FAIR Principles in United Nations Instruments Information Management

Horst Kremers
CODATA-Germany Secretary General
Engineering Management and Information Sciences, Berlin (Germany)

UNISA University of South Africa Library and Information Services Webinar
"Open Access for removing barriers to knowledge sharing"
2021-10-26

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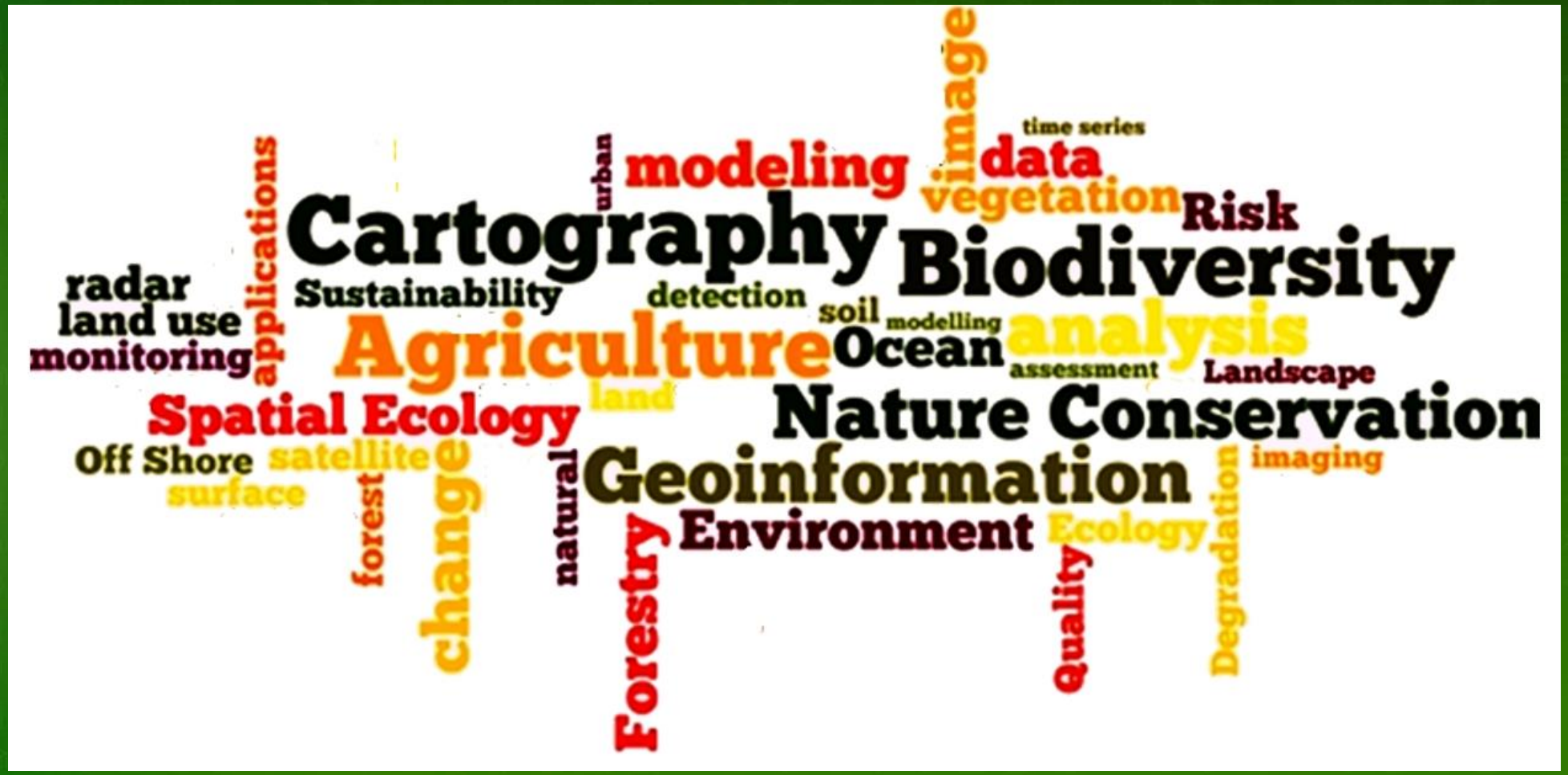

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Structure

- United Nations Instruments Information Management
- Complexity
- Stakeholders
  (including Indigenous Peoples)
- Recommendations for Action
- Questions

