



1st Information and Knowledge Management for Disaster Risk Reduction (IKM4DRR) Workshop

Final Report

Fourth session of the Global Platform for Disaster Risk Reduction
Geneva, Switzerland

20 May 2013



UNISDR

The United Nations Office for Disaster Risk Reduction

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About this Report

This report summarizes the key discussions, outputs and decisions generated from the first Information and Knowledge Management for Disaster Risk Reduction (IKM4DRR) workshop.

The Workshop was held as a consultation day event at the Fourth Session of the Global Platform for Disaster Risk Reduction (19-24 May 2013) in Geneva, Switzerland. It was convened and organized by the United Nations Office for Disaster Risk Reduction (UNISDR) using the inputs, suggestions and ideas of the members of an international community of practitioners working in information and knowledge management for disaster risk reduction (the IKM4DRR Community of Practice). The workshop took place over one full day – 20 May 2013 – at the Geneva International Conference Centre in Geneva, Switzerland.

Overall, the workshop aimed to strengthen the information and knowledge management capacity among national, regional and thematic stakeholders; facilitate knowledge sharing and increase collaboration among professionals and existing projects and portals; strengthen a global IKM4DRR community and confirm its roles and responsibilities in support of information and knowledge management for disaster risk reduction (DRR) and climate change adaptation (CCA). The key outputs include an IKM4DRR Framework, its corresponding IKM4DRR Scorecard, and an IKM4DRR Action Plan.

For more information about the fourth session of the Global Platform, visit:

www.preventionweb.net/globalplatform/2013/

For further information on IKM4DRR and the Workshop, visit:

www.preventionweb.net/go/ikm4drr

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Background

Over the past five years, the domain of disaster risk reduction (DRR) has evolved significantly and has emerged as an issue of global interest and importance. The global dialogues around climate change adaptation (CCA) are also closely linked to DRR.

As a result, there has been a corresponding development and evolution of information and knowledge management systems in the DRR and CCA domains at the global, regional and national levels.

The PreventionWeb site was launched by the UNISDR in 2007 and has become the recognized go-to place for global information on DRR. A recent independent evaluation of the project recommended however that PreventionWeb should evolve from being an information aggregator to becoming an active knowledge broker.

In addition, in 2012, a workshop held in Bangkok entitled “Enhancing linkages between DRR project portals and DRR related knowledge management/ information management systems in Asia and the Pacific Region” revealed a strong need for efficient and effective information and knowledge management in the DRR and CCA domains.

The proceedings of the Third Session of the Global Platform for Disaster Risk Reduction (2011)¹ reference 28 calls for further commitment to enhanced access to information, exchange of information, and improved coherence among information management systems. These statements directly support the Hyogo Framework for Action (2005-2015) Priority 3, core indicator 1: Relevant information on disasters is available and accessible at all levels, to all stakeholders (through networks, development of information sharing systems).

¹ Third session of the Global Platform for Disaster Risk Reduction and World Reconstruction Conference proceedings (www.preventionweb.net/go/22420)

IKM4DRR Community and Advisory Group

To follow up on growing demand, UNISDR convened an IKM4DRR Community of Practice in early 2013. More than 385 experts and practitioners from across the globe, working and/or interested in information and knowledge management for disaster risk reduction, had joined this group at that time. An IKM4DRR Advisory Group was formed prior to the workshop to assist with and steer the focus of the discussions and activities of the community. (Annex 2)

As a lead up to the workshop, two online dialogue discussions were held on the following topics:

- **9-19 April 2013:** What are the essentials of a successful national or regional information and knowledge management system?
- **23 April 2 - 13 May 2013:** What explicit guiding principles, required definitions and other relevant points should we include in an Information and Knowledge Management for Disaster Risk Reduction (IKM4DRR) Framework?

More than 60 contributions were made to the above topics and identify the most appropriate answers. The outputs from these discussions provided essential input to a draft IKM4DRR Framework, and were used to design the IKM4DRR Workshop. Full summaries of these discussions are available on the IKM4DRR workspace on PreventionWeb:

www.preventionweb.net/go/ikm4drr

The Workshop

A total of 60 IKM4DRR participants representing 31 countries including 19 government representatives and five intergovernmental organizations from all regions attended the Workshop. (Annex 3)

Workshop Goal

The main goal of the Workshop was to improve participants' understanding of Information Management (IM), Knowledge Management (KM) and Knowledge Brokering (KB), how it supports their work in disaster risk reduction and climate change adaptation, and how – if strengthened - it could improve the delivery and impact of their work.

Specifically, the purpose of the Workshop was three-fold:

- **IKM4DRR Framework:** To review, test and advance a final draft IKM4DRR Framework – a set of guidelines for initiating and developing information and knowledge management systems for disaster risk reduction.
- **IKM4DRR Community:** To establish and create an environment where community members can easily connect; share their projects, ideas, expertise and concerns; learn from each other; and strengthen the IKM4DRR Community.
- **IKM4DRR Action Plan:** To develop and agree upon an action plan for the IKM4DRR Community for the period between 2013 and 2015 to advance the inclusion of IKM4DRR as part of the post-2015 framework for disaster risk reduction, or 'HFA2', discussions.



Key Workshop Outputs

Three key outputs result from the inputs and contributions of all participants:

1. Revised and final IKM4DRR Framework and Scorecard (Annex 1)
2. Establishment of the IKM4DRR Community of Practice
3. IKM4DRR Action Plan to guide the advancement of IKM4DRR as part of the post 2015 framework for disaster risk reduction, or 'HFA2', discussions

In addition, all IKM4DRR Community members were invited to participate in an IKM4DRR stocktaking exercise prior to the Workshop. The draft results of the initial stocktaking exercise were presented at the Workshop and are available online (www.preventionweb.net/go/ikm4drr). This stocktaking exercise will continue as a community activity.

Workshop Process

The Workshop used participatory approaches and methodologies that involved all participants in an open and engaging discussion, reflection and learning. The Workshop was primarily led by one lead facilitator, with several co-facilitators assisting as session leads, note takers, and engaging participants. The following activities took place throughout the day of the Workshop:

- Presentation and discussion in plenary of the notions and definitions of Information Management (IM), Knowledge Management (KM) and Knowledge Brokering (KB).
- Review of the different components of the draft IKM4DRR Framework in small groups. The Framework components focused on the issues, principles and key concepts in IKM4DRR, the IKM4DRR enabling environment, leadership, design and planning, and monitoring and evaluation.
- Individual study and discussion in plenary

of the Framework applied in the form of an IKM4DRR Scorecard to existing IKM projects to validate the core elements

- Keynote presentations and discussion in a Chat Show format on the importance of effective communication strategies for IKM systems and how this can strengthen project impact.
- IKM4DRR Showcase – a Workshop participants’ Share Fair – where participants shared their own projects, ideas and initiatives and received feedback and inputs from peers.
- Proposals and prioritization of IKM4DRR actions between 2013 and 2015 in view of advancing IKM4DRR in the post-2015 framework for disaster risk reduction, or ‘HFA2’ discussions.

Working Definitions

At the beginning of the Workshop, participants were presented with the following guiding definitions:

DATA is recorded, captured and stored symbols and readings.

INFORMATION is a message that contains meaning, an implication or an input that is required for a decision or action.

KNOWLEDGE is cognition or recognition (know-what), capacity to act (know-how) and/or understanding as to why something is the case (know-why).

