Public Health England

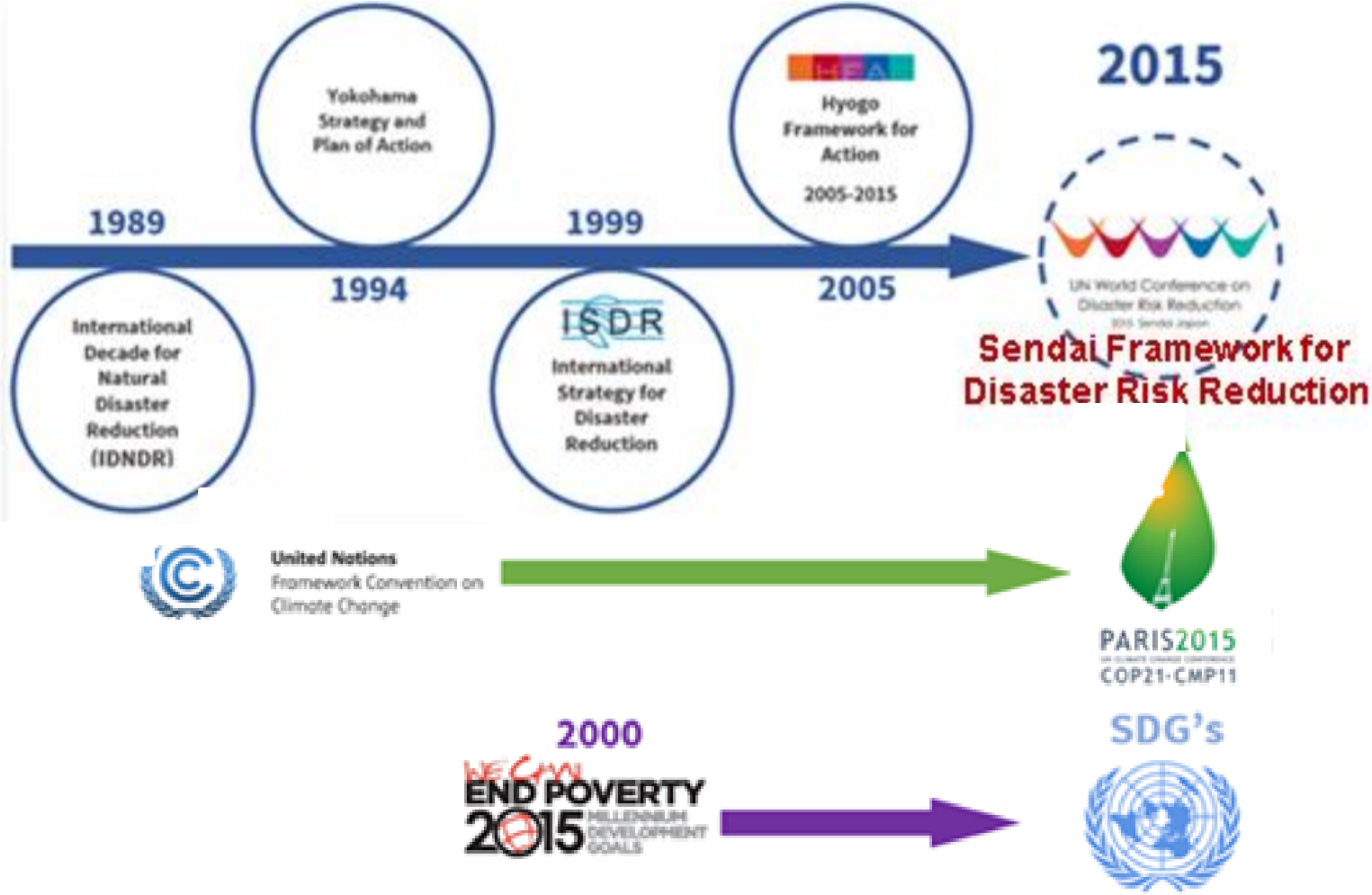
Protecting and improving the nation's health

