Mainstreaming biodiversity concerns into decision making at national, state and local levels

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INTERACT-Bio Integrated action on biodiversity

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1. Framing the context

Cities are a growing source of pollution and greenhouse gas emissions that results in deterioration of the environmental quality, and impacts the sustainability of the cities. Recognising the need to address the negative impacts of rapid and unplanned urbanization, many cities around the world have started implementing Nature based Solution (NbS) to ensure long term sustainable urban development and build city resilience to extreme climate events. This calls for sensitizing cities and the city authorities on the significance of urban biodiversity

and the need to incorporate the same into urban planning. Several Indian city leaders and officials are yet to recognize the potential of NbS and understand how to integrate them into conventional urban planning. This was also pointed out during previous dialogues that have been conducted.



Sitting Row :- Dr. Dhanya Bhaskar, Mr. Shishir Shrivastava, Mr. V. Krishna, Mr. Emani Kumar, Dr. G.S. Rawat, Mr. Bharat V. Rana, Mrs. Lata I. Solanki, Mr. Sunil Uniyal Gama, Mr. Shakti Singh Choudhary, Dr. Dhananjay Mohan, Dr. V.P. Uniyal, Dr. S.C. Joshi, Dr. Gautam Talukdar, Dr. Monalisa Sen

Standing Row 1 :- Mr. P.S. Dhamanda, Dr. Malvika Onial, Mr. Devendra Mahajan, Dr. S. Murali Krishna, Mr. L.V.R. Rao, Mr. Uttam Yadav, Dr. Abdul Kareem, Dr. Pradip V. Sarmokadam, Mr. Sanjeev Parkash, Mr. Lalit Katoch, Mr. B.R. Negi, Dr. R.K. Singh, Mr. Sukhvir Butola, Dr. J. Soundrapandi, Dr. Nasim A. Ansari, Ms. Vishakha Panwar, Ms. Rithika Fernandes, Ms. Anindita Debnath

Standing Row 2:- Mr. Sanjay Sondhi, Mr. Sanjay Prasad, Mr. Lokesh Ohri, Dr. Manoj Nair, Mr. Anjum Ali Ansari, Mr. L. Joseph Reginald, Mr. Rahul Thakur, Mr. Bajirao Kamble, Mr. Vishal Hinge, Mr. Kingsuk Roy, Dr. R.K. Hirpara, Dr. Prakash Pradhan, Mr. Sony R.K., Mr. Rahul Singh

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In this vein, a national outreach event to generate awareness on the various facets of urban biodiversity, was organised by the Wildlife Institute of India (WII), Dehradun in collaboration with ICLEI-Local Governments for Sustainability, South Asia on the 14th and 15th of November 2019 under the Chairmanship of the Honourable Mayor of Dehradun, Shri Sunil Uniyal Gama. The event was undertaken to support the implementation of the National Biodiversity Strategy and Action Plan (NBSAP) through the mainstreaming of biodiversity objectives across City-Regions. A total of 51 participants from various national, state and city governments attended the event. A field visit was undertaken on the second day in order to gain hands on experience on the concepts discussed and debated upon on the first day.

The aim of the outreach workshop was to apprise administrators and decision makers about the current conservation scenario, the ongoing issues and trends in biodiversity conservation, the existing policy, legal and institutional framework, tools and solutions to monitor, mitigate and reduce impacts of urban expansion on biodiversity and ecosystem services. Thus, the event aimed at disseminating information while also initiating a dialogue between these various levels of government for mainstreaming biodiversity.

2. Emerging themes

2.1. Dispelling the conventional perception that biodiversity belongs only in forests

It was observed that the word biodiversity does not often come up in matters concerning urban affairs, cities and urban areas. Agriculture, forestry, fisheries are generally not under the primary jurisdiction of city authorities. The Convention on Biological Diversity (CBD) brought about the importance of biodiversity through which the Biological Diversity Act (2002) in India was enacted for the management of biodiversity. The traditional mindset is that cities are for people and biodiversity belongs in forests. The idea of harbouring biodiversity in cities is an alien one. Cities have changed, are losing green spaces and gaining more concrete, which is very worrying.

