

## Traditional healing practices in northeast India\*

The northeast (NE) region of India is inhabited by a large number of tribals of various ethnic groups. The region is the home to a number of primitive societies like Abor, Garo, Dafla, Khasi, Kuki, Mishi, Rabha, Naga, Apatani, etc. Although the tribal population in this zone is less than 12% of the total tribal population of the country, it constitutes bulk of the population in this region. This wide geographical, climatic and cultural diversity provides a repository of wealthy traditional knowledge in the region.

Traditional healing practice is one of the treasures of this resource-privileged region. But this practice is losing its existence due to modernization of the society. In view of the growing interest among the traditional healers and scientific community and to understand the problems and prospects of this practice, the North Eastern Institute of Folk Medicine (NEIFM), Pasighat had organized regional and state-level workshops on traditional healing practices in all eight states of Northeast India. There were 493 participants in the eight workshops, 301 among them being traditional healers and the rest scientists, doctors, research scholars and students. The traditional healers belonged to different categories like herbalist, diviners, birth attendants and faith healers.

During the regional workshop at Guwahati, Assam, about 25 resource persons from different institutes and universities of India and more than 40 traditional healers of NE India participated. In his inaugural speech, S. K. Chadha (Director, AYUSH, Govt of India) introduced the background and aim behind the establishment of NEIFM. The Institute is the first of its kind in the country to focus on folk medicine, which is normally not documented and is passed on from one generation to the next generation and ultimately lost. The Institute has been set up for the revitalization of local health tradition and to survey, document and validate traditional knowl-

edge in this part of the country. Verghese Samuel (Joint Secretary, Department of AYUSH) added that the research output on traditional medicine would help improve the health status of our country.

During the state-level workshop at Pasighat, Arunachal Pradesh, R. C. Srivastava (Joint Director, BSI) emphasized on networking of formal and informal knowledge of folklore medicinal practices. He also emphasized on awareness through campaigns and to control knowledge erosion. R. K. Singh (Horticulture College) reported 70 different herbs consumed by Adi tribes, unknown in the other parts of India and Asia.

During the state-level workshop at Shillong, Glen Karkongor (Vice Chancellor, Martin Luther Christian University) mentioned that the health indices of Meghalaya are alarming and it called for the need to improve the health scenario. One way is through the Local Health Tradition (LHT) system, where 70% of the people use traditional medicine. Hari-ramurthy (FRLHT, Bangalore) stressed on the need for documentation of LHT practices and especially documenting in the language and form that traditional healers can understand. Rama Shankar (NEIFM) explained the activities of NEIFM and also some basic efforts from the Institute for the upliftment of traditional healthcare system in Meghalaya.

S. K. Chaturvedi (Department of Botany, Nagaland University) during his inaugural speech at state-level workshop at Makokchung, Nagaland, stressed on the conservation and scientific validation of traditional knowledge systems. N. S. Jamir (Department of Botany, Nagaland University) focused on traditional knowledge of ethnobotanical and ethnozoological resources of Nagaland. Unni (NEIST, Jorhat) mentioned that the selection of genuine traditional healers in the midst of fake ones was an important task. He emphasized on the molecular study and tissue culture of traditionally used medicinal plants.

During the state-level workshop at Gangtok, Panda mentioned that folk medicine is a sustainable and self-reliant form of healthcare in the remote areas of NE India, but it is not yet organized and

streamlined. Badola (GBPIHED, Gangtok) focused his presentation on the conservation of medicinal plants in Sikkim, with a comparative account of the medicinal plants in other places.

B. K. Dutta (Tripura University) in his welcome address during the state-level workshop at Tripura, mentioned that the major tribes of Tripura possess incredible knowledge on the use of medicinal plants for the health of individuals. B. Dinda (Vice Chancellor, Tripura University) shared his knowledge about the chemistry and active constituents found in certain medicinal plants growing in Tripura, like *Holorrhena antidyenterica*, *Cathranthus roseus* and *Rauvolfia serpentina*. M. Dutta Choudhury (Assam University, Silchar) in his presentation emphasized on the involvement of chemical constituents for making standard for the correct identity of the traditionally used medicinal plants, with a detailed account of *Drynaria quercifolia* and its active constituent Drynarene, a triterpene.

P. H. Parijat (Minister of Health and Family Welfare, Government of Manipur) made important suggestions on different aspects of traditional healing systems in Manipur and encouraged the participants to form a state-level association of traditional healers. Borthakur (Guwhati University) emphasized on the involvement of taxonomist in the study of folk medicine. B. K. Dutta (Assam University, Silchar) spoke about the preparation of a database of folk medicines in NE India. Bala Prasad (Conservator of Forest) informed about the exploitation of *Smilax china* from Manipur and also elucidated the scope of cultivation of *Aquillaria agallocha* (Agar) and *Taxus baccata* in Manipur, by specifying the suitable areas for cultivation. He proposed to establish a processing and manufacturing unit of traditional medicines in every state.

