

India's Submission on possible themes for the eighteenth meeting of the research dialogue, to be held in conjunction with SBSTA 64

The following research items are proposed for India for the 18th Research Dialogue to be held in conjunction with SBSTA 64.

i. **Scenario development the 7th Phase of the Coupled Model Intercomparison Project (CMIP7)**

CMIP7 will be a departure in the way in which land-use and land-use change-related emissions will be handled in the models. CMIP7 has called for this aspect to now be resolved within the General Circulation Models (GCMs), whereas in CMIP6, land-use emissions were a boundary condition imported directly from Integrated Assessment Models. Land-use across and within regions is driven by policy and developmental consideration and assumptions about how land-use will evolve in the future can have significant implications for equity. The topic should address work done in this domain so far, the implications of the shift that is planned for CMIP7.

ii. **New approaches to Integrated Assessment Modelling**

IAMs and scenarios from IAMs have been criticized in the past for not considering questions of equity, sustainable development, feasibility among other things. This topic should address the potential for IAMs to resolve some of these issues as well as new analytical tools and integrated assessment frameworks that have emerged to address some of these issues.

iii. **Adaptation Knowledge and Practice**

Strengthening coordination and collation of adaptation experiences, including the development of technical tools and advanced data management techniques.

iv. **Application of Artificial Intelligence in Climate Science**

Assessment of opportunities and concerns relating to the use of AI in climate science, including its role in climate modelling and literature assessment.
