

REPORT

A Report on International Biodiversity Congress

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The loss of habitat, over exploitation of resources, invasion of species alien to the local context, water-soil-air pollution coupled with climate change continue to threaten the functioning of our life-sustaining biosphere. Considering the ever-growing demand for bioresources, the UN General Assembly declared the period 2011-2020 as “United Nations Decade on Biodiversity” to promote living in harmony with nature. Its plan, called the 2020 Strategic Plan of the Convention on Biological Diversity (CBD), aims to address the underlying causes of biodiversity loss, reduce the pressures on biodiversity, safeguard biodiversity at all levels, and to enhance the benefits provided by biodiversity. The importance of biodiversity and ecosystems is also reflected in many of the United Nations Sustainable Development Goals (SDGs) and targets. Acknowledging the importance of biodiversity as closely linked to human well-being, the Centre for Innovation in Science and Social Action (CISSA), Navdanya (Dehradun), Forest Research Institute (FRI), Indian Council of Forestry Research and Education (ICFRE, Dehradun), Uttarakhand Biodiversity Board, Uttarakhand Council for Science and Technology, and Wildlife Institute of India (WII, Dehradun) came together to organise the International Biodiversity Congress (IBC 2018) at FRI from 4 to 6 October 2018. Its primary objective was to initiate and encourage interdisciplinary and inclusive dialogue among relevant stakeholders in the field of biodiversity, and to facilitate a shift towards ecological civilization that values, cherishes and conserves biodiversity in order to achieve sustainable development goals.

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Published by Indian Society for Ecological Economics (INSEE), c/o Institute of Economic Growth, University Enclave, North Campus, Delhi 110007.

ISSN: 2581-6152 (print); 2581-6101 (web).

About 800 delegates and biodiversity experts from India and abroad attended the Congress. The Congress was inaugurated by the Hon'ble Chief Minister of Sikkim, Pawan Kumar Chamling. He highlighted the need to exchange sustainable developmental models across the world and to mainstream biodiversity in developmental planning. Giving the example of organic state model of Sikkim, he reiterated the need for working towards organic Himalaya in order to make agriculture ecologically sustainable and to conserve the rich diversity of the mountain ecosystem.

Presenting the overview of the Congress, Vandana Shiva, Chairperson of IBC and founder of 'Navdanya', emphasised the need for women's empowerment and their role in biodiversity conservation and the sustainable utilisation of resources. Shiva underlined the traditional Indian philosophy of *Aranya Sanskriti* that has conserved the diversity of nature for hundreds of years. Shiva emphasized management of natural resources based on the principles of resilience, social values, cultural values, and linkage of food, nutrition, and health in order to create circular economies with happy and sustainable societies that cherish the values of ecology besides inheriting the ecological wisdom deep rooted in the society. Savita, Director of Forest Research Institute, highlighted the importance of biodiversity for sustainable development and emphasised the need to educate the people for conservation of natural resources. Shyam Saran, former Foreign Secretary and Special Envoy on Climate Change, highlighted the lethal implications of unsustainable developmental paradigms and the need for following Mahatma Gandhi's philosophy on judicious utilization of natural resources.

The IBC hosted six plenary sessions under six themes —Biodiversity Crisis: Challenges & Way Ahead; Legal Framework for Protecting Biodiversity; Ecosystem Services and Sustainability of Fragile Mountain Ecosystems; Biodiversity For Food, Nutrition & Health; Biodiversity and Knowledge Systems; and Climate Change and Planetary Health —ten parallel technical sessions, and four poster sessions under themes Biodiversity and Ecosystem Services (Microbial, floral and faunal diversity); Biodiversity: Legal and Knowledge Systems; Biodiversity: Threats and Conservation Strategies, and Biodiversity: Agro-ecosystems and Food Security; Medicinal Plants. A total of 27 invited plenary lectures were delivered in three days by eminent scholars and 103 papers were presented by the delegates in parallel technical sessions, besides 410 posters.

Delivering Indian Perspective on biodiversity crisis, V.B. Mathur, Director of Wildlife Institute of India, expressed great concern over accelerated loss of genetic variability of species and highlighted prioritizing the conservation research and management programmes for the endangered species such as

South Asian river dolphin (*Platanista gangetica*), Dugong (*Dugong dugon*), Great Indian Bustard (*Ardeotis nigriceps*), and Brow-antlered Deer or Sangai (*Rucervus eldii*) inhabiting critical ecosystems of India and facing a series of anthropogenic interventions. Highlighting the “trusteeship” concept of Mahatma Gandhi, during discussion on “Biodiversity Education to Address Sixth Mass Extinction”, Kartikeya Sarabhai, Director of Centre for Environment Education, Ahmedabad, emphasized that a range of climate friendly traditions and practices are promoting more sustainable life styles, and therefore their replication could play a key role in biodiversity conservation. Jyotsna Sitling from the Ministry of Skill Development & Entrepreneurship, Government of India, stressed the need to develop skilled human resources to meet the challenges for nature conservation and warranted the need for reskilling and up-skilling professionals to maintain the biodiversity.

Sanjay Molur, Executive Director of Zoo Outreach Organisation, discussed the conservation strategies for different threatened taxa and highlighted the need for protecting freshwater fauna with more diversity of threatened point endemics in India. While presenting an overview of various laws, Acts, government schemes and projects for biodiversity conservation, Balakrishna Pisupati, former Chairman of National Biodiversity Authority, said declining biodiversity is still not seen as a threat to our survival by non-conservationists, including the general public. He highlighted the need for “social-proofing” or social informational influence through the involvement of brand ambassadors for raising awareness about biodiversity crisis. M.K. Ramesh, National Law School, Bangalore, suggested that the Biological Diversity Act of India is one of the finest globally in terms of managing biodiversity, though refinement is required for the implementation of the Act. The experts also highlighted the need for vigil in protecting indigenous biodiversity in the spirit of Conservation of Biological Diversity and sensitizing the people about the traditional knowledge, plant varieties and protection of farmer’s rights for controlling biopiracy.

