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Urban Resilience and Adaptation for India and Mongolia: curricula, capacity, ICT and stakeholder collaboration to support green & blue infrastructure and nature-based solutions
619050-EPP-1-2020-1-DE-EPPKA2-CBHE-JP



URGENT *Lecture Series*

1st
Lecture

Nature Based Solutions (NBSs)

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Date : 31 July 2021, Saturday
Time : 1230 – 1400 Hrs IST

Speakers



Dr Yogesh Gokhale

Senior Fellow
The Energy and Resources Institute (TERI),
New Delhi, India

He is an ecologist with specialization in natural resource management, monitoring and evaluation of watershed projects and ecological assessments in different parts of India. He has extensively worked on people and forest interface issues regarding conservation of biological resources such as sacred groves in India. Some of his research topics include forest ecology, non-timber forest produce, medicinal plant conservation, community forestry, eco-development, and national and international biodiversity policy issues.



Dr Anton Shkaruba

Senior Researcher
Estonian University of Life Sciences,
Tartu, Estonia

His research focus is on biodiversity governance, urban planning and science-policy interfacing. He was a lead author for the IPBES Europe & Central Asia regional assessment, and currently a lead author of the IPBES assessment on sustainable use of wild species. He has worked in interdisciplinary projects focusing on mapping and spatially-explicit assessment of ecosystem vulnerability to global environmental change, adaptation of social-ecological systems and sectors (forestry, biodiversity conservation) and, more recently, also land-use planning and policies.

Facilitating Institution

Jawaharlal Nehru University

Speaker: **Dr. Anton Shkaruba**, Estonian University of Life Sciences, Tartu, Estonia

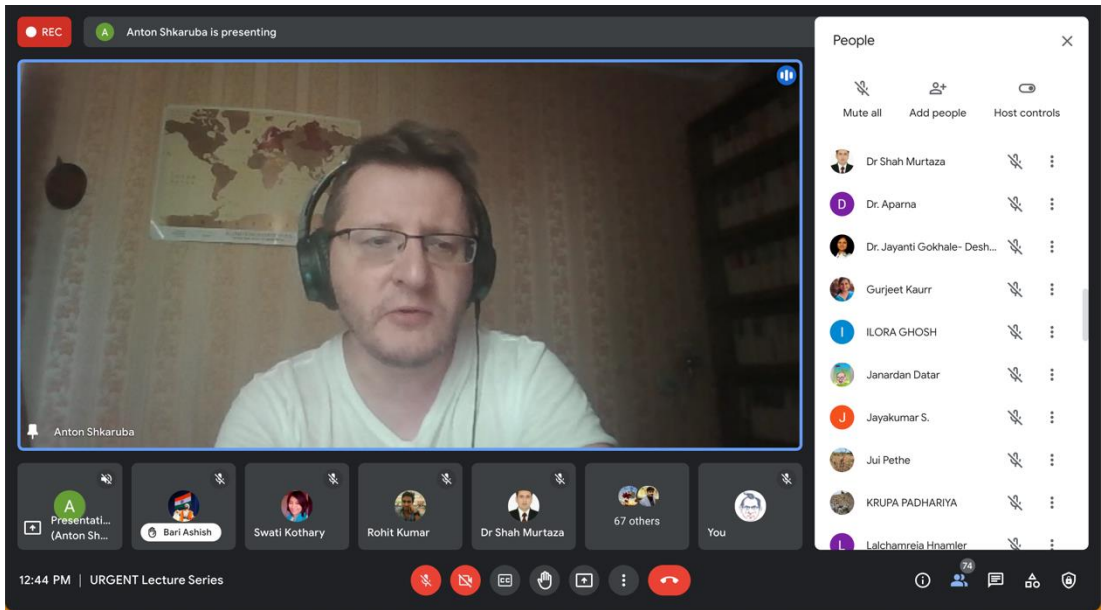
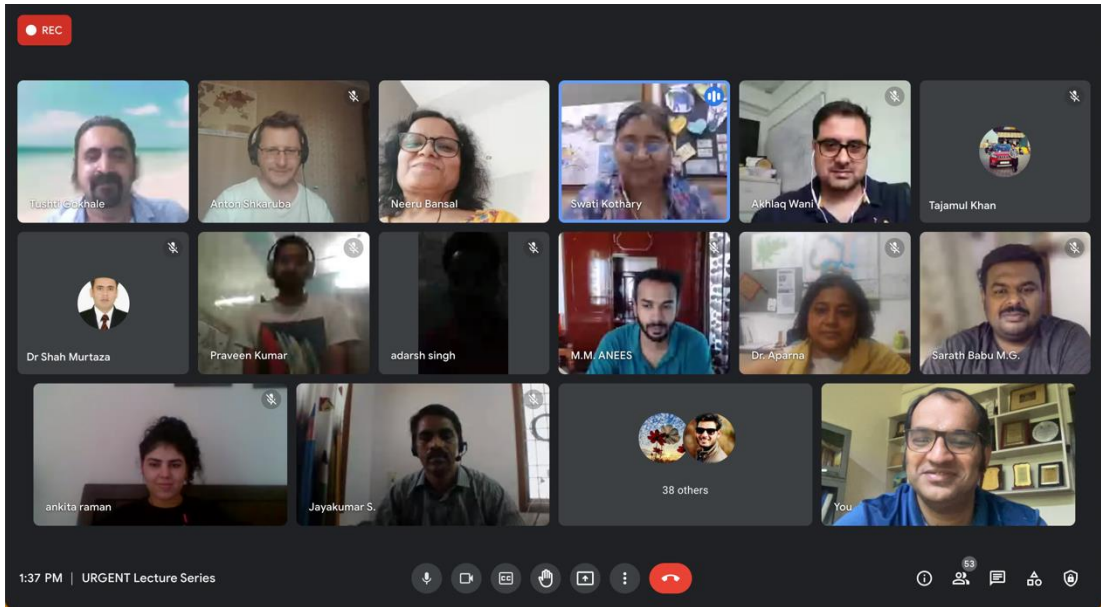
Topic: **Nature-based solutions - the concepts and lessons from Eastern Europe**