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United Nations Instruments

Transnational Declarations, Conventions, Treaties, Frameworks and Directives

UN HABITAT,

UN Sustainable Development Goals SDGs,

UN Disaster Risk Reduction (SENDAI Framework),

UN Framework Convention on Climate Change,

Int. Platform on Biodiversity and Ecosystem Services IPBES,

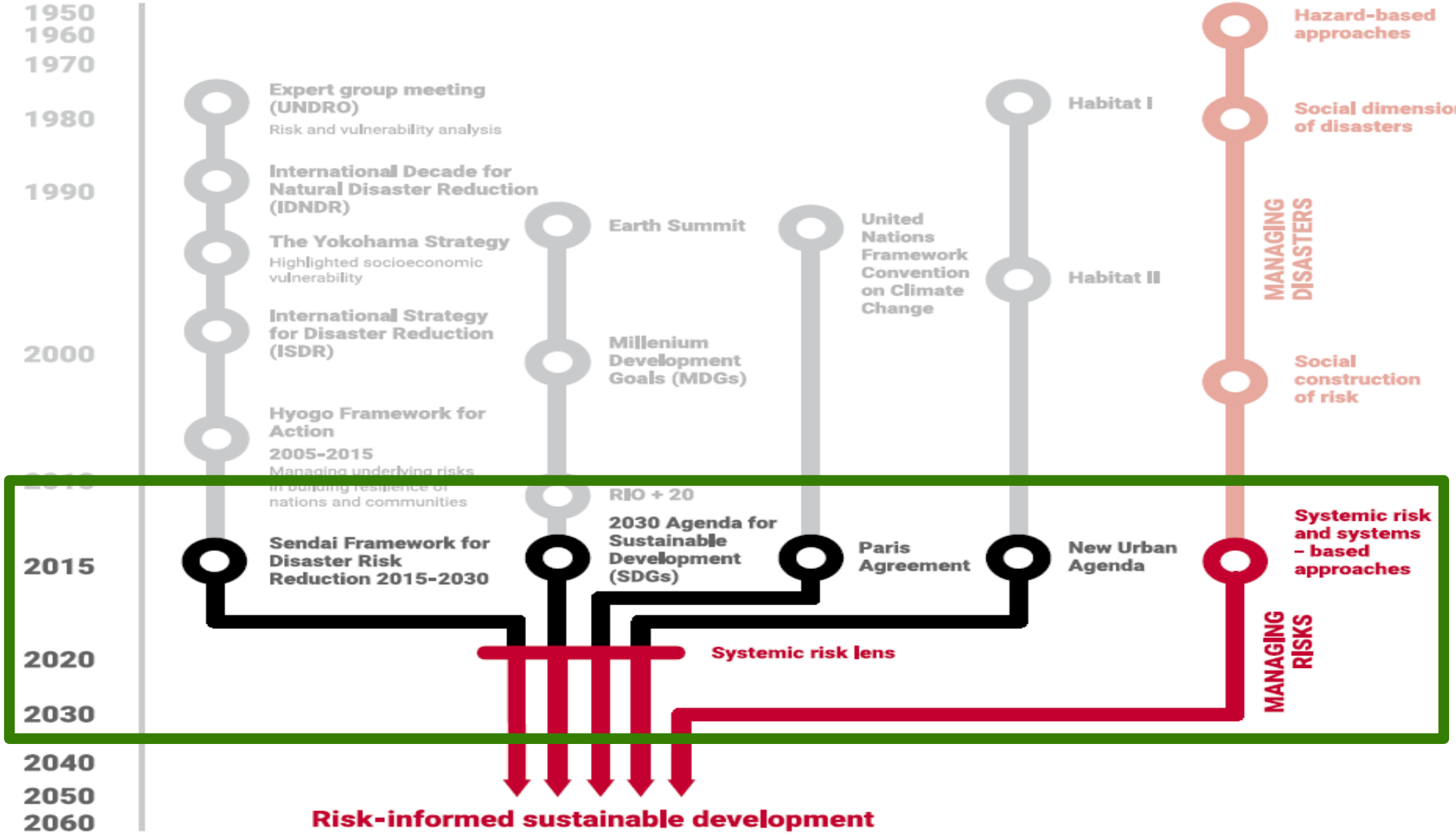
Universal Declaration of Human Rights,

UN Declaration on the Rights of Indigenous Peoples

UN Convention on the Rights of the Child,

Doha Declaration on Disability and Development

and many others



(Source: UNDRR 2019)

