

The Open Access Interviews: Dr Indrajit Banerjee, Director of UNESCO's Knowledge Societies Division

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The [mission](#) of [UNESCO](#), which was founded in 1945, is to “contribute to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information.”

An important plank in that mission is a commitment to help build inclusive and equitable knowledge societies. We should not be surprised, therefore, that UNESCO supports the Open Access movement, we should not be surprised that it was the [first UN agency](#) to adopt an [OA policy](#), and we should not be surprised that it now makes its [own publications](#) Open Access.



Dr Indrajit Banerjee*

Today UNESCO's OA repository ([OAR](#)) provides free access to over 500 of its own books, reports and articles in over 11 languages, and in recent years it has created a number of OA portals, directories, knowledge banks and Open Access indicators.

In actual fact, argues Indrajit Banerjee, a commitment to both openness and to science has been implicit in everything UNESCO has done since it was founded in 1945. Immediately after the Second World War, for instance, it was one of the chief architects of the portion of the 1948 [Universal Declaration of Human Rights](#) aimed at safeguarding the rights of researchers. Specifically, [Article 27](#) of that declaration asserts that everyone has the right to freely share scientific advancement and its benefits.

Subsequently, in 1974, UNESCO proposed a set of special recommendations concerning the status of science researchers; and in 1999 it organised a World Conference where a [declaration on science and the use of scientific knowledge](#) was agreed.

UNESCO's advocacy for Open Access as such began shortly after the 2003 Budapest Open Access Initiative ([BOAI](#)), where the term Open Access was first adopted, and a definition of OA agreed. That year UNESCO had its first high-level success in OA advocacy, when it successfully lobbied for universal access to scientific information and knowledge to be included as one of the Action lines ([C3](#)) of the World Summit on Information Society ([WSIS](#)) process.

In 2009, UNESCO was requested by its member states to draw up a strategy for Open Access, a strategy approved at UNESCO's 187th session in 2011. This contains a set of short, medium and long-term action plans (to be achieved within set time frames) to assist governments strengthen the processes for granting irrevocable rights of access to copy, use, distribute, transmit and make derivative works of research outputs in any format, within certain constraints.

The strategy also stresses that UNESCO should place particular emphasis on making publicly-funded scientific information (journal articles, conference papers and datasets of various kinds) freely available.

As a global organisation with [195 member states and 9 associate member states](#), much of UNESCO's work takes place at the level of national governments and regions. To that end it regularly convenes high-level meetings in order to educate national governments about the benefits of OA. It also commissions research, reports, and guides on OA (often in partnership with other large organisations like the EU).

Given its broad mission, UNESCO views Open Access not as an end in itself, but as one of a number of important tools that can help achieve its wider objective. The toolkit includes other free and open approaches like Open Data, Open Educational Resources, and Free and Open Source Software, plus tools designed to facilitate and encourage sharing such as Creative Commons licences.

Above all, UNESCO believes that the success of OA depends on effective capacity building. In the context of OA this implies facilitating “a set of activities to improve awareness, knowledge, skills and processes relevant to the design, development and maintenance of institutional and operational infrastructures and other processes for implementing Open Access”.

And with its focus on creating inclusive and equitable knowledge societies, UNESCO approaches Open Access from the perspective of human rights and the eradication of poverty, and sees ICTs playing a vital role in achieving its objectives in these areas. Its [two global priorities](#) currently are Africa and gender equality. As such, it is determined to ensure that Open Access is implemented in ways likely to help, rather than further marginalise, developing nations, and in a gender neutral way.

In light of all this, as the UN's [Millennium Development Goals](#) give way to the [Sustainable Development Goals](#), UNESCO is keen to embed Open Access into the new goals, viewing OA as a vital tool for achieving them.

Given its international perspective, and its authority, UNESCO also believes that it is ideally suited to oversee a global debate on Open Access, a debate that – in light of the growing danger that Open Access could end up excluding rather than including the developing world – is now pressing. To this end, UNESCO hopes to organise the first international congress on OA.

To get a better sense of UNESCO's interest in, and work on, OA, and what it feels to be the key issues going forward, I sent seven questions to the director of UNESCO's [Knowledge Societies Division](#) Indrajit Banerjee. The answers turned out to be admirably comprehensive, so I list a few choice quotes from Banerjee's answers below. I urge everyone to read the full text.

UNESCO's INTEREST AND ROLE IN OPEN ACCESS

- *The primary reason for UNESCO to be involved in Open Access stems from the fact that the organization believes in “Maintaining, increasing and diffusing knowledge by encouraging cooperation among the nations in all branches of intellectual activities”.*
- *UNESCO's role in the global Open Access movement is to foster OA at the highest possible level by continuing to build on the pillar of universal access to information and knowledge to empower local communities by bringing experts together and utilizing its global network of regional and field offices, Institutes and Centres.*
- *Guided by the organization's founding principle that universal access to information is the key to building peace, sustainable economic development and intercultural dialogue, UNESCO must continue to raise awareness, formulate policies and build capacities to promote Openness in content, technology and processes, with particular emphasis on scientific information.*
- *In an era where the World Wide Web plays an increasingly vital role in the intellectual development of societies, information digitization has revolutionized the means by which we*

share knowledge. As the ‘intellectual’ agency of the [United Nations](#), [UNESCO](#) has a central and critical role in encouraging the universal sharing of all forms of knowledge in real time to build inclusive Knowledge Societies. This may be through the classical form of dissemination, but more importantly by supporting the Open Access movement enabled through the power of the Internet.

