



Big data and digitalization for promoting equity and equality in sustainability efforts

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Science as a global public good: ISC domains of action

Global sustainability

Converging science and technology in a digital era

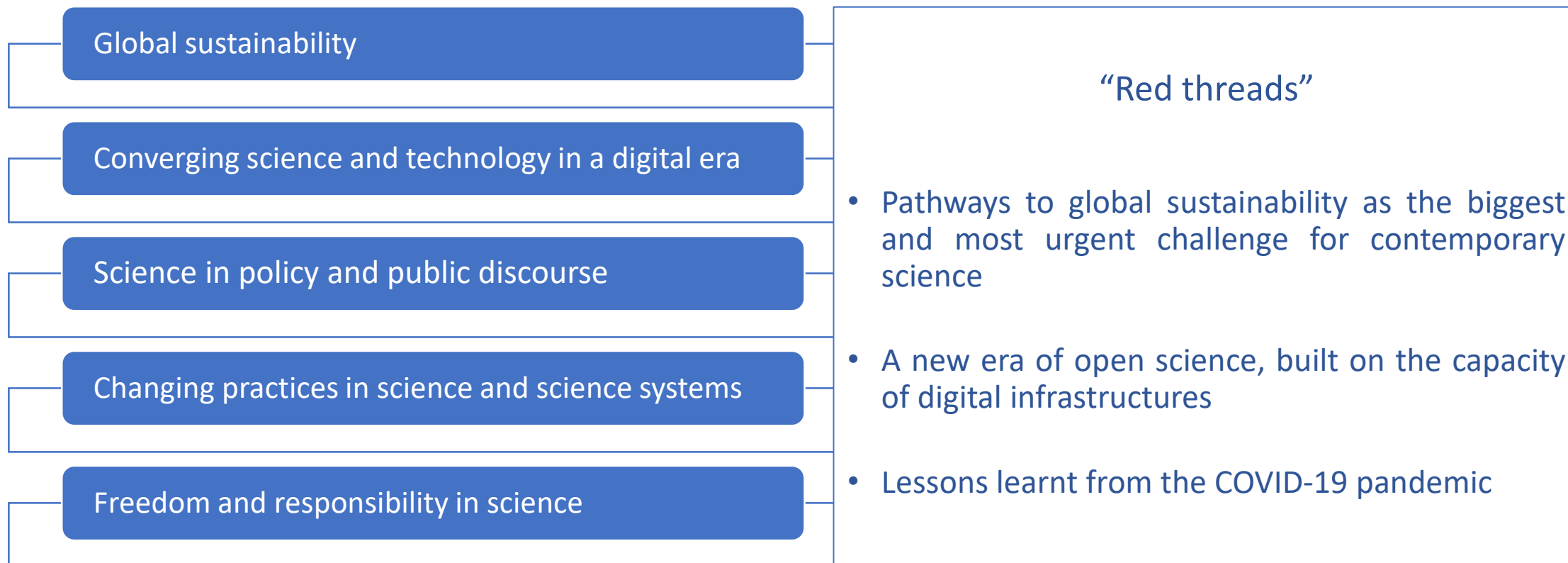
Science in policy and public discourse

Changing practices in science and science systems

Freedom and responsibility in science



Science as a global public good: ISC domains of action





Flagship ISC activities relevant to big data and digitalization for sustainability