In the host city, Dehradun, interestingly the district has 50% of forest cover. On the city's outskirts is Rajaji National Park. However, citizens have noticed a decline in species like sparrows and vultures, an alarming increase in pollution within the city limits. There is a lack of awareness of the significance of animals we are living with, such as that of Short-nosed fruit bat, which lives in the fish-tail palm or the Adjutant storks which

have been sighted in the garbage dumps of Guwahati. Similarly, the leopards in Mumbai, elephants in Siliguri, civet cats in Kochi, have a lot of value within their ecosystems. There is this misconception that biodiversity is what we come across when we go to National Parks. Urban biodiversity plays an equally significant role.

Human populations and anthropogenic activities associated with development such as pollution, deforestation, urbanisation are threatening biodiversity richness. The most important threat is the lack of awareness. Data availability is poor except for some areas where proper empirical data is available. Biodiversity is at a low priority in municipal governance. Habitat alteration and destruction is common. A small clump of trees, small wetland, or a small marshy area disappears on regular basis in the country. Ecosystem services are either poorly understood or not discussed. Improper waste management, exotic or invasive species, exotic horticulture and excessive manicuring in the management of green spaces are damaging city ecosystems.

The concept of "urban ecological commons" was explained and several examples on how nature conservation is ignored in the cities were highlighted. Research findings on biodiversity loss, economic loss due to rapid urbanization were also presented, stressing on the importance of developing sustainable and equitable cities. Ecosystem services are not recognised in urban planning and policy making and certain services are prioritised more than others when it comes to nature, e.g. supporting services are ignored while cultural service are promoted. NbS has a promising scope in India and can be incorporated into city planning. In the meanwhile it is also necessary to protect, conserve and restore green areas in the cities.

There is a realisation that it is time for corrective action in the cities. Biodiversity in urban areas needs to be prioritised, a strong institutional structure needs to be built and a momentum needs to be created to take the priorities of conservation forward. Partnerships are the need of the hour. Regulation of people is not a solution; it is inclusive governance that will take the agenda of mainstreaming biodiversity forward.

Some quick-win solutions proposed included identifying and protecting iconic/historic trees, focussing on periurban areas during zonation and planning and using government programs like AMRUT and Smart Cities Mission to green cities and improve biodiversity creatively. Outreach and awareness for rewilding city areas, partnerships with CSOs and NGOs who can support cities and strengthening citizen science initiatives were also discussed.

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2.2. Legal safety-net for Indian Biodiversity

There is a long history of biodiversity legislation in India which was discussed by Dr. Dhananjay Mohan, Chairman, Uttarakhand State Biodiversity Board. There are the 'Big Five' central acts of biodiversity conservation. The **Indian Forest Act, 1927** laid the foundation of legislation for protection of biodiversity and the environment which led to the creation of reserve forests, community forests etc. Several cities in India like Mumbai, Hyderabad, Kochi have forest and forest lands within their boundaries. The **Wildlife (Protection) Act, 1972** set aside areas for biodiversity conservation (5% area as Protected Areas). This was an exclusionary approach and has impacted local communities. The act does not protect the habitat of species. Several animals survive in urban landscapes and their secretive and nocturnal behaviours allow them to coexist. This act is thus relevant to local bodies because human-animal conflict is on the rise. There is the monkey and leopard menace in urban areas which is increasing over time, primarily because of poor garbage management. This is