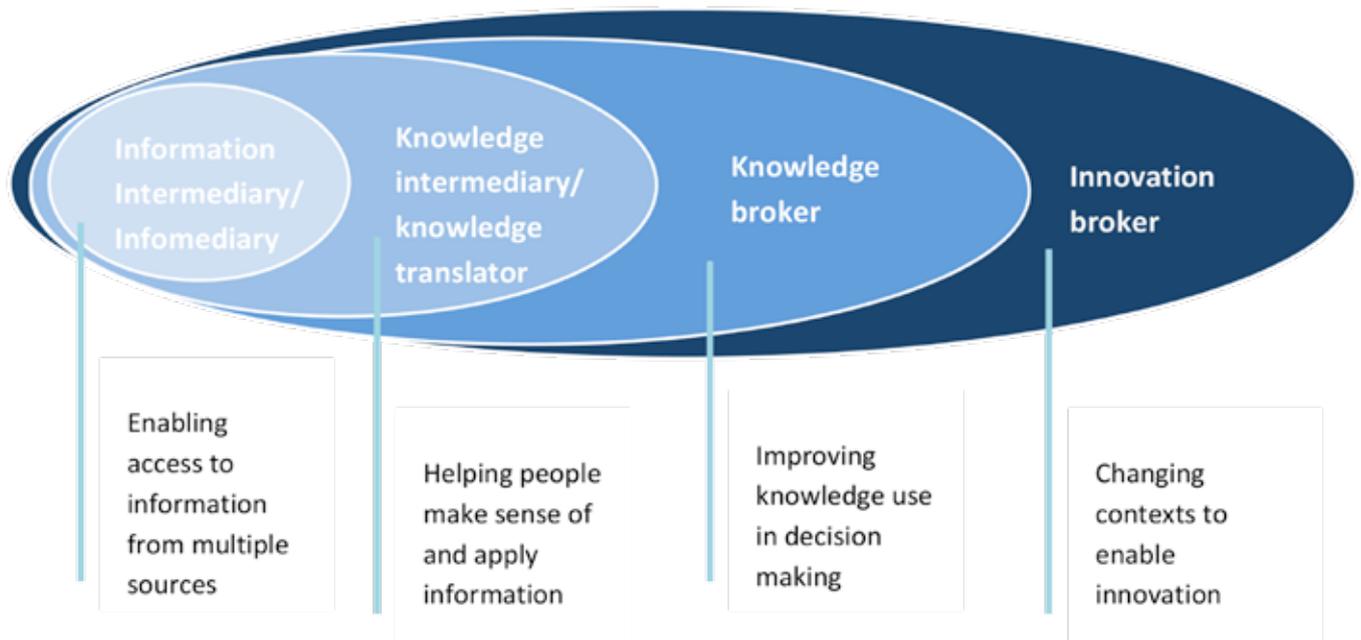
INFORMATION MANAGEMENT (IM) is the collection, processing, organization, storage and dissemination of information for a specific purpose.

- **‘Infomediary’**: Enabling access to DRR information from multiple sources and engaged in informing, aggregating, compiling and signaling information.

KNOWLEDGE MANAGEMENT (KM) is the leveraging of people, resources, processes and information in order to achieve a strategic objective.

- **Knowledge translation**: Helping people to make sense of and apply DRR information.
- **Knowledge brokering**: Improving knowledge use in DRR decision-making and engaged in bridging, matching, connecting, convening, linking, boundary spanning, networking and facilitating people.
- **Innovation brokering**: Changing contexts to enable innovation in DRR.

Participants used these definitions to initiate a discussion on the nature of IM, KM and KB and how these are useful in their DRR work.



Source: Knowledge Brokering and Intermediary Concepts e-discussion analysis paper: <http://bit.ly/rgjD6C>

A significant number of participants pointed out that information underlies all knowledge-based activities that comprise KM and KB. They further said all knowledge-based decisions depend on information that is accurate and reliable. IM is indispensable because it is a precursor to KM and is the foundation of informed decision-making.

Enabling ‘informed’ decision-making

Participants further observed that information becomes knowledge only within a particular context that is defined by a number of characteristics, including culture and local level needs and experiences. It is thus important not to underestimate the importance of culture and local knowledge in DRR.

When asked to identify themselves with either IM or KM based on the nature of their current roles in DRR, the majority of participants saw themselves as knowledge brokers — that is professionals who enable informed decision-

making and in this way bridge the gap between IM and KM. A significant number of the remaining participants saw themselves as information managers because their primary role was to collect, adapt and disseminate information.

Overall, participants thought that knowledge brokering (KB) is of primary importance to the implementation of DRR. There was a general agreement that we need more KB in DRR in order to effectively advance DRR’s aims and objectives.

About the IKM4DRR Framework and Scorecard

A main segment of the Workshop was used to revise and discuss a draft Information and Knowledge Management Framework and Scorecard (Annex 1). The purpose of the Framework and Scorecard is to provide guidelines to creating, managing and sustaining information and knowledge management initiatives and projects in DRR.

The process of creating the draft Framework and Scorecard was fully participatory, and was based on inputs from the IKM4DRR online discussions. At the Workshop, the Framework and Scorecard were revised, discussed and validated as useful tools by all participants.

IKM4DRR Framework

The IKM4DRR Framework includes guidance and recommendations around the following pillars of IKM for DRR:

- Definitions
- Principles and key concepts
- Issues in information and knowledge management
- Elements of a successful system, including: stakeholder engagement, design and planning, content, monitoring and evaluation
- Communicating impact

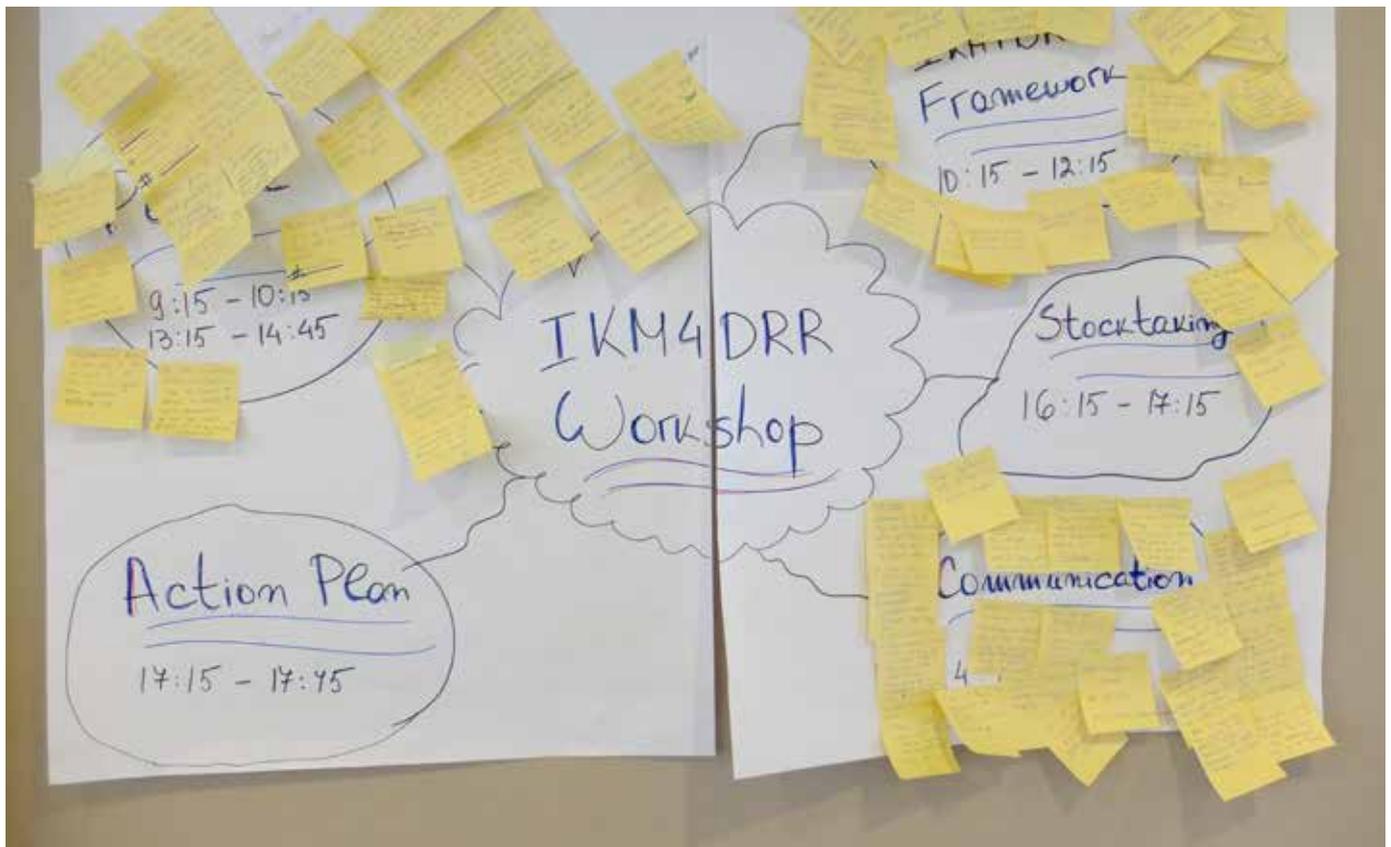
As participants discussed and revised the Framework, they made the following points:

