

drugs such as AZT, 3TC, D4T, Saquinavir, Nevirapine, etc. that are unaffordable to a majority of the population.

The need to provide care and support to HIV/AIDS patients was repeatedly stressed; but very little understanding exists in India on palliative care. Palliative care, in its most abbreviated sense, is providing symptomatic relief to patients with termi-

nal illnesses or serious ailments that have not responded to curative therapies. Palliative care does not involve actual and active therapeutic intervention, and can be provided at hospices. Although removal of the social stigma attached to HIV/AIDS is the ideal target, hospice-care rather than home care can indeed be a more viable option in providing care and

support to people with HIV/AIDS. Unfortunately though, hospices are a rarity in our country and so is our interest in palliative care.

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## MEETING REPORT

### Impact assessment of the Indian Ocean tsunami\*

A book, *26th December 2004 Tsunami: A Geoscientific Perspective*, was released at the meeting organized by the Department of Science and Technology (DST), Government of India and Anna University (AU), Chennai. D. Viswanathan (AU) in his presidential remarks briefly explained some of the important activities of AU pertaining to Science and Technology developments in general and Earth System Science including ocean-related research activities in particular.

M. Prithviraj (ESS, DST) explained about the discussions held with academic institutions and national agencies in order to evolve integrated short-term projects after the onslaught of the tsunami on the Indian coasts. He elaborated how the ESS division of the DST launched and executed seven integrated projects under four major themes aimed at field survey and data collection in all the tsunami-affected areas on the Indian mainland and Andaman and Nicobar Islands. G. Victor Rajamanickam (SASTRA, Thanjavur), editor-in-chief of the above-mentioned book, gave a brief note on the contents of the book, which has two sections. The first section consists of two perspective papers on the Great Indian Ocean tsunami and seven theme papers highlighting the findings and significant observations of the research projects supported under this endeavour. The second section contains papers pertaining to post-tsunami activities contributed by national agencies like DST and DOD, New Delhi; Geological Survey of India, Kolkata; Department of Atomic Energy, Mumbai; and academic institutions namely IITM

and IIT, Roorkee. It is envisaged that the book would serve as a reference volume to the future researchers and provide basic information to the coastal community, the industry, media, government and non-governmental agencies in the management of such natural hazards.

About 150 members participated in the meet. Topics covered in the meet included effects of tsunami on coastal Andhra Pradesh, Tamil Nadu, Kerala and Andaman and Nicobar Islands; issues and challenges in post-tsunami rehabilitation; architecture and planning of infrastructure; sensors for hazard mapping and vulnerability assessment.

In the first technical session, Rajendra Prasad (Andhra University) gave an account of inundated areas, volume of erosion/deposition and their areal extent, average depth of erosion, thickness of deposition, coastal property loss and coastal geomorphic changes that took place due to tsunami along Andhra Pradesh coast. T. N. Prakash (CESS, Trivandrum) discussed the impact of the tsunami on shoreline changes, nearshore bathymetry, geomorphology, backwater siltation, concentration of placer deposits and human/property loss along the Kerala coast. He also explained about the various rehabilitation plans the Government of Kerala has taken up for the worst affected area between Neendakara and Arattupuzha. Based on tsunami characterization and maps prepared using post-tsunami IRS images, Ramesh (AU) discussed coastal inundation, changes in shoreline, coastal geomorphology and land use/cover pattern of Andaman and Nicobar islands. Assessment made regarding damage to coastal ecosystems like coastal waters/aquifers, mangroves, coral reefs and sandy beaches/dunes were presented in the meeting. He also discussed the damage to settlement

and coconut plantation, emergence of land, change in water chemistry and types of restorations that can be taken up on the islands. B. R. Subramanian (NIOT), based on inundation of seawater due to Indian Ocean tsunami, felt the necessity of incorporating elevation levels for new/expanded settlement areas under the town and country planning acts so that human life and property are saved from the natural hazards. He listed the towns along the Indian coast, where immediate attention in this regard is required. All developmental activities need to adopt the construction codes stipulated for each region, he felt.

In the second session, S. M. Hussain (Madras University) presented results of micro-palaeontological studies using tsunami sediments of Tamil Nadu and Andaman and Nicobar islands. P. Seralathan (CUSAT, Cochin) and S. Kaliappan (AU) discussed respectively the post-tsunami sediments characterization and water quality in the coastal areas of Tamil Nadu. Prabhakar (Department of Atomic Energy, Kalpakkam) projected the impact of tsunami on township and power plants at Kalpakkam. P. G. Diwakar (RRSSC, Bangalore) and Srinivasan (NGRI, Hyderabad) showed the impact of tsunami on east coast of India and Andaman and Nicobar islands respectively using post-tsunami high-resolution satellite data.

In the third session, NGOs and research students of Architecture and Planning, AU made the following three presentations: (i) Issues and challenges in post-tsunami rehabilitation by DHAN Foundation, Madurai; (ii) Sensors for hazard mapping and vulnerability assessment by PASCO Geomatics India Pvt Ltd; and (iii) Architecture and Planning of Infrastructure using tsunami database of Cuddalore coast by the research students of AU.

