REGIONAL REPORT (SOUTH ASIA)

OPEN SCIENCE BEYOND OPEN ACCESS: FOR AND WITH COMMUNITIES

A STEP TOWARDS THE DECOLONIZATION OF KNOWLEDGE

INTERNATIONAL WEBINAR SERIES

Organized by:

Canadian Commission for UNESCO & UNESCO Chair in Community Based Research and Social Responsibility in Higher Education.

Supported by:

UNESCO, Delhi Office (Cluster Office for Bangladesh, Bhutan, India, Maldives, Nepal and Sri Lanka), The RRING Project

Tuesday, 17 November 2020

WEBINAR AGENDA

- **Moderator:** Ms. Sumitra Srinivasan, PRIA

- **Rapporteur:** Ms. Niharika Kaul, PRIA

- **Time-** 11 am- 12 30 pm IST

- **Number of registered participants-** 147

- **Number of active participants -** 65

- Welcome Address (10 Min)- Mr. Eric Falt, Director and UNESCO Representative to Bhutan, India, Maldives and Sri Lanka

- Key note presenter introducing Open Science Brief- '*Open Science Beyond Open Access: For and with communities, A step towards the decolonization of knowledge'* (15 Min)- Dr. Rajesh Tandon, Founder-President, PRIA and UNESCO Co-Chair in Community Based Research and Social Responsibility in Higher Education

- Speaker 1 (15 Min)- Prof. Saleemul Huq, Director of the International Centre for Climate Change & Development (ICCCAD)

- Speaker 2 (15 Min)- Dr. Bhavani Rao, UNESCO Chair, Gender Equality & Women's Empowerment (India) (Director, AMMACHI Labs, Director CWEGE)

- Discussants (15 Minutes each)

- Q/A (15 Minutes)

- Wrap Up (5 Minutes)

SPEAKERS

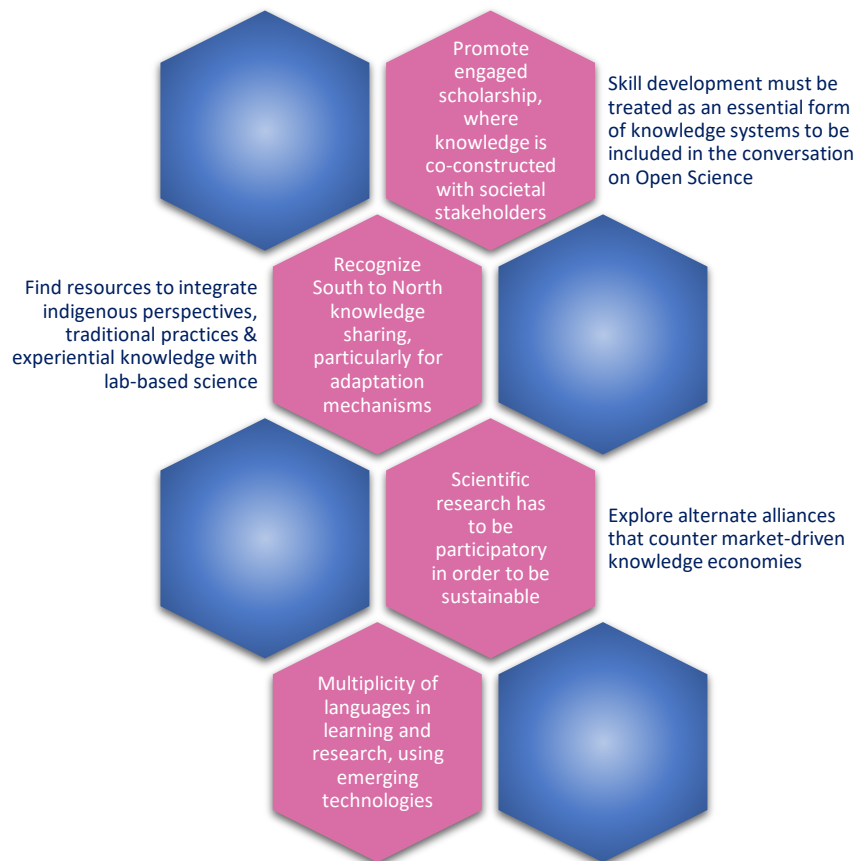**Mr. Eric Falt,**
UNESCO

Dr. Saleemul Huq,
ICCCAD

Dr. Rajesh Tandon,
PRIA

Dr. Bhavani Rao R,
AMMACHI Labs

KEY MESSAGES

Promote engaged scholarship, where knowledge is co-constructed with societal stakeholders

