalayas located in east Himalayas in Chittagong Hill Tracts, but it is unique and this is also important to ICIMOD. I am a taxonomist by training and botanist and biodiversity specialist in my recent years career. While performing my own work for long time I have read many times, cited specimen collections from area called Chittagong, and today I am very happy to be here. So, Chittagong is well known from botanical records for unique biodiversity and also for cultural transition from western to east Asia.

This Hindu Kush-Himalayan Ethnobotany Project is a joint project organised by UNESCO and ICIMOD through a fund from DANIDA, a Danish Government International Aid Agency. It is a three years project. The project is constructed as a part of the umbrella project of an international programme called the People and the Plants. The People and the Plants programme was established in 1984, by 4 major institutions in the world. One is UNESCO, the WWF International and

the Royal Botanical Gardens, Kew. So, this is an umbrella project. The People and the Plants programme has many regional projects like Ethnobotany Project of Africa, Ethnobotany Project of South America, Ethnobotany Project of Malaysia concentrating on Mt. Kinabalu protected area and the Ethnobotany of Hindu Kush-Himalayas.

The Hindu Kush-Himalayan Ethnobotany Project has three major functions: provide training; support small case studies, and net working. Training is conducted both at national and regional levels.

The present workshop is the sub-regional training workshop for Bangladesh and Bhutan. We established net-working to provide a forum and opportunity for concerned scientists, young people, and

workers in this area together. So far we have successfully conducted four national training workshops in Nepal, Pakistan, China and India. Now, we are in the fifth or last training workshop of this first phase of the project. This six days workshop will be organised in to two parts, one is the 3-days intensive interactions in the auditorium room. Intensive means, lectures by resource persons, discussions and interactions among participants. Then there will be field trips to observe what are the reality of the mountain people. And how applied ethnobotany can be incorporated in the conservation and the rural development, largely, in the community base. So, I hope all of you will enjoy the workshop, and wish you have a successful and joyful 7 days staying here in Chittagong. Thank you very much.

**Address by the special guest**  
**Dr. Sayeedul Huq**  
**Director, Bangladesh Council of Scientific and**  
**Industrial Research**  
**Chittagong**

Mr. Chairman, Your Excellencies,  
Ladies and Gentlemen.

I am thankful to the organisers of sub regional workshop on "Application of Ethnobotany in Participatory Biodiversity Assessment, Conservation and Sustainable Utilisation of Bamboo and other Non-Timber Forest Products" held at Bangladesh Forest Research Institute (BFRI) Chittagong during December 17-22, 1997, sponsored by International Centre for Integrated Mountain Development (ICIMOD) organised by BFRI.

Ladies and Gentlemen,

The term "ethnobotany" was first applied as early as 1895 by John W. Harshberger to the study of plants used by primitive and aboriginal people. In simple terms, the ethnobotany is the study of the relationship between Adivasis and their surrounding plants. In broader terms, the subject ethnobotany is a synthetic one which involves inter alia, the study of botany (mainly taxonomy, phytogeography, ecology) anthropology, sociology, medicobotany, pharmacology, phytochemistry and even psychology. Therefore, any approach to ethnobotanical studies should consider these aspects.

There are two indigenous medical systems in Bangladesh, the *Unani* and the *Ayurvedic* systems. For health care, Homeopathic, Allopathic and Traditional systems are in practice. Traditional drugs, generally, mean Ayurvedic, Unani and Household preparation with medicinal and aromatic plant sources in crude forms. Allopathic drugs are prepared with synthetic as well as plant based pure

substances. The present Drug Policy of the country does not allow any extracts in Allopathic drug. Homeopathic medicines are prepared mainly as tinctures of medicinal plants or of pure substances. In Bangladesh 546 medicinal and aromatic plants (MAP) have been recorded from available information by Bangladesh Council of Industrial Research (BCSIR) scientists. Out of them, 106 species are used in *Ayurvedic* and *Unani* systems. The remaining plants may have got application by individuals. Since the chemical industries to process MAPs to value added products do not exist in the country, their role are limited to traditional drugs only. MAPs used in *Ayurvedic* and *Unani* systems are collected mainly from wild state and partly from planted species or limited cultivation.

In view of the growing interest in traditional medicines all over the world, scientists of BCSIR Laboratories, Chittagong has published a book entitled "Medicinal Plants of Bangladesh". This is an attempt to present a comprehensive information on most of the medicinal plants occurring in Bangladesh. This is a convenient source book for this region which I think will be helpful for scientific community.