Health Summit,
The Open Geospatial Consortium (OGC)
Dublin, June 21, 2016

Geospatial standards are important to the 2015 UN Landmark Agreements

Professor Virginia Murray, Public Health England
Vice-chair of UNISDR Scientific and Technical Advisory Group
Member of UN Sustainable Development Solutions Data Network
Co-Chair IRDR Disaster Data Loss Project (DATA) project

Why 2015 mattered so much



Sendai Framework for Disaster Risk Reduction 2015 - 2030

United Nations

Health messages in the Sendai Framework

- The scope of disaster risk reduction has been broadened significantly to focus on both natural and man-made hazards and related environmental, technological and biological hazards and risks.
- Health resilience is strongly promoted throughout.
- The substantial reduction of disaster risk and losses in lives, livelihoods and **health** and in the economic, physical, social, cultural and environmental assets of persons, businesses, communities and countries.

Guiding Principles

19g) Disaster risk reduction requires a multi-hazard approach and inclusive risk-informed decision-making based on the **open exchange and dissemination of disaggregated data, including by sex, age and disability, as well as on easily accessible, up-to-date, comprehensible, science-based, non-sensitive risk information**, complemented by traditional knowledge;

Priority 1 Understanding Disaster Risk

- **Enhance the scientific and technical work on disaster risk reduction and its mobilization through the coordination of existing networks and scientific research institutions at all levels and all regions** with the support of the UNISDR Scientific and Technical Advisory Group in order to:

Priority 1 Understanding Disaster Risk

- strengthen the **evidence-base** in support of the implementation of this framework;
- promote **scientific research of disaster risk patterns, causes and effects**;
- **disseminate risk information** with the best use of geospatial information technology;
- use **post-disaster reviews** as opportunities to enhance learning and public policy; and disseminate studies

UNISDR

The United Nations Office for Disaster Risk Reduction

UNISDR SCIENCE AND TECHNOLOGY CONFERENCE

Mobilising science to implement the Sendai Framework

27-29 JANUARY 2016 | GENEVA, SWITZERLAND

community will best support the implementation of the Sendai Framework for Disaster Risk Reduction 2015-2030.

The UNISDR Science and Technology Conference on the implementation

2015 S

2013 S

UNISDR technic

Int J Disaster Risk Sci
DOI 10.1007/s13753-016-0081-x

www.ijdrs.com
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ARTICLE

Reflections on a Science and Technology Agenda for 21st Century Disaster Risk Reduction

Based on the Scientific Content of the 2016 UNISDR Science and Technology Conference on the Implementation of the Sendai Framework for Disaster Risk Reduction 2015–2030

Amina Aitsi-Selmi[1] · Virginia Murray[1,2] · Chadia Wannous[3] · Chloe Dickinson[1] · David Johnston[4] · Akiyuki Kawasaki[5] · Anne-Sophie Stevance[6] · Tiffany Yeung[7]

Abstract The first international conference for the post-2015 United Nations landmark agreements (Sendai Framework for Disaster Risk Reduction 2015–2030, Sustainable Development Goals, and Paris Agreement on Climate Change) was held in January 2016 to discuss the role of science and technology in implementing the Sendai Framework for Disaster Risk Reduction 2015–2030. The

risk reduction (DRR) science and technology. This article describes the evolution of the role of science and technology in the policy process building up to the Sendai Framework adoption that resulted in an unprecedented emphasis on science in the text agreed on by 187 United Nations member states in March 2015 and endorsed by the United Nations General Assembly in June 2015. Contri-

http://www.evidenceaid.org/wp-content/uploads/2013/02/Aitsi-Selmi_Murray_et-al_Reflections-on-a-Science-and-Technology-Agenda-for-21st-Century-DRR_March-2016.pdf

Way forward

- **Supporting open access, multi-hazard data platforms and standardized approaches** and tools to map and use of data and scenarios that make science sensible to decision makers and the general public.
- Strengthening DRR science-policy and cross-sectoral dialogues to facilitate risk assessments, post disaster reviews, **data sharing,** and decision making.