UNESCO’s VIEWS ON CURRENT ISSUES IN OPEN ACCESS

- *We understand that OA publications are underrated because there is a lack of a policy that fully respects the effort behind the publications. There is a serious concern about peer review processes employed by OA journals.*
- *There is an increasing concern that although the OA mode of research publication is becoming increasingly popular, it has not positively impacted the ability of researchers from developing countries to publish their research works.*
- *The policy issues surrounding OA, adoption of policies (and/or mandates), implementation of policies (and/or mandates), monitoring and evaluation of these policies (and/or mandates) still need to be improved for most countries.*
- *Furthermore, in the countries which have formulated and established OA policies/mandates, they have not been able to produce any solid evidence that OA is indeed having a positive impact on knowledge production and dissemination in the country. As the contribution of Open Access to the cost of research saved and the amount of knowledge gained are still not properly evaluated, the condition of “lead-by-example” is lacking.*
- *We have also noted that within countries, those who can make a difference still lack a good understanding of OA and therefore do not fully support the OA movement, for fear of job loss and negative impact on its publishing industry.*
- *Development, sophistication or understanding of OA is not evenly distributed, by geography or by subject. There is a strong need for the cross-fertilization of ideas and conditions for synergy to be properly discussed and explored in their entirety.*
- *As the Global South catches up with the North in terms of scientific output, for instance, it allows for greater innovation in OA, and provides opportunities for developed countries to adopt some of the less costly OA methods that have emerged in developing countries. So, for instance, innovation in Latin America is enabling a lower APC cost base. New models like this could benefit the North.*
- *At the same time, innovative methods from the North are being implemented in some developing countries. This cross-fertilisation could be very productive and so we are documenting the processes involved.*

UNESCO’s PLANS FOR OPEN ACCESS

- *OA is central to UNESCO’s activities in the future. It is part of our [Open Solutions](#) programme and we are convinced that Open Access should be an integral agenda in any effort to create Knowledge Societies.*
- *UNESCO must mobilize stakeholders to organize regional consultations and explore the possibility of organizing the first international congress on Open Access to scientific information and research. This international congress should analyse the existing national and*

international legal framework concerning Open Access and examine the necessity for the elaboration of a new international instrument.

- UNESCO must also play a role in combining the context of Open Access within the broader understanding of Openness and link it with [Open Educational resources](#) (OER); [Open Training Platform](#) (OTP) and [Free and Open Source Software](#) (FOSS).
- UNESCO is also concerned about the role that Open Access can play in realizing [Post-2015 Development Goals](#). Dedicated research is currently on going to identify the potential of Open Access within the broader context of [SDGs](#).
- As a specialized agency of the UN system, UNESCO is playing its part in analyzing the concern about poverty (and other human challenges) and is committed to making Open Access one of the central supporting agendas to achieve the SDGs.
- Out of 17 goals proposed for the next SDGs, at least 10 goals need constant research inputs. Given that these goals must be achieved globally, there is an absolute need for any restriction to disseminate research outputs to be comprehensively addressed. So in the next 15 years, OA to research will play a fundamental role in supporting efforts to achieve these goals.
- UNESCO is working with its partners to provide a closer look at the Impact Factor. While the existing bibliometric, scientometric and altmetric approaches are robust, their upstream usage has remained very limited.
- The extent to which the Knowledge Divide is narrowed, and to which we are able to create societies that are truly Knowledge Societies, will determine the pace of development. OA has the potential to lessen the existing knowledge divide. This gap goes beyond the rifts in mere access to ICT. It refers to the gaps that exist across all the four building blocks of Knowledge Societies, namely: Knowledge Creation; Knowledge Preservation; Knowledge Dissemination; and Use of Knowledge.
- Opening access to knowledge is thus a fundamental part of the approach that can open and address the many jagged facets of Sustainable Development. OA uses ICTs to increase and enhance dissemination of scholarship. Sustainable Development and the creation of Knowledge Societies therefore are two sides of the same coin.
- The theme of inclusive [Knowledge Societies](#) continues to be at the heart of [UNESCO](#)'s work to fulfil the [WSIS](#) objectives. Inclusive Knowledge Societies are societies in which people have ready access to information and communications resources, in languages and formats that suit them, and the skills to interpret and make use of them. The Organization's future work will thus be to establish the context of OA within the broader framework of inclusive Knowledge Societies. [UNESCO](#) will continue to pursue this objective vigorously through its own programmes on OA as well as in partnership with other organizations and [UN](#) agencies.

The interview begins

Q: WHEN AND WHY DID [UNESCO](#) FIRST BECOME INTERESTED IN OA?

A: This is a very interesting question and requires me to revisit some 70 years of existence of [UNESCO](#).

The modern definition of Open Access (OA) is the provision of free access to peer-reviewed, scholarly, research information (both scientific papers and research data) to all. It envisages that the rights-holder grants worldwide irrevocable right of access to copy, use, distribute, transmit, and make derivative works in any format for any lawful activities with proper attribution to the original author.

Through Open Access, researchers and students from around the world gain increased access to knowledge, publications have greater visibility and readership, and the potential impact of research is heightened.

When the context of Openness was initially envisaged at [UNESCO](#), it carried a different connotation, but it directly sought to open science and research outputs and make them available to everyone—primarily to foster global peace and stability.

I am sure all of these processes aided in the conceptualization of the Open Access movement of today.

[UNESCO](#) is a specialized United Nations Agency founded in 1945 by thirty seven countries as an organization focused on building peace in the minds of humanity.¹ [UNESCO](#) began its activities related to the sciences, and to openness, immediately after the Second World War.

Since its founding in 1945, [UNESCO](#) has acted as a catalyst for the establishment of many, now leading, scientific unions and bodies such as [CERN](#), [IUCN](#) and [ICIMOD](#); and initiatives such as [IOC](#) and [IHP](#) with far-reaching implications for sustainable human security and well-being.

[UNESCO](#) was one of the chief architects for the portion of [The Universal Declaration of Human Rights](#) adopted by the [UN](#) on 10 December 1948 that aimed at safeguarding the rights of researchers. [Article 27](#) of the declaration provides that everyone has the right to freely share scientific advancement and its benefits.

On 20 November 1974, [UNESCO](#) brought out a set of special recommendations on the Status of Scientific Researchers. The World Conference that [UNESCO](#) organized on 1 July 1999 agreed on a [declaration on science and the use of scientific knowledge](#).