Clear and shared definitions, terms, incentives, responsibilities, accountabilities and political backing for IKM4DRR are lacking. Issues of power and competition at institutional and other

levels often get in the way of sharing information in DRR. Culture and local knowledge — which are a major influence on how information is packaged and knowledge is created — are rarely considered. These issues need to be addressed in order to ensure effective sharing of information and knowledge, and also learning from failure and success.

Quality control and DRR information standards in data and information management are important and required. Such standards in DRR information infrastructure must exist to allow interoperability among the various DRR information systems and portals - and in this way allow for better integration of information in the field. Such standards should be flexible enough to allow for local preferences and needs in information and knowledge management to be met.

Professionals working in IKM4DRR need a certain set of skills and capacities in order to do their job well. These skills and capacities range from research and information collection, quality control, archiving, to knowledge and



application of standards in the DRR domain with sensitivity to different stakeholder cultures, needs and approaches. Communication with target audiences is essential to ensure concrete and measurable impact.

DRR practitioners need to do more to ensure the success and sustainability of IKM4DRR systems. To achieve this, IKM4DRR systems should be owned by the community. Systems should also benefit from regular monitoring and evaluation using participatory surveys and approaches to ensure they are applied, accessible, reliable and credible. The right cause and effect attributions should also be made when evaluating IKM4DRR initiatives. Finally, a successful IKM4DRR system should contribute to changing society's risk awareness, preparedness, and responsiveness, diminishing the society's risk from disaster.

IKM4DRR Scorecard

The IKM4DRR Scorecard is a 'flipped' version of the IKM4DRR Framework where key framework elements are turned into questions and check lists. This creates a practical tool for the assessment or creation of IKM programmes or systems.

Considering the areas of the Framework, participants were asked to consider a current project and evaluate its IKM elements. Participants applied the Scorecard to that project, and endorsed it as a highly useful tool. They reported that it had helped them in identifying gaps in project design and thinking. See IKM4DRR Framework and Scorecard, in Annex 1.

IKM4DRR Showcase – Participant Share Fair

One of the key goals of the Workshop was to create an environment where community members could easily connect; share their projects, ideas, expertise and concerns; learn from each other; and thereby strengthen the IKM4DRR Community.

To meet this goal, participants were encouraged to share any project or idea they wanted to discuss and seek feedback on from their peers during a Participant Share Fair session. During this session, a range of topics was discussed:

Topic 1: Cultural Considerations in IM/KM for DRR.

- Persons considered members of a ‘minority groups’ in a given community are often greater in number than the those considered ‘the majority’ – thus, it is important to consider culture as we approach IKM4DRR and incorporate it in the overall DRR system.
- We need to respect the various cultures that are at play in DRR.
- We need to allow members of minority cultures to represent the concepts of DRR the way they see them and can understand them.
- We need to develop culturally-sensitive information products, including audio material, pictorial material, etc.
- Recommendation for UNISDR: Provide guidance to governments and agencies to develop materials and services in DRR that are culturally sensitive.
- Caution: This is not as simple as translating information into multiple languages. This is about respecting the way people approach concepts.
- For example, how do we explain “risk” and “vulnerability” to people who do not have these terms and concepts in their language and way of conceiving the world?

Topic 2: National Disaster Observatory Marketplace Approaches

The discussion focused on three different but similar information platforms, all sharing the characteristic of an “observatory marketplace” in DRR.

- The “Marketplace” provides for the members/users to share information about themselves and what they do, and match this to a particular DRR demand.
- The main purpose of the Observatory Marketplace approach is to provide immediate disaster analysis and reporting after a disaster takes place.
- One of the platforms discussed was sponsored by a UNDP-backed Centre of Excellence for Risk Assessment and Management (CERAM) at Shanghai Normal University (SNU). The research geographical scope was limited to Shanghai.
- A similar initiative presented was the National Disaster Observatory Marketplace in France (www.onrn.fr).

The group discussion outlined the following good practices and recommendations as part of the Observatory Marketplace approach:

- Open to all.
- Integration of top level and local level initiatives.

- Agreed data protocol.
- Interactive.
- User-oriented and user-driven.
- Supported by an institutional budget and mandate.
- Define focus and differentiated from other observatories.
- Network and connect with other observatories.

Ensure platform sustainability by:

- Using a local host for the platform.
- Providing training and developing skills on platform use and administration.
- Making information products culturally sensitive.
- Communicating widely about the platform offering.
- Clarifying roles of donors and partners: Who has a stake in the project? Who should pay for its maintenance?



Topic 3: Open Data - Problems, Practices, and Communities. How to Ensure Interoperability, Sustainability, and Compliance?

Open data is harmonized data in a standard format that is freely available to all. The following conclusions emerged with regards to enabling and operationalizing open data:

- Create a dynamic map of actors involved, processes and resources available in the ecosystems we are working in.
- Use open street maps to assess and capture exposure data.
- Take standard datasets and turn them into web services.
- At national level, take advantage of more diverse sets of data and organize those into subsets at regional level.
- Set up legal frameworks that allow the reuse of data once it has been used.



Topic 4: Public Participation – Is It Possible? How is it Desirable as an Information Source?

The discussion focused on how to make public participation in the creation of adequate and reliable information possible.

- There is a rising interest and research in how to enable individuals to participate in the creation of adequate and reliable information about disasters and disaster risk reduction.
- Trust at local level is key in enabling individuals to participate in disaster information creation.
- Individuals are not and should not be considered as mere information sources; they have their needs and function from within a particular context that is key to formulating and understanding information.

Topic 5: Compiling, Integrating and Making Accessible Existing Risk Information

The discussion focused on the following issues we often encounter as IKM4DRR professionals. GRIPweb was discussed as an example:

- Information is scattered across many different places.
- People often do not (want to) share information.

In light of the issues, the group asked, how then do we develop an integrated risk information system or a different type of a DRR integrated information system?

- First develop a catalogue (including all people and institutions working in the particular area) of all systems that are available in the country or context, then build on this by developing an IKM4DRR system.



Topic 6: A System to Enhance Communication between DRR Practitioners and HYDROMET to Enhance Risk Communication (Caribbean)

The discussion focused on the effectiveness of a system to enhance communication between DRR and hydro-meteorological practitioners. The system was implemented together by UNDP the Caribbean Institute for Meteorology and hydrology (CIMH).

- A general conclusion was that it is important to consider the purpose and impact of the system, as this is being formulated and marketed to users.
- It is also important to generate buy-in for the system from the target user groups by communicating the importance of the data and information to their jobs.

Topic 7: Mainstreaming of DRR in the Education Sector.

The discussion focused on mainstreaming DRR in the Education sector, using a Nigerian example.

- It is important to have a full and all-encompassing curriculum focusing on DRR as part of education programmes on the ground.