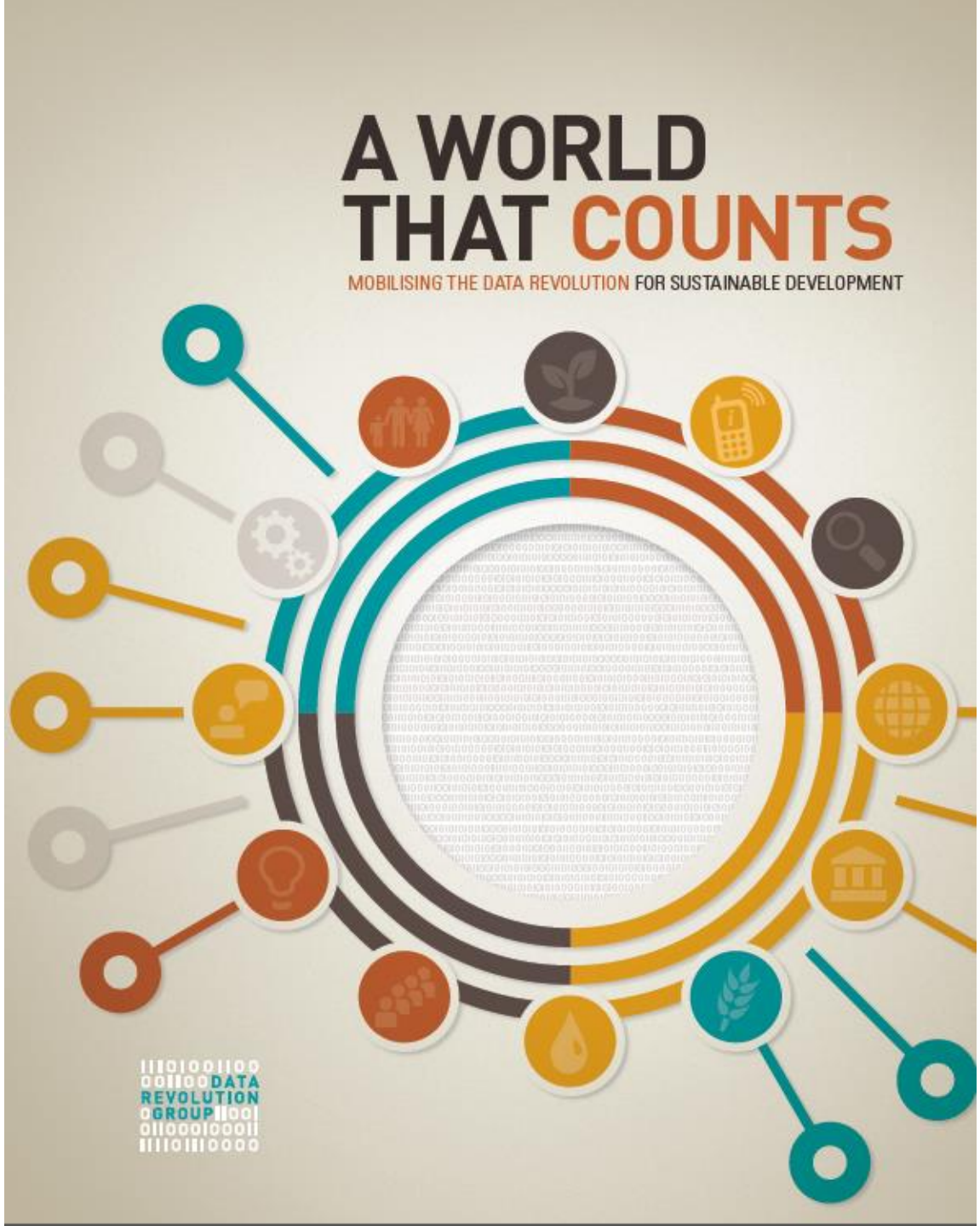
SUSTAINABLE DEVELOPMENT
SOLUTIONS NETWORK
A GLOBAL INITIATIVE FOR THE UNITED NATIONS

THEMATIC NETWORK 12:

Data for Sustainable Development

Navigate to: Overview Resources News Members Other Thematic Networks

The data revolution is poised to transform the way governments, citizens, and companies do business. The revolution is being defined by the explosion in availability of data resources and rapidly evolving technologies, which are changing the way we collect, process, and disseminate data. The creation and implementation of the SDGs offers a unique opportunity to ensure that the benefits of the data revolution are extended to those most in need, that it becomes a true data revolution for sustainable development.