[UNESCO](#) was kept in the loop of the Berlin-Budapest and Bethesda processes, and thus in 2003 in Geneva, [UNESCO](#) lobbied to include Universal Access to Scientific Information and Knowledge as one of the Action lines (C3) of the [World Summit on Information Society](#) (WSIS) process. [UNESCO](#) still acts as a lead to this action line along with other partners.

Since taking the lead in the [WSIS](#) process, [Member States](#) have recognized that one of [UNESCO](#)'s overarching goals should be to build inclusive [Knowledge Societies](#) by harnessing information and communication technologies to maintain, increase and diffuse knowledge in the fields of education, sciences, culture, and communication and information.

At that point [UNESCO](#) recognized the relevance and context of Open Access to scientific information and research as one of the key programmes that can help build [Knowledge Societies](#).

¹ Today there are 195 member countries and 9 others are associated members.

The primary reason for [UNESCO](#) to be involved in Open Access stems from the fact that the organization believes in “Maintaining, increasing and diffusing knowledge by encouraging cooperation among the nations in all branches of intellectual activities”.

It strongly supports the building of inclusive [Knowledge Societies](#); leveraging new technological innovations and supports the principles of ‘Openness’, ‘Inclusiveness’, ‘access and sharing of contents, technologies and processes’ that generate information and knowledge. Scholarly communication and research forms a major part of information and knowledge.

Q: WHAT HAS [UNESCO](#) DONE SO FAR IN ORDER TO SUPPORT/PROMOTE OA?

A: Building on the momentum that [UNESCO](#) created during [WSIS](#) for Open Access to Scientific Information and Research, the German National Commission for [UNESCO](#) published a Handbook entitled “[Open Access : Opportunities and Challenges](#)” in 2005. Published by the EU, this report still serves as a reference book to introduce Open Access.

From 2007-9, [UNESCO](#) organized a series of meetings in different parts of the world to raise awareness among policy makers. These meetings were organized within the broader framework of Access line [C3](#) of the [WSIS](#) recommendation.

In 2009, [UNESCO](#) was requested by the 195 [Member States](#) to draw up a strategy for Open Access. The [UNESCO](#) Executive Board approved an Open Access Strategy for [UNESCO](#) at its 187th session in 2011.

The strategy contained a set of short, medium and long-term action plans with definite time frames to assist governments to strengthen the processes to grant irrevocable right of access to copy, use, distribute, transmit and make derivative works of research works in any format within certain constraints. The implementation of the OA Strategy complements the framework of the [Information for All Programme](#) (IFAP).

The strategy has tasked [UNESCO](#) to promote OA, with particular emphasis on scientific information (journal articles, conference papers and datasets of various kinds) emanating from publicly funded research.

Working with partners, [UNESCO](#) thus is improving awareness and utility about OA and providing various solutions to foster the benefits of OA among policy makers, researchers and knowledge managers.

For this [UNESCO](#) takes maximum advantage of its global network of Field Offices, Institutes and Centres. [UNESCO](#)’s action on OA supports the action line [C3](#) of [WSIS](#) process and is directly relevant to improve access to Information and Knowledge.

As you would agree, a sound universal campaign for Open Access must begin at the local or regional level. Thus, [UNESCO](#) continues its efforts in organizing and participating in meetings/discussions that address country specific or region specific constraints and limitations to promoting Open Access to scientific research.

‘[The Regional Consultation on Open Access to Scientific Information and Research](#)’ organized jointly by [UNESCO](#) and the National Library of Belarus in 2012 or [Regional Latin American And Caribbean Consultation On Open Access To Scientific Information And Research](#) organized jointly by the Government of Jamaica, University of West Indies and the UNESCO National Commission for Jamaica in 2013 are examples of [UNESCO](#)’s effort to identify and draft recommendations to advance Open Access in this region.

In 2012, as part of its Open Access Strategy for providing policy advice and facilitating policy development, [UNESCO](#) issued ‘[Policy Guidelines for the Development and Promotion of Open Access](#)’,

which serves the needs of OA policy development in [Member States](#) at the government, institutional and funding agency level.

The overall objective of the Policy Guidelines is to promote OA in [Member States](#) by facilitating understanding of all relevant issues related to Open Access. The Policy Guidelines can be used by individuals as a basic text on Open Access and related policies. The published version is available in French, English, Spanish and Arabic.

A few interested countries, such as Mexico, St. Kitts and Nevis and Cambodia were given policy development support. For example: as a first step towards making Science and Technology more accessible to the people of Mexico, the [Knowledge Societies Division](#) of [UNESCO](#) was invited as an expert in the workshop related to the ‘[Analysis of Legislation in the field of Open Access and Access to Scientific Information](#)’ organized by the Senate Committee on Science and Technology and the [National Council of Science and Technology](#) (CONACYT).

[UNESCO](#) reinforced the efforts of [CONACYT](#) in providing policy development and implementation in Mexico. As a result, earlier this year, Mexico became the second country in Latin America to have a policy on Open Access at the national level.

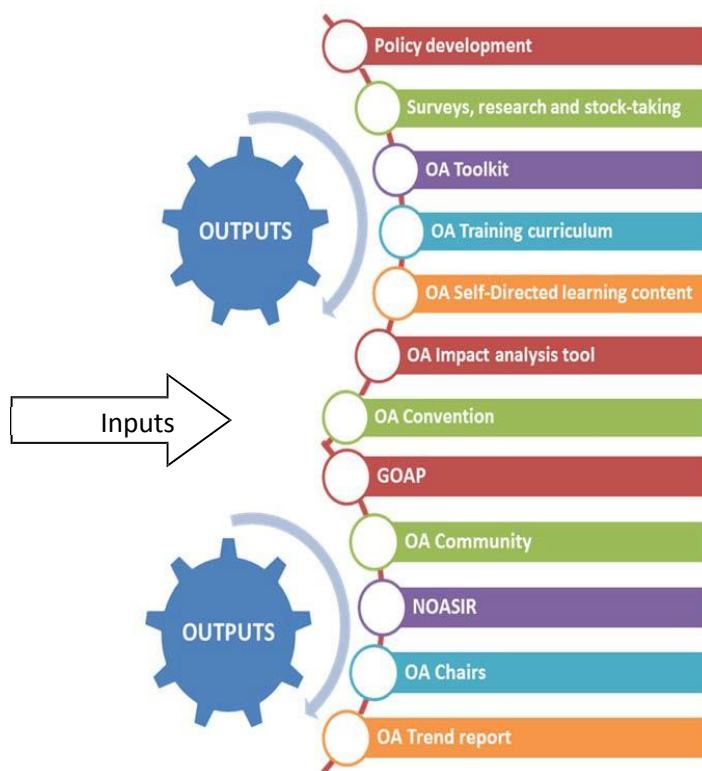
[UNESCO](#) actively engages in reinforcing national policies by sorting out local institute level or university level constraints towards a movement for opening up scientific research.