Skill development must be treated as an essential form of knowledge systems to be included in the conversation on Open Science

Find resources to integrate indigenous perspectives, traditional practices & experiential knowledge with lab-based science

Recognize South to North knowledge sharing, particularly for adaptation mechanisms

Scientific research has to be participatory in order to be sustainable

Explore alternate alliances that counter market-driven knowledge economies

Multiplicity of languages in learning and research, using emerging technologies

Opening the discussion
Ms. Sumitra Srinivasan

Ms. Srinivasan welcomed the participants and speakers and set out the objectives and purpose of the 11 international webinars on Open Science hosted by UNESCO Chair in Community Based Research and Social Responsibility in Higher Education in collaboration with Canadian Commission, UNESCO and regional partners. She stated that the webinar was an important one, not only to engage with stakeholders for the UNESCO Recommendation on Open Science, but because the disruption caused by the Covid-19 pandemic has altered science's position in society. The UNESCO Recommendation on Open Science is an international normative document which will be adopted by the UNESCO General Conference next November. These recommendations set the standards, goals and values by which science operates. The policy brief authored by our UNESCO Co-Chairs- Dr. Hall and Dr. Tandon along with several others- titled 'Open Science Beyond Open Access: For and with communities, a step towards the decolonization of knowledge' has buttressed this global movement in highlighting the most pressing issues surrounding Open Science. PRIA, in the last two and a half years has partnered in the RRING project, building a network of individuals who are interested in building a socially responsible relationship between research, innovation and society and aligning research to Sustainable Development Goals (SDGs).

Welcome Address
Mr. Eric Falt

Mr. Falt welcomed the speakers, UNESCO Chairs and participants for being part of the webinar and initiated the dialogue by giving a brief background to the UNESCO Recommendation on Open Science. He quoted the underlying hypothesis "since it is in the minds of human beings that wars begin, it is in those minds that we can build capacities for peace". Under the direction of the Member States, UNESCO developed a range of functional approaches; one is being a laboratory of ideas such as the International Union for Conservation of Nature set up in 1948; the first UN Water Initiative; the Man and Biosphere Idea that became the precursor for Global Vision for Sustainable Development. All these ideas emerged from stakeholders including scientists, activists, and therefore UNESCO became the vehicle to convert them into action. The second function is being a standard setter; we often refer to the normative role of UNESCO for addressing major societal issues that are endorsed through instruments such as declarations or conventions.

In this context, Open Science is a movement that has emerged globally from a need identified by scientists to move barriers, which has been supported by entrepreneurs, investors, policy makers and citizens. However a global understanding of the meaning and challenges of Open Science is still missing. Therefore in the UNESCO General Council Conference in 2019, UNESCO was tasked with creating a coherent vision of Open Science and a shared set of values and principles for an international standard setting instrument on Open Science in the form of the UNESCO Recommendation on Open Science. Since last year, extensive regional and global consultations have taken place. Covid-19 has highlighted the significance of equal access to science for everyone, both as users and as contributors of knowledge.

In October 2020, Mr. Audrey Azoulay, Director General, UNESCO submitted a draft recommendation to UNESCO Member States to give final comments by 31st December. Its main objectives are to come to a common definition of Open Science, create an enabling policy environment, promote investment, transform scientific culture, generate incentives and collaborate with international stakeholders. The definition itself has different components, from open access, open data, open education resources to openness to diversity of knowledge. The values that encapsulate the recommendation are fundamental, which include collective benefit, integrity and transparency. This initiative is less about doing science, than about using sciences to drive a better society with inclusiveness, equity and fairness. Finally, the draft recommendation refers to actions and instruments to remove barriers to science by promoting a common understanding, investing in infrastructure, promoting international cooperation and monitoring progress. He hoped that the discussion of the day could delve deeper into some of the afore-mentioned issues.