something pertinent to urban local bodies. Garbage management is paramount in taking care of this issue and local authorities should look into this. The **Forest Conservation Act, 1980** protects forest from being diverted into a non-forest purpose. The **Environment Protection Act, 1986** is an umbrella act that influences activities in industrial and development sector, bringing them into the folds of conservation. Under this Act, Environmental Impact Assessment, Eco-sensitive Zones and Pollution Control are important steps for protecting biodiversity. The **Biological Diversity Act, 2002** deals with the utilization and conservation of biodiversity while empowering local communities. The aspect of 'Access and Benefit Sharing (ABS)' under Nagoya Protocol is a step towards sharing benefits with local communities. The institutional structures which the Act defines should also be instituted at the city level and not just the village level. The Biological Management Committees (BMCs) should become the focal point for management of biodiversity locally. Local documentation, known as People's Biodiversity



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Registers (PBRs) records the biodiversity in a particular area. This on one hand helps to support the ABS mechanism through patents, on the other hand also helps in the protection of habitats which would ordinarily not fall under protected areas.

At the state level there is the **Tree Protection Act** in each state, which restricts felling of trees even on private lands, having an important bearing on urban areas. There are also administrative orders which have some bearing on legislation such as the restriction of land use change around protected areas and so on.

2.3. Local case studies: Success stories and Challenges

Dr. Sanjay Sondhi, Founder Trustee, Titli Trust talked about the exercise of animal counts in the cities. He gave successful examples of case studies such as "Great Backyard Bird Count", Doon School rewilding project with native plant species in Dehradun and subsequently, encouraged the participants to promote the same in their respective cities. Dr. Manoj Nair, Deputy Director, Lal Bahadur Shastri National Academy of Administration expressed the need to document biodiversity in the cities and encouraged the growing citizen science

engagement to document birds and butterflies in cities. Dr. Dhanya Bhaskar, Assistant Professor, Azim Premji University highlighted that there are many negative incidents of biodiversity loss in the cities but there are also positive examples, e.g. Vancouver city drew up a bird strategy inviting bird watchers and actively works to conserve city biodiversity.

Dr. Abdul Kareem, Associate Professor, University of Trans-Disciplinary Health Sciences and Technology raised a question about the reason behind biodiversity not being included in urban planning and asked for suggestions on how to overcome this. Dr. S.C. Joshi, Chairman, Kerala State Biodiversity Board, also enquired about global examples of biodiversity as a priority governance issue. Biodiversity is conveniently ignored. He gave an example of Europe during industrialization, where focus was only on developing industries and in due course



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the forests were lost. The increase in industrial production came at the cost of nature. He also emphasized that biodiversity is not small, it includes everything- physical and biological systems. He mentioned that planners are only committed to short-term impacts and suggested biodiversity needs to be included to achieve long term efficiency in cities.

Mr. Sanjay Prasad, Urban Planner, Kurseong, mentioned that the city has considered biodiversity in their city plans. A survey of flora and fauna was done to see how it can be improved within the city. He also said he was unaware of the existence of State Biodiversity Board (SBB) and expressed the need for vertical integration for effective conservation of biodiversity across all levels of governance. Mr. Shishir Srivastav, Engineer, Gwalior, talked their initiatives in urban areas such as the establishment of sewage treatment plants and plantation drives to improve city forests. Native trees like Neem, Peepal, Amla, Jamun are being planted. He also mentioned that it is necessary to develop local water bodies and maintain ground water levels. Mrs. Lataben Indulal Solanki, Chairperson, Bhuj explained how they are creating gardens, small lakes and habitats for birds where Neem, Jamun, Tamarind trees are being planted. She emphasized that it is important not just to plant the trees but also to make sure that they grow. In Kutch, 5 lakh trees were planted and adopted to ensure their survival. She also talked about the issue with water availability in Kutch and how they are adopting rainwater harvesting measures to resolve the issue.

