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TOWARDS A NEW CARTOGRAPHY OF KNOWLEDGE

OUTCOME DOCUMENT

3RD UNITED NATIONS OPEN SCIENCE CONFERENCE

NEW YORK | 8–10 FEBRUARY 2023

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OPENING REMARKS

Excellencies, Distinguished Delegates, Ladies and Gentlemen,

It is an honour to speak with you all today. Bridging the gap between science and decision-making has been a cornerstone of my Presidency since day one, and I believe that only by doing so it would be possible to change the way we operate and to efficiently tackle the manifold challenges at hand.

There are currently thirteen negotiation processes related to transformation underway; thirteen pathways for us to reach the ambitions of the SDGs, and every single process would benefit from science-based evidence to support Member States' decision-making.

Just yesterday, we held briefings for them by representatives of the scientific community on how science-based evidence can be the key to identifying and implementing sustainable solutions. The briefings were divided into three panels: the New Economics of Water; Climate, Conflict and Cooperation; and Early Warnings for Pandemic Preparedness. All of them with the promise of making breakthroughs and identifying gamechangers for us. The briefings also included an update on the Global Sustainable Development Report 2023 which can provide a solid basis for a strong political declaration at the SDG Summit later in September.

We must adapt to the changing nature of the world around us as well as the changing nature of crises we face.

I am deeply committed to breaking down the fences that divide the work of disparate fields. Better inclusion in science is paramount, and it is part of a broader discussion. Data shows that the best and most accurate research accounts for a range of human experiences. Yet, we live in societies that have grown divided along arbitrary lines such as gender, class, caste, religion or ethnicity, and, sadly, this unequal and unfair inheritance also seeped into academia and science. Groups that have been historically marginalized are all too often still de facto excluded from research. But we are in trouble now, and we cannot afford any longer to go without anyone who can bring value to science. In fact, we must mobilize everyone, all our energies, to deal with the challenges.

Fostering a culture of open research and access is critical for the democratization of knowledge. As things currently stand, grossly inaccurate misinformation, disinformation and malinformation are freely available online, but credible, authoritative and peer-reviewed scientific advances are guarded by paywalls. From racist conspiracy theories to lies about vaccines – I need not remind this room of the dire consequences that spreading false information can have.

The pandemic cast a stark light on the importance of having accurate, science-driven information easily and freely accessible, particularly online, and it put us before the urgency of strengthening the science-policy-society interface. The good news I brought to you this morning is this interface is being further developed as we speak.

We all know how far off-track we are on the achievement of the SDGs. So, what are we going to do? What should we change to do right? There is no other way for us to reach the SDGs than to transform how we relate to each other and how we deliver global public goods. Because the crises we face are interconnected, so too must be our solutions. The science of complexities is the science of the SDGs.

Sharing our knowledge on open access online platforms will only be detrimental to those who do not want a just and fair world. But something else is missing. We are still lacking the science-based, simple, flexible, adaptable to various conditions of countries methodology of measuring sustainability transformation.

How could we expect breakthroughs in the implementation of the real transformation to a sustainable world while we are not prepared to measure it? That is my strong request and appeal to you. Please help us develop this strong tool we call “Going Beyond GDP”.

The adage goes that science does not bring about answers, only more questions. That’s fine.

Let us strive to always listen to these questions, and to always listen to those asking them.

Let us improve how we work, and how we work together.

Never forgetting the words of the French physiologist Claude Bernard: “Art is I; science is we.”

Thank you.

Csaba Kőrösi
President of the 77th Session of the UN General Assembly

INTRODUCTION

From 8 to 10 February 2023, researchers, policymakers, librarians, representatives of intergovernmental organizations (IGOs), publishers, and members of civil society came together online and in person at the United Nations Headquarters in New York to engage in a dialogue about the opportunities and challenges of practicing Open Science. This convening marked the 3rd United Nations Open Science Conference, "Accelerating the Sustainable Development Goals, Democratizing the Record of Science," and was organized by the Dag Hammarskjöld Library of the United Nations Department of Global Communications in collaboration with the Department of Economic and Social Affairs, Division of Sustainable Development Goals, and UNESCO's Division of Science Policy and Capacity-Building. It aimed to build upon the outcomes of previous United Nations Open Science Conferences, as well as recent developments in the Open Science landscape.

As articulated in The New York Pledge, adopted by the UN Dag Hammarskjöld Library and all UN Secretariat Libraries, access to information is the foundation of an enabling environment for all Sustainable Development Goals (SDGs). It is a universal human right. The global imperative for open access and Open Science could not have been clearer than it was during the global health crisis of the COVID-19 pandemic. IGOs and governments responded to this call. On 27 October 2020, in the height of the pandemic, the United Nations Educational, Scientific and Cultural Organization (UNESCO), the World Health Organization (WHO), the European Organization for Nuclear Research (CERN) and the Office of the United Nations High Commissioner for Human Rights launched a Joint Appeal for Open Science. In February 2021, the International Science Council (ISC) released its opinion on the future of scientific publishing highlighting the need to open the record of science and recommending eight fundamental principles to reform scientific publishing endorsed by the Council's members . On 23 November 2021, following an inclusive, transparent and multistakeholder consultative process, UNESCO's Recommendation on Open Science was adopted by 193 Member States during the 41st session of the Organization's General Conference. On 25 August 2022, in the United States, the world's largest research-funder, the White House Office of Science and Technology Policy (OSTP) published a policy guidance to US federal agencies with research and development expenditures on updating their public access policies to ensure free, immediate, and equitable access to federally funded research, including data, by December 2025. With the pioneering work of the European Open Science Cloud initiated back in 2015, the evolving African Open Science Platform, the significant equity paradigm of open scholarship in Latin America and the related developments in Asia and the Arab region, the global agenda is set on the necessity to democratize the record of science.

The September 2023 SDG Summit and Action Weekend and, most notably, the Global Sustainable Development Report 2023, all presented opportunities to codify lessons learned from global crises into policies that support producing and disseminating scientific research, data and knowledge, openly and equitably. Effectively connecting science, policymaking and society requires strategies to create partnerships and actionable knowledge for sustainable development. This was one of the key messages of the Open Science Conference. With crises highlighting the need for evidence-based policymaking, for access to credible and trustworthy information, knowledge and data, there is no better time than now to reinforce the science-policy-society interface through normalizing Open Science practices in support of the global public good.

The present document offers a brief outline of the main ideas and suggestions put forward by the Conference speakers and audience members, grouped into the three streams of the event. It also collects recommendations for policymakers, IGOs, librarians, publishers, Open Science practitioners and academia with a view to advancing the causes and practice of Open Science for the good of humanity. It is complementary to the video recordings and presentations which are freely available online . I'd like to express my gratitude to Ms. Astra Bonini from the UN Department of Economic and Social Affairs, Ms. Ana Persic from UNESCO, my colleagues Ms. Ariel Lebowitz and Mx. Meg Wacha, as well as to all teams of the UN Dag Hammarskjöld Library for working collaboratively and seamlessly to make this Conference a reality. Sincerest thanks also to our 36 speakers and moderators for their insightful interventions and powerful messages.

