

GROUNDING RISK REDUCTION STRATEGIES IN RISK ASSESSMENTS

Technical Workshop

Launch of Sendai Framework Monitoring System

December 6-8, Bonn, Germany

United Nations Office for Disaster Risk Reduction (**UNISDR**)

In support of the Sendai Framework
for Disaster Risk Reduction 2015 - 2030

Measurement

G-5 Number of countries that have accessible, understandable, usable and relevant disaster risk information and assessment available to the people at the national and local levels

Technical Guidance

Disaster risk assessment: A qualitative or quantitative approach to determine the nature and extent of disaster risk by analysing potential hazards and evaluating existing conditions of exposure and vulnerability that together could harm people, property, services, livelihoods and the environment on which they depend.

Annotation: Disaster risk assessments include: the identification of hazards; a review of the technical characteristics of hazards such as their location, intensity, frequency and probability; the analysis of exposure and vulnerability, including the physical, social, health, environmental and economic dimensions; and the evaluation of the effectiveness of prevailing and alternative coping capacities with respect to likely risk scenarios.

Technical Guidance

Disaster risk information. Comprehensive information on all dimensions of disaster risk, including hazards, exposure, vulnerability and capacity, related to persons, communities, organizations and countries and their assets.

Annotation: Disaster risk information includes all studies, information and mapping required to understand the disaster risk drivers and underlying risk factors.

Open Questions for Target G

1. Questions of Coverage:

Are all hazards assessed for all countries? All relevant hazards? How to determine relevance? How often/recently assessed? What level of detail is covered by the assessment?

2. Questions of Quality:

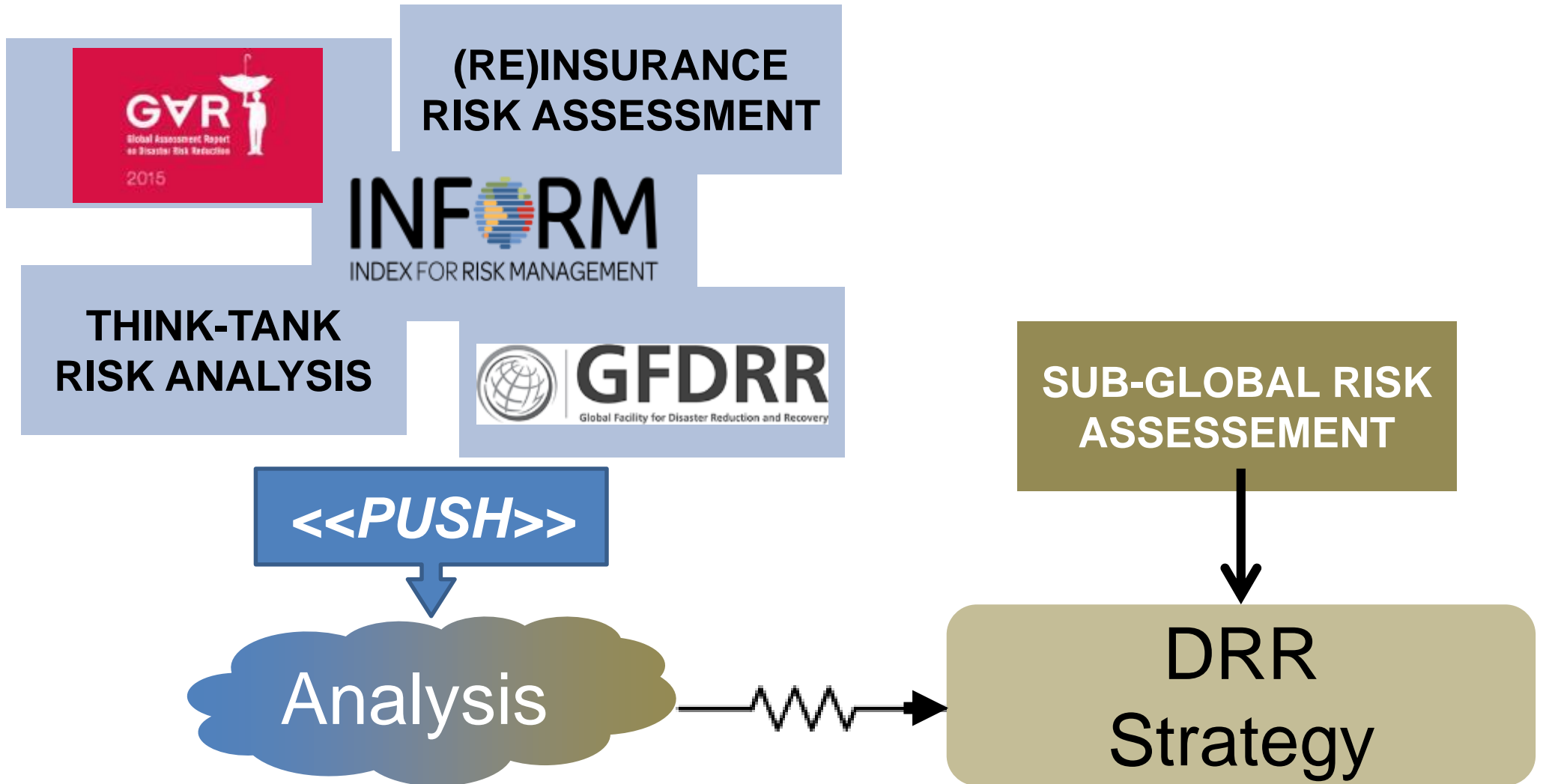
What is the nature of the risk assessment? Scientific and replicable? Probabilistic or the product of models? Deterministic or the produce of expert judgment?

Provisional advice

... the best case risk assessment is, given the hazard,

- based on most **scientific** approach possible (ideally probabilistic where possible);
- the product of a national **consultation**, shared, coordinated, and used by national institutions;
- with **clear** responsibilities for decision making, planning, and storing data and information

USE OF RISK ASSESSMENT TOOLS (BEFORE)



Survey regarding use of risk analysis tools

- ... to determine *unmet needs in terms of coverage, content, format, applicability and usability.*

Respondents

Africa	Cabo Verde, Kenya, South Africa
Americas	Canada, Colombia, Jamaica
Europe/CIS	Armenia, Tajikistan
Middle East & North Africa	Jordan, Lebanon, State of Palestine

What Risk Information are you using?

Meteorological Office, National Research Institutes, University Departments

“GAR, DesInventar, INFORM, ISO 31010 