Agroclimatic conditions of Bangladesh is really conducive to the growth of medicinal and aromatic plants based on which new agro-based cottage industries can be established. Underutilised fallow lands of Chittagong Hill Tracts and forest lands can be utilised to plant and grow these medicinal and aromatic plants.



Interest in herbal medicines has increased considerably in recent years both at home and abroad as they found to be cheaper and safer compared to synthetic drugs. At present the use of MAP in Bangladesh is limited to traditional drugs. Acceptable Policy has yet to be developed in Bangladesh to use the traditional drugs. So they are facing serious problems and competition with the modern allopathic drugs. For this reason, the trade on traditional drugs and herbs is not encouraging.

Ethnobotanical survey and documentation can develop appropriate technology for their commercial exploitation of MAPs in Bangladesh.

So far as I understand that the present workshop on ethnobotany is very much appropriate with time. This will help exchange the expertise knowledge amongst the scientists of countries.

I wish all success of the workshop. Thank you all.

**Address by the chairperson**  
**Dr. M. A. Sattar**  
**Director, Bangladesh Forest Research Institute, Chittagong**

Respected chief guest, special guest, guests, my colleagues and participants, Good morning.

I heartily welcome you all to this sub-regional workshop on ethnobotany. I am neither a botanist nor an anthropologist. As a wood scientist, I understand, ethnobotany is the botany of the people. It is the traditional codification of folk botany and practices. Ethnobotany is by nature an interdisciplinary field encompassing inputs from various subject areas, such as botany, ecology, anthropology, economics and linguistics.

Dependence of our livelihood on plants needs not to be mentioned here. Wild plant resources provide a variety of basic needs to rural and urban people. The traditional utilisation of biologically diverse resources not only reflects the diverse use pattern, but also the way of different land use, management and conservation pattern. It also reflects human migrations, their pattern of domestication of wild plant resources.

Bangladesh is a country of immense natural beauties and diversities. Its south eastern part comprises Chittagong Hill Tracts, and are mostly covered with forests. Out of estimated 5000 plant species in Bangladesh, about 3000 plant species occur in Chittagong and Chittagong Hill Tracts. The forests of Chittagong Hill Tracts not only support a wide variety of plant diversities, but also variety of people. About 13 tribes live in Chittagong Hill Tracts. They have their own culture, mode of plant use and land utilisation. The lives of the people are intricately linked with the plant resources. With the development of the infrastructure and urbanisation, the plant resources as well as the folk knowledge of the plants are eroding. Sporadic works on ethnobotany, particularly ethnomedicobotany have been done in this Institute, BCSIR Laboratory, Chittagong, Bangladesh National Herbarium and different universities of the country. This workshop is an attempt towards systematic studies on traditional

and applied ethnobotany. It has jointly been organised by the International Centre for Integrated. Mountain Development (ICIMOD), Nepal and Bangladesh Forest Research Institute. The ICIMOD is committed to sustainable development of the Hindu Kush-Himalayas. Chittagong Hill Tracts is a fringe of the Hindu-Kush-Himalayas. So its development also falls under the purview of ICIMOD.

As ethnobotany is an interdisciplinary science, participants from different disciplines have been invited to attend the workshop. The participants are not only from different disciplines, but also from different organisations comprising government ministries, research institutes, universities, development organisations and NGOs. I believe this workshop, with varied participants from a wide range of organisations, will be able to focus on the insight of the subject. Three-day in-house deliberations, discussions and interactions among the participants, and two-day field visit and interaction with the people will create a base of ethnobotanical research and development force in Bangladesh. I am confident that this force will identify research areas on the subject. It is expected that the workshop will ultimately present us directives on research and development programmes in this important subject which will in turn help sustainable management of national resources and also improve the socio-economic conditions of people living in and around the Chittagong Hill Tracts.

Ladies and gentlemen, I thank you very much for kindly attending this inaugural session. I am particularly grateful to the chief guest, Dr. Z. Karim, Executive Chairman of the Bangladesh Agricultural Research Council, who has kindly taken the trouble to come from Dhaka in spite of his very busy schedule of works. My thanks are due to Professor Pei Shengji and Mr. Ajay Rastogi of ICIMOD who have come from Nepal to attend the workshop. Allah Hafez.