This often requires encouraging the establishment of institute/ university level mandates and raising awareness to educate scientific researchers themselves about the advantages of increasing the visibility to their research by OA publishing, OA sharing and Open Contents.

An example can be seen in [UNESCO](#)’s activities in Open Access Weeks, where, together with [INASP](#), universities and institutions primarily in developing countries are annually awarded 10 small grants to organize events.

The successful implementation of national Open Access policies is followed up and documented by other bodies operating under [UNESCO](#), such as the [UNESCO Institute for Statistics](#) (UIS), where an elaborate database is maintained for country-wise indicators through direct contact with national S&T statisticians.

[UNESCO](#) collects and freely shares data that can be utilized to compute indices such as the Gross Domestic Expenditure on Research and Development (GERD), which is one of the primary inputs to calculate the Global Innovation Index (GII), which provides a good measure for the total research intensity, innovativeness and research output of a country.



Such statistical proof of the impact of Open Access becomes a driving force for further encouraging researchers to publish their work openly, institutes to establish OA mandates and countries to establish national OA policies.

In order to improve tracking of Open Access, [UNESCO](#) is working with its partners to develop a set of indicators. In August 2014, [UNESCO](#) partnered with [CLACSO](#), [SciELO](#), [RedALyC](#), [AJOL](#) and [FLACSO-Brazil](#) to undertake detailed research on Open Access in Latin America.

The outcome of this research is published in a book entitled '[Open access Indicators and Scholarly Communications in Latin America](#)'. This publication not only documents the success of the joint research and development project in the LAC region, but also provides a testimonial of how [UNESCO](#) brings different stakeholders together for a product of global interest.

Similar initiatives are already on going for Africa and the Asia Pacific. Here, we appreciate and recognize the effort of the EU, which undertook a similar study for its constituencies. At [UNESCO](#), we avoid duplicating efforts as much as possible and invite calls for partnerships from other interested stakeholders.

In 2012-2013, in order to enhance capacities at various levels, [UNESCO](#) undertook a **global capacity assessment survey on OA**. Using a Delphi method, capacity enhancement needs were identified. Based on curricula thus developed, three volumes divided across 11 individual modules were produced to benefit the larger Open Access community.

For example, to raise awareness among the young scientists about the advantages of Open Access to scientific research, [UNESCO](#)'s curricula provide a guided understanding on issues related to (i) Scholarly Communications; (ii) Concepts of Openness and Open Access; (iii) Intellectual Property Rights; (iv) Research Evaluation Metrics and (v) Fundamentals of Sharing Work in Open Access.

Currently [UNESCO](#) is working in South Asia and the MENA regions on a strategy that would **link Open Access with Open Sciences**. At the global level, [UNESCO](#) is currently **working to make Open Access inclusive by bringing the issue closer to people with various forms of disability**.

[UNESCO](#) is also concerned about the role that Open Access can play in realizing [Post-2015 Development Goals](#). Dedicated research is currently on going to identify the potential of Open Access within the broader context of [SDGs](#).

Within the framework of the overarching objective of "Enabling Universal Access and Preservation of Information and Knowledge", [UNESCO](#) is actively engaged in promoting the sharing of information through the **establishment of 'Knowledge Banks'** to reinforce its fundamental goal of ensuring that all knowledge created is made available to the widest possible audience.

In 2013, [UNESCO](#) launched its [Open Access repository \(OAR\)](#) that provides free access to over 500 [UNESCO](#) publications (books, reports and articles) in over 11 languages.

The launch of the OAR follows [UNESCO](#)'s decision in April 2013 to become the first UN agency to adopt an [OA policy](#) for its publications and is believed to further raise awareness of the Organization's activities related to Open Access.

It must also be mentioned that in 2014, as part of its OA strategy which focuses on strengthening capacities to adopt OA, [UNESCO](#) provided **Guidelines to compare Institutional Repository Software in the publication entitled '[Institutional Repository Software Comparison](#)'**, which compares the five most widely adopted IR platforms: [Digital Commons](#), [DSpace](#), [Eprints](#), [Fedora](#) and [Islandora](#). These guidelines are intended to help libraries focus on which features will help facilitate the success of their repository.

The [Global Open Access Portal \(GOAP\)](#) which was launched during the 36th General Conference is a service maintained by [UNESCO](#) to provide country-wise distilled information regarding the framework surrounding Open Access in [UNESCO Member States](#). It acts as a global-scan of Open Access processes worldwide and presents a critical assessment of major barriers to OA for each country.

As a further step, the [Directory of Open Access Scholarly Resources \(ROAD\)](#) is a service which is supported by the Communication and Information Sector of [UNESCO](#) to provide free access to a subset of the [ISSN register](#) (journals, conference proceedings and academic repositories).

Together, [ROAD](#) and [GOAP](#) provide a single access point for an overview of Open Access scholarly publication in at least 149 countries, with respect to funding, advocacy, and mandates.

Q: WHAT DO YOU BELIEVE TO BE THE PROPER ROLE FOR [UNESCO](#) WITHIN THE GLOBAL OA MOVEMENT, AND WHY?