Thanos Giannakopoulos
Chief, Information Management Section
UN Dag Hammarskjöld Library

STRENGTHENING THE SCIENCE-POLICY-SOCIETY INTERFACE

As the world approaches the midpoint on the path to implementing the 2030 Agenda for Sustainable Development and its 17 Sustainable Development Goals (SDGs), it faces overlapping and reinforcing crises that underscore the urgency of strengthening links between science, policymaking and society. Science is a vital tool for progressing and achieving the SDGs, as recognized in the 2030 Agenda's call for mechanisms to advance science, technology and innovation through open knowledge sharing. The science of the SDGs is the science of complex systems.

In her opening remarks, Ms. Maria-Francesca Spatolisano, Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs in the Department of Economic and Social Affairs (DESA), stated that "if there is hope – and there is hope for the future – it will rest … on human ingenuity and scientific technological advances". The breakthroughs required to address global issues such as climate change and disease will be "driven by science and accelerated through partnerships … When knowledge flows freely and efficiently between people, scientific communities, and countries, such breakthroughs are far more likely".

It is not enough for scientific knowledge to be openly accessible. Open Science requires the culture of science to change. Who is science open to and how is it practiced? What is the role of a global citizenry in the co-creation and sharing of knowledge? How is success measured and does this include incentives for Open Science processes?

Policymakers must create systems and avenues for success that support practical solutions and accelerate development globally. It is beyond the role of the private sector to do something for the purposes of the global good. The open access movement has been overrun by commercial publishers which require payment for publishing, further increasing revenues even during economic depressions and global health emergencies. While the commercial publishing industry adds value through its aggregated services, it is built "on the backs of scientists" and, as suggested by the former Director of the Indian Institute of Science Dr. Padmanabhan Balaram, the same value could come from open access repositories. Public-private partnerships might also be explored without a profit imperative, and as noted by Ms. Spatolisano, regulations are helpful in accomplishing this.

Dr. Jeffrey Sachs, Professor at Columbia University and President of the UN Sustainable Development Solutions Network, noted that "knowledge that is vital to the world is kept in a small number of private hands". There are two great barriers to science as a public good: corporate greed and the "militarization of breakthroughs of knowledge that should be turned truly into the public good but are being turned into nothing more than rampant destruction".

The open data movement must consider both people and purpose in Open Science. FAIR (Findable, Accessible, Interoperable, Reusable) principles for data are complemented by CARE Principles for Indigenous Data Governance, which promote data sovereignty through the principles of Collective benefit, the Authority to control, Responsibility and Ethics. Dr. Barend Mons, President of CODATA, a committee of the International Science Council, spoke on the promotion of FAIR science as promoting data visiting rather than data sharing, and distributed rather than centralized learning on data management.

The importance of knowledge co-creation and sharing was further underscored in the context of citizen science. From this perspective, Dr. Uta Wehn emphasized that science is about people and that different forms of citizen science form a microcosm of Open Science. She demonstrated that citizen science has the potential to contribute to all 17 SDGs and – while requiring changing roles, responsibilities, competencies and skills – citizen science is the only way to achieve the SDGs.

UNESCO pointed out that 70% of the world population live in countries with weak systems of science, and that Open Science practices and investment in science systems are important contributions to closing the gap to strong science systems. Dr. Imme Scholz, co-chair of the Independent Group of Scientists nominated by the Secretary-General to co-write the 2023 Global Sustainable Development Report, stressed that access to information is central to any attempt to implement sustainability transformations such as those advanced by the SDGs. “Transformations are a context-specific process and require context-specific knowledge”, and this requires the cooperation of local actors, including scientists, citizens, and policymakers.

EQUITY IN OPEN SCHOLARSHIP

Panelists reflected on how Open Science must be achieved and practiced in ways that ensure equity of access to reading and contributing to the scientific record. The global science community and its supporters must actively seek out and execute strategies for achieving inclusivity bridging the gaps between high-, middle- and low-income nations. It was acknowledged that incentives such as power, profit and expansion result in climate change, global inequalities, and the systemic oppression of marginalized and excluded groups; the recent inequities in global health outcomes and vaccine access are fatal references.

Panelists proposed that individuals and institutions can work towards equity by adopting a values-based approach that recognizes the interconnectedness of the scientific publishing ecosystem. Under the lens of intersectionality, some pathways to open access reinforce mechanisms of systemic oppression while others remove barriers inherent within the existing systems of scholarly publishing and prestige. Open Science practices are therefore better suited to support equity and inclusivity when they enable all people, especially those who have been excluded, to read about and access data, conduct research on topics relevant to them and their communities, have their research recognized and rewarded, produced and disseminated in multiple languages, and freely translate research output into impact for their own communities. Panelists agreed that the scientific community must be intentional in securing a system-wide shift to bibliodiversity, inclusiveness and multilingualism, and adept at building partnerships and pursuing science that is of social relevance, for all.

Open Science is not inherently equitable. Dr. Monica Granados, Assistant Director of Open Climate at Creative Commons, reminded attendees that the Open Science movement must center equity and include it in every conversation, or we risk building another system that reinforces the inequities embedded in the legacy commercial publishing system.

Integrating knowledge systems, such as western science and indigenous knowledge, through education and ongoing dialogue would advance science and knowledge for the public good. Dr. Gregory Cajete, Professor of Native American Studies and Language, Literacy, and Sociocultural Studies at the University of New Mexico, explained the value in developing curricula that support both indigenous and western science in ways that are economically positive for indigenous communities. “Science” may be broadened to understand multiple forms of knowledge systems and improve “nature-literacy”.

Having access to scientific knowledge without the capability to engage with it reinforces existing problems. Policymakers, for instance, may require policy briefs that translate scientific knowledge into more accessible language that can better inform policy. Barriers are high and effort is needed to circulate knowledge and lower barriers, including language and cognitive barriers. Another challenge is how to locally build and repair hardware using available tools. Open Science often focuses on data and software, but, as Dr. Julieta Arancio underscored, open hardware is equally important. Having access to microscopes and other equipment is essential to contributing to and advancing scientific research, as well as addressing local issues in fields such as health and agriculture. Many scientists adjust and customize hardware as part of their research process, but there is little public discussion of this. Open hardware would give researchers greater freedom in the ways that they plan and implement their studies.

REFORMING SCIENTIFIC PUBLISHING

The scientific publishing ecosystem grows increasingly dysfunctional as market shares, profit and power are prioritized at the expense of its original purpose: to disseminate scientific knowledge and to allow that knowledge to be built upon. Panelists agreed that the current criteria used to communicate perceived value (impact factors, h-index etc.) create and maintain hierarchies, cultivate a distorted image of research excellence propagated by an outdated research assessment and awards system, and deprioritize research perceived as unprofitable without thought to local or global relevance. A concern was raised that legacy commercial publishers are increasingly rebranding as information analytics companies, morphing into entities with a heightened ability to surveil users and commercialize data. Such shifts risk public trust in science, restrict access to the scientific record, undercut global inclusion, and fall short of the opportunities presented by the digital revolution.

Throughout the Conference, speakers stressed that, as the Executive Director of SPARC, Ms. Heather Joseph, put it, the current "game" of journal ranking, impact factors and competition within scientific publishing has nothing to do with scientific knowledge creation and in fact gets in the way of "doing science for the public good". It distorts academic life, maintains hierarchies, and poses a conflict of interest between the purpose of disseminating knowledge and the goal of assessing it. "Academic capitalism" and the prestige economy promote the continued marginalization and exclusion of certain groups. For an individual researcher, this may include intersections across multiple communities and identities, including but not limited to gender, race, class, country of origin, and linguistic background.

