

## Network programme on convergence of traditional knowledge systems for sustainable development in the Indian Himalayan region\*

The National Mission for Sustaining the Himalayan Ecosystem (NMSHE) is the only location-specific mission among the eight missions under National Action Plan on Climate Change (NAPCC) being anchored by the Department of Science and Technology (DST), Government of India. To develop a coherent database on the traditional knowledge systems (TKS) inclusive of farming and traditional health-care systems of the Himalayan region and linking it with the formal knowledge system (FKS) for community participation in climate change adaptation and mitigation is one of the key objectives of the NMSHE. Jawaharlal Nehru University (JNU), New Delhi has been assigned the task to coordinate the activities of the above-mentioned network programme in the Indian Himalayan Region (IHR), as one of the task forces constituted under NMSHE. To implement the programme in the 12 states of IHR, JNU and DST have jointly identified eight network partners, viz. Kashmir University, Srinagar; Institute of Himalayan Bioresource Technology (IHBT), Palampur; G.B. Pant Institute of Himalayan Environment and Development (GBPIHED), Almora; Wildlife Institute of India (WII), Dehradun; Doon University, Dehradun; Central Arid Zone Research Institute (CAZRI), Jodhpur, North Eastern Hill University (NEHU), Shillong and Vigyan Prasar, Noida.

The key objectives of the programme are to document, validate and analyse TKS in IHR; create a digital library based on documented traditional knowledge; understand the linkages between traditional knowledge and formal/scientific knowledge in order to identify promising TKS for improvement and adoption; capacity building of institutions for TKS for sustainable Development in IHR, and strategic framework for traditional knowledge management in the

ecologically fragile Himalayan region in the face of climate change adaptation and mitigation.

As a prelude to holding a wider consultation with the network partners, a focused meeting with the select experts was organized at JNU on 10 June 2015 to deliberate on specific issues/themes such as mechanisms to know about the status of documentation and identifying knowledge gaps; need of validation of documented TKS and methods of validation; broad methods of documentation of new TKS; modalities for developing integrated approach-based common methodology framework for documentation and handling qualitative and quantitative data; criteria for selection of study area(s) in each Himalayan States; communication strategy across stakeholders and mechanisms for sharing results and assisting other missions under NAPCC and task forces under NMSHE; instruments/means to avoid duplication of work elements with other task forces under NMSHE especially on agriculture and biodiversity to help achieve the objectives of the programme in the most efficient manner. In addition to the programme coordinator and his team members at JNU, a total of 10 experts from various institutes/organizations participated in the meeting. The following key points emerged from the meeting:

- Extensive desk research is required to identify the knowledge gaps/missing links in the collected information and also to know about use and non-use issues concerning documented TKS.

- Climate change filter will help in narrowing down the said vast mandate/objectives of the programme.

- Setting up timelines with focused mandate for the next five years and clearly chalked out half yearly plans for network partners.

- Network partners are expected to identify knowledge gaps and prioritize study area/traditional communities and issues in their respective eco-cultural regions within the mandate of the Task Force.

- Network partners follow integrated approach for documenting TKS.

- While submitting progress reports, network partners describe details of the study area and villages.

- Gender-related TKS issues are required to be given importance.

- Need for mapping of institutions and resource persons for expanding the list of partners/technical partners.

- Coordinating unit at JNU may also select some areas/issues for generating primary data and may put in place a website in the public domain accessible to the stakeholders.

Subsequent to the above meeting, a consultation meeting with all the network partners and select experts was organized at the same venue on 8 August 2015 to discuss implementation mechanisms for the programme. In the meeting, the Chief Guest S. K. Sopory (JNU) briefly highlighted the immense national importance of the programme and the high expectations of concerned stakeholders from the Task Force. He expressed hope that the committed team of partners through mutual collaboration will certainly make this programme a success. S. C. Garkoti (Programme/Task Force Coordinator) urged all the network partners and invited experts to help/guide the Task Force in developing a clear framework for focused and efficient implementation of the programme.

While delivering the invited talk I. S. Bisht (ICAR-NBPGR) said that traditional agriculture in the IHR harbours staggering number of traditional crop species/cultivars and genetic diversity where local farmers help in their *in situ*/on-farm conservation and thus assist in the process of natural evolution of crop species. However, of late, due to a variety of reasons we are not only alarmingly losing this precious wealth of the region, but also the traditional knowledge associated with it. He emphasized on the need for documentation of traditional knowledge related to a range of agronomic practices, conservation of land races, major attributes of a given traditional crop, including medicinal properties

\*A report on the meetings on Network Programme on documentation of Traditional Knowledge Systems in the Indian Himalayan Region organized at the Jawaharlal Nehru University, New Delhi on 10 June 2015 and 8 August 2015.

known and perceived by the farmers, and role of agroforestry in climate change adaptation and mitigation.