Arguing that the market does not transfer money from consumers to ecosystems facilitating various services, S.P. Singh, former Vice chancellor, H.N.B. Garhwal University, Srinagar, stressed the need for incorporating Himalayan ecosystem services in national accounting. The plenary lectures also highlighted the need for accelerating the R&D interventions to strengthen the mountain ecosystems under changing climatic regimes.

Expressing concern over biodiversity loss for monetary benefits in the western world, Renate Kunast, former Minister of Consumer Protection, Food and Agriculture, Germany, advocated the adaption of international protocols and agreement to protect biodiversity and highlighted the need to

break the dependency and monopoly, and work towards pluralism for sustainable economies.

James Buchanan from Xavier University, USA remarked that our education system is stuck in a moribund and dangerous atomistic or mechanistic worldview that is wholly inadequate for understanding the complex system of biodiversity. He said, if we are to address the growing crisis, we must begin by reshaping our education systems so that future generations understand, organize and value the world in fundamentally new ways. He then outlined the key criteria and steps in the radical reshaping of education. Erach Bharucha, Director of Bharathi Vidyapeeth, Pune and Bittu Sehgal, Editor, *Sanctuary Asia*, discussed the need for incorporating biodiversity conservation case studies in formal education and the role of the youth in transforming biodiversity science and creating ecological civilization. According to Ravindra Singh (Indo-German Biodiversity Program, GIZ), scientists, policy makers and media are the three key interconnected players in prioritizing and implementing solution for conservation challenges.

In the valedictory session, B.P. Singh, former Governor of Sikkim and former Secretary, Ministry of Environment and Forest, Government of India, spoke on building an ecological civilisation and called upon to remain associated with Indian concept of “Unity in Diversity” to preserve our biological diversity and cultural diversity which are mutually dependent. Chief Guest Trivendra Singh Rawat, Chief Minister of Uttarakhand, highlighted Uttarakhand’s rich heritage and biodiversity that draws tourists, philosophers, scientists and saints. He stressed the need to combine the best of traditional wisdom and science with stakeholder participation for holistic perspective for biodiversity conservation and sustainable development.

The children who participated in the Children’s Biodiversity Congress of IBC initiated a campaign to reduce their carbon footprint and increase their handprint (positive contributions towards conservation and sustainable use) for better life on the planet. The participants of the IBC 2018 took the Doon Valley Biodiversity pledge for ecological civilization.

The three-day conference forwarded the following major recommendations:

- (i) Initiate and encourage a dialogue among stakeholders of biodiversity, including civil society organisations and farmers, to chart out programmes to facilitate a shift towards an ecological civilization that values, cherishes and conserves biodiversity to achieve United Nations Sustainable Development Goals (UNSDGs), both at national and international platforms. Necessary policies may be adopted by the

governments across the world to establish a legal and policy framework that initiates a shift towards biodiversity-based civilization that facilitates green, low-carbon, and circular development and economy, promotes afforestation and protects the ecosystems and ecosystem services, strengthens wetland conservation and restoration, promotes organic and nutrition-rich farming practices, and ensures stronger action against those who debilitate the environment; implements nation-wide “Biodiversity Literacy Programme” based on ecological civilization in order to spread the message of biodiversity and its conservation.

(ii) The Indian philosophy of *Vasudhaiva Kutumbakam* (One earth one family) needs to be promoted and implemented in a holistic manner for effective management and sustainable utilization of biodiversity.

(iii) Biodiversity utilization should be integrated with sustainable development goals and there should be holistic action plans involving the youth, women and citizen scientists to popularise the need for biodiversity conservation for sustainable development.

(iv) As the governments have already announced adoption of the concept of sustainable development in planning process, the concept of biodiversity and related livelihoods should be flagged as the central principle of all developmental processes.

(v) Considering the fact that habitat degradation is one of the primary reasons for biodiversity loss, spatial planning using GIS technology is recommended to prioritise land use for developmental and conservation planning and to demarcate areas rich in indigenous biodiversity including that of the agro-biodiversity.

(vi) Develop new foodscapes in cities and villages, primarily using resources from the local areas and by promoting the good food culture and conservation of biodiversity.

(vii) Transparent and fair labelling of food, agricultural products and other value-added products from biodiversity so as to ensure the rights of the consumers and to prevent the misuse of biodiversity.

(viii) In order to prevent the rapid erosion of genetic diversity, strengthen on-farm conservation initiatives of indigenous biodiversity with proper recognition of and incentives for farmers and pastoralists involved.

(ix) Strengthen synergies between climate mitigation strategies and development policies in areas such as energy efficiency, fuel substitution, renewables, afforestation, and land and waste management.

- (x) Increased communication between scientists and policy makers through programs like capacity building seminars for policy makers, people's representatives, and bureaucrats.
- (xi) Sustainable livelihood programmes must also focus on skill development for biodiversity conservation. Reskilling and upskilling of professionals are also needed to maintain the biodiversity outside the forests.
- (xii) The nation should have sovereign rights on the biological resources which fall under its jurisdiction and the benefits arising from the commercial utilization of biological resources must be shared with the local community.
- (xiii) Ecosystem services should be incorporated in national accounting in order to prioritize the value of conservation and in the backdrop of climate change, an action plan should be prepared for biodiversity conservation of the Himalayan mountain ecosystem.