We must democratize scientific knowledge and build a citizenry to develop evidence-based public policy. Civil society organizations and activists may offer solutions to local challenges. Researchers, especially those from less privileged institutions and countries, must be positioned as active producers of knowledge, not mere consumers. Academic institutions must move their focus away from metrics and instead return to their role as agents of social change. Research agendas must be driven, as suggested by independent consultant Mr. Claudio Aspesi, by "global or regional relevance rather than journal visibility".

If the scholarly publishing system is "broken", what can be done to fix it? Can we reform the scientific publishing ecosystem, or do we need to build a whole new system? Ms. Kathleen Shearer, Executive Director of the Confederation of Open Access Repositories (COAR), proposed a move away from the commodification of knowledge and towards the creation of a global commons, with resources accessible to all. Science should be managed as a public good, like air or water. Open Science would benefit from a distributed ecosystem that supports bibliodiversity and, as recommended by Dr. Tshiamo Motshegwa, Director of the African Open Science Platform (AOSP), includes infrastructure at the international and regional levels.

Intellectual property reforms are required to support the aims of Open Science. This requires a paradigm shift; a move away from proprietary models and towards more collaborative, transparent and open approaches. Inconsistent copyright laws and policies generate confusion and create barriers to the creation, dissemination and preservation of scientific knowledge, as well as its mining and re-use. Dr. Bernt Hugenholtz, Professor Emeritus of Intellectual Property at the University of Amsterdam and a member of the European Federation of Academic Sciences and Humanities (ALLEA), presented recommendations to change the intellectual property rights model, including a departure from rights assignment and the introduction of Secondary Publication Rights to permit the publication of the post-print/accepted version of a manuscript without an embargo.

RECOMMENDATIONS FOR POLICYMAKERS, FUNDERS, SCIENTIFIC LEADERS, AND PRACTITIONERS

Strengthen the relationship between science, policy, and public trust.

- Encourage the prioritization of UNESCO's Recommendation on Open Science in public policy implementation: With the first internationally agreed upon definition of Open Science and areas of prioritization, the UNESCO Recommendation provides an international framework for Open Science policy and practice adopted by 193 Member States.
- Make scientific outputs available to the public: Build public trust through providing verifiable information that is freely available and accessible to all. Focus on cognitive accessibility, including multilingualism, upstream engagement, and participatory methods.
- Promote engagement of actors beyond the conventional scientific community, for example through citizen science and scientific proficiency amongst the global citizenry: Build trust in science by involving a wider range of local actors in the scientific process.
- Promote dialogue between different knowledge systems.
- Enable open access to high-quality science (publications, data, software, code, hardware) to inform public policy- and decision-making.
- Provide universal access to education at all levels, including short-term skill-building and certificate programs.
- Encourage citizen science as a collaborative approach to scientific research that involves members of the public in the research process. Academic and public libraries are in a unique position to support citizen science initiatives, as they can provide access to research resources, data management and analysis tools, and expertise in research methods.

Fund Open Science infrastructures that prioritize the advancement of the public good over private interests.

- Decolonize the information ecosystem and increase the visibility of research outputs: Promote and support the description and dissemination of research outputs from all regions, shorten the cycle of scholarly dissemination, and promote bibliodiversity through thinking outside of traditional "journal" publishing models.
- Support multilingualism in scientific research outputs: Support the distribution and description of research in all languages.
- Facilitate the interoperability of open access journals (diamond open access) and open access repositories (green open access): Improve the visibility of Open Science and new forms of scientific evaluation through implementing and/or reinforcing interoperability between existing Open Science infrastructures.

- Favor inclusive publishing and distribution channels that never exclude authors on economic grounds.
- Promote international efforts to provide access to publicly funded research.
- Develop international repositories and indexing services.
- Establish Open Science policies that generate local capability: Open Science is not only a practice but includes the need for Open Science hardware in order to build capacity.
- Use the UNESCO Open Science Toolkit to advance global and equitable transition to Open Science, including UNESCO's Checklist for open access publishers: **https://www.unesco.org/en/open-science/toolkit**

Reform the system of reward and recognition in scientific publishing and careers.

- Separate the assessment of science from its publication: Publishing and distribution models should be about a "record of versions", connecting the multiple iterations of research outputs across the publishing lifecycle.
- Encourage scientists to act as information brokers: Align the markers of a successful scientific career with the public good.
- Support alternative models of funding and reward for scientific research: Policymakers should promote collaboration and Open Science, such as research prizes, crowdfunding and public funding.
- Account for Open Science activities in evaluations and incentives, including awards, hiring practices, and funding.
- Improve the transparency and equity of reviews: Public accountability for who and what is funded and how decisions are made.
- Promote inclusion and equity in publishing so that all can serve as both creators and users of knowledge: Include women, youth and local actors in science. Activists, professionals, citizen scientists, and civil society organizations offer context-specific and place-based knowledge.

Modernize the intellectual property rights regime in the context of Open Science and science as a public good.

- Emphasize the importance of Open Science to make policymakers aware and encourage them to promote the principles of openness, collaboration and transparency in research.

- Promote synergies between intellectual property rights and Open Science. This could include measures such as shorter patent terms, stricter requirements for patentability, and exceptions to patent protection for research and educational purposes.
- Encourage the use of open licenses: Intellectual property regimes should encourage the use of open licenses, such as Creative Commons licenses, to promote the sharing and reuse of research outputs.
- Strengthen the collaboration between academia and industry to promote innovation and knowledge transfer while ensuring that the public interest is protected.
- Address the concerns and interests of indigenous knowledge owners.
- Ensure that intellectual property rights protect the public interest.

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APPENDIX I. PROGRAMME

UNITED NATIONS, NEW YORK | 8–10 FEBRUARY 2023

3rd Open Science Conference

Accelerating the Sustainable Development Goals, Democratizing the Record of Science

CONFERENCE PROGRAMME

Wednesday, 8 February 2023

9.00 – 9.20 a.m. **Welcome and opening remarks**

His Excellency, Mr. Csaba Kőrösi, President of the General Assembly, United Nations (UN)

Ms. Melissa Fleming, Under-Secretary-General for Global Communications, Department of Global Communications, UN

Ms. Maria-Francesca Spatolisano, Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs, Department of Economic and Social Affairs, UN

9.20 – 10.20 a.m. **Opening keynote**

Dr. Shamila Nair-Bedouelle, Assistant Director-General for Natural Sciences, United Nations Educational, Scientific and Cultural Organization (UNESCO)

Moderator: **Dr. Ana Persic,** Programme Specialist, UNESCO

10.45 – 11.45 a.m. **Panel: Strengthening the science-policy-society interface (policy-making)**

Dr. Chelle Gentemann, Program Scientist Transform to Open Science, National Aeronautics and Space Administration (NASA)

Dr. Aldo Stroebel, Executive Director for Strategy, Planning and Partnerships, National Research Foundation, South Africa

Dr. Padmanabhan Balaram, Biochemist, Former Director, Indian Institute of Science