In Nigeria, there are Masters and PhD programmes focused on DRR. How can the experience be replicated in other contexts?

- Important to have national support and backing for the programme.
- Important to 'do more with less' within the resources available.

IKM4DRR Chat Show - Communicating Impact

Following the participant Share Fair, three IKM4DRR initiatives were presented in a moderated 'chat show' format. Panellists highlighted the challenges and opportunities in communicating their IKM4DRR work to make an impact. The following programmes were presented:

- **InaSAFE**: free software that produces realistic natural hazard impact scenarios for better planning, preparedness and response activities. It provides a simple but rigorous way to combine data from scientists, local governments and communities to provide insights into the likely impacts of future disaster events.
 - Presented by Dr Purwo Nugroho Sutopo, Head of Data, Information and Public Relations, National Agency for Disaster Management, Government of Indonesia and Mr Jason Brown, Technical Advisor, Australia-Indonesia Facility for Disaster Reduction (AIFDR) - www.inasafe.org
- **Klimatanpassningsportalen**: a Swedish knowledge centre portal for climate change adaptation supporting those who are working to adapt to climate change, and other interested parties. It is a collaboration among fourteen agencies, and operated by the Swedish Meteorological and Hydrological Institute.
 - Presented by Ms Åsa Sjöström, Swedish Meteorological and Hydrological Institute (SMHI), Government of Sweden - www.smhi.se/klimatanpassningsportalen
- **DRR Project Portal**: aims to collect information on all multi-country and national level DRR projects and initiatives in Asia and the Pacific to support effective planning, programming, cooperation, and collaboration between DRR projects and programmes in the region
 - Presented by Mr Sudhir Kumar, Senior Project Manager, Asian Disaster Preparedness Centre (ADPC) - www.drrprojects.net

Chat Show panellists and the audience agreed that communicating, as part of our work in disaster risk reduction, is key not only to engaging stakeholders and promoting our results, it is also key to generating and achieving impact.

Some of the examples and recommendations include:

- Engaging with journalists and the public at large can help make a stronger impact. In the InaSAFE example, a Blackberry account is dedicated to sharing Indonesian National Agency for Disaster Management updates with 1300 journalists. A local social media network and Facebook are regularly used to communicate with the public.
- Be clear in communicating your purpose. One size does not fit all: the kind of system you design and implement will depend on particular needs and context. In the Swedish Klimatanpassningsportalen example, there is no single authority responsible for climate change adaptation; there are authorities responsible for different areas of work, each responsible for climate change adaptation in its own sector. Klimatanpassningsportalen puts all the CCA information in one place to enable linkages and demonstrate the intersection between different sectors, which helps communicate impact.
- Use terms and tags that are already being used by others. Do not reinvent the wheel. In the DRR Projects Portal example, use of the disaster risk reduction themes and issues validated by the UNISDR PreventionWeb portal and accepted by many as an emerging standard helps improve communication and understanding of the subject in the same terms.

The discussion following the Chat Show contributed to revising the Communicating Impact section of the IKM4DRR Framework and Scorecard. (Annex 1)

IKM4DRR Action Plan 2013– 2015

In the final part of the Workshop, participants put together an IKM4DRR Action Plan to implement within the next 6 months to 2 years. The main goal of the Action Plan is to advance IKM4DRR in the post-HFA (HFA2) discussions. Below is a full list of actions proposed:

In 6 months	In 1 year	In 2 years
<p>Revise and formalize the IKM4DRR Framework.</p> <p>Finalize and report on the information shared at the workshop.</p> <p>Build a network of IKM4DRR managers.</p> <p>Consolidate the IKM4DRR Community of Practice by developing a shared protocol, calendars and documents.</p> <p>Sustain the IKM4DRR online discussion.</p> <p>Continue the exchange of good practices and lessons learned.</p> <p>Organize and hold virtual meetings of IKM4DRR Community focal points. Create a standard template for sharing best practices and lessons learned.</p> <p>Establish and develop ways to exchange best practices in open data.</p> <p>Collect IKM resources for the development of education programmes and raising awareness of the importance of IKM in DRR.</p>	<p>Communicate the IKM4DRR Framework through the DRR community, the media and the general public.</p> <p>Set up IKM4DRR guidelines. Share lessons learned/ best practices/ failures among a broad community of practitioners.</p> <p>Complete a national stocktaking of IKM4DRR initiatives, and establish a yearly stocktaking update.</p> <p>Organize regional workshops to collect national inputs.</p> <p>Develop information sharing and exchange standards.</p> <p>Create template sets as standard but adaptable protocols.</p> <p>Convene a Community of Practice on open data.</p> <p>Establish M&E guidelines to measure and report on the impact of open data.</p> <p>Integrate DRR and CCA in IKM at all levels.</p>	<p>Hold another IKM4DRR global workshop.</p> <p>Combine and integrate national databases.</p> <p>Use the HFA monitoring and Views from the Frontline (VFL) survey to include IKM4DRR stocktaking.</p> <p>Put together and share case studies with best and worst IKM4DRR practice.</p> <p>Leverage and develop the SPARQL catalogue for open data sources. Develop indicators for IKM as part of the post 2015 framework (HFA2).</p>



Conclusions

At the end of the Workshop, UNISDR and the IKM4DRR Advisory Group committed to continue steering the post-2015 framework for DRR discussions to include IKM4DRR discussions as a contribution to 'HFA2'.

The IKM4DRR Community of Practice will continue to play a key and active role in this process through its ideas, initiatives and online and face-to-face discussions. The IKM4DRR Action Plan – providing a focused and actionable roadmap for all of the above – will be implemented within the specified 6-month to 2-year time frame.

Updates will be posted to the IKM4DRR workspace at:

www.preventionweb.net/go/ikm4dr

Annex 1: IKM4DRR Framework and Scorecard

Information and Knowledge Management for Disaster Risk Reduction (IKM4DRR) Framework

This framework was developed by the IKM4DRR Community, and validated in the first IKM4DRR Workshop, Global Platform for Disaster Risk Reduction, 20 May 2013

Purpose

Information and Knowledge Management for Disaster Risk Reduction (IKM4DRR) enables and sustains informed decision-making for managing disaster risk and is essential for coordinated action. Informed decision-making needs a solid information and knowledge base as well as dedicated and skilled professionals.

The purpose of an IKM4DRR Framework is to guide the initiation, creation and sustainability of information and knowledge management for DRR at all levels in order to address the aforementioned issues, and improve the impact, efficiency and interoperability of IKM for DRR efforts.

Introduction

Over the past five years, the domain of disaster risk reduction (DRR) has evolved significantly and has emerged as an issue of global interest and importance. The global dialogues around climate change adaptation (CCA) are also closely linked to DRR.

As a result, there has been a corresponding development and evolution of information and knowledge management systems in the DRR and CCA domains at the global, regional, national, and community levels.

The proceedings of the third session of the Global Platform for Disaster Risk Reduction (2011) reference 28 calls and commitments to enhanced access to information, exchange of information, and improved coherence among information management systems from Regional and National Platforms for DRR, mayors and private sector to statements from children and vulnerable groups, to actors in preparedness, health, and climate change.