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Basic Management Principles

- critical thinking
- gaps and deficits analysis
- decision, action, and control cycle support
- transparent analysis
- compliance to legal and technical regulations and other boundary conditions
- include financial structures, budgets and the use of financial instruments in reporting and control
- constructive goal-reaching and effectivity control
- guidance on human resources (quantity, future competence levels)
- avoidance of malpractice
- extend concepts of FAIR information principles to support transparency goals and accountability
- extensive documentation and reporting obligations
- quality indications on confidence, weaknesses, uncertainties, error propagation, and vulnerabilities

Establishing Cross-Organizational Information Infrastructures

- Catalog of Information Sources Metainformation
- Improved Data Access (Time and Cost Savings)
- Enable and Improve Data Exchange between different Institutions and Application Domains
- Consistent and Efficient Use of Data
- More Efficient Development of Services using existing Data and Standards
- High-Quality Data for Action Alternatives and Decision-Making Support
- Service-Level-Agreements (Preparatory and Operational)
- Improvement of Strategic, Tactical and Operational Decisions
- Possibility of Decision-Making about Policies (Administration, Jurisdiction etc.)
- Including the Private Sector
- Facilitating the Development of Knowledge Generation, Communication and Comparison
- Comprehensive Documentation and holistic Ex-Post Analysis
- Analysis Across all Phases of Planning, Implementation, Operation and Control of Goal-Reaching Effects

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Selected Domains and Organizations of Current Interoperability Best Practice

Environmental Information (UNEP Digital Transformation towards a Global Data Strategy, EU INSPIRE Directive)

Geoinformation (Open GIS Consortium OGC)

Observational Health Data Sciences and Informatics (OHDSI)

Essential Biodiversity Variables (EBVs)

Group on Earth Observations

Resource Description Framework (W3C)

Process Modeling Standards (BPM)

Data Documentation Initiative (DDI)

International Image Interoperabilty Framework (IIIF)

W3C Data Activity: Semantic Web

... and many more

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Elements of Information Management

The elements of Information Management are not only “pure” data but all facts

values, metainformation, methods, functions, processes, models, measures, principles,
expectations, goals, actors and their culture and sociology,
documentation, decisions, actions, effects and control

Consequences:

- Enabling Operational Complexity,
- Improvement of Transparency,
- Avoidance of Misinterpretation,
- Essentially speeding-up Alternatives and Decisions,
- Support of Accountability

The Complexity Challenge (1)

- Complexity and Dynamics of Facts
- Complexity and Dynamics of Contexts
- Complexity of Actors
- Complexity of Organizations
- Complexity of Stakeholders – „those that are affected“
- Complexity of Systems Interdependence
- …

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The Complexity Challenge (2)

- Information capturing and data analysis
- Information documentation and permanent access
- Data-driven understanding of our world
- Decision-making support and control
- Thresholds, signals, triggers
- Alerts
- (re-)Action
- Processes, Workflows
- Goals-reaching
- Effects, Consequences

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The UN Declarations and other UN Instruments texts increasingly enforce the demands for Coherence and mutual Synergies

There is special emphasis on

- defining the basic elements of coherence
- consequences for holistic information management across programs and conventions
- rising awareness on the key role of stakeholder driven participative information governance needed to foster of cross-domain and cross-organizational national as well as international implementations.

Timeliness implementations guided by the principles of holistic information management are key prerequisites in societal, natural, technical, humanistic and ethical aspects for the future of people and planet.

Aims

Coherence and Accountability Improvements according to Expectations of Information Society

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2021 2030 United Nations Decade of Ocean Science for Sustainable Development

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The United Nations General Assembly has endorsed seven outcomes for the Decade of Ocean Science for Sustainable Development leading to 2030:

1. A clean ocean where sources of pollution are identified and reduced or removed,
2. A healthy and resilient ocean where marine ecosystems are understood, protected, restored and managed,
3. A productive ocean supporting sustainable food supply and a sustainable ocean economy,
4. A predicted ocean where society understands and can respond to changing ocean conditions,
5. A safe ocean where life and livelihoods are protected from ocean-related hazards,
6. An accessible ocean with open and equitable access to data, information and technology and innovation,
7. An inspiring and engaging ocean where society understands and values the ocean in relation to human wellbeing and sustainable development.