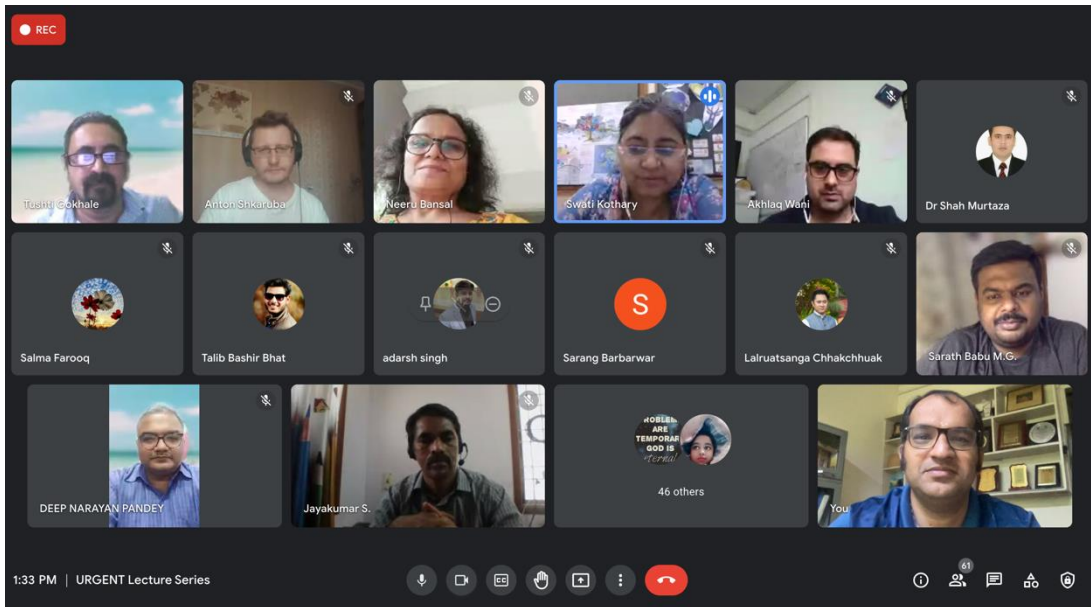
Dr. Anton's presentation was divided in two parts- (i) European Commission's (EC) role in promoting nature based solutions (NBS) and (ii) specific case studies detailing NBS applications in Eastern European countries. He started his presentation by highlighting contrasting situations that exist with respect to the application of NBS- *if probability of failure is low Vs consequences are high and if probability of partial failure is higher Vs consequences are lower*. Following this, the definition of NBS was discussed, stressing on the one provided by EC (2015) and the International Union for Conservation of Nature (IUCN). EC's definition was stated to be more leaning towards society and local communities. Next, EC's contribution to NBS's promotion and development was discussed. One of the prominent examples of EC's contribution is 'Urban Nature Atlas' through the Horizon 2020 Action, which covers more than 100 European cities, detailing on the how NBS solutions work and their social acceptance. NBS for climate change adaption and disaster risk reduction was discussed next, specially the application of this concept as an umbrella concept to design climate change mitigation measures and disaster risk reduction. The next part of the presentation focused on governance barriers to NBS in Eastern Europe, particularly in Belarus, Russia and Ukraine. He started with the main challenge faced in implementation of NBS in these countries. This was attributed to socio-political and governance factors among other barriers. He highlighted that this was despite NBS's low-cost application. A number of types of barriers, known from literature, were presented, namely, (i) fear of the unknown, (ii) the disconnect between short-term actions and long-term goals, (iii) the discontinuity between short-term actions and long-term plans, (iv) sectoral silos, and (v) the paradigm of growth. Other than this, the main lessons learnt from NBS development were also discussed. In light of NBS application, three case studies were discussed, namely, Lviv, Ukraine, Mahiliou, Berlarus, and Pskov, Russia. In these cities, few specific barriers were discussed such as deficit of strategic foresight for urban development. This has led to focus only on short-term issues while overlooking the long-term ones. Another barrier was funding received for development of NBS projects, and also role and acceptance of different NGOs who implement these ground was identified as a barrier. The lack of availability of successful examples of NBS is also noted to be one of the identified barriers. A robust governance framework which integrates across fields and departments is suggested as the key solution to overcome many of these barriers. Further details about his research work can be accessed through the article titled - '*Development of sustainable urban drainage systems in Eastern Europe: an analytical overview of the constraints and enabling conditions*'. More questions pertaining to Dr.Anton's research work can be corresponded through his email- anton.shkaruba@emu.ee.