A WORLD
THAT COUNTS
MOBILISING THE DATA REVOLUTION FOR SUSTAINABLE DEVELOPMENT
DATA
REVOLUTION
GROUP

Basic Principles for the **Data Revolution** for Sustainable Development

BASIC PRINCIPLES FOR THE **DATA REVOLUTION** FOR SUSTAINABLE DEVELOPMENT

The data revolution will need to be harnessed for sustainable and inclusive development through proactive measures and guided by the following **KEY PRINCIPLES:**

1 » DATA QUALITY AND INTEGRITY

Poor quality data can mislead. The entire process of data design, collection, analysis and dissemination needs to be demonstrably of high quality and integrity. Clear standards need to be developed to safeguard quality, drawing on the UN Fundamental Principles of Official Statistics and the work of independent third parties. A robust framework for quality assurance is required, particularly for official data. This includes internal systems as well as periodic audits by professional and independent third parties. Existing tools for improving the quality of statistical data should be used and strengthened, and data should be classified using commonly agreed criteria and quality benchmarks.

2 » DATA DISAGGREGATION

No one should be invisible. To the extent possible and with due safeguards for individual privacy and data quality, data should be disaggregated across many dimensions, such as geography, wealth, disability, sex and age. Disaggregated data should be collected on other dimensions based on their relevance to the program, policy or other matter under consideration, for example, ethnicity, migrant status, marital status, HIV status, sexual orientation and gender identity, with due protections for privacy and human rights. Disaggregated data can provide a better comparative picture of what works, and help inform and promote evidence based policy making at every level.

3 » DATA TIMELINESS

Data delayed is data denied. Standards should be tightened and technology leveraged to reduce the time between the design of data collection and the publication of data. The value of data produced can be enhanced by ensuring there is a steady flow of high-quality and timely data from national, international, private big data sources, and digital data generated by people. The data cycle must match the decision cycle.

4 » DATA TRANSPARENCY AND OPENNESS

Many publicly-funded datasets, as well as data on public spending and budgets, are not available to other ministries or to the general public. All data on public matters and/or funded by public funds, including those data produced by the private sector, should be made public and "open by default", with narrow exemptions for genuine security or privacy concerns. It needs to be both technically open (i.e., available in a machine-readable standard format so that it can be retrieved and meaningfully processed by a computer application) and legally open (i.e., explicitly licensed in a way that permits commercial and non-commercial use and re-use without restrictions). The underlying data design and sampling, methods, tools and datasets should be explained and published alongside findings to enable greater scrutiny, understanding and independent analysis.

5 » DATA USABILITY AND CURATION

Too often data is presented in ways that cannot be understood by most people. The data architecture should therefore place great emphasis on user-centred design and user friendly interfaces. Communities of "information intermediaries" should be fostered to develop new tools that can translate raw data into information for a broader constituency of non-technical potential users and enable citizens and other data users to provide feedback.

6 » DATA PROTECTION AND PRIVACY

As more data becomes available in disaggregated forms and data-silos become more integrated, privacy issues are increasingly a concern about what data is collected and how it is used. Further risk arises where collectors of big data do not have sufficient protection from demands from State bodies or interference from hackers. Clear international norms and robust national policy and legal frameworks need to be developed that regulate opt-in and opt-out, data mining, use, re-use for other purpose, transfer and dissemination. They should enable citizens to better understand and control their own data, and protect data producers from demands of governments and attacks by hackers, while still allowing for rich innovation in re-use of data for the public good. Within the agreed privacy constraints, people's rights to freedom of expression using data should be protected. People who correctly provide, collect, curate and analyse data need freedom to operate and protection from recrimination.