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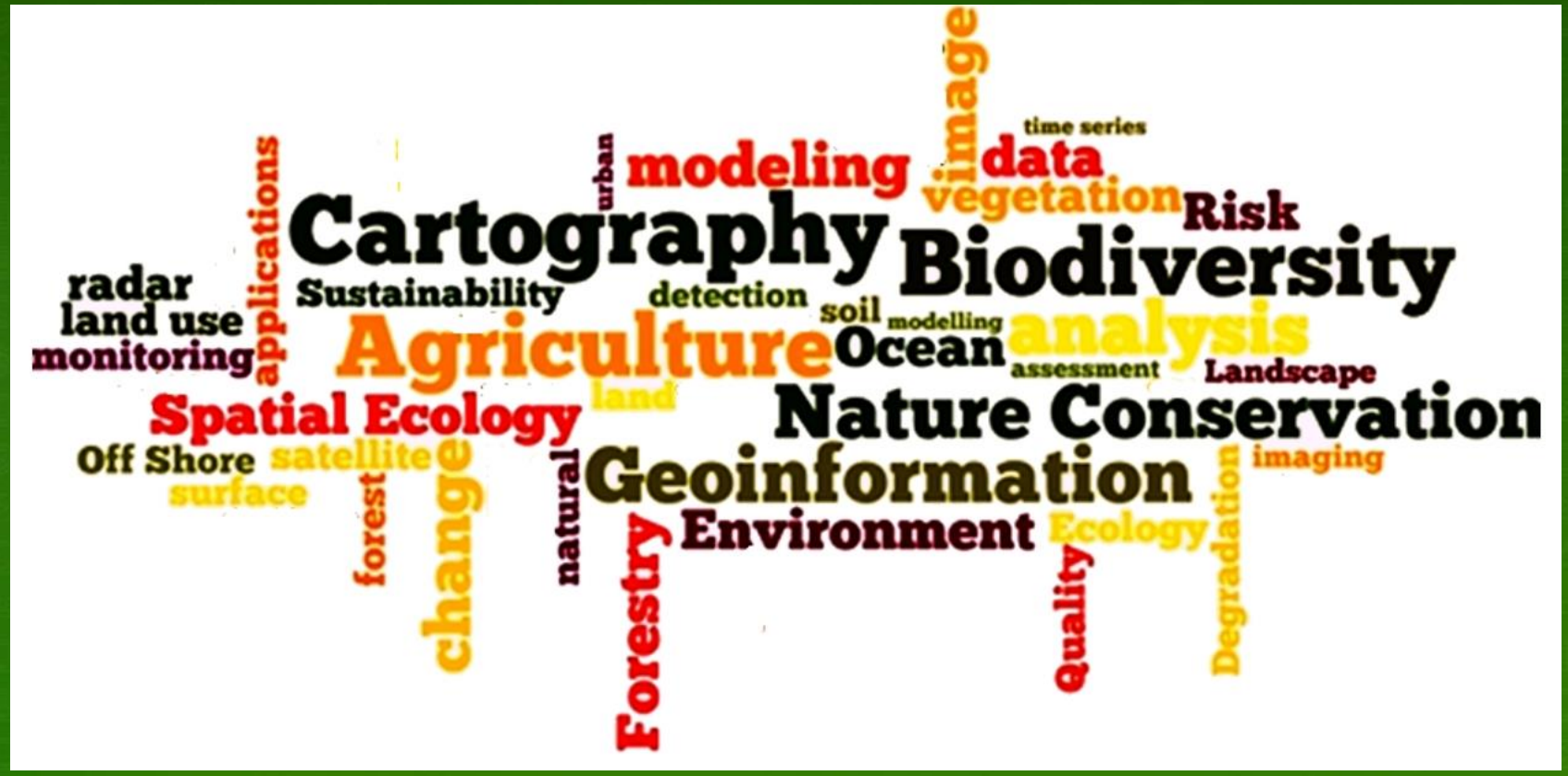
Information from Historic Times used to Manage Tasks of Today



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Information from Historic Times used to Manage Tasks of Today

- Knowledge Institutions multi-modal Information Sources
- Digitization
- Markups
- Annotation
- cross-organizational synergies across topics domains, time and space
- “include promoting public awareness and education and strengthening community participation; and promoting and utilising indigenous knowledge and practices”
  http://agreement.asean.org/media/download/20190702042042.pdf

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General Conditions

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Besides multi-stakeholder inclusion and discussion in the development of strategies, implementing a concept of follow-up roadmap / action-plan is to be anticipated already in preparatory phases:

- negotiate for standards for situation/action phases definition
- make Information Mangement elements a prerequisite of comprehensive reporting and (annual) National Reporting (National Focal Points for UN Instruments)
- specify a priori documentation requirements according to UN Instruments extensive requirements,
- enable content search by timestamp, time period, content or actor group involved (define information management elements in strong anticipation of information use)
- check with all stakeholders for potential fraud in decisions and actions in operation as well as in administration, financial and private sector domains
- implement awareness on best practice ethical principles

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Knowledge Institutions should engage with Stakeholders

including and giving special support to

- women,
- children and youth,
- persons with disabilities,
- poor people,
- migrants,
- indigenous peoples,
- older persons,
- investigative and data journalists,
- the media

for implementation of United Nations Instruments and goals achievement control, participative governance for local/regional/national policies, plans and standards.

Knowledge Institutions: Libraries, Courts, Museums, Collections, Archives, Observatories, Internet Sources (e.g. WIKIPEDIA), Universities, Schools, ...

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Indigenous Peoples at the United Nations

- In November 2020, the fifth anniversary of the SWAP-Indigenous Peoples *https://www.un.org/development/desa/indigenouspeoples/about-us/system-wide-action-plan.html*

  the UN System Chief Executives Board for Coordination (CEB) took the opportunity to revitalize the System-Wide Action Plan SWAP and strengthen collective and coherent UN system efforts by endorsing a call to action on building an inclusive, sustainable and resilient future with indigenous peoples.

- The call to action was developed through the Inter-Agency Support Group on Indigenous Issues and and approved by the High-level Committee on Programmes. The call to action affirms the Executive Heads' commitment to supporting Member States in the promotion, protection and realization of the rights of indigenous peoples and redoubling efforts to ensure collaborative and coherent United Nations system action to support the rights and well-being of indigenous peoples.

UN Declaration on the Rights of Indigenous Peoples *https://humanrights.gov.au/our-work/un-declaration-rights-indigenous-peoples-1*

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- Find adequate ways for closing the R&D / Practitioners gaps by making technical best practice mandatory for routine procedures in operational actors groups and organizations

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- A comparative content analysis of available information, participation tools, and interaction showed how these aspects are expressed.

Recommendations for Action (3)

- Enable steps in direction of institutionalizing participative Governance of Information, including periodic reporting as well as independent auditing according to holistic management principles on all levels. Alignment of interest and operational role of different stakeholder groups is achieved by open participative procedures.

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- Draw from existing previous long-term experiences in the broad fields of environmental information and geoinformation (INSPIRE, Open GIS Consortium, ORCHESTRA 2008)

Recommendations for Action (4)

5. HUMAN RIGHTS

The first case which truly considered human rights in the disaster context and specifically whether a right to be informed existed was the decision of the ECtHR in *Guerra* v. *Italy*,[75] in which the ECtHR found against a state whose authorities had failed to provide the local population with information about the risks of living close to a chemical factory. Relying on article 10 (freedom of expression) of the European Convention for the Protection of Human Rights and Fundamental Freedoms[76] (ECHR), the ECtHR held that the freedom to receive information within that article should be construed as 'conferring an actual right to receive information, in particular from the relevant authorities, on members of local populations who had been or might be affected by an industrial or other activity representing a threat to the environment'. Associated with the right was 'a positive obligation [on the state] to collect, process and disseminate [information on environmental matters] which could not otherwise come to the knowledge of the public'.[77]

source:
Simon Whitbourne: „The Protection of Knowing" in Samuel, K., Aronsson-Storrier, M., & Bookmiller, K. (Eds.). (2019). The Cambridge Handbook of Disaster Risk Reduction and International Law. p. 131 ff. , Cambridge University Press. doi:10.1017/9781108564540

FAIR Aware

FAIR-Aware is an online tool which helps researchers and data managers assess how much they know about the requirements for making datasets findable, accessible, interoperable, and reusable (FAIR) before uploading them into a data repository.

The tool comprises 10 carefully designed questions, each generously supplied with additional information and practical tips which extend users' understanding of the FAIR principles as they work through the questionnaire with a target dataset in mind.

Presented in a clear and informative way and suitable for different research domains, FAIR-Aware provides tips for each question, making it easier for users to understand difficult topics and helping them learn how to make their data more FAIR. Part of this guidance also supports researchers in the choices they need to make to choose a repository to deposit their data in, and how to collaborate with that repository to create a FAIR dataset.