Definitions

Content management (CM)

The process of managing paper and electronic information through its life cycle creation, review, storage and dissemination all the way to their disposal as well as tracking and storing different versions

Information management (IM)

The collection, processing, organization, storage and dissemination of information for a specific purpose

Information intermediary

Enabling access to information from multiple sources

Knowledge management (KM)

Leveraging people, resources, processes and information in order to achieve a strategic objective

Knowledge translation

Helping people make sense of and apply information

Knowledge brokering (KB)

Improving knowledge use in decision-making processes

Innovation brokering

Changing contexts to enable innovation

IKM system

A system that provides specific users with the explicit information required, in the most appropriate form and in the way the user needs it

Disaster Risk Reduction (DRR)

The concept and practice of reducing disaster risks through systematic efforts to analyze and manage causal factors of disasters, including through reduced exposure to hazards, lessened vulnerability of people and property, wise management of land and the environment, and improved preparedness for adverse events (UNISDR terminology)

Principles and key concepts

The following are the key concepts and principles that are essential to developing effective Information and Knowledge Management initiatives for DRR:

Demand-driven

- All IKM systems should be based on a thorough user needs analysis
- Communication and collaboration with users and stakeholders is central and strategic
- Standards-based

IKM systems should support and embrace information standards including:

- Accessibility
- Interoperability and compatibility
- Terminology and ontology
- Quality control

Collaborative

- IKM systems should seek collaborative partnerships to avoid duplication of effort
- National and regional initiatives share data, expertise and information
- Local and national institutions and agencies share data, expertise and information

Sustainable

- IKM systems should be recognized as beneficial knowledge products
- Needs of the business must be addressed
- Systems must be managed and maintained up-to-date
- Effective hand-over, migration or integration procedures must be in place
- Sustainable funding mechanisms must be identified

Transparent

- Risk information should be transparent and open to all to enable analysis, education and improved management for risk reduction
- Good practice, failures and lessons learned should be shared
- Information should be captured and made freely available for analysis, co-creation and synthesis where appropriate.

Monitored

- IKM systems should systematically use participatory surveys and assessments
- Regular evaluation should ensure that systems are applied, consistent, accessible, reliable and credible.

Issues in Information and Knowledge Management

The following issues were identified by the IKM4DRR community and underline the need for a systematic approach to guide the development of IKM systems at all levels:

- Information is scattered among various agencies and institutions with limited coherence, coordination and sharing.
- Information about hazard events, exposure, vulnerability, and the impacts of disasters is often not systematically collected.
- Limited analysis has been done to understand the trends, spatial and temporal impacts of potential disaster risks and their impacts.
- Risk information is not systematically used for policy and decision-making
- There are no agreed upon standards and shared definitions in IKM for DRR and CCA.
- There is little integration of knowledge systems at regional, national and community levels.
- There is inadequate collaboration between the different organizations working in DRR or related areas such as CCA and the environment.
- Civil society and private sector involvement is often limited.
- Information is often collected in different languages but insufficient resources are allocated or used for translation.
- Cultural context as a major influence to approaches in disaster risk reduction and disaster risk management is rarely considered.
- Incentives and political backing for information sharing are insufficient or lacking, and responsibilities and accountabilities for IKM are not defined.
- Issues of power and competition at institutional and other levels get in the way of sharing information.
- Dedicated capacity and skill development in information and knowledge management are lacking.
- Resources are not committed for sustainable IKM initiatives.

Elements of a successful system

A successful and sustainable IKM4DRR system should be owned by the community and should seek to change society in a way such that the risk from disaster is diminished.

Stakeholder engagement and awareness creation

There should be engagement and communication with all concerned stakeholders, (i.e., governments, parliaments, citizens, organizations) and across all sectors (private, public, UN, etc.), with special attention given to local leaders, indigenous communities, the disabled, the elderly, children, and women.

Ensure communication and engagement addresses:

- Awareness about disaster risk, vulnerability, and DRR
- Stakeholder networks and communities
- Improved understanding between scientists and researchers and other actors

Identifying stakeholders that fit within the following groups:

- Management - creates an enabling environment (financial frameworks, legal frameworks, institutional frameworks).
- Producers of information - feed the IKM4DRR system with information, ensure information reliability and translate information to suit various cultures, contexts and languages.
- Users of information - identify the information needs, set the information priorities, identify information applications and co-produce solutions.
- Communicators of information – create awareness and advocate for IKM

Design and planning

IKM systems should be carefully planned and designed. Supply driven project plans should be avoided.

IKM4DRR system demand analysis

- Establish a business case with a view of all user needs, objectives and priorities
- Assess level of readiness
- Do regular user testing and elicit quality feedback
- Engage IKM and communications professionals at the start

Engage all stakeholders including and beyond system users

- Target users and build trust
- Communicate with and promote services to target users
- Use accessible and culturally sensitive language
- Respect indigenous knowledge
- Provide training to both users and system developers and administrators

Technology

- Address user technology constraints and adapt technology to local context
- Use data standardization while respecting the local context
- Ensure interoperability
- Promote open data and use open source technology where appropriate
- Integrate social media and social services where appropriate
- Integrate communication systems (alternative, public and private) where appropriate
- Design and test interfaces and interactions for usability

Sustainability

- Budget for the entire IKM4DRR effort and plan for the long-term
- Identify multiple sources of funding
- Partner with other organizations owning similar technology and/or engage in agreements for co-development of interoperable systems
- Ensure adequate and appropriately skilled human resources
- Ensure ongoing data and information quality

Content Types

The following are a number of content types currently captured to help facilitate analysis and make sense of the disaster risk reduction domain:

- Disaster loss and risk information
- Documents and publications
- Fact sheets
- Methodologies and tools
- Terminology for DRR
- Projects and initiatives
- Policy, plans, statements and legislation
- Institutional contacts, capabilities and professional expertise
- Risk assessment studies and projects
- News and announcements
- Country profiles
- City profiles
- Descriptions of national and regional coordination mechanisms
- HFA and other DRR progress reports (national, regional and local)
- Event calendar of meetings, conferences, training and workshops
- Networks and communities of practice
- Academic programmes
- Jobs
- Educational materials
- Maps (hazard, risk, vulnerability and capacity)
- Analysis and packaging, with thematic, hazard and/or georeference as appropriate
- Social media (microblogs, blogs, networks, wikis)
- Links to related websites and databases

Monitoring and evaluation

The relevance and utility of IKM systems is dependent on regular monitoring and evaluation.

Formulate and use SMART (specific, measurable, attainable, relevant and time-bound) indicators based on action and change

- Differentiate between IM and KM indicators
- Differentiate between qualitative and quantitative indicators

Evaluate regularly (typically 6 months – 1 years – 2 years afterwards)

- Evaluate impact after project has taken place, not during when it is too early to measure
- Communicate evaluation results

Conduct participatory appraisals

- Use varied and appropriate approaches and tools that help to make the right impact attributions
- Consult all concerned stakeholders

Ensure transparency of the monitoring and evaluation (M&E) system

- Budget for M&E at the beginning
- Develop M&E partnerships
- Ensure independence of the M&E system
- Communicate activities both internally and externally

Ensure sustainability of the M&E system

- Build the M&E capacity of knowledge workers
- Analyze costs and benefits of the M&E exercise

Learning from failures and good practice

- Design methods and approaches that
- Facilitate the capturing of good practice and flow of information and knowledge
- Develop smart practice templates
- Take stock of both failures and successes
- Ensure adequate resources are available to communicate lessons learned

Enabling environment

Policy and legislative frameworks

To be effective, IKM needs to be embedded in policy and legislative frameworks. Barriers to effective IKM4DRR can include politics, social divisions, power relations, differing cultures, systematic corruption and attitudes towards risk. In this sense, legislation and policy frameworks that address these issues are key to the adoption and success of IKM initiatives.

Legislation and policy frameworks should:

Include an IKM accountability framework

- Specify the path of implementation by the responsible institutions and governmental agencies, not only the objectives (i.e., state the need to do something)
- Make demonstrated accountability and responsibility an incentive for all actors

Support the obligation of information sharing

- Stimulate and incentivize various actors and institutions to work together towards common goals, in particular public-private collaboration
- Develop a DRR business case shared by both private and public sectors

Be championed and sponsored by high-level advocates and leaders

- Identify, target and maximize heads of state and ministers to advocate for coordinated IKM for effected disaster risk reduction implementation

Be supported by leading agencies

- Develop an understanding of institutional protocols and processes
- Establish quality controls that verify information before use, to ensure credibility

Use a common vocabulary regarding risk and vulnerability for DRR and CCA

- Use appropriate and widely accepted, clear terms and messages associated with DRR and CCA to ensure impact that reduces risk and vulnerability to disasters
- Use culturally appropriate language to fit the context

Professionalization

- Effective IKM systems are dependent on professionally trained and dedicated staff.