\*Based on the National Meet on 'Indian Ocean Tsunami – Its Impact Assessment and Lessons for Future' held on 5 June 2006 in the Anna University Campus.

In the panel discussion, the following suggestions emerged: There is a need to take up long-term multidisciplinary study on various coastal aspects and development of an integrated database. Dissemination of information with newer groups and creating awareness among the coastal

community about coastal hazards is essential. Coastal sand dunes, mangroves and coral reefs should be protected. There is an urgent need to have a map policy pertaining to easy access of database/maps. Formation of a research group consisting of scientists who are in the

forefront of tsunami research is the need of the hour.

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## MEETING REPORT

### Intellectual property rights: Himalayan context\*

The broad objectives of the workshop on intellectual property rights were: (i) to create awareness among researchers and stakeholders including the local communities of the Indian Himalayan Region (IHR), and (ii) to identify a mechanism for ensuring legal protection and benefit sharing in intellectual property rights (IPR) related issues in the IHR. The workshop attracted over 60 participants from all over the country, including distinguished scientists, academicians, government officials, research students and scientists. The 2-day deliberations covered three technical sessions and were centred around different themes, namely, Patent laws in India, Intellectual property (rights and management), Patenting and various issues like Biotechnology, Biodiversity, Indigenous knowledge, Geographical Indications, Protection of plant varieties and farmer's right, Benefit sharing mechanism, Patent co-operation treaty (PCT) and filing PCT application.

In the inaugural session, Upendra Dhar, G.B. Pant Institute of Himalayan Environment and Development (GBPIHED) welcomed the delegates and the participants, and highlighted the objectives of the workshop; he indicated that the institute has already formulated an IPR policy which is being examined by MoEF and will be ready soon. S. K. Nandi (GBPIHED) spoke on the relevance of IPR and expressed the need for the workshop particularly in the Himalayan context. B. A. Wafai (Kashmir University, Srinagar) described the rich Himalayan biodiversity and the judicious and sustainable use of high value medicinal plants by the folklore and traditional knowledge over the ages.

He stressed that the ever-increasing demand in recent years has resulted in depletion of these highly valued plants. He emphasized that traditional knowledge must be protected in the context of the current day's IPRs. In his inaugural address, H. N. Chanakya (IISc, Bangalore) indicated that protection of IPRs plays an important role in boosting the inventive and innovative activities in any society and stressed that IPR is being well taken up in the country by publicly funded R&D institutions, universities and industries. He mentioned that for Indian enterprises to compete globally, we must maximise benefits and ensure legal protection for its IP to the researchers in particular and other stakeholders of the IHR. Recognition and reward of innovations and inventions is imperative.

H. S. Chawla (GBPUAT, Pantnagar) provided an overall picture of IP issues dwelling on rights and management. He also shared valuable information relating to IPR guidelines and the role of DST and other organizations in creating awareness, promoting IPR and providing information on benefit sharing. Rajesh Dixit (Patent Office, GOI, New Delhi) deliberated on the topic 'Patent laws in India: an integrated scenario'; he cited examples of different laws on issues related to regional, national and global level, and the changing scenario of IPR following the WTO membership of India. R. Dhobhal (Uttaranchal State Council for Science and Technology, Dehradun) elaborated on the current status of IPR focusing on different issues in the national and international context. He emphasized the protection of IPR for the country, particularly for deriving economic benefits.

S. V. Bhardwaj (YSPUHF, Solan) dwelt on patenting and biotechnology. After briefing on various biotechnology-based industries of the country, he emphasized the strategic management of IP policy

that includes disclosure plan, timing of disclosure, competing products, products to be commercialized, expected revenues, etc. B. N. Pandey (BHU, Varanasi) deliberated on legal aspects of patenting and IP licensing. He clearly brought into light the prevailing fallacies in the patent laws, education and the Indian society, and stressed on creating awareness on the subject.

B. Subramaniam (NISCAIR, New Delhi) dwelt on traditional knowledge digital library as a tool for defensive protection of India's rich traditional knowledge. He stated that the country's vast and rich traditional knowledge must be protected and benefits provided to appropriate people/communities. He mentioned that despite the immense popularity of modern medicines, traditional medicine still caters to the demand of about 80% of health care in developing countries. Saroj Kumar (Patent Office, New Delhi) dealt with drafting and filing of patents in India. While highlighting the commercial applicability of patents he stressed that a patent should contain novelty, inventive steps (non-obvious) and utility. He clarified that applications must be filed before public disclosure (written or oral), public use and offer of sale; otherwise, patent rights would be lost.

Following deliberations by various resource persons, Heads of all departments of GBPIHED briefed the audience about R&D activities being undertaken in the Institute. The results and achievements of various activities were discussed in the light of possible patents and/or copyright protection that could be achieved.

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