Key Note Address
Dr. Rajesh Tandon

Dr. Tandon began the discussion by highlighting the purpose of the web series, which is to open a discussion on Open Science beyond official scientific enterprises and institutions to societal actors and stakeholders. These are abnormal times; where normal science is facing an abnormal virus. Science and scientists are under public gaze as the virus has spread throughout the world. Science is also facing politics of evidence, because policy responses are not necessarily supportive of recommendations given by scientists. Various debates are taking place around the world around prevention and treatment of Covid-19. The science of vaccines is facing competing truths about the efficacy, preventive potential, the usefulness of the vaccine and who will have access to the vaccine.

Questioning the meaning of Open Science, Dr. Tandon stated that there has been a lot of debate around access to data, research findings and during the pandemic, many such open access efforts have speeded up. Journals have started expediting their review process, paid journals have opened their subscriptions free for others, research labs have shared data more freely. Open access has been the historical practice of modern science. Up until the beginning of the 20th Century, scientists were sharing results with others openly, without financial implications as most of these journals were not for profit journals. Over a period of time, access to data was put behind paywalls, which gathered momentum in the 1980s. This was because there was a shift in the perception of knowledge from "knowledge for society" to "knowledge for economy." As the "open access" movement rose, there was clever re-designing of providing paid information, with the advent of the "pay-to-publish" trend. Research funding agencies are including down payment by authors for publishing this information in their research grants. Most of these journals belong to the Global North and publish in English language. Open access is not limited to scientists, it must go beyond to include practitioners and lay persons.

Science must be open to society which motivates the phenomenon of "science citizenship". The choices for investment in science, the results of the knowledge that is produced must be accessible to society as a public benefit. Many research funding agencies in the past few months have been discussing societal relevance of research. This must not remain a pandemic phenomenon and

become a general principle of linking research to societal concerns. Another related issue is the openness to digital technologies. Even today, as online platforms have gained popularity there are many parts of the world where digital access is very weak. This digital divide continues to restrict open access to society. The second form of exclusion is linguistic. Bulk of research in science is now becoming anglo-focussed. By using a mono language, we are excluding access to society.

In terms of openness to other forms of knowledges, the western canon in which science is carried out inside labs is not the only knowledge system in the world today. If Covid – 19 has taught us anything today, it is that practical, local, indigenous knowledge has served families and communities to prevent themselves over the years. Indigenous systems of knowledge on water, agriculture, medicine have been devalued and derailed by these canons of science. There are also contested epistemologies and the western science tends to exclude other forms of epistemologies which may not be codified. One of the recommendations we make to UNESCO is to promote policies for engaged co-construction of knowledge; the relationship between science and society is not one sided but mutually accountable. The governance of journals and research institutes remain euro-centric, male dominated and do not have the diversity. There is a need to find resources to integrate indigenous perspectives, indigenous epistemologies, experiential knowledge with lab-based science. Finally, this conversation about openness to society, openness to other forms of knowledge systems and building capacities must happen with young researchers.

Dr. Saleemul Huq

Professor Huq spoke about how the paradigm shift came about in his journey from traditional science to the Open Science paradigm. The bulk of his work at the International Institute for Environment and Development was working with vulnerable people in vulnerable communities. He had to find ways to make these communities understand the relevance and meaning of climate science since it comes from a western, scientific domain, and how can they be involved in enhancing their abilities to take action in climate change. His team began harvesting stories from these vulnerable communities about their methods of dealing with the pandemic, calling them "Voices from the Frontline". One important element is recognizing and respecting knowledge of these communities as valid experiential knowledge. His own organization (ICCCAD) in Bangladesh focusses on harnessing locally led actions and ensuring that local communities are part of shaping the research, not just beneficiaries of the research. What they have managed to do is bring together the research communities and civil society on a platform called Gobeshona. The Centre also coordinates a network of universities in the least developed countries, the focus of which is South-South knowledge sharing.