7 » DATA GOVERNANCE AND INDEPENDENCE

Many national statistical offices lack sufficient capacity and funding, and remain vulnerable to political and interest group influence (including by donors). Data quality should be protected and improved by strengthening NSOs, and ensuring they are functionally autonomous, independent of sector ministries and political influence. Their transparency and accountability should be improved, including their direct communication with the public they serve. This can include independent monitoring of the same public services, for example, or monitoring of related indicators such as public satisfaction with services.

8 » DATA RESOURCES AND CAPACITY

There is a global responsibility to ensure that all countries have an effective national statistical system, capable of producing high-quality statistics in line with global standards and expectations. This requires investments in human capital, new technology, infrastructure, geospatial data and management systems in both governmental and independent systems, as well as information intermediaries. At the same time, national capacity for data science must be developed to leverage opportunities in big data, to complement high-quality official statistics. Increased domestic resources and international support for developing countries are needed to have the data revolution contribute to sustainable development. Applications of big data for the public good must be developed and scaled up transparently, demonstrating full compliance with applicable laws.

ALL PUBLIC DATA
SHOULD BE
'OPEN BY DEFAULT'

9 » DATA RIGHTS

Human rights cut across many issues related to the data revolution. These rights include but are not limited to the right to be counted, the right to an identity, the right to privacy and to ownership of personal data, the right to due process (for example when data is used as evidence in proceedings, or in administrative decisions), freedom of expression, the right to participation, the right to non-discrimination and equality, and principles of consent. Any legal or regulatory mechanisms, or networks or partnerships, set up to mobilise the data revolution for sustainable development should have the protection of human rights as a core part of their activities, specify who is responsible for upholding those rights, and should support the protection, respect and fulfilment of human rights.

IRDR

Integrated Research on Disaster Risk

SCIENTIFIC ADVICE ON REDUCING DISASTER RISKS

HOME ABOUT PROJECTS NCS & RCS ICOES PUBLICATIONS POLICY NEWS EVENTS OPPORTUNITIES

» Projects » **DATA**

Welcome to the DATA Community of Practice

This Community of Practice (CoP) for IRDR's Disaster Loss Data (DATA) project is the information dissemination, networking and collaboration forum for the growing network of stakeholders from different disciplines and sectors to study issues related to the collection, storage and dissemination of disaster loss data.

The Community:

- Aims to become the reference point for sharing DATA news, proposals, results, and ideas.
- Bring together loss data stakeholders and develop and utilise synergies.
- Identify the quality of existing data and what data are needed to improve disaster risk management.
- Develop recognised standards or protocols to reduce uncertainty in the data.

Login Register Reset

Enter your username and password below to login.

Username:

