



**Divecha Centre for Climate Change INDIAN  
INSTITUTE OF SCIENCE BANGALORE -  
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## **SEMINAR NOTICE**

**Title: "Developmental trajectories of nations based on equity, historic, responsibility and planetary boundaries".**

**Speaker:** Dr.Soumyajit Bhar, Visiting Assistant Professor (full-time) at Krea University

Dr. Chirag Dhara, climate physicist, and Assistant professor at Krea University

**Date: 10/12/2021**

**Time: 3.30 PM - 5.00 PM**

**Venue: Online using MS Teams**

### **Speaker Bios -**

**Soumyajit** straddles action and academic research with more than 14 years of experience (both volunteering and full time) working with various environmental and sustainability issues. He is a Visiting Assistant Professor (full-time) at Krea University, where he teaches courses at the intersection of Environmental Studies and Economics. He holds a Ph.D. in Sustainability Studies from Ashoka Trust for Research in Ecology and the Environment (ATREE) as part of a unique interdisciplinary Ph.D. program.

**Chirag** is a climate physicist, and currently an Assistant professor at Krea University. His primary area of research is atmospheric physics. He is currently studying near-future changes in global and regional precipitation in response to different aerosol pathways. Other areas of research are climate change impacts, climate policy, and human development in the context of planetary boundaries. Chirag holds two doctorates- quantum theory from the Institute of Photonic Sciences in Barcelona, Spain and Earth system sciences from the Max Planck Institute for Biogeochemistry, Jena, Germany.

## **Abstract:**

A major challenge for humanity today is to articulate a developmental vision that can achieve a reasonable quality of life for the global population of over 7 billion without breaching sustainability limits. The Human Development Index (HDI) (UNDP 2010), which externalizes the planetary pressures of economic growth, promotes misguided development models since countries scoring highest on HDI have transgressed multiple planetary boundaries. The question that arises is whether templates of development exist among the fraternity of nations that may be sustainably scaled to the global population. We study this by constructing a new conceptual framework foregrounding the principles of equity, historic responsibility, and planetary boundaries. We propose a new environmentally-driven measure of human development – called the eHDI – that internalizes the climate and ecological pressures of economic growth. Analysis of the developmental trajectories of countries over the past three decades based on the eHDI reveals profound insights. We identify Panama, Costa Rica, Albania, Sri Lanka, and Georgia as the top exemplar models that can provide reasonably high levels of human development to the entire global population with low environmental pressures. However, a conservative extrapolation of current trends indicates that only the Sri Lankan and Costa Rican trajectories may remain (largely) within planetary boundaries by 2050. Our results, therefore, foreground these two countries as the ones that merit the most focus in sustainability policy studies. We propose modifying the HDI by adjusting for environmental pressures, underpinned by the principles of equity, historic responsibility, and planetary boundaries. Belying its simplicity, this framework provides profound insights into the past and future developmental trajectories of nations.

**ALL ARE WELCOME**