Dr. Pradip Sarmokadam, Member Secretary, Goa State Biodiversity Board, said that although local people may not be aware of the legislation and the SBBs, they know about biodiversity conservation evidenced by how they co-exist with nature. In Goa, they are still preserving indigenous crop varieties and have the potential to grow it. He raised his concern regarding a lack of convergence between government departments and mentioned about the process of development of PBRs in Goa where every village's strength and weakness have been listed. People will only take interest if the benefits of something are spoken about. He talked about the problems relating to the protection of green spaces in urban areas. He suggested that old trees and sacred groves in a city should receive protection through policy and legislation. Mr. Shakti Singh Choudhary, Mayor, Gangtok, said the state has 48% forest cover but lacks appropriate documentation. He gave an example from his state, saying their biodiversity policy takes into account climate change- clean air, clean water through its Dhara Vikas programme. He emphasized on the fact that in cities (like Gangtok, where tourism pressure is high) urban biodiversity conservation is highly significant for enhancing visitor experience and promoting opportunities for local livelihood. Mr. V. Krishna, Additional Commissioner, Greater Hyderabad Municipal Corporation stated that cities are losing biodiversity where grey infrastructure is replacing green spaces. To mitigate this, some plantation work is being done but this does not compensate the loss. Urbanisation has impacted drainage, water availability and the green-blue infrastructure. He quoted how in the state of Telangana the Panchayati Raj Act and Telanagana Municipal Act have been amended, making it mandatory that 10% of budget be allocated as green budget and be spent in augmenting biodiversity and green infrastructure. The responsibility has therefore been fixed on the public authorities to ensure this.

Dr. Lokesh Ohri, Independent Director, Dehradun Smart City Ltd. spoke extensively about adaptive reuse, protecting a city's heritage and involvement of citizens. He highlighted how in a major part of the city, people either walk or cycle, whereas the roads are mainly designed for cars and private vehicles. Mr. Devendra Mahajan, Managing Director, Nagpur Smart and Sustainable City Development Corporation Limited, talked about developing utility ducts and super imposition of town planning scheme on existing roads and planning for biodiversity corridors and avenue plantations that will mitigate heat island effect. Mr. Anjum Ali Ansari, Junior Engineer, Pokhran, gave an example of a success story of Anna Sagar lake rejuvenation project in Ajmer. The lake was a habitat to migratory birds, however due to water contamination, large scale fish mortality was observed. With the efforts of local civic bodies, the lake ecosystem was reclaimed and a lakefront was developed. Dr. J. Soundrapandi, Project Officer, National Biodiversity Authority gave an example of Adiyar river rejuvenation project for which the state government allocated funds. The process involved waste removal, plantation of native species on adjoining lands which resulted in the replenishing of water, improving river biodiversity. He further informed the upscaling of project to other canals and building fences to prevent encroachment. Mr. Vishal Hinge, Engineer, Thane, talked about lake encroachment in his city. The local government has however taken up a decision to rejuvenate the lake by removing all hutments and providing alternate accommodation.

Dr. Gautam Talukdar, Scientist, WII, presented regional case studies on natural resource extraction, delivering a strong message that "biodiversity cannot be marketed". The concept of different kinds of ecosystem services was discussed highlighting that their value which is derived from nature is actually the value for money which may be lost due to unsustainable practices. The supply of ecosystem services is not always the same, it changes

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seasonally. He emphatically stated that data should drive planned actions. He concluded by emphasizing the importance of our fundamental duties to protect biodiversity as equal to fundamental rights.

The city has also requested support from ICLEI South Asia on inventorying its biodiversity in the form of a People's Biodiversity Register. The Register is a document which contains comprehensive information on locally available bio-resources including landscape and demography of a particular area. This document, along with the Local Biodiversity Strategy and Action Plan of the city, which is being developed by ICLEI South Asia, will not only assist in local alignment of national priorities but support better informed planning and conservation of biodiversity.