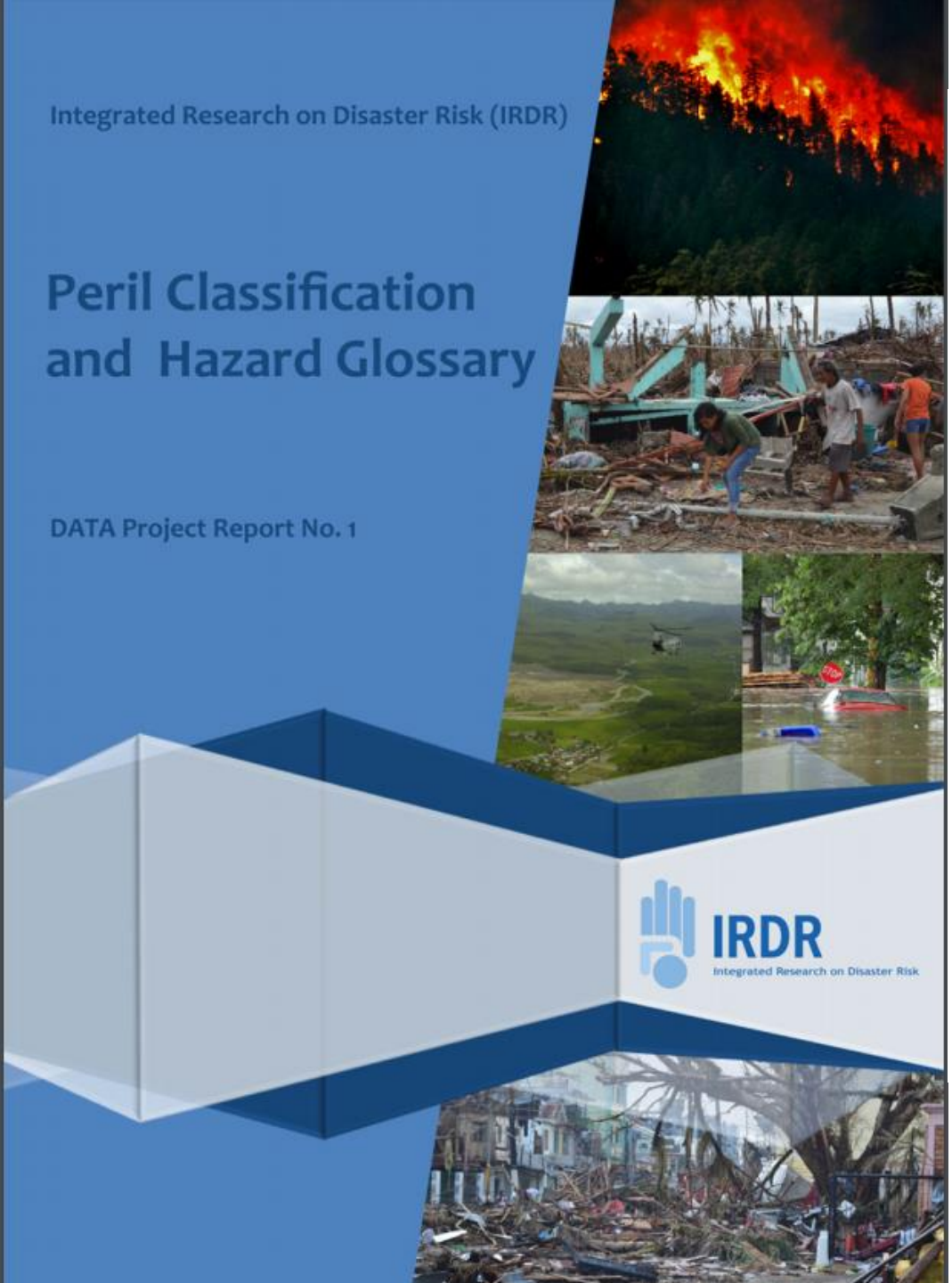
Password:

☑ Remember me

Login

About DATA | Research Priorities | Expected Outcomes | DATA Events

Co-Chairs: Virginia MURRAY and S.H.M FAKHRUDDIN



Family	Main Event
Geophysical	Earthquake Mass Movement Volcanic Activity
Hydrological	Flood Landslide Wave Action
Meteorological	Convective Storm Extratropical Storm Extreme Temperature Fog Tropical Cyclone
Climatological	Drought Glacial Lake Outburst Wildfire
Biological	Animal Incident Disease Insect Infestation
Extraterrestrial	Impact Space Weather

Figure 2: Peril classification at the Family and Main Events levels.

http://www.irdrinternational.org/wp-content/uploads/2014/04/IRDR_DATA-Project-Report-No.-1.pdf

In summary

- **G**eospatial standards are important to the 2015 UN Landmark Agreements
- ***Purpose / Goals:*** 1) To convene OGC Health DWG participants, OGC members, other interested stakeholders; 2) To inform how geospatial standards and related technologies can benefit the health domain; 3) To identify requirements for OGC standards, Interoperability work
- Is partnership working a possibility?