During the last state-level workshop in Mizoram, A. N. Rai (Vice Chancellor, Mizoram University) stressed on the biochemical estimation and authentication of traditional medicine. Lalram Nghinglova presented an overview of prospective ethnomedicinal plants of Mizoram.

\*A report on the regional and state-level workshops on 'Traditional healing practices in North East India', held at the eight NE states.

He mentioned about 10 common ethnic groups of Mizoram and their traditional healing practices.

After a technical session in every state, an interactive session with traditional healers was arranged under the chairmanship of Rama Shankar, where all traditional healers shared their views and problems in continuing their practice. They also demonstrated their method of treatment. Most of the traditional healers are aged and the younger generation was

found less interested in this profession. Traditional healers also discussed their difficulties like establishment of a mini herbal garden, transportation for collection of drugs from forest areas, small manufacturing dispensaries in different areas, basic instruments like grinders and extractors, preparation of medicines at the home-level and their preservation. Suggestions were made for solving their problems and requirements. Traditional healer associations were also formed in

all eight states of NE India for further developmental activities in the region.

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## MEETING REPORT

### Earthquake engineering\*

In 1956, the first World Conference on Earthquake Engineering (1WCEE) was held at Berkeley, USA, to bring together scientists and engineers from major seismic areas of the world, in order to share their knowledge of earthquakes and developments in the science and art of earthquake-resistant design and construction<sup>1</sup>. In addition, the conference also commemorated the 50th anniversary of the 1906 San Francisco earthquake by an appropriate technical meeting. With the same intention, the world conferences are being held every four years, and the 14WCEE was held in Beijing, China under the auspices of International Association of Earthquake Engineering (IAEE). IAEE is the union of National Organizations of Earthquake Engineering in 56 earthquake-prone countries of the world.

The theme of the 14WCEE was 'Innovation, Practice, Safety', in order to reduce the impact of earthquakes on our society and natural environment. The past world conferences were held at Berkeley, USA (1956); Tokyo and Kyoto, Japan (1960); Wellington and Auckland, New Zealand (1965); Santiago, Chile (1969); Rome, Italy (1972); New Delhi, India (1977); Istanbul, Turkey (1980); San Francisco, USA (1984); Tokyo and Kyoto, Japan (1988); Madrid,

Spain (1992); Acapulco, Mexico (1996); Auckland, New Zealand (2000), and Vancouver, Canada (2004). This is the fourth time that the world conference is being held in an Asian country.

Interestingly, delegates from 11 countries participated in the 1WCEE and 40 papers were presented<sup>1</sup>. On the other hand, about 3100 papers were presented in the 14WCEE, and about 3400 delegates participated in the conference. About 1700 oral presentations and 1400 poster presentations were made during the conference; these are significantly larger than even the 13WCEE, wherein approximately 700 oral presentations and 1600 poster presentations were made<sup>2</sup>. In comparison, the 12WCEE observed participation from 2000 delegates from 72 countries, who presented 1500 papers<sup>3</sup>. Figure 1 shows the percentage distribution of abstracts received in 14WCEE from different countries. In this conference, the number of abstracts received from China was the highest (in comparison, China stood at fifth position in the 13WCEE)<sup>2</sup>, which is understandable since the venue of this conference is China. What was more remarkable, however, was that the number of abstracts submitted by delegates of Iran also rose significantly, and was in third place after China and Japan, and even more than that from USA. From India about 150 abstracts were received by the organizers; however, only about 45 delegates attended the conference. There was a clear decrease in the number of participants from India compared to the

13WCEE, which was attended by about 60 delegates<sup>2</sup>. This can be attributed to the fact that the first phase of the National Programme on Earthquake Engineering Education (NPEEE), which provided financial support to many delegates to attend the 13WCEE, had come to an end in March 2007. It is hoped that the second phase of the NPEEE will be implemented in not-too-distant a future.

It is heartening to note that about 700 students attended the conference and presented their work in front of the international community. Fifty of these and other young researchers from 16 countries were, in fact, provided with waiver of registration and accommodation fees in order to facilitate them to attend the conference.

The oral presentations were made in parallel sessions in about 30 different rooms, and about 350 posters were presented daily in the exhibition area. All the papers presented in the conference were clubbed into three broad categories: 11 keynote presentations by experts in various fields, 1257 oral and 1153 poster presentations in 15 regular sessions, and 480 oral and 165 poster presentations in 31 special sessions. Distribution of papers presented in a few major subjects and topics is shown in Figure 2a and b respectively. Some of the major keynote presentation topics were: earthquake risk reduction in China, performance-based earthquake engineering, time domain response of structures, application of remote sensing technologies for disaster management, lessons learnt from past earth-

\*A report on the 14th World Conference on Earthquake Engineering held at the Jihua Resort and Convention Centre, Beijing, China during 12–17 October 2008, and hosted by the Chinese Association of Earthquake Engineering.