Network partners presented the progress made by them so far and their respective work plan. R. C. Sundriyal (GBPIHED) informed that different units of GBPIHED spread across the IHR will implement the programme activities in different states of western, central and north-eastern Himalaya according to the mandate of the programme. S. K. Barik (NEHU) informed that a significant amount of documented traditional knowledge already exists for different North East States, but it cannot be considered systematic as the knowledge has been documented using different methodologies by different workers and its scientific validation still remains a major issue. However, the studies can be used as baseline. He also reported that collaboration will be sought from Mizoram University, Manipur University, Tripura University, BSI and KVKs in Meghalaya for implementation of the programme activities in the aforesaid NE states. I. A. Nawchoo (Kashmir University) presented the year-wise plan for the next five years and informed that his team has already selected the study area and indigenous nomadic groups like Bakrawal and Gujjars to be covered for detailed documentation in Jammu and Kashmir. Gaur (ICAR-CAZARI) reported the work plan of ICAR-CAZARI and informed about the progress being made.

Brij Lal (IHB) informed that his team will be documenting the TKS of indigenous groups like Gaddis, Gujjars, Kinnaura and Lahaula of Kinnaur and Chamba districts in Himachal Pradesh emphasizing especially on traditional technologies. G. S. Rawat (WII) briefly explained about the relevant work done by WII on the traditional knowledge systems in the Himalayan region and highlighted the significance of the outcomes of such work in strengthening the science

policy and practice connect in the region. He informed about the progress made by his team under the programme to kick-start the activities in the field. To begin with, WII has selected Munshyari Block of Pithoragarh district, Uttarakhand for detailed documentation of indigenous communities, viz. Van Rajis, Barpattiyas, and medieval settlers and agro-pastoral communities. K. Arunachalam (Doon University) informed that her team will undertake studies focusing mainly on all the major traditional farming systems and aspects related to agrobiodiversity conservation in the six districts of Garhwal division of Uttarakhand. In addition, TKS of socio-cultural groups like Jaunsaris and Bhotiyas will also be studied in a comprehensive manner. She emphasized bringing in more clarity on selecting study sites and methodologies as well. In their joint presentation, B. K. Tyagi and Bharat Bhushan (Vigyan Prasar) shared the experiences of Vigyan Prasar in science communication in the country. Vigyan Prasar will shoulder the responsibility of digitization of documented knowledge and create a webpage on the programme. They also informed that the documented knowledge from the entire Himalayan region can be digitized in a single product and according to the requirement of the programme, can also be translated to several regional languages of the country.

K. S. Rao (Delhi University), while chairing one of the sessions, cautioned the partners to remain vigilant to avoid biological bias in documentation. He also stressed that the Task Force should try documenting the rate of erosion of traditional knowledge comprehensively, and mechanisms of transmission of knowledge within a generation and from one generation to the next. He reiterated that the partner institutions may also ponder over the challenges that they may face in documentation of knowledge which is esoteric in nature or knowledge holders

consider it a taboo to reveal such knowledge to outsiders.

G. S. Rawat (WII) chaired the last session on developing the implementation framework of the programme. He concluded that there is an urgent need to develop a common methodology framework and imparting training to young researchers in the teams of all network partners to generate credible and comparable information from the field. He also said that under the present funding scenario, it is difficult to spread widely across the entire IHR. He suggested that initially the partners may focus on a part of the eco-cultural zone covering 3–4 indigenous/traditional communities in each IHR state for documentation in a comprehensive manner according to the mandate of the programme.

Responding on the presentations made and various issues raised by network partners, K. G. Saxena (JNU) suggested that the partners make efforts to put in place operational strategy of the programme that will help them in developing a common format for documentation, looking at documentation on the one hand and providing benefits to communities on the other, responding to high level of aspirations from concerned quarters, and getting support from outside the present network as well. According to him, (i) it would be more useful to set an objective of assessing the scientific evidences/basis behind traditional practices rather than of validating traditional knowledge and practices, and (ii) criteria such as availability of climatic and socio-economic data and eco-cultural uniqueness may be considered while selecting the study areas.

---

**S. C. Garkoti\*** and **Rajeev Semwal**,  
School of Environmental Sciences,  
Jawaharlal Nehru University, New Delhi  
110 067, India.

\*e-mail: scgarkoti@mail.jnu.ac.in