Moderator: **Dr. Nancy Shackell,** Research Scientist, Fisheries and Oceans Canada

12.15 – 1.15 p.m. **Panel: Strengthening the science-policy-society interface (Open Data)**

Professor Dr. Barend Mons, President, CODATA

Dr. Uta Wehn, Associate Professor of Water Innovation Studies, IHE Delft Institute for Water Education

Mr. Yousef Torman, Managing Director, Arab States Research and Education Network (ASREN)

Moderator: **Dr. Lisa Federer,** Acting Director, Office of Strategic Initiatives, National Library of Medicine, National Institutes of Health

1.15 – 1.30 p.m. **Closing remarks**

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UNITED NATIONS, NEW YORK | 8–10 FEBRUARY 2023

3rd Open Science Conference

Accelerating the Sustainable Development Goals, Democratizing the Record of Science

Thursday, 9 February 2023

9.00 – 9.15 a.m. **Opening remarks**

9.15 – 10.20 a.m. **Keynote**

Dr. Arianna Becerril García, Executive Director, Redalyc (Network of Scholarly Journals from Latin America, the Caribbean, Spain and Portugal)

Moderator: **Ms. Laura Hanscom,** Head, Scholarly Communications & Collections Strategy (SCCS), MIT Libraries

10.45 – 11.45 a.m. **Panel: Reforming scientific publishing**

Ms. Carolina Botero, Director, Karisma Foundation

Ms. Susan Murray, CEO, Africa Journals OnLine

Ms. Joy Owango, Executive Director, Training Centre in Communication, University of Nairobi

Moderator: **Ms. Loida Garcia-Febo,** International Library Consultant, Chair, American Library Association - United Nations SDGs Subcommittee

12.15 – 1.15 p.m. **Panel: Equity in open scholarship**

Dr. Gregory Cajete, Professor of Native American Studies and Language, Literacy and Sociocultural Studies, University of New Mexico

Mr. Thomas Klebel, Researcher & Project Manager, **Dr. Tony Ross-Hellauer,** Group Leader and Senior Researcher, TU Graz and Know-Center GmbH

Dr. Julieta Arancio, Postdoctoral researcher, Center for Science, Technology and Society, Drexel University

Moderator: **Dr. Monica Granados,** Assistant Director, Open Climate, Creative Commons

1.15 – 1.30 p.m. **Closing remarks**

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UNITED NATIONS, NEW YORK | 8–10 FEBRUARY 2023

3rd Open Science Conference

Accelerating the Sustainable Development Goals, Democratizing the Record of Science

Friday, 10 February 2023

9.00 – 9.05 a.m. **Opening remarks**

9.05 – 9.15 a.m. **Virtual address**

Professor Jeffrey D. Sachs, President, UN Sustainable Development Solutions Network

9.15 – 10.20 a.m. **Keynote**

Ms. Alison Mudditt, CEO, PLOS

Moderator: **Ms. Astra Bonini,** Senior Sustainable Development Officer, UN Department of Economic and Social Affairs

10.45 – 11.45 a.m. **Panel: Reforming scientific publishing**

Mr. Claudio Aspesi, Independent Consultant

Professor Lisa Janicke Hinchliffe, Professor, University of Illinois, Representative of the International Federation of Library Associations and Institutions (IFLA)

Professor Bernt Hugenholtz, Professor Emeritus of Intellectual Property Law, University of Amsterdam, European Federation of Academies of Sciences and Humanities (ALLEA)

Moderator: **Ms. Claire Redhead,** Executive Director, Open Access Scholarly Publishing Association (OASPA)

12.00 – 1.15 p.m. **Panel: Reforming scientific publishing (Global Science Commons for the SDGs)**

Ms. Kathleen Shearer, Executive Director, Confederation of Open Access Repositories (COAR)

Dr. Tshiamo Motshegwa, Director, African Open Science Platform (AOSP)

Dr. Mathieu Denis, Senior Director, Head of the Centre for Science Futures, International Science Council (ISC)

Moderator: **Ms. Heather Joseph,** Executive Director, Scholarly Publishing and Academic Resources Coalition

1.15 – 1.25 p.m. **Virtual address**

Dr. Imme Scholz, President, Heinrich Böll Foundation, and Co-Chair of the Independent Group of Scientists drafting the **2023 Global Sustainable Development Report**

1.25 – 1.30 p.m. **Closing remarks**

Mr. Maher Nasser, Director, Outreach Division, Department of Global Communications, United Nations

Mr. Thanos Giannakopoulos, Chief Librarian, UN Dag Hammarskjöld Library

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APPENDIX II. SPEAKER BIOGRAPHIES

BIOGRAPHY

KEYNOTE SPEAKER

Dr. Arianna Becerril García

Dr. Becerril is a full-time professor at the Autonomous University of the State of Mexico (UAEM) and member of the National System of Researchers (SNI) of Mexico. She was the recipient of the 2021 Early Career Scientist Award (South America and the Caribbean) by the International Science Council. She holds a PhD and MSc in Computer Science, Tecnológico de Monterrey, Mexico. And she holds a BA in Computer Engineering, UAEM. She is part of the founding team of the Scientific Information System Redalyc.org where she is the current Executive Director. Dr. Becerril is founder and president of AmeliCA Conocimiento Abierto S.C. She is co-founder of Red Mexicana de Repositorios Institucionales (Mexican Network of Institutional Repositories). She participated as part of the advisory team of the Open Access national legislation in Mexico in 2014. She is currently a member of the council of the Directory of Open Access Journals (DOAJ) and participates as advisory board member of different international initiatives. She has coordinated various multilateral projects supported by UNESCO, in partnership with organizations such as the Indian Statistical Institute, and governmental entities as the Ministry of Education, Science, Technology and Innovation of Angola, where she participated in the recommendations for the national legislation on Open Access.

Ms. Alison Mudditt

Since June 2017 Alison has been Chief Executive Officer of the Public Library of Science (PLOS), an organization dedicated to building an Open Science future that is equitable, collaborative and global. Prior to PLOS, Alison served as Director of the University of California Press and as Executive Vice President at SAGE Publications. Alison is Chair of the Board of Directors for the Center for Open Science and also serves on the boards of the Authors' Alliance, NISO and the American Chemical Society's Governing Board for Publishing. She is a regular speaker at industry meetings and contributing "chef" to the Scholarly Kitchen blog. Her more than 30 years in the publishing industry also include leadership positions at Taylor & Francis and Blackwell Publishers.

In the past, Alison has also served on the board of the Society for Scholarly Publishing, the Scientific Publications Committee and the Open Science Committee of the American Heart Association; the Executive Council of the PSP Division of the American Association of Publishers; and as Co-Chair of the Dean's Leadership Council at California State University, Channel Islands. She holds an MBA in addition to a Bachelor of Arts degree from the University of Bath.

Dr. Shamila Nair-Bedouelle

Dr. Shamila Nair-Bedouelle has a long-standing career as a researcher and in implementing international programmes for science for development (UN, UNESCO and European Commission).

As Director of the OzonAction at the UN Environment Programme, she was responsible for developing and implementing programmes for the Montreal Protocol, providing 148 developing countries with scientific and technical advice, and implementing capacity-building programmes for the phase-out of ozone-depleting chemicals. She launched the first global programme for capacity building for women technicians.

