Open Science - The Way Forward for India

"Open Science seeks to make scientific information, knowledge and data available to all. By increasing access to information, it aims to give all scientists, innovators, engineers, entrepreneurs and citizens the opportunity to observe, contribute and create knowledge in the fields of science, technology and innovation. Not only does this approach boost transparency and accountability, it also helps create equal opportunities for all by encouraging engagement with scientific culture."

— Audrey Azoulay, Director-General of UNESCO Message on the occasion of World Science Day for Peace and Development 2019.

There are many fundamental flaws in the way science is being practiced, starting from the problems of equitable access to knowledge and resources to the real applications of scientific knowledge for the benefits of society at large. Considering this situation many high-level bodies such as UNESCO, OECD, European Commission, etc. have recommended the adoption of an "**open science"** environment. Many countries have already articulated open science policies and implementations are underway for many of them.

The Open Science approach to the science fosters cooperation among the stakeholders and therefore helps in the wider dissemination of knowledge, improves accessibility, transparency, and re-usability of research outputs through the utilization of digital technologies.

Recognizing the importance of open science, **UNESCO** [drafted a set of recommendations](#) after detailed stakeholder consultations. The aim of the recommendations is to deliver an international open science policy framework. This framework emphasizes the best practices in science, such as open access, open research data, open evaluation, etc. It also recognizes regional differences in Open Science perspectives, in particular, the specific challenges faced by the scientists and other Open Science actors in developing countries, and contributes to reducing the digital, technological and knowledge divides existing between and within countries. The UNESCO open science policy and practice framework intends to i) develop an enabling policy environment for open science; ii) invest in open science infrastructure; iv) transform scientific culture and incentivization; v) invest in capacity building.

Indian policymakers have realized the importance of open science in making the STI ecosystem of the country more innovative, transparent, efficient, and to build greater societal connect to science. The [new STI policy draft](#) has the entire first chapter on open science. Open Science is an umbrella term that identifies many different components, and the following components have been identified in the policy draft as important in the Indian context-

Open Data Policy for Publicly Funded Research; Open Access; One Nation, One Subscription; Indian Journals; Research Facilities; Open Educational Resources; Libraries; Learning Spaces;

However, so far, most of the post-draft consultations on open science chapters were focused only on open access/ one nation-one subscription. Any discussions on the other important components of the open science chapter are grossly missing. Moreover, any policy is as good as its implementation and we need wider consultations on how to implement the policy suggestions. Therefore, we aim to focus on these issues in our proposed post-draft consultations on the open science chapter.