In the science of climate change, there is what we call mitigation which refers to reducing emissions of green-house gasses which cause global climate change. The second component is adapting to the impacts of climate change. The year 2020 is not just the year of Covid-19 but also the year of human- induced climate change. In terms of the science of adaption, it is not a theory to practice but practice to theory. It is a learning by doing process, by which people need to do things and learn from those actions. It is the vulnerable communities who are in fact leading the world in this respect because it is them who are coming up with the most effective solutions, simply out of necessity. Monopoly of knowledge in the western world does not apply to the

context of adaptation, since local communities know much better than those in the developed countries.

Dr. Bhavani Rao

Dr. Rao reminded the audience that the prime objective of the SDGs is to leave no one behind. The idea that knowledge belongs to all and that knowledge is a public good is being talked about a great deal. Knowledge must be non-excludable and when we take from it, it does not diminish what is already there. When we talk about open source software, the words "open" and "free" come to mind. The word "open" relates to the production process, while the word "free" refers to the distribution process and relates to who gets access to the knowledge. Both these processes-production/creation of knowledge and its dissemination are important when we talk of Open Science.

Elinor Ostrom came up with eight principles of managing commons. The tragedy of commons was one of the principles which spoke of how commons are mismanaged, that becomes a tragedy to humankind. Ostrom speaks of how management of commons should be participatory. Amrita University strongly believes that whatever research happens is for public good. Social research has to be participatory otherwise it would not be sustainable. It is important to include the voices of those who we are researching about, for facilitating co-creation of research.

Skill training and skill development is the step child of innovation, which is not considered as part of any of these dialogues. However, when we talk of including all kinds and sources of knowledge, skill development forms an important component, both in terms of the cognition as well as motor skills. The huge mass of skilled workers is a very important part of the marginalised voices to be included in this conversation. A search of millions of books with the use of artificial intelligence classified men as chivalrous and brave, while women were seen as pretty and sensual. Therefore what you include within this knowledge repository will then shift perceptions accordingly. The other example of such persisting gender perceptions is the number of women authors cited in research, even in fields dominated by women, is far fewer than men. For understanding vulnerabilities of women, mapping access, awareness and opportunities is relevant, and these three principles apply to Open Science as well. In terms of good practices, there is one international journal – International Studies Review which asks researchers to explain their citation gaps which is a positive step towards having a participatory approach in creating Open Science. If knowledge is created by the commons, it must be governed by the commons, and includes giving back to the commons. The question that emerges from this conversation is that how can we bring this knowledge to local communities, to be accessed by everyone in a language they understand and the capacity to add back to everyone. Discussions about "internet for all" can lead to redistribution of power, but is not necessarily equitable and transparent. Review process of research is in the hands of few scientists, who in turn determine what is valid science. Two kinds of feedback come from such a process. One kind comes from those who know, second kind comes from what is tested over time. We have knowledge systems that stood the test of time and peer-reviewed by time, but that kind of knowledge also needs to be brought out and the two kinds must talk to each other.

DISCUSSANTS

Dr. J. Prabhakar Rao, Professor of Linguistics, Adjunct Professor, Department of Foreign Languages and Literature, Asia University

Openness of science is connected with openness of education. When we treat education as commodity, we treat science also as commodity. We need to provide free education to all so that science can also become open. In terms of linguistic angle of science, science has to be translated into vernacular languages through use of technology and artificial intelligence. University of Hyderabad has been working as a nodal centre for building machine translation systems in local languages. UNESCO must take initiative in exploring ways in which emerging technologies can be used to make science more open and accessible. In terms of indigenous knowledge, "imported" knowledge from the west often devalues indigenous knowledge. There has to be amalgamation of indigenous and modern scientific knowledge for knowledge systems to be sustainable and participatory.

Dr. Mira Shiva, Director, Initiative for Health, Equity and Society

She strongly endorsed that Open Science has to be participatory, give respect to other knowledge systems, but also counter market-friendly, corporate research which is shown as the only solution and pushed down the public discourse as the "norm".