Prior, she was Programme Manager and responsible for the research for development and international cooperation with developing countries, specifically health research, in the European Commission. Thereafter, she coordinated science programmes in Africa for UNESCO in close collaboration with the African Union Ministerial Council for Science and managed the UN Cluster for Science and Technology in Africa.

She holds a PhD in Life Sciences from the University of Cape Town in South Africa, HDR (University of Paris V) and is a Member of the Academy of Sciences of South Africa. She pursued her research career at the Institute Pasteur in Paris, at the MIT University Park in Boston, and the French National Institute for Medical Research as Director of Research (INSERM). In parallel to her UN career, Dr. Nair-Bedouelle has been working since 2000 as Director of Research at the University of Paris V. In 2017, she was nominated First Class Director of Research at INSERM. Her scientific research was in the field of molecular biology and identification of new targets for anti-microbial compounds. She has published in numerous scientific journals and is the co-inventor of several patents.

PANELIST

Dr. Julieta Arancio

Julieta Arancio is a postdoctoral researcher at the Center for Science, Technology and Society, Drexel University (US), and an associated researcher at CENIT-UNSAM (Argentina). She holds a degree in environmental science from Universidad de Buenos Aires and a PhD in science and technology studies from Universidad Nacional de Quilmes. Julieta's research looks into inequalities in scientific knowledge production, focusing on the role of technologies. Her current work, funded by the Alfred P. Sloan Foundation, explores open hardware as an enabler of research questions and agendas that are not favored by current incentives and funding schemes. She has published academic papers on the topic, presented her work at venues like University of Cambridge (UK) & MIT (US), written policy briefs in collaboration with partners at the W. Wilson Center for Scholars (US) and teaches seminars at Universidad Nacional de Rosario (Argentina) and TU Berlin (Germany). Beyond academia, Julieta co-founded the open science hardware network in Latin America (reGOSH) and the mentorship program "Open Hardware Makers" to support newcomers in their journey into open science hardware.

Mr. Claudio Aspesi

A respected market analyst with more than a decade of experience covering the academic publishing market for international investors. Between 2004 and 2016, Claudio Aspesi was the Senior Research Analyst at Sanford C. Bernstein covering European Media Stocks. The academic publishing market – and Reed Elsevier and Pearson in specific – was a key area focus for him during his tenure.

Previously he was Global Senior Vice President of Strategy at EMI Music and was responsible for defining EMI's business model as the music industry entered the digital age. Before joining EMI in 2002, Claudio was a member of the executive team at Airclic, an Internet infrastructure company and, prior to that, a partner at McKinsey and Co., working with many leading media and entertainment companies.

Dr. Padmanabhan Balaram

Padmanabhan Balaram obtained his B.Sc. (1967) from Poona University, M.Sc. (1969) from IIT Kanpur and Ph.D. (1972) in chemistry from the Carnegie-Mellon University, USA. He was a Research Associate at Harvard University (1972-73). He served on the faculty of the Indian Institute of Science (IISc), Bangalore from 1973 to 2014. He was Director of the Institute from 2005 to 2014. He has been associated with the National Centre for Biological Sciences, Bangalore since 2017. He has contributed extensively to the areas of molecular biophysics and chemical biology.

He was the editor of Current Science from 1995 to 2013. During this time he authored over 300 editorials on diverse subjects related to science and scientists.

He is the recipient of several awards and honours, including Padma Shri (2002) and Padma Bhushan (2014). He is the recipient of the R. Bruce Merrifield Award 2021 of the American Peptide Society.

Ms. Carolina Botero

Carolina is the executive director of the Colombian civil society digital rights organization Karisma Foundation. She is a researcher, lawyer, lecturer, writer and consultant on topics related to law and technology. She also works for a world where human rights and social justice guide the development and deployment of technology.

Under her leadership, Karisma won the Index Censorship Freedom of Expression in the category of digital activism (2019). She was appointed as an international expert for the UNESCO recommendation on Open Science (2021). She holds a master's degree in international law and cooperation (VUB - Belgium), and a master's degree in Business and Contracting Law (2006, UAB - Spain).

Carolina is a member of the Board at Creative Commons and writes frequent Op Ed in local media El Espectador and La Silla Vacía.

Dr. Gregory Cajete

Gregory Cajete is a Native American educator whose work is dedicated to honoring the foundations of indigenous knowledge in education. Dr. Cajete is a Tewa Indian from Santa Clara Pueblo, New Mexico. He has served as a New Mexico Humanities scholar in ethno-botany of Northern New Mexico and as a member of the New Mexico Arts Commission. In addition, he has lectured at colleges and universities worldwide.

He worked at the Institute of American Indian Arts in Santa Fe, New Mexico for 21 years. There he served as Dean of the Center for Research and Cultural Exchange, Chair of Native American Studies and Professor of ethno-science. In 1995, he was offered a position in American Indian education at the University of New Mexico, College of Education.

He is the former Director of Native American Studies at the University College and an Emeritus Professor in the Division of Language, Literacy and Sociocultural Studies in the College of Education at the University of New Mexico. Dr. Cajete earned his Bachelor of Arts degree from New Mexico Highlands University with majors in Biology and Sociology and a minor in Secondary Education. He received his M.A. from the University of New Mexico in Adult and Secondary Education. He received his Ph.D. from International College, University Without Walls, Los Angeles, New Philosophy Program in Social Science Education with an emphasis in Native American Studies.

Dr. Cajete has received several fellowships and academic distinctions. He authored ten books, wrote prefaces and chapters in 44 other books along with numerous journal articles and over 350 national and international keynote and workshop presentations. Dr. Cajete retired from the University of New Mexico in June 2020 and is currently an independent consultant, scholar and writer.

Dr. Mathieu Denis

Mathieu is International Science Council's (ISC) Senior Director and Head of the Centre for Science Futures. He was appointed Science Director at the creation of the Council in 2018, a position he held until 2022. He also served as Acting CEO of the ISC throughout 2022. Mathieu had originally joined the International Social Science Council in 2012 and became its Executive Director in 2015. In that position he helped guiding and overseeing the merger with the International Council for Science (ICSU), and the creation of the ISC. Mathieu holds a PhD from the Humboldt University in Berlin, Germany. He has previously taught history, political theory, and industrial relations at the Université de Montréal. He worked as researcher at the Berlin Social Science Centre.

Dr. Lisa Federer

Lisa Federer is the Acting Director of the National Library of Medicine's Office of Strategic Initiatives, serving as principal advisor to the NLM Director on strategic directions of NLM, including open science, analysis, evaluation, and reporting on NLM programs and activities. Prior to this position, Lisa served as NLM's Data Science and Open Science Librarian, and previously served as the Research Data Informationist at the National Institutes of Health Library, where she developed and ran the Library's Data Services Program. She holds a PhD in information studies from the University of Maryland and an MLIS from the University of California-Los Angeles, as well as graduate certificates in data science and data visualization.