A: In an era where the World Wide Web plays an increasingly vital role in the intellectual development of societies, information digitization has revolutionized the means by which we share knowledge. As the ‘intellectual’ agency of the [United Nations](#), [UNESCO](#) has a central and critical role in encouraging the universal sharing of all forms of knowledge in real time to build inclusive Knowledge Societies. This may be through the classical form of dissemination, but more importantly by supporting the Open Access movement enabled through the power of the Internet.

[UNESCO](#)’s role in the global Open Access movement is to foster OA at the highest possible level by continuing to build on the pillar of universal access to information and knowledge to empower local communities by bringing experts together and utilizing its global network of regional and field offices, Institutes and Centres.

Guided by the organization’s founding principle that universal access to information is the key to building peace, sustainable economic development and intercultural dialogue, [UNESCO](#) must continue to raise awareness, formulate policies and build capacities to promote Openness in content, technology and processes, with particular emphasis on scientific information.

[UNESCO](#)’s role lies in 4 areas:

i) Advocacy Role

The existing policy vacuum places our role in advocacy at the top of our list of priorities. With the government affiliated network that [UNESCO](#) has, it is best placed to provide upstream policy advice on development of OA policy to its [Member States](#) and their research institutions. This would involve building the capacity of national decision-makers and personnel of research institutions to draft and implement OA policies.

[UNESCO](#)’s assistance must focus on building national capacities to undertake a review of the production of scientific information and policy analysis leading to prepare comprehensive national OA policies integrated into the national systems of research and development.

As there is still much confusion about Open Access at the higher policy making sphere, using its convening power, [UNESCO](#) must raise global awareness about the advantages of OA to encourage policy development in [Member States](#).

[UNESCO](#) must mobilize stakeholders to organize regional consultations and explore the possibility of organizing the first international congress on Open Access to scientific information and research. This international congress should analyse the existing national and international legal framework

concerning Open Access and examine the necessity for the elaboration of a new international instrument.

ii) Cooperation and Partnership Role

Open Access to scientific information is a global programme, therefore highlighting the need to strengthen it through partnerships and collaborations with publishers, universities, research institutions, libraries and specialized national and international non-governmental organizations (NGOs).

[UNESCO](#)'s role is thus to initiate and support the establishment of a Network for Open Access to Scientific Information and Research (NOASIR) and consider the best possible way to support institutional OA archives and journals in various disciplines by research institutions; encourage researchers and scientists to publish in OA journals and deposit their works in OA repositories; encourage publishers to offer more journals and articles in OA; support research and development in OA technologies, policies and practices; provide access to scientific journals in developing countries; and serve as a laboratory for innovation and as a catalyst for international cooperation.

In line with the [Research4Life](#) programme of other [UN](#) organizations and potentially with [UNESCO](#), the Organization's role would be to enhance access to scientific publications in Science, Technology/Engineering and Mathematics (STEM) and Humanities and Social Sciences (HSS) journals for developing countries.

While [UNESCO](#) must continue to engage with the scientific journal publishers to join the OA movement, research institutions and funding agencies must also be encouraged to create specific funding schemes to support publication fees in OA journals, and support researchers from the developing countries.

The [UN](#) system as a whole is one of the major publishers of documents. [UNESCO](#), therefore, has a role to establish systematic cooperation and improve coordination with regard to OA within UN agencies, such as the [World Health Organization](#) (WHO), [Food and Agriculture Organization](#) (FAO), [United Nations Environment Programme](#) (UNEP), [World Intellectual Property Organization](#) (WIPO), regional bodies like the [European Commission](#) (EC), as well as non-governmental organizations (NGOs) and foundations.

The Organization must continue to facilitate the OA activities of the [United Nations Group on the Information Society](#) (UNGIS) within the framework of the [World Summit on the Information Society](#) (WSIS).

iii) Role in Capacity Enhancement

It is important that national and institutional capacity is increased to develop, maintain and sustain OA repositories and journals. [Member States](#) must be facilitated to organize workshops and training programmes on OA that would cover policy, planning and implementation issues. It will also cover development of software expertise to maintain repositories for scientific and educational materials.

Suitable guidelines and manuals in the form of toolkits shall be developed in print, interactive CDs and online versions to support the workshops and training activities.

[UNESCO](#) will have to play the role of the standard setter in OA by developing curricula and courses for adoption and adaptation in the curricula of Library and Information Science Schools of the [Member States](#).

iv) Role to Serve as a Clearing-House to Support the Global OA debate

[UNESCO](#) with its global network of offices and support of [Member States](#), must encourage and support research and evaluation of the impacts of OA on the advancement of knowledge.

This may include preparation of operational user studies, citation studies, impact factor analysis, and in-depth studies on the visibility of researchers and research institutions.

With its purview of operation, [UNESCO](#) must also promote regional, subject-specific and indigenous knowledge repositories in different languages. Given its global position and orientation, [UNESCO](#) is rightly placed to produce a periodic state-of-the-art publication on world trends, issues and best practices in OA.

[UNESCO](#) must also play a role in combining the context of Open Access within the broader understanding of Openness and link it with [Open Educational resources](#) (OER); [Open Training Platform](#) (OTP) and [Free and Open Source Software](#) (FOSS).

All of these programs are already housed under one roof, which provides a strong justification to cultivate existing synergy between these programs.

Q: WHAT DO YOU BELIEVE TO BE THE KEY ISSUES FACING OA RIGHT NOW GLOBALLY?

A: The key issues related to the current OA scenario lie within the following four areas: advocacy, bridging, capacity building and dissemination:

i) Adaptation of policies and advocacy:

The policy issues surrounding OA, adoption of policies (and/or mandates), implementation of policies (and/or mandates), monitoring and evaluation of these policies (and/or mandates) still need to be improved for most countries.

In 2005, the [Handbook of Open Access](#) had rightly noted that there is an uncertain legislative framework surrounding Open Access. This situation has not changed much since 2005 - whether it is in the appreciation of Open Access publications over those published in subscription based journals or that which is linked to the Article Processing Charges levied to authors.