Ensure sufficient capacities and human resources for all initiatives

Provide training, education and capacity development in relevant competencies, such as:

- Information research, data collection and data mining
- Cataloguing and Archiving
- Knowledge and application of information standards
- Communication skills.
- Sensitivity to multiple and diverse cultures
- Enabling open access to data
- Technological skills
- Interdisciplinary skills to integrate DRR information with information from other related fields and networks
- Cooperation with media and public communication agencies

Cultivate information and knowledge professionals in DRR

- Develop performance evaluation framework and measure performance against appropriate indicators of success.
- Provide public education to enhance awareness and user/audience capacity
- Involve other mature sectors in IKM, such as the Health and Private Sectors

Communicating impact

IKM systems require their own communication strategies.

- Develop a strategic communication plan - externally and internally
- Design communication and knowledge sharing initiatives that aim at concrete and measurable impact
- Be clear about the purpose and contents of DRR information products and promote widely to target audiences and groups.
- Forge linkages with related thematic areas.
- Share successes, challenges and opportunities for improvement in 'lessons learned'
- Communicate regularly with stakeholders (including key groups such as politicians) and users – capture their stories
- Use social media to reach target populations, as appropriate
- Use conventional media to reach target populations, as appropriate (alternative, public and private)
- Use clear and user-friendly language: use terms and tags that are already being used by others, free of institutional jargon
- Control information quality on ongoing basis

IKM4DRR Scorecard

Information and Knowledge Management for Disaster Risk Reduction (IKM4DRR) Scorecard

This scorecard was tested by the IKM4DRR Community, and validated in the first IKM4DRR Workshop, Global Platform for Disaster Risk Reduction, 20 May 2013

Purpose

The purpose of an IKM4DRR Scorecard is to assess the implementation of the IKM4DRR Framework principles in disaster risk reduction (DRR) and climate change adaptation (CCA) programme design and delivery.

How to use the IKM4DRR Scorecard:

The Scorecard provides the IKM4DRR Framework in question format. Thinking about a specific information or knowledge management programme or system, answer each of the questions to get a sense of whether you are following recommended practice in addressing each of the Framework components.

Key:

- **Yes answers** show a high level of IKM good practice;
- **Partially answers** show progress in IKM good practice and should aim for yes;
- **No answers** show potential weaknesses or obstacles to good practice implementation.

Principles and key concepts

The following are the key concepts and principles that are essential to developing effective Information and Knowledge Management initiatives for DRR and CCA:

Do you employ these principles and key concepts in your situation?			
	Yes	Partially	No
Demand-driven			
» All IKM systems are based on a thorough user needs analysis			
» Communication and collaboration with users and stakeholders is central and strategic			
Standards-based			
» IKM systems support and embrace information standards			
» Accessibility standards are followed			
» Interoperability and compatibility standards are followed			
» Terminology standards are followed			
» Quality control standards are in place			
Collaborative			
» IKM systems should seek collaborative partnerships to avoid duplication of effort			
» National and regional initiatives share data, expertise and information			
» Local and national institutions and agencies share data, expertise and information			
Sustainable			
» IKM systems are recognized as beneficial knowledge products			
» Needs of the business are addressed			
» Systems are managed and maintained up-to-date			
» Effective hand-over, migration or integration procedures are in place			
» Sustainable funding mechanisms have been identified			

Do you employ these principles and key concepts in your situation?			
	Yes	Partially	No
Transparent			
» Risk information is transparent and open to all to enable analysis, education and improved management for risk reduction			
» Good practice, failures and lessons learned are shared			
Monitored			
» IKM systems systematically use participatory surveys and assessments			
» Regular evaluation ensure that systems are applied, consistent, accessible, reliable and credible			

Issues in Information and Knowledge Management

The following issues were identified by the IKM4DRR community and underline the need for a systematic approach to guide the development of IKM systems at all levels.

Does this describe your situation?	Yes	Partially	No
Information among various agencies and institutions is coherent, coordinated and shared			
Information about hazard events, exposure, vulnerability, and the impacts of disasters is systematically collected			
Analysis has been done to understand the trends, spatial and temporal impacts of potential disaster risks and their impacts			
Risk information is systematically used for policy and decision-making			
There are agreed upon standards and shared definitions in IKM for DRR and CCA			
There is integration of knowledge systems at regional, national and community levels			
There is collaboration between the different organizations working in DRR or related areas such as CCA and the environment			
Civil society and private sector are involved			
Information is collected in different languages and sufficient resources are allocated or used for translation			
Cultural context as a major influence to approaches in disaster risk reduction and disaster risk management is considered			
Incentives and political backing for information sharing are in place, and responsibilities and accountabilities for IKM are defined			
Issues of power and competition at institutional and other levels do not get in the way of sharing information			
Dedicated capacity and skill development in information and knowledge management is provided			
Resources are committed for sustainable IKM initiatives			

Elements of a successful system

A successful and sustainable IKM4DRR system should be owned by the community and should seek to change society and reduce disaster risk.

Stakeholder engagement and awareness creation

Do you ensure stakeholder engagement and awareness in your situation?			
	Yes	Partially	No
Communication and engagement addresses awareness about disaster risk, vulnerability, and DRR			
All concerned stakeholders (i.e., governments, parliaments, citizens, organizations) and across all sectors (private, public, UN, etc.) are engaged			
All IKM systems are based on a thorough user needs analysis			
All identified stakeholder networks and communities analyzed			
Improved understanding between scientists and researchers and other actors is addressed			

There should be engagement and communication with special attention given to local leaders, indigenous communities, the disabled, the elderly, children, and women.

Have you identified stakeholder groups in each of the four areas?			
	Yes	Partially	No
Management - creates an enabling environment (financial frameworks, legal frameworks, institutional frameworks).			
Producers of information - feed the IKM4DRR system with information, ensure information reliability and translate information to suit various cultures, contexts and languages.			
Users of information - identify the information needs, set the information priorities, identify information applications and co-produce solutions.			
Communicators of information - create awareness and advocate for IKM			

Do your stakeholder groups consider inclusion of special groups?			
	Yes	Partially	No
Local leaders			
Indigenous communities			
The disabled			
The elderly			
Children			
Women			

Design and planning

IKM systems should be carefully planned and designed. Supply driven project plans should be avoided.

In your situation, does your design and planning ...?	Yes	Partially	No
Analyze IKM4DRR system demand			
» Establish a business case with a view of all user needs, objectives and priorities			
» Assess level of readiness			
» Regularly test users and elicit quality feedback			
» Engage IKM and comms professionals at the start			
Engage all stakeholders incl. and beyond system users			
» Target users and build trust			
» Communicate with & promote services to target users			
» Use accessible and culturally sensitive language			
» Respect indigenous knowledge			
» Provide training to both users and system developers and administrators			
Assess technology			
» Address user technology constraints and adapt technology to local context			
» Use data standardization while respecting the local context			
» Ensure interoperability			
» Promote open data and use open source technology where appropriate			
» Integrate social media & social services where appropriate			
» Integrate communication systems (alternative, public and private) where appropriate			
» Design and test, interfaces and interactions for usability			
Plan for sustainability			
» Budget for the entire IKM4DRR effort and plan for the long-term			
» Identify Multiple sources of funding identified			
» Partner with other organizations owning similar technology and/or engage in agreements for co-development of interoperable systems			
» Ensure adequate and appropriately skilled human resources			
» Ensure ongoing data and information quality control			

Content

Information should be captured and made freely available for analysis, co-creation and synthesis where appropriate. The following are a number of content types currently captured to help facilitate analysis and make sense of the disaster risk reduction domain:

- Disaster loss and risk information
- Documents and publications
- Fact sheets
- Methodologies and tools
- Terminology for DRR
- Projects and initiatives
- Policy, plans, statements and legislation
- Institutional contacts, capabilities and professional expertise
- Risk assessment studies and projects
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- Country profiles
- City profiles
- Descriptions of national and regional coordination mechanisms
- HFA and other DRR progress reports (national, regional and local)
- Event calendar of meetings, conferences, training and workshops
- Networks and communities of practice
- Academic programmes
- Jobs
- Educational materials
- Maps (hazard, risk, vulnerability and capacity)
- Analysis and packaging, with thematic, hazard and/or georeference as appropriate
- Social media (microblogs, blogs, networks, wikis)
- Links to related websites and databases

Monitoring and evaluation

The relevance and utility of IKM systems is dependent on regular monitoring and evaluation.