2.4. Actions need resources

Participants raised the query of how they could achieve outcomes of biodiversity conservation in their jurisdiction. In order to generate protective actions, resources be it, technical know-how, capacity, finance and manpower are required. Tools and resources available to administrators at sub-national and local levels were discussed in detail. Dr. Monalisa Sen, Programme Coordinator (Biodiversity) detailed the importance of PBR and introduced the City Biodiversity Index (CBI) as tools that enumerate and monitor biodiversity within an area. The interlinkages between Local Biodiversity Strategy and Action Plans with the National Biodiversity Action Plans must be strong in order to ensure good governance at local levels.

Dr. Malvika Onial, Scientist, WII, discussed aspects of biodiversity finance. This type of financing is intuitive. It says what it means in terms of what are the funds available and what should be financed. People must start to think about the value of biodiversity otherwise they will not want to conserve it. The trend in urban green spaces is the most commonly used indicator of biodiversity and ecosystem services. Several departments have programmes and schemes which are relevant to biodiversity conservation. Aligning or reorienting schemes to ensure this without having to leverage more funds for the same is an efficient and quick way to finance conservation. The NBSAP can help to work out funding through a financial needs assessment, which looks at various expenditures and identifies how revenue can be generated. There may be policies working against biodiversity conservation, hence this exercise helps to re-evaluate/pre-empt expenditure by removing these types of policies. Additionally, the BIOFIN Plan- Working Doc 2019 offers finance solutions. Aligning different plans and schemes with slight modifications will help in achieving several National Biodiversity Targets along with nature conservation.

The participants marked capacity building as a major issue followed by convergence between departments and stakeholders. They also discussed finance and allocation of green funds needed at a higher level for urban biodiversity. The group also debated on green tax and that it should be linked to the biodiversity fund. Several representatives felt that every project that takes place within a city must have some budget factored in for biodiversity conservation.

2.5. How can ICLEI South Asia facilitate the various action points described above?

The event saw a lot of discussion around various themes of biodiversity. At the end, participants flagged a number of issues that needed attention in their cities. The issue concerning loss of native species/local extinction of species, lack of policy framework at local level and lack of stakeholder convergence was highlighted by one group. The group stressed the importance of folklore and awareness for reversing the effects of biodiversity loss and laid emphasis on the development of micro projects where the community was involved at every step of decision making, instead of large hydropower dams within fragile mountain ecosystems in order to avert disasters. Another group posed lack of awareness and unplanned development as major challenges. They suggested demarcation of eco-sensitive zones and monitoring of land use changes in the city area could be effective solutions to keep in check unregulated urbanisation. Strict planning and penalty actions should be in place such as making open defecation a punishable offence or encouraging the creation of social pressure groups which would improve accountability.

The dialogue presented numerous opportunities for ICLEI South Asia to support cities. The lack of policy framework at a local level requires technical know-how and should be well-informed. Furthermore, several participants spoke about how projects should have resource analyses and action planning strategies in built within them. Stakeholder cooperation/convergence needs engagement in order to build a strong stakeholder group. ICLEI South Asia can assist most effectively through facilitating a closer relationship between these various groups as well as provide the technical expertise necessary to build stronger policies and plans, aimed at biodiversity protection and long term sustainability of projects.

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3. Post-2020 Global Biodiversity Framework implications

Going forward, the dialogue and the points raised can be viewed through the Post-2020 lens, specifically in point 5 of ICLEI's 10 Point Framework, which promotes the creation of an enabling environment that supports the mainstreaming of the multiple social and health benefits of nature at the local and subnational levels to improve the quality of life and resilience of communities, enhance social cohesion and lead to financial benefits and savings for both individuals and governments. In addition, Point 3 promotes the creation of an enabling environment for significantly increased private sector investment and development aid in nature-based solutions at local and subnational levels, as they are closer to the mainstreaming sectors and best positioned to build and sustain functional and resilient ecosystems and urban-rural linkages. In this regard, both points highlight the necessity for the issues raised in this dialogue to be addressed, as their resolution can prove to be hugely beneficial to India and the Post-2020 agenda.

INTERACT-Bio project at a glance

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