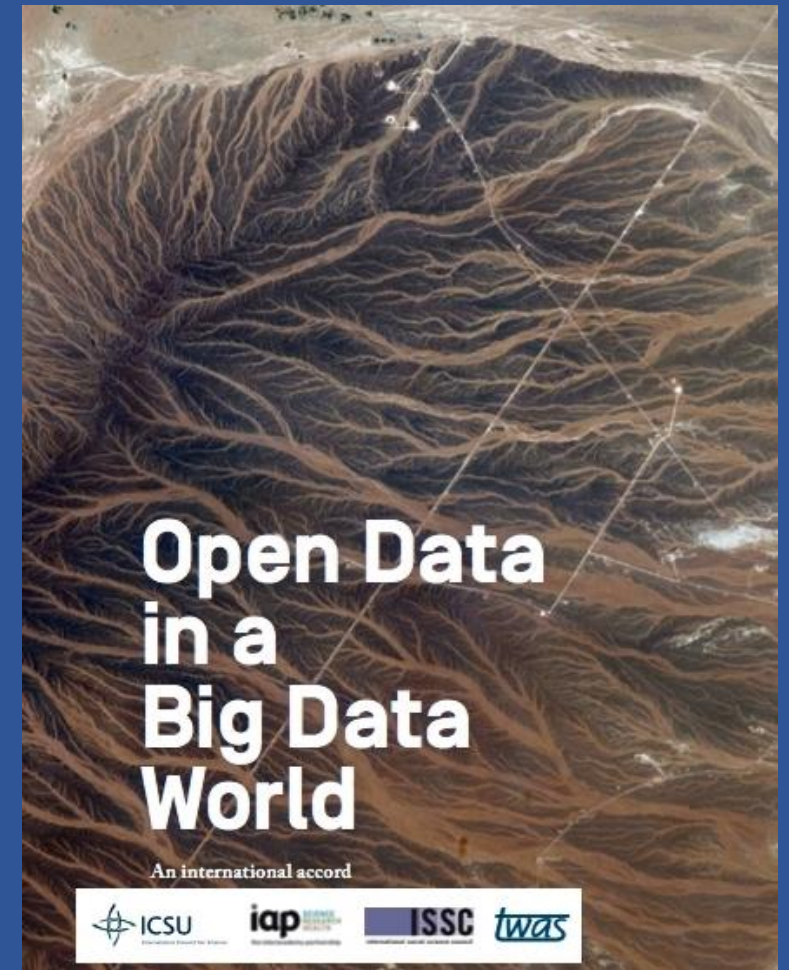




Open data in a big data world

- An international accord
- Published in 2015 by four major organizations representing international science: IAP, TWAS and ISC's predecessors, ICSU and the ISSC
- Proposed principles to guide the practice of open data
- Framed the subsequent development of ISC activities on the digital revolution and on open science

<https://council.science/publications/open-data-in-a-big-data-world/>





Making data work for cross-domain grand challenges

- A decadal programme, initiated in 2019
- Led by the ISC's Committee on Data (CODATA)
- Aims to develop more effective, evidence-based solutions for complex global challenges through interdisciplinary collaboration enabled by policies and practices of data integration across scientific fields and disciplines

<https://council.science/actionplan/making-data-work-for-grand-challenges/>





Coalition for digital environmental sustainability (CODES)

- A global community of practice, launched in 2020
- Championed by the UN Environment Programme, the UN Development Programme, the German Environment Agency, the Kenyan Ministry of Environment and Forestry, Future Earth and the ISC
- Part of the follow-up to the UN Secretary General's 'Roadmap on Digital Cooperation'
- Aims to develop and implement an acceleration plan for action at the nexus of environmental sustainability and digitalization

<https://www.sparkblue.org/CODES>





Open science for the 21st Century

- A series of actions aimed at articulating and advocating the principles and practices of open science
- Leading the international scientific community's input into the develop of a UNESCO recommendation on open science
- Framing other ISC projects on open science, incl. on the future of scientific and scholarly publishing

<https://council.science/actionplan/open-science/>





Open science in the 'Global South'

- A programme launched in 2019
- Aimed at positioning scientists and science systems in low and middle-income countries at the cutting edge of data-intensive open science
- The African Open Science Platform, hosted by South Africa's National Research Foundation, serves as a model for the development of analogous initiatives in Latin America and the Caribbean, Asia and the Pacific

<https://council.science/actionplan/open-science/>





**Relevance of these activities to issues of
inequality and inequity?**





Harnessing the tools of the digital revolution to enhance the capacity of science to understand and address the complexities inherent in global sustainability challenges, including issues of inequality and inequity



Raising awareness of and safeguarding against the potential of digital technologies and related processes to deepen inequalities, exclusion and discrimination



Empowering vulnerable citizens and communities by making the record of science, its evolving stock of evidence, knowledge, ideas, and possibilities accessible to, reusable by, and free for all



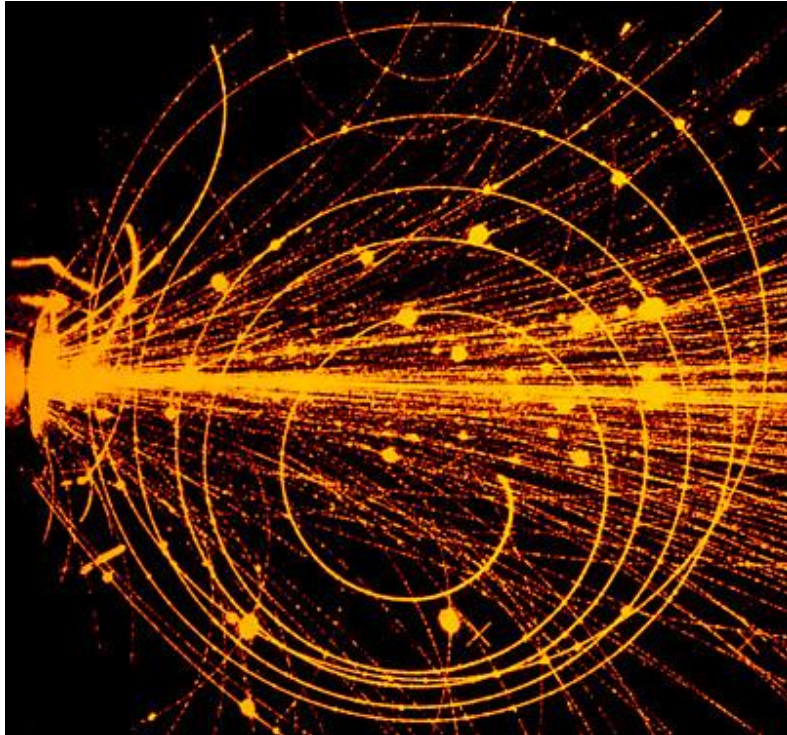
Giving visibility and voice to the interests and perspectives of vulnerable communities by engaging them in the co-production of knowledge, and the co-creation of pathways to an equitable and sustainable life for all on planet Earth



Redressing inequalities in global science by developing individual, institutional, and political capacities for data-intensive open science in low and middle-income countries



Challenging – and changing – the governance of science through an emphasis on policies for and practices of openness, inclusivity and diversity



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