We understand that OA publications are underrated because there is a lack of a policy that fully respects the effort behind the publications. There is a serious concern about peer review processes employed by OA journals. There is an increasing concern that although the OA mode of research publication is becoming increasingly popular, it has not positively impacted the ability of researchers from developing countries to publish their research works.

There are similar issues that can be addressed by formulating a sound policy and ensuring its effective implementation.

We have also noted that within countries, those who can make a difference still lack a good understanding of OA and therefore do not fully support the OA movement, for fear of job loss and negative impact on its publishing industry.

Furthermore, in the countries which have formulated and established OA policies/mandates, they have not been able to produce any solid evidence that OA is indeed having a positive impact on knowledge production and dissemination in the country. As the contribution of Open Access to the cost of research saved and the amount of knowledge gained are still not properly evaluated, the condition of “lead-by-example” is lacking.

It is therefore essential that the policy issues surrounding OA (or Openness, *sensu grosso*) are supported with a sound implementation, monitoring and evaluation frameworks to ensure their effectiveness.

ii) Bridging the Knowledge Divide:

Development, sophistication or understanding of OA is not evenly distributed, by geography or by subject. There is a strong need for the cross-fertilization of ideas and conditions for synergy to be properly discussed and explored in their entirety.

This requires fostering frameworks for backward and forward linkages between those who have knowledge on OA with others who lack sound knowledge about the issue. Although several excellent initiatives have been launched in the recent years, the Knowledge Commons still suffers from the lack of good “bridging” frameworks.

Similarly, a sound system of subsidiarity is still not established in the domain of Open Access to scholarly communication. Consequently, OA is increasingly becoming an up-stream agenda. (In other words, decisions about Open Access are having to be taken not at the level of the researcher, but at the level of funders and governments).

Bridging efforts thus are also required to bring OA to the common people, students, etc. The recently held [OpenCon](#) or the efforts made to make Open Access inclusive by bringing its benefits to persons with disabilities are good examples and must be sustained.

iii) Capacity building:

Capacity building is needed at all levels.² This is the only way that we can reduce the Knowledge Divide on OA.

Open Access publishing is a major thrust in the post 2000s scholarly communications process and many research surveys have been commissioned by Knowledge Communities, OA publishers and scientific societies to understand stakeholders’ perceptions, attitudes, acceptance, practices, level of awareness and training needs. A majority of these surveys revealed that stakeholders in developing countries were not fully aware of OA principles, OA mandates of their national research funding agencies, OA publishing processes, OA publishing fees and OA licensing policies.

However, some others, who had earlier experience in publishing in OA journals, had a better understanding and awareness of OA publishing principles and processes.

A recent effort to create capacity building products of [UNESCO](#) reviewed these studies carried out between 2006 and 2012, which represented a geographical diversity. The review included the [Survey of Open Access Publishing](#) (Project SOAP), funded by the [European Commission](#) under FP7, which is the largest survey ever undertaken on OA.

Our review established that capacity building is a major issue for researchers, librarians and publishers. OA publishing is a learning experience for the majority of the stakeholders.

iv) Dissemination:

Technology is flattening the communications landscape at an unprecedented pace, making it easier to share information and knowledge. Everyday a new line of thinking is brought into the Open Access world. It is essential that we create a system so that these contents, tools and processes of OA are brought to the attention of the whole world.

² Capacity building within the context of OA implies a set of activities undertaken to improve awareness, knowledge, skills and processes relevant to the design, development and maintenance of institutional and operational infrastructures and other processes for implementing Open Access.

Q: WHAT ARE THE NEXT STEPS FOR UNESCO WITH REGARD TO OA?

The theme of inclusive [Knowledge Societies](#) continues to be at the heart of [UNESCO](#)'s work to fulfil the [WSIS](#) objectives. Inclusive Knowledge Societies are societies in which people have ready access to information and communications resources, in languages and formats that suit them, and the skills to interpret and make use of them. The Organization's future work will thus be to establish the context of OA within the broader framework of inclusive Knowledge Societies. [UNESCO](#) will continue to pursue this objective vigorously through its own programmes on OA as well as in partnership with other organizations and [UN](#) agencies.

OA is central to [UNESCO](#)'s activities in the future. It is part of our [Open Solutions](#) programme and we are convinced that Open Access should be an integral agenda in any effort to create Knowledge Societies.

Despite rapidly advancing technological developments, fully accessible research is still not a widespread practice and experiences a 'global divide'.

Recently at the [6th Conference on Open Access and Scholarly Publication](#) (COASP), held at [UNESCO](#) headquarters in Paris, [UNESCO](#) highlighted the role of Open Access within the framework of the [Post-2015 Development Agenda](#). At the conference, we highlighted that partnerships and collaborations among stakeholders is essential to create an enabling mechanism for effective Open Access.

[UNESCO](#)'s future work in the Open Access Programme is defined by the strategy that was adopted by the Member States in 2011. As per the strategy, we will be focusing on the following areas:

- *Establishing OA within the broader context of the post-2015 development agenda:*

We aim to include OA in the Global Innovation Index, and to establish a monitoring and evaluation framework.

- *Revisiting the economics of Open Access:*

Under this we will be trying to explore the business models of OA and examine what lies beyond Gold and Green OA.

Two dedicated studies are already on going to understand the economics of OA, which we plan to discuss and debate further in order to develop a set of guidelines. [UNESCO](#)'s Member States have requested that this aspect be further examined for the benefit of the OA world.

- *Developing inclusive Open Access indicators to measure the development and success of Open Access:*

This will be complemented with a rigorous data collection effort.

We will be expanding the work of the [UNESCO Institute for Statistics](#) (UIS) to collect relevant statistics so that these indicators can be regularly monitored to measure the growth of OA scholarship.

- *Enhancing capacities for Open Access at various levels:*

This will involve developing curricula, self-directed learning (SDL) tools and MOOCs on OA.

I must note here that two sets of curricula for researchers and librarians have just been released. [UNESCO](#) is currently working with partners to develop SDLs. These are also being translated into several [UN](#) languages.

- *Enhancing Human Rights based approaches in Open Access to publication:*

[UNESCO](#) is promoting a Human Rights based approach in its Open Access initiatives, primarily to ensure that OA frameworks support equality and non-discrimination.