Speaker: **Dr. Yogesh Gokhale**, TERI, New Delhi, India

Topic: **Nature-based solutions: Future of climate actions at local-level**

Dr. Yogesh' presentation was largely focused on the Indian context of NBS, which is largely rural. The presentation starts with the basics of NBS. NBS were stated to be cost effective, sustainable and long-term solution to mitigate and adapt to climate change. He stressed on the exiting NBS which have been largely forgotten such as traditional techniques of water conservation, community based governance of natural resources, use of compost and change in environment friendly life style. Thus, he pointed that not all solutions are necessarily new and traditional knowledge has an important role in adopting NBS. Next, he showcased the different typologies of NBS, such as environmental movements, sacred groves, germplasm conservation, green buildings, and aquaculture. Some examples of NBS in Indian context includes the implementation of soil and water conservation in over 60million hectare area of land over 50 years, maintaining a network of over 750 protected areas for biodiversity conservation and presence of 200,000 sacred forest across country. A NBS assessment framework was showcased which spreads across various sectoral programmes such as forest and biodiversity, agriculture, land and water management, pollution, energy etc. Different scales such as national, local, urban and rural exist for such framework's implementation. A number of existing challenges with respect to concepts and methodologies of NBS were discussed next. This included lack of methodologies to assess the contribution of NBS in mitigation and adaptation for dryland soils. Other challenges include the (1) north-south divide over natural resource use, which usually puts the burden on developing countries to act (2) lack of accounting for multiplier effects such as recognizing the diverse set of outputs of catchment area treatments and (3) the lack of strong policies and financial push for upscaling NBS solutions, such as organic agriculture. Overcoming these challenges, a number of opportunities and way forward were highlighted. These included (1) moving beyond the conventional business model approach for mitigation and adaptation (2) recognizing, contextualize and promote NBS through conducive policy environment and (3) opting an approach of common, but differentiated responsibilities as the basis, which demands the developed world to strengthen, fund practices in the developing countries. More questions pertaining to Dr. Yogesh's research work can be corresponded through his email- yogeshg@teri.res.in.





Link to Lecture

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