In your situation, do you...?	Yes	Partially	No
Formulate and use SMART indicators (specific, measurable, attainable, relevant and time-bound) indicators based on action and change			
» Differentiate between IM and KM indicators			
» Differentiate between qualitative and quantitative indicators			
Evaluate regularly (typically 6 months – 1 years – 2 years afterwards)			
» Evaluate impact after project has taken place, not during when it is too early to measure			
» Communicate evaluation results			
Conduct participatory appraisals			
» Use varied and appropriate approaches and tools that help to make the right impact attributions			
» Consult all concerned stakeholders			
Ensure transparency of the monitoring and evaluation (M&E) system			
» Budget for M&E at the beginning			
» Develop M&E partnerships			
» Ensure independence of the M&E system			
» Communicate activities both internally and externally			
Ensure sustainability of the M&E system			
» Build the M&E capacity of knowledge workers			
» Analyze costs and benefits of the M&E exercise			

Learning from failures and good practice

In your situation, do you ...?	Yes	Partially	No
Design methods and approaches that facilitate the capturing of good practice and flow of information and knowledge			
Develop smart practice templates			
Take stock of both failures and successes			
Ensure adequate resources are available to communicate lessons learned			

Enabling environment

Policy frameworks and legislation

To be effective, IKM needs to be embedded in policy and legislative frameworks.

In your context, do you have policy or legislative frameworks that mandate the sharing of disaster and risk information?			
Issue addressed	Yes	In progress	No
IKM accountability framework included in policy			
» Accountability and responsibility is demonstrated and an incentive for all actors			
» Path of implementation by the responsible institutions includes plan of action beyond a statement of objectives			
The obligation of information sharing is supported			
» Various actors and institutions are stimulated and incentivized to work together towards common goals, in particular public-private collaboration			
» A DRR business case shared by both private and public sectors is developed			
High-level advocates and leaders champion and sponsor IKM			
» Heads of state and ministers identified, targeted and maximized to advocate for coordinated IKM for effective disaster risk reduction implementation			
IKM support provided by leading agencies			
» Understanding of institutional protocols and processes developed			
» Quality controls that verify information before use, to ensure credibility established			
Common vocabulary regarding risk and vulnerability for DRR and CCA is used			
» Appropriate and widely accepted clear terms and messages associated with DRR and CCA are used to ensure impact that reduces risk and vulnerability to disasters			
» Culturally appropriate language is used to fit the context			
» Investment made in translation to local languages			

Professionalization

Effective IKM systems are dependent on professionally trained and dedicated staff.

In your situation, how professionalized is IKM for DRR? Do you...?			
Issue addressed	Yes	In progress	No
Ensure sufficient capacities and human resources for all initiatives			
Provide training, education and capacity development in relevant competencies			
» Information research, data collection and data mining			
» Cataloguing and archiving			
» Knowledge and application of information standards			
» Communication skills			
» Sensitivity to multiple and diverse cultures			
» Enabling open access to data			
» Technological skills			
» Interdisciplinary skills to integrate DRR information with information from other related fields and networks			
» Cooperation with media and public communication agencies			
Cultivate information and knowledge professionals in DRR			
» Develop performance evaluation framework and measure performance against appropriate indicators of success			
» Provide public education to enhance awareness and user/audience capacity			
» Involve other mature sectors in IKM, such as the Health and Private Sectors			

Communicating impact

IKM systems require their own communication strategies.

In your situation, do you...?	Yes	Partially	No
Develop a strategic communication plan - externally and internally			
Design communication and knowledge sharing initiatives that aim at concrete and measurable impact			
Be clear about the purpose and contents of DRR information products and promote widely to target audiences and groups			
Forge linkages with related thematic areas			
Share successes, challenges and opportunities for improvement in 'lessons learned'			
Communicate regularly with stakeholders (including key groups such as politicians) and users – capture their stories			
Use social media to reach target populations, as appropriate			
Use conventional media to reach target populations, as appropriate (alternative, public and private)			
Use clear and user-friendly language: use terms and tags that are already being used by others, free of institutional jargon			
Control information quality on ongoing basis			

Annex 2: IKM4DRR Advisory Group members

IKM4DRR Advisory Group						
	Last name	First name	Organization	Acronym	Title/Position	Country
Mr	Duncan	Craig	United Nations Office for Disaster Risk Reduction	UNISDR	Coordinator, Information Management Unit	Switzerland
Mr	Fong	Phillip	Food and Agricultural Organization of the United Nations - Kenya	FAO Kenya	Regional Data and Information Officer, DisasterRisk-Reduction.net	Kenya
Mr	Gennai	Emanuele	Esri		Global Affairs Account Executive	USA/ Switzerland
Mr	Karelia	Hemang	The Global Facility for Disaster Reduction and Recovery	GFDRR	DRM Analyst	USA
Ms	Loumbeva	Nadejda	United Nations Office for Disaster Risk Reduction	UNISDR	Consultant, IKM4DRR facilitator	Italy
Ms	May	Jutta	Applied Geoscience and Technology Division of the Secretariat of the Pacific Community	SPC/SOPAC	Information and Database Management Adviser	Fiji
Ms	Miranda	Ramona	Duryog Nivaran	DN	Steering Committee Member	Sri Lanka
Mr	Svensson	Åke	Swedish Civil Contingencies Agency, Sweden - Government	MSB	National Coordinator for DRR	Sweden
Mr	Villacis	Carlos	United Nations Development Programme - Geneva	UNDP - BCPR	GRIP Coordinator	Switzerland
Mr	Yan	Jianping	United Nations Development Programme - Geneva	UNDP - BCPR	Programme Specialist	Switzerland
Ms	Wade-Apicella	Sarah	United Nations Office for Disaster Risk Reduction	UNISDR	PreventionWeb Managing Editor, Information Management Unit	Switzerland

Annex 3: IKM4DRR Workshop participant list

1st IKM4DRR Workshop 20 May 2013 - Global Platform for Disaster Risk Reduction - Participant List						
	Last name	First name	Organization	Acronym	Title/Position	Country
Ms	Acero	Berta	United Nations Office for Disaster Risk Reduction - Regional Office for Arab States	UNISDR ROAS	Information Management & Communication Officer	Egypt
Mr	Bako	Boubacar	Groupement National des Sapeurs Pompiers		Executive Commander	Niger
Dr	Balzer	Dirk	Federal Institute for Geosciences and Natural Resources	BGR	Head of Section	Germany
Mr	Baranyi	Jeff	Esri		Emergency Management Solution Lead	USA
Ms	Bettencourt	Sofia	World Bank	WB	Lead Operations Officer	USA
Mr	Bhatia	Sanjaya	International Recovery Platform	IRP	Head, Thematic Platform Secretariat	Japan
Ms	Bittner	Patricia	Center for Public Service Communications	CPSC	Disaster Risk Reduction Program Coordinator	USA
Mr	Brown	Jason	Australia-Indonesia Facility for Disaster Reduction	AIFDR	Technical Adviser	Australia
Dr	Camara	Oumar	Service National de Gestion des Catastrophes et des Urgences Environnementales, Guinea - Government	SNGCUE	Chef de la Division Reconstruction et Réhabilitation	Guinea
Ms	Güner	Duygu	Prime Ministry, Disaster and Emergency Management Presidency, Turkey - Government	AFAD	Junior Expert	Turkey
Ms	Haider	Dilruba	United Nations Development Programme - Bangladesh	UNDP Bangladesh	Community Facilitation Coordinator, Climate and Disaster Risk Reduction Community	Bangladesh
Mr	Ho	Bill	Asian Disaster Preparedness Center	ADPC	Department Head, IT and Communication Unit	Thailand
Mr	Inoue	Hiromu	Cabinet Office, Government of Japan		Deputy-Director, International Office for Disaster Management	Japan

1st IKM4DRR Workshop Participant List (cont...)

	Last name	First name	Organization	Acronym	Title/Position	Country
Ms	Chilundo	Dulce	National Institute for Disaster Management		Director CENOE	Mozambique
Mr	Crowley	John	The Global Facility for Disaster Reduction and Recovery	GFDRR	Consultant to GFDRR, CEO New South Wales Rural Fire Services	Australia
Ms	Doyard	Marianne	United Nations Children's Fund - West and Central Africa Regional Office	UNICEF WCARO	Knowledge and Information Manager	Senegal
Mr	Duncan	Craig	United Nations Office for Disaster Risk Reduction	UNISDR	Coordinator, Information Management Unit	Switzerland
Mr	Kayode	Fagbemi	Economic Community of West African States	ECOWAS	Humanitarian Affairs Officer	Nigeria
Mr	Fong	Phillip	Food and Agricultural Organization of the United Nations - Kenya	FAO Kenya	Regional Data and Information Officer, DisasterRiskReduction.net	Kenya
Dr	Füssel	Hans-Martin	European Environment Agency - European Union		Project Manager - Climate Impacts, Vulnerability and Adaptation	Denmark
Ms	Garaebiti	Esline	Vanuatu Meteorology and Geo-hazards Department (VMGD), Vanuatu - Government		Manager Geohazards	Vanuatu
Mr	Girón	Freddy	Centro de Coordinación para la Prevención de los Desastres Naturales en América Central	CEPRE DENAC	Coordinator of Information Technology and Communication	Guatemala
Mr	Gökçe	Oktay	Prime Ministry, Disaster and Emergency Management Presidency, Turkey - Government	AFAD	Geological Eng. / Head of Work Group	Turkey
Mr	Jaime	Humberto	United Nations Office for Disaster Risk Reduction - Regional Office for the Americas	UNISDR - AM	Communication and Information Manager	Panama
Mr	Jinadu	Asimiyu Mohammed	Centre for Disaster Risk Management and Development Studies, Federal University of Technology, Minna		Academic Staff	Nigeria
Mr	Karelia	Hemang	The Global Facility for Disaster Reduction and Recovery	GFDRR	DRM Analyst	USA

1st IKM4DRR Workshop Participant List (cont...)

Mr	King	Ian	United Nations Development Programme Barbados and the Organization of Eastern Caribbean States	UNDP Barbados and the OECS	Programme Manager, Disaster and Climate Risk Management	Barbados
Ms	Keller	Nicole	Global Earthquake Model	GEM	Communications and International Relations Lead	Italy
Mr	Kochi	Shingo	Asian Disaster Reduction Centre	ADRC	Researcher	Japan
Mr	Kremers	Horst	German National Committee for the ICSU Committee on Data for Science and Technology	CODATA-Germany	President	Germany
Mr	Kumar	Sudhir	Asian Disaster Preparedness Center	ADPC	Senior Project Manager	Thailand
Mr	Lalieu	Vincent	Caspian Sea Environmental Information Center		Regional Coordinator	Kazakhstan
Mr	Lanclos	Ryan	Esri		Emergency Management & Humanitarian Industry Manager	USA
Ms	Lopes	Rosane	Municipality of Duque de Caxias, Civil Defence, Rio de Janeiro, RJ		Subsecretária de Proteção Comunitária	Brazil
Ms	Lopez	Amaia	Pan American Health Organization	PAHO	Communication Officer	USA
Ms	Loumbeva	Nadejda	United Nations Office for Disaster Risk Reduction	UNISDR	Consultant, IKM4DRR facilitator	Italy
Dr	Massabo	Marco	Centro Internazionale in Monitoraggio Ambientale	CIMA	Researcher	Italy
Ms	May	Jutta	Applied Geoscience and Technology Division of the Secretariat of the Pacific Community	SPC/SOPAC	Information and Database Management Adviser	Fiji
Dr	Torres Kremers	Maria Angela	German National Committee for the ICSU Committee on Data for Science and Technology	CODATA-Germany	Communication Scientist	Germany

1st IKM4DRR Workshop Participant List (cont...)

Ms	Miranda	Ramona	Duryog Nivaran	DN	Steering Committee Member	Sri Lanka
Col	Moussallem	Joseph	Internal Security Forces, Lebanon - Government		Chief of Public Relations Department	Lebanon
Mr	Natori	Kiyoshi	Asian Disaster Reduction Centre	ADRC	Executive Director	Japan
Ms	Njihia	Isabel	United Nations Office for Disaster Risk Reduction - Regional Office for Africa	UNISDR AF	Communications Officer	Kenya
Mr	Nussbaum	Roland	Mission Risques Naturels	MRN	Executive Director	France
Ms	Osihn	Mariana	United Nations Office for Disaster Risk Reduction - Regional Office for Europe	UNISDR EUR	Associate Public Information Officer	Belgium
Mr	Pigeon	Patrick	Université de Savoie		Geographer	France
Dr	Purwo Nugroho	Sutopo	National Agency for Disaster Management, Indonesia - Government	BNPB	Head of Data, Information, and Public Relation	Indonesia
Mr	Rego	Loy	UNISDR Office for Northeast Asia and Global Education and Training Institute for Disaster Risk Reduction at Incheon	UNISDR NEA & GETI	Consultant	USA
Ms	Reyes	Marqueza	Association of South East Asian Nations	ASEAN	ASEAN Technical Advisor for Disaster Risk Reduction	Indonesia
Mr	Aliyu	Sambo	National Emergency Management Agency	NEMA	Deputy Director/Head	Nigeria
Mr	Scott	John	Center for Public Service Communications	CPSC	President	USA
Ms	Sjöström	Åsa	Swedish Meteorological and Hydrological Institute, Sweden - Government	SMHI	Klimatanpassning-sportalen	Sweden
Mr	Svensson	Åke	Swedish Civil Contingencies Agency, Sweden - Government	MSB	National Coordinator for DRR	Sweden

1st IKM4DRR Workshop Participant List (cont...)						
Ms	Victoria	Paola	Graduate Institute of International and Development Studies	IHEID		Switzerland
Mr	Villacis	Carlos	United Nations Development Programme - Geneva	UNDP - BCPR	GRIP Coordinator	Switzerland
Mr	Yan	Jianping	United Nations Development Programme - Geneva	UNDP - BCPR	Programme Specialist	Switzerland
Ms	Wade-Apicella	Sarah	United Nations Office for Disaster Risk Reduction	UNISDR	PreventionWeb Managing Editor, Information Management Unit	Switzerland
Prof	Wen	Jiahong	Shanghai Normal University		Dean	China
Mr	Witting	Maximilian	United Nations University Institute for Environment and Human Security	UNU-EHS	Research Associate	Germany
Eng	Zepeda	Oscar	Centro Nacional de Prevencion de Desastres	CENA-PRED	Chief Risk Information Officer	Mexico

“I’m in information management because everything starts from here. We cannot have knowledge without information.”

“I’m a bridge between information and knowledge management. Information is very important, without it, we cannot share knowledge.”

“We are all knowledge workers.”

- Workshop participants