Since 2009, [UNESCO](#) has been requested by its Member States to address the influence of power inequalities in all of its OA programmes. [UNESCO](#) is working with the Government of The Netherlands to ensure that its activities on OA are in conformity with the Human Rights based approach.

- *Revisiting the issue of the Impact Factor:*

[UNESCO](#) is working with its partners to provide a closer look at the Impact Factor. While the existing bibliometric, scientometric and altmetric approaches are robust, their upstream usage has remained very limited.

While there may exist some need to further innovate on them, there is a definite need to simplify its uptake. Concerns expressed in the 2004 [Nature's Web Focus](#) on OA, are still as valid today as they were then.

[UNESCO](#) will consider inviting the contributors to reflect upon the findings posted in 2004.

- *Opening Development contribution:*

Funding agencies have increasingly started to set conditions that all research funded by them must only be published in OA journals.

While a very careful system has been in place for its effective implementation in developed countries, the provision lacks similar rigor in developing countries. A recent review that [UNESCO](#) undertook has revealed that many development agencies fail to maintain this when making funding decisions in developing countries.

[UNESCO](#) plans to undertake a major study to understand and develop guidelines.

- *Connecting Openness:*

This effort will aim to create a bridge between the Global North and the Global South in order to facilitate mutual learning. As the Global South catches up with the North in terms of scientific output, for instance, it allows for greater innovation in OA, and provides opportunities for developed countries to adopt some of the less costly OA methods that have emerged in developing countries. So, for instance, innovation in Latin America is enabling a lower APC cost base. New models like this could benefit the North.

At the same time, innovative methods from the North are being implemented in some developing countries. This cross-fertilisation could be very productive and so we are documenting the processes involved.

[UNESCO](#) will be working with the Creative Commons to specifically spearhead this initiative. Training on Open Journal publication, copyright, learning and exchange visits are planned under this initiative.

- *Making the [Global Open Access Portal](#) (GOAP) a single window for Open Access Resources.*

[UNESCO](#) is working to further improve and update the portal. Our aim is to make it truly interactive and dynamic. More integrative features and visualization tools on OA around the world will be worked out in collaboration with our partners.

- *Simplifying guidelines of Open Access Policy:*

As already mentioned, policies on OA top the priority list related to OA. We have just developed a policy-development app, which we are Beta testing. Similar easier tools on policy development will be developed and launched in the near future.

In summary, as envisaged in its OA strategy, [UNESCO](#) will continue to work in the area of **Advocacy, Bridging, Capacity building and Dissemination** of OA tools, processes and contents.

Needless to say, we will be soliciting support and cooperation from all stakeholders - big and small- to further this cause.

At the 2016 Executive Board, [UNESCO](#) will provide a mid-term assessment on the outcomes of its OA strategy implementation and request further support to achieve the remaining goals.

Q: WHERE DO YOU BELIEVE OA FITS INTO THE UPCOMING [SUSTAINABLE DEVELOPMENT GOALS \(SDGs\)](#), AND WHY?

A: During the [WSIS+10 review](#), the [United Nations General Assembly](#) will undertake a comprehensive review of the [Millennium Development Goals](#) (MDGs), and will agree on a new [Post-2015 Development Agenda](#), including the adoption of [SDGs](#). This provides an opportunity to integrate OA and [WSIS](#) outcomes more effectively within the broader development agenda, and associate the emergence of inclusive [Knowledge Societies](#) with the Sustainable Development objectives of social equity, economic prosperity and environmental sustainability.

The [Rio+20 Conference](#) addressed the importance of Knowledge-Sharing for eradicating poverty and carrying out Sustainable Development. During the conference, the Member States agreed to launch a process to develop a set of [Sustainable Development Goals](#) (SDGs), which will build upon the [Millennium Development Goals](#) (MDGs) and converge with the [Post-2015 Development Agenda](#).

[UNESCO](#) can be expected to enthusiastically contribute further to the growth of inclusive [Knowledge Societies](#) in the framework of the new mandate for development that will emerge from the General Assembly in 2015.

I completely agree with the current concern that there exists a problem in linking Open Access with the [SDGs](#). Yes, the problem doesn't exist because there are no linkages per-se, but it is because of how we perceive Openness.

But ask a researcher involved in any area of the [SDGs](#) - may it be to reduce extreme poverty, or to reduce incidence of maternal mortality during child birth or to provide safe drinking water to the public - one will unequivocally receive the same answer. S/He will note the context of knowledge and mention that opening and sharing knowledge is critical and that we need to push the frontiers of these goals!

Out of 17 goals proposed for the next [SDGs](#), at least 10 goals need constant research inputs. Given that these goals must be achieved globally, there is an absolute need for any restriction to disseminate research outputs to be comprehensively addressed. So in the next 15 years, OA to research will play a fundamental role in supporting efforts to achieve these goals.

If we analyze the process of development since the dawn of human civilization, it becomes evident that the creation and application of new knowledge, in every sphere of human activity, has contributed to the evolution of societies and the economic welfare of people.

Knowledge of how to communicate and how to work with other people has therefore been regarded, since ancient times, as the most precious ‘wealth’ that humans possess.

Almost all major religions and cultures have laid emphasis on the acquisition of knowledge for cultural enrichment and socioeconomic progress of societies. The process of growth of knowledge and dissemination of information has accelerated with time with far reaching consequences: positive for those who receive it and negative for those who do not.

Against the backdrop of major societal trends and their implications for the future, it is argued that knowledge will play a central role in shaping economic growth, social development, cultural enrichment and political empowerment. Summing these facets of development, the [Brundtland Commission](#) coined the result as ‘Sustainable Development’.

Allow me to examine the global dynamics, in which this process is set. We live in a world marked by contrast and characterized by division, extremism, and even paradox. For how else can we describe a world order where amidst breath-taking advances in Science and Technology and economic miracles, there is massive poverty, socio-economic inequality and political marginalization? As per the [Report of the High-level Panel of Eminent Persons on the Post-2015 Development Agenda](#) published earlier this year-

We are deeply aware of the hunger, vulnerability, and deprivation that still shape the daily lives of more than a billion people in the world today. At the same time, we are struck by the level of inequality in the world, both among and within countries. Of all the goods and services consumed in the world each year, the 1.2 billion people living in extreme poverty only account for one per cent, while the richest 1 billion people consume 72 per cent.

The same report also notes that:

Science in many fields... can be advanced by using open platforms where scientists everywhere have access to each other’s findings and can build on them freely and collaborate broadly, adding useful features without limit. Open platform science can speed the development of new ideas for Sustainable Development and rapidly bring them to scale. It can support innovation, diffusion and transfer of technology throughout the world.

As a specialized agency of the [UN](#) system, [UNESCO](#) is playing its part in analysing the concern about poverty (and other human challenges) and is committed to making Open Access one of the central supporting agendas to achieve the SDGs.

I would also like to note a few obvious facts: The relative importance of the major determinants of development has been changing over the past decades and a shift is taking place from manufacturing to services, and from capital resources to knowledge resources.

Increasingly, knowledge is considered to be the key to escape both poverty and marginalization. As former [World Bank President Wolfensohn noted](#): “The world has moved to a revolution which is built on knowledge, on technology and on information. Knowledge, if properly transferred and made available to all, gives the greatest opportunity for people to advance themselves and fight against poverty”.

[SDGs](#) are primarily about improving people’s lives and securing livelihood of them. Thus the context of free and Open Knowledge become central to any efforts to achieve [SDGs](#).

Let me also note that with the new ICTs emerged the Knowledge Economy, characterized by an abundance of “organized and functional information” leading to a phenomenon which we now describe as a “Knowledge Explosion.”

ICT has facilitated at an enormous rate the generation, preservation, dissemination, exchange and utilization of knowledge. ICTs have brought about enormous opportunities, but also major risks of deepening the divide. Thus emerges a major development challenge, as serious, if not more so, than the challenges described earlier.

This is something that we refer to as the “Knowledge Divide”. The extent to which the Knowledge Divide is narrowed, and to which we are able to create societies that are truly Knowledge Societies, will determine the pace of development. OA has the potential to lessen the existing knowledge divide. This gap goes beyond the rifts in mere access to ICT. It refers to the gaps that exist across all the four building blocks of Knowledge Societies, namely: Knowledge Creation; Knowledge Preservation; Knowledge Dissemination; and Use of Knowledge.

Opening access to knowledge is thus a fundamental part of the approach that can open and address the many jagged facets of Sustainable Development. OA uses ICTs to increase and enhance dissemination of scholarship. Sustainable Development and the creation of Knowledge Societies therefore are two sides of the same coin.

Unless one side shines, it is very unlikely that the other side can be properly valued and put to use.

[UNESCO](#) has been, and will continue to advocate, the need to recognize the power of knowledge in fuelling development.

As opening knowledge can encompass plurality, inclusion, solidarity, and participation, which are all fundamentals of any Sustainable Development plan, it will also energize the principles of Freedom of Expression, universal access to information and knowledge, promotion of cultural and linguistic diversity, and equal access to quality education.

As soon as information becomes a part of the Knowledge Commons, it becomes a non-value laden product.

As Human Beings, we do not give much regard to the commons - perhaps it is because of this that the value of OA will never be properly appreciated by many.

As Hess and Orstom argued in their [book](#)³, and I quote, “Potential problems in the use, governance, and sustainability of a commons can be caused by some characteristic human behaviors that lead to social dilemmas such as competition for use, free riding, and overharvesting. Typical threats to knowledge commons are commodification or enclosure, pollution and degradation, and non-sustainability.”

However, it is the job of all involved in Open Access that the linkages between the two spheres are properly identified and appreciated.

Q: WHAT WILL [UNESCO](#) BE DOING TO PROMOTE/SUPPORT OA WITHIN THE SPECIFIC CONTEXT OF THE [SDGs](#)?

A: I hope you will appreciate that this question has been comprehensively answered in question 5. We believe OA has a fundamental role to support [SDGs](#) and it is essential that this interrelationship is further strengthened and examined to reap the fullest benefits of OA to achieve the [SDGs](#).

³ Hess and Orstom (2007) Understanding Knowledge as commons. MIT press

The idea of Peace does not only refer to the absence of war, but to a state of living where every human being can enjoy their basic human rights, the free access to knowledge being one such right. Access to knowledge implies not only access to information, but also involvement in learning processes. There is no knowledge without learning.

[UNESCO](#) acknowledges the fact that building [Knowledge Societies](#) as part of the [SDGs](#) means having to address challenges that are more complex than simply developing virtual tools for sharing data and information.

The [SDGs](#) acknowledge the importance of access to information and transparency in its Goal number 16 which aims to ‘promote peaceful and inclusive societies for Sustainable Development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels’.

[UNESCO](#)’s Open Access initiatives are built around this [SDG](#) to recognize the need for ensuring that scientific research addresses the needs of society and responds to current and future sustainability challenges.

[UNESCO](#) will help build national capacities to enable public access to information and play a leading role in monitoring the progress of this project through the global road map it has created with [GOAP](#) and [ROAD](#) using country specific indicators and databases maintained by other [UN](#) institutes such as the [UNESCO Institute for Statistics](#) (UIS).

At [UNESCO](#) we believe that OA has a role to play in demystifying the context of research (journal articles and associated products) that will backstop all types of efforts to achieve [SDGs](#).

The approach will positively impact on taking research closer to those who require it.

OA will primarily provide a framework of “information by all” where sharing of research information will create a condition for more research. The realization of this outcome will require commitment and involvement of the political leadership at every level in every country.

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After completing his doctoral degree, Mr. Banerjee undertook a stint as a post-doctoral research fellow at the University of Quebec in Montreal (UQAM). Following his term at UQAM, he was a faculty member at the University of Ottawa, the University Science Malaysia and the Nanyang Technological University in Singapore.

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