Q&A

Myth around world university rankings

Universities in the Global South are compelled to participate due to the chain reaction of trickle-down economic implications. A better ranked university has more access to funding. Ranking depends on the number of publications in Q1 journals, wherein quantity is valued more than quality. This is part of the big problem of academic/intellectual imperialism that Open Science (and Open Social Science) has to address. We tend to measure the inconsequential precisely and call it research or knowledge. University rankings are similar to this concept. There is a positive initiative called "University Wankings" which counter university rankings, calling the latter a colonial project. The ranking system of researchers, publications in limited journals creates exclusion and discrimination.

Peer reviewed system

The peer-reviewed system appears robust, but by its own logic, it prevents path-breaking discoveries - it only allows incremental changes because of the process followed. It impresses on researchers to be 'respectful' of the knowledge in the minds of the peers, if the new research has to be approved by other peers and to see the light of day, and hence breeds conformism. We need to have some mechanisms to prevent such practices. We need to enforce ethics of research to avoid stealing work.

London School of Hygiene & Tropical Medicine (LSHTM) two decades ago had a research protocol that no agreement could be signed by a funder without a clause that LSHTM had the right to publish the results of the research if the funder didn't publish them, emerging from the practice of

funders to not publish an "adverse" result report. This should be made a mandatory part of all funding arrangements, otherwise institutes like LSHTM would be avoided by the funders.

Approaches to make indigenous knowledge systems more accessible

Apart from translation, one approach to get access to knowledge across languages and cultures would be to organize sub groups and encourage discussion among them. With the current digital use, that is possible. It will also keep the vernacular language and local knowledge identities. Why should Ayurveda researchers need to get the nod of western researchers for legitimizing their knowledge? Let the Ayurveda researchers be taught the principles of scientific methodology, presentation skills and other skills and let them do it in the manner they think fit. Ayurveda researchers struggle to translate their principles to western concepts to get any kind of nod on their work. This makes it an uphill challenge. For example, there is no known physiological equivalent of the Doshas (Kapha, Vata, Pitta). It is equally important to make sure any research that is done with them gets back to them.

Increasing knowledge sharing via national language along with global concerns, and making popular interdisciplinary knowledge practice could make the movement of open science more successful worldwide. In terms of misusing local knowledge, often modern labs set up their system to extract the local (knowledge) and material resources; then they take credit for it and commercialize it. Just acknowledgement is not enough, physical relief is necessary for local communities whose indigenous knowledge has been stolen from them and led to misappropriation of their local resources.

Intellectual Property Rights (IP Rights)

IP Rights are a form of private monopoly control and act as a barrier to access medicines. We need to support the India South Africa waiver proposal for access to medicines, diagnostic tests under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Private financing of research resulting in patenting of knowledge is not the right response of science in society. One has to refocus on how knowledge is produced, and whether source of information is open or not, not just the packaged information.

Partnerships for encouraging harnessing local knowledge systems

Consolidated alliances which are often formed in pursuit of money and power hinder new forms of alternate alignments and local interventions. We must all question and explore what are these new kinds of alliances that we need to get in touch with, because this touches everyone's right to knowledge. Seeing the linguistic challenges, we need to localize our networks in our regions. Building a coalition of practitioners, community leaders, scientists is extremely important. Gobeshona is one such platform which we can explore.

Closing comments

Dr. Tandon focussed on the importance of challenging hegemony of knowledge. Science continues to be relevant and the pandemic is bringing issues such as climate change in public domain more forcefully. Therefore UNESCO's initiative on Open Science gives us an opening and Dr. Tandon encouraged everyone to feed into this global movement so that it is as representative of local voices as possible.

Dr. Rao voiced her concern about ensuring that this movement did not become a tragedy of the commons, where the information is misused by some. There must be rules and etiquettes around how the Open Science mechanism is built. The rules will be governed by a community of Open Science so its very important that we all actively participate in this mechanism building process.

Ms Srinivasan closed the discussion by suggesting that all stakeholders, ranging from scientists, civil society, researchers, diverse individuals and the common person must participate in research and innovation, both in India and globally. This includes gender equality, making research practices accessible and being guided by ethical principles instead of just market considerations.