Ms. Loida Garcia-Febo

Loida Garcia-Febo is a Puerto Rican American librarian and International Library Consultant expert in library services to diverse populations and human rights. President of the American Library Association (ALA) 2018-2019. Chair of the ALA United Nations SDGs Subcommittee. Garcia-Febo is worldwide known for her passion about diversity, communities, sustainability, innovation and digital transformation, library workers, library advocacy, wellness for library workers, and human rights about which she has taught in 44 countries. In her job, she helps libraries, companies and organizations strategize programs, services and strategies in areas related to these topics and many others. She has experience as an academic, public, school and special librarian in NY and Puerto Rico. Born, raised, and educated in Puerto Rico. Garcia-Febo has a Bachelors in Business Education, and a Masters in Library and Information Sciences. She has advocated for libraries at the United Nations, the European Union Parliament, U.S. Congress, NY State Senate, NY City Hall, and on sidewalks and streets of various U.S. states.

Garcia-Febo has a long history of service in library associations. At IFLA: Governing Board 2013-2017, Co-Founder of IFLA New Professionals, two-term Member/Expert of the Free Access to Information and Freedom of Expression Committee of IFLA (FAIFE), two-term member of the Continuing Professional Development and Workplace Learning Section of IFLA (CPDWL). Currently: CPDWL Advisor, Management of Library Associations Section Info Coordinator. Currently at ALA: Chair Public Awareness Committee. Recently: Chair, Status of Women in Librarianship and Chair ALA United Nations 2030 Sustainable Development Goals Task Force.

Dr. Chelle Gentemann

As a computational physical oceanographer focused on remote sensing, Dr. Gentemann has worked for 30 years on retrievals of ocean temperature from space and using that data to understand how the ocean impacts our lives. She is the science lead for NASA's Transform to Open Science (TOPS) mission and is helping to organize the 2023 Year of Open Science.

Dr. Monica Granados

Dr. Monica Granados has a PhD in ecology from McGill University. While working on her PhD, Monica discovered incentives in academia promote practices that make knowledge less accessible. Since then, Monica has devoted her career to working in the open science space in pursuit of making knowledge more equitable and accessible. Monica is presently Assistant Director, Open Climate at Creative Commons working on the Open Climate Campaign promoting open access of climate and biodiversity research.

Ms. Laura Hanscom

Laura Hanscom is the head of the Scholarly Communications and Collections Strategy (SCCS) department in the MIT Libraries. In this position, she leads MIT Libraries services and staff in transforming models of scholarly publishing to increase the impact and reach of scholarship globally and promoting equitable, open, and sustainable access models. She also coordinates the overall collection management strategy for the Libraries' general collections, vendor negotiations, licensing, MIT's OA Policy implementation, scholarly communications awareness and outreach, and repository services.

Professor Lisa Janicke Hinchliffe

Lisa Janicke Hinchliffe is Professor as well as Coordinator for Research and Teaching Professional Development in the University Library at the University of Illinois at Urbana-Champaign. She is also an affiliate faculty member in the University's Center for Global Studies, European Union Center, and School of Information Sciences. Her responsibilities encompass training, coaching, and mentoring library employees to achieve success in their scholarship and educational roles. Lisa has taught courses in the iSchool on user education, international information organizations and policy making, library service evaluation and assessment, and academic librarianship. Lisa is the secretary of the IFLA Education and Training Section and a Chair of the ORCID Board of Directors. She is the PI on the Prioritizing Privacy (IMLS) and Licensing Privacy (Mellon) projects as well as co-PI for CARLI Counts (IMLS). Lisa has consulted, presented, and published widely on the scholarly communications, publishing, the value of libraries, strategic planning, organizational innovation, emerging technologies, program evaluation, library assessment, inclusion and equity, information literacy, and teaching and learning. Her clients include libraries, colleges and universities, scholarly and professional associations, and non-profit organizations and for-profit companies in the library business community.

Professor Bernt Hugenholtz

Bernt Hugenholtz is Professor Emeritus of Intellectual Property Law, and former Director of the Institute for Information Law (IViR) of the University of Amsterdam. He is Visiting Professor at the University of Bergen, Norway, and he teaches regularly at Católica Global School of Law (Lisbon), the Munich IP Law Centre, Bocconi University (Milan), Charles University (Prague), and occasionally at other universities. He is also Of Counsel at Brinkhof (Amsterdam) and Adjunct Judge at the Court of Appeals in The Hague.

Prof. Hugenholtz is a member of the Permanent Working Group Intellectual Property Rights of ALLEA, the European Federation of Academies of Sciences and Humanities. He has also acted as an advisor to the World Intellectual Property Organization (WIPO), the European Commission, the European Parliament and the Netherlands government.

Prof. Hugenholtz is co-author, with Professor Paul Goldstein (Stanford University), of International Copyright. Principles, Law, and Practice (4th ed., Oxford University Press, 2019), and co-author, with Professor Thomas Dreier (TU Karlsruhe), of European Copyright Law (2nd ed., Kluwer Law International, 2016). He is one of the founders of the Wittem Group that drafted the European Copyright Code, and a co-founder and member of the European Copyright Society.

Ms. Heather Joseph

Since her appointment as SPARC's Executive Director in 2005, Heather has focused the organization's efforts on supporting the open and equitable sharing of digital articles, data, and educational resources. Under her stewardship, SPARC has become widely recognized as the leading international force for effective open access policies and practices. Among her many achievements, she convened the Alliance for Taxpayer Access and the Open Access Working Group, which provided critical advocacy for the establishment of the landmark 2008 NIH Public Access Policy and the 2013 White House Memorandum on Public Access to Federally Funded Research.

Heather regularly participates in committees and collaborates on projects with U.S. federal agencies, ranging from the NIH National Advisory Committee on PubMed Central, to the NIST Steering Committee to establish a Research Data Framework. In 2015, she was appointed to the newly formed Commerce Data Advisory Council and tasked with providing input to the Secretary of Commerce on issues surrounding open data, and in 2019, she spearheaded the establishment of the National Academies of Science, Engineering and Medicine's Roundtable an Aligning Incentives to Support Open Science. Internationally, Heather has worked on initiatives and consultations to promote the open sharing of research outputs at the UN, The World Bank, UNESCO, and World Health Organization.

Prior to joining SPARC, Heather spent 15 years as a publishing executive in both commercial and not-for-profit organizations. She is also the founding President and COO of BioOne, a collaborative publishing organization designed to keep non-profit publishers operating independently. She is a frequent speaker and writer on issues relating to knowledge sharing, and on open access in particular.

Mr. Thomas Klebel

Thomas Klebel is a Researcher and Project Manager in the ORRG at Know-Center and a PhD-candidate in Sociology at the University of Graz. In his research he investigates unintended consequences of current implementations of Open Research, such as Open Access publishing. With a focus on quantitative methods of inquiry, he is also keenly interested in causal modelling and current issues concerning the reproducibility of research. He is project manager of the Horizon Europe project TIER2, investigating reproducibility across disciplines, and former project manager of ON-MERRIT, researching issues of equity in Open Science. Thomas holds degrees in Sociology and Music Performance from the University of Graz and the University of Performing Arts Graz.

Professor Barend Mons

Barend Mons is a molecular biologist by training and a leading FAIR data specialist. The first decade of his scientific career he spent on fundamental research on malaria parasites and later on translational research for malaria vaccines. In 2000, he switched to advanced data stewardship and (biological) systems analytics. He is currently a professor in Leiden and most known for innovations in scholarly collaboration, especially nanopublications, knowledge graph-based discovery and most recently the FAIR data initiative and GO FAIR.