The project team has made the source code of the tool available online in two versions, English and French, hosted by DANS and by Doranum. This source code can be modified to facilitate approval by other databases and also as part of FAIRsFAIR engagement and training activities. The FAIRsFAIR project partners and supporters invite everyone working with research data to use the tool, and spread the word to those who may benefit from it.

https://www.fairsfair.eu/fair-aware

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Questions (1)

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- Do Knowledge Institutions cooperate in innovative Information Management concepts, models, long-term open availability that is necessary for actively contributing to and partnering with public and civil society / NGO initiatives and thus essentially enable transparency in support of participative governance of United Nations Instruments implementation and goalreaching control?

...

Questions (2)

- Which Risks are in automation of processes, in particular in connection with the application of artificial intelligence, and the enrichment with or introduction of a range of "smart" technologies such as assistance systems and personalization algorithms, customized services etc.

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- Do we need a Critique of Knowledge Institutions‘ User Data Analysis / User Tracking?

...

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- Is there a a Requirements Engineering approach to the Role that Knowledge Institutions have in United Nations Instruments Implementations and corresponding Stakeholder Engagement?

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- What humanitarian criteria are in place according to which Knowledge Institutions collect, make available and interoperable (e.g. need of support for regions of humanitarian crisis, Indigenous Peoples' land rights, war against Environment, unprecedented number of those in Poverty and Hunger ? (cf. https://www.accioncontraelhambre.org/en)

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- Is „Information Availability from/for Research" identical with „Most urgent information demands to support those who suffer"? Are there (maybe) Gaps?

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DEFINING THE **DATA REVOLUTION**

Since the phrase was coined in May 2013 in the report of the High-Level Panel of Eminent Persons on the post-2015 Development Agenda, the "data revolution" has come to mean many things to many people. Here, we take it to mean the following:

The data revolution is:

- An explosion in the volume of data, the speed with which data are produced, the number of producers of data, the dissemination of data, and the range of things on which there is data, coming from new technologies such as mobile phones and the "internet of things", and from other sources, such as qualitative data, citizen-generated data and perceptions data;
- A growing demand for data from all parts of society.

The data revolution for sustainable development is:

- The integration of these new data with traditional data to produce high-quality information that is more detailed, timely and relevant for many purposes and users, especially to foster and monitor sustainable development;
- The increase in the usefulness of data through a much greater degree of openness and transparency, avoiding invasion of privacy and abuse of human rights from misuse of data on individuals and groups, and minimising inequality in production, access to and use of data;
- Ultimately, more empowered people, better policies, better decisions and greater participation and accountability, leading to better outcomes for people and the planet.

A World that Counts: Mobilising the Data Revolution for Sustainable Development
The United Nations Secretary-General's (Kofi Annan) Independent Expert Advisory Group on a Data Revolution for Sustainable Development (IEAG) http://www.undatarevolution.org

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Sustainable Development Information Management

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Sustainable Development Information according to the adopted UN 2030 Agenda for Sustainable Development and other related UN Instruments

The 2030 Agenda for Sustainable Development provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. The 17 Sustainable Development Goals (SDGs) have to be guided by strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests.

Thank You for Your Attention !

For further information, communication and cooperation please contact:

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----------End-of-Presentation----------

additional material for your information

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WSIS2020 High-Level Policy Session 10 : Ethical Dimensions of Information and Knowledge Societies

Tuesday, 28 July 2020 High-Level Policy Session
"The Information Society should respect peace and uphold the fundamental values of freedom,
equality, solidarity, tolerance, shared responsibility, and respect for nature."

We acknowledge the importance of ethics for the Information Society, which should foster justice,
and the dignity and worth of the human person.
The widest possible protection should be accorded to the family and to enable it to play its crucial role in society.
The use of ICTs and content creation should respect human rights and fundamental freedoms of others,
including personal privacy, and the right to freedom of thought, conscience, and religion
in conformity with relevant international instruments.

All actors in the Information Society should take appropriate actions and preventive measures,
as determined by law, against abusive uses of ICTs, such as illegal and other acts
motivated by racism, racial discrimination, xenophobia, and related intolerance, hatred, violence,
all forms of child abuse, including paedophilia and child pornography, and trafficking in,
and exploitation of, human beings."
Geneva Declaration of Principles, WSIS 2003, *https://www.itu.int/net/wsis/docs/geneva/official/dop.html*

http://wedocs.unep.org/bitstream/handle/20.500.11822/29769/DigitalTransformation_GlobalDataStrategy_ReportCPR_10Dec2019.pdf

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