Since 2012 he is Professor in biosemantics in the Department of Human Genetics at the Leiden University Medical Center (LUMC) and since May 2022 also at the Leiden Academic Centre for Drug Research (LACDR) in the Netherlands. In 2015, Barend was appointed chair of the High-Level Expert Group on the European Open Science Cloud. In 2017, Barend started the International Support and Coordination office of the GO FAIR initiative. He is also the elected president of CODATA, the standing committee on research data-related issues of the International Science Council. Since 2021, Barend is the Scientific Director of the GO FAIR Foundation. Barend is a member of the Netherlands Academy of Technology and Innovation (ACTI). He is also the European representative in the Board on Research Data and Information (BRDI) of the National Academies of Science, Engineering and Medicine in the USA. Barend is a frequent keynote speaker about FAIR and open science around the world and participates in various scientific advisory boards of international research projects.

Dr. Tshiamo Motshegwa

Dr. Motshegwa is the inaugural Director of the African Open Science Platform (AOSP) with the strategic portfolio to direct and support the AOSP. AOSP aims to position African scientists at the cutting edge of data intensive science by stimulating interactivity and creating opportunity through the development of efficiencies of scale, building critical mass through shared capacities, amplifying impact through a commonality of purpose and voice, and to engage in Global Commons to address continental and global challenges through joint action. He has a Ph.D. in Computer Science from City, University of London, UK at the School of Mathematics, Computer Science and Engineering.

Regionally Dr. Motshegwa has been Chair of the Southern African Development Community (SADC) Technical Experts Working Group developing and implementing the SADC Regional Cyber-infrastructure Framework – this to develop a shared regional commons of compute, data, networks and human capital to enhance regional research, innovation and education and host data and computationally intensive projects of regional impact.

Globally, he is a member of the Open Science Clouds Executives' Roundtable (OSCER) that promotes collaboration through open science in practice towards optimal global interoperability and reuse of data and services for the benefit of open science.

Nationally, Dr. Motshegwa was seconded to the Ministry of Tertiary Education Research Science and Technology (now Ministry of Education), Government of Botswana since November 2020 around the Botswana National Digital Transformation Initiative (SmartBotswana) regarding ''Education Towards a Knowledge Based Economy'' and the digital transformation of Botswana's research, science, technology and innovation (RSTI) ecosystem.

Ms. Susan Murray

With an academic background in Development Economics and previous non-profit training organisation work experience, Susan has been the Executive Director of African Journals OnLine (AJOL) since 2010, and its manager for 3 years before that. She has grown AJOL from an online list of some African peer-reviewed journals to the huge online library of African research output, and varied services AJOL provides today to millions of people on the continent and around the world. Susan considers herself extremely fortunate to work with a wonderful group of dedicated, expert, and light-hearted colleagues who have brought important African research outputs to global prominence.

Ms. Joy Owango

Joy is an experienced award-winning Founding Director of the Training Centre in Communication (TCC Africa) an award-winning Trust registered in Kenya set up in 2006 and is the first African-based training centre to teach effective communication skills to scientists. TCC Africa is in partnership with the University of Nairobi, Kenya and provides capacity support in improving African researchers output and visibility through training in scholarly and science communication.

She has a demonstrated history of working in higher education (in both private, university and non-governmental sectors). She was a successful higher education practitioner with Clarivate Analytics and worked with the following Governments, Kenya, Tanzania, Rwanda, Mauritius, Ghana, Senegal, Burkina Faso and created foundational opportunities valued at approximately USD 1.3Million. As the Director of TCC Africa, she is currently working with all 15 African countries that have committed to spending 1% of their GDP in Higher Education and Research and Development.

Dr. Ana Persic

Dr. Ana Peršić is a Programme Specialist at the Section of Science Technology Innovation Policy at the UNESCO Headquarters in Paris. Ecologist by training (Master in Ecological Sciences at the University of Padova, Italy, and PhD in Ecotoxicology at the University of Paris South, France), Dr. Ana Peršić joined UNESCO in April 2006 as an Assistant Programme Specialist serving UNESCO's Man and the Biosphere programme within the Division of Ecological and Earth Sciences. She has then served as Science Specialist at the UNESCO Liaison Office in New York from 2011 to 2018.

Her work relates to strengthening the science-policy interface and the promotion of science technology and innovation in the implementation of the United Nations 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs). She coordinated the development of the UNESCO Recommendation on Open Science and is currently working towards its implementation.

Ms. Claire Redhead

Claire Redhead is Executive Director of OASPA (the Open Access Scholarly Publishing Association) and is responsible for leading this diverse, open access publishing community and overseeing the activities of the organisation. She joined OASPA as Membership and Communications Manager in 2012 and prior to that worked in the academic publishing sector, gaining editorial and management experience and developing valuable insight. Claire is chair of the OA Switchboard and is an active member of a number of working groups and committees, including OAPEN's Advisory Board, the OA Books Toolkit, and Think. Check. Submit.. She was involved in a recent in-depth study of Diamond OA Journals, and represents OASPA on two European Commission funded projects: DIAMAS and PALOMERA.

Dr. Tony Ross-Hellauer

Tony Ross-Hellauer is leader of the Open and Reproducible Research Group at Graz University of Technology and Senior Researcher at Know-Center. His research focuses on a range of issues related to open science evaluation, skills, policy, governance, monitoring and infrastructure. Tony has a PhD in Information Studies (University of Glasgow, 2012), as well as degrees in Information and Library Studies and Philosophy. He is coordinator (PI) of the new EC Horizon Europe-funded project TIER2, investigating reproducibility and served the same role in the completed EC Horizon 2020 project ON-MERRIT, researching issues of equity in Open Science.

Professor Jeffrey D. Sachs

Jeffrey D. Sachs is University Professor and Director of the Center for Sustainable Development at Columbia University, where he directed the Earth Institute from 2002 until 2016. He is Presidentof the UN Sustainable Development Solutions Network, Co-Chair of the Councilof Engineers for the Energy Transition, Commissioner of the UN Broadband Commission for Development, academicianof the Pontifical Academy of Social Sciences at the Vatican, and Tan Sri Jeffrey Cheah Honorary Distinguished Professor at Sunway University.He has been Special Advisor to three United Nations Secretaries-General, and currently serves as an SDG Advocate under SecretaryGeneral António Guterres. He spent over twenty years as a professor at Harvard University, where he received his B.A., M.A., and Ph.D. degrees. Sachs hasreceived 41honorary doctorates, and hisrecent awardsincludethe 2022 Tang Prize in Sustainable Development, the Legion of Honor by decree of the President of the RepublicofFrance,andthe Order of the Cross from the President of Estonia. His most recent booksareThe Ages of Globalization: Geography, Technology, and Institutions(2020)and Ethics in Action for Sustainable Development(2022).

Dr. Imme Scholz

Since April 2022, Dr. Imme Scholz serves as Co-President of the Berlin-based Heinrich Böll Foundation. Prior to that she had been Deputy Director of the German Development Institute (Deutsches Institut für Entwicklungspolitik, DIE) since 2009. She is an Honorary professor for Global Sustainability and its Normative Fundamentals at the Center for Ethics and Responsibility (ZEV) at Bonn-Rhein-Sieg University of Applied Sciences in St. Augustin.

Imme Scholz is Deputy Chair of the Council for Sustainable Development (RNE), where she has been active since 2013. In addition, she is the Co-Chair of the Independent Group of Scientists, an organisation that has been commissioned by the United Nations to prepare the second Global Sustainable Development Report. She is also a member of the "Bioökonomierrat" (Council on Ecological Economics) and of the supervisory board of Diakonie, the social welfare organisation of Germany's Protestant churches (since 2012) and the German Committee on Sustainability Research. Between 2003 and 2022 she served on the Böll Foundation's North-South expert advisory board.

Imme Scholz joined the German Development Institute in 1992 as a research assistant, and between 2002 and 2009 she was in charge of its newly created division for "Environmental Policy and the Management of Natural Resources", where she established a programme on "climate change adaptation in developing countries". Her research focus has been on numerous aspects of climate change, the natural environment and development.

In the 1980s she studied sociology at Berlin's Free University, earning her PhD in 1999 with a thesis titled Environmental standards for the export of tropical timber - the adaptability of timber-exporting companies in Eastern Amazonia, Brazil.

Dr. Nancy Shackell

Dr. Nancy Shackell (she/her) is a Senior Research Scientist at Bedford Institute of Oceanography in Nova Scotia, working for Fisheries and Oceans Canada (DFO). Dr. Shackell research themes of climate change, biodiversity conservation, marine protected area design, spatial ecology and how such information can be applied in an oceans management framework. She co-led the Aquatic Climate Change Adaptation Services Program in Canada's Atlantic Basin, coordinating scientific research necessary to identify climate change impacts, to refine applied ocean modelling and to develop adaptation tools for vulnerable coastal regions. She currently serves as co-chair of a Canadian-US Climate and Fisheries Collaboration to advance bilateral scientific research to detect, understand, project and respond to climate-related changes.

Dr. Shackell is currently part of a UN Independent Group of 15 Scientists (IGS) who are drafting the 2023 Global Sustainable Development Report (GSDR), to be launched officially in September 2023. The GSDR aims to strengthen the science-policy interface at the High-Level Political Forum (HLPF) on Sustainable Development in their review of Agenda 2030, and the Sustainable Development Goals. Through the regional input process of the GSDR report, the IGS recognized a common theme;- the "Science Policy Interface" is starting to include a broader spectrum of society, and there is a need to develop more pathways to dialogue with policy makers. Indeed, dialogues between science and policy makers is evolving into a "Science-Policy-Society" interface. Diverse forms of knowledge and working together towards a common agenda is a promising direction in an age of multiple compounding global risks.

Ms. Kathleen Shearer

Kathleen Shearer has been the Executive Director of the Confederation of Open Access Repositories (COAR) since 2013 and has been working in the area of open access, open science, scholarly communications, and research data management for over 15 years. She is based in Montreal, Canada and participates in numerous other organizations to advance open science around the world. She is the author of numerous publications and delivered many presentations at international events. Most recently, she was the lead author of the paper Fostering Bibliodiversity in Scholarly Communications: A Call for Action (April 2020) and presented the keynote speech at the Open Repositories Conference in June 2020.

Shearer is also a Research Associate with the Canadian Association of Research Libraries (CARL) and has been instrumental in many of CARL's activities related to open science, including the launch of the Portage Initiative in Canada, a national research data management network.

Dr. Aldo Stroebel

Dr. Aldo Stroebel is Executive Director Strategic Partnerships, and Acting Group Executive Strategy, Planning and Partnerships, at the National Research Foundation (NRF) of South Africa. He has initiated and has oversight of South Africa's membership to the Human Frontiers Science Programme, the African Open Science Platform, and the Africa Global Secretariat Hub of Future Earth. He serves as South Africa's National Contact Point for the European Research Council, as Board Member of the Water Research Commission, as Council Member to the International Institute for Applied Systems Analysis (IIASA) and as the co-chairperson of the Executive Support Group of the Global Research Council. He is a Foreign Fellow of the Ugandan National Academy of Science, a Senior Fellow of the Pan-African Scientific Council, and a founding member of the SA Young Academy of Science (SAYAS).

Aldo Stroebel earned his BSc and Hons degrees from the University of Pretoria, South Africa, his Master's degree in International Agricultural Development from University of Ghent, Belgium, and his PhD from the University of the Free State and Cornell University, USA. He is a recognised scholar in sustainable agriculture, and acknowledged as a leader in the internationalisation of Higher Education, and research and innovation management.

Mr. Yousef Torman

For more than thirty years, I worked as ICT specialist at highly reputable institutions in the sector of higher education and scientific research with focus on promoting and supporting the use of technology for developing and enhancing research, education and scientific practices.

I had successfully established and managed the New Computer and Information Center at Jordan University of Science and Technology serving around 16000 students, 3500 faculty and staff member through advanced infrastructure and wide range of services beyond campus borders.

At the national level, I established and managed the Jordanian National Research and Education Network (Jordanian Universities Network (JUNet)) serving 11 Universities with more than 250000 students and 25000 faculty and staff members all were connected to the national and global research and education networks.

At the regional level, I played a prominent and key role in establishing of the Arab States Research and Education Network – ASREN – for which I am currently the Managing Director. Hoping to serve hundreds of Universities in the Arab Region and to connect them with the other regional and global research and education networks to enable collaboration and facilitate access to educational and research resources and services around the world.

As a Managing Director for ASREN, my priority is to promote, facilitate and support Science Cooperation and joint activities through the provision of reliable e-Infrastructures with advanced research and educational services. All this with UN-SDGs and UNESCO's Open science Recommendations in mind.

Dr. Uta Wehn

Uta Wehn is Associate Professor of Water Innovation Studies and head of the Knowledge & Innovation Studies Development group at IHE Delft and the Adlerbert Visiting Professor of Marine Citizen Science for Sustainable Development at the University of Gothenburg.

She is a social scientist with a background in ICTs, drawing on more than 20 years of industrial, research and international development experience. Her work at the intersection of data and knowledge co-creation, digital innovations and water and environment focuses on the social dynamics of innovation and how to harness Citizen Science and social innovation for participatory environmental governance and sustainable development. Her Citizen Science and community-based monitoring activities include case studies in Europe, the Middle East and Africa, tailoring user-centred and multi-stakeholder co-design approaches and advancing methods for measuring as well as sustainably attaining impacts.

She is a member of several high-level international initiatives, including the OECD Water Governance Initiative where she has represented IHE Delft since the start of the initiative in 2013. She currently chairs two WeObserve Communities of Practice and co-chairs the CSGP Community of Practice on Citizen Science & Open Science.

Ms. Astra Bonini, Senior Sustainable Development Officer, Department of Economic and Social Affairs, United Nations (UN)

His Excellency, Mr. Csaba Kőrösi, President of the General Assembly, UN

Ms. Melissa Fleming, Under-Secretary-General for Department of Global Communications, UN

Mr. Thanos Giannakopoulos, Chief Librarian, Dag Hammarskjöld Library, UN

Mr. Maher Nasser, Director, Outreach Division, Department of Global Communications, UN

Ms. Maria-Francesca Spatolisano, Assistant Secretary-General for Policy Coordination and Inter-Agency Affairs, Department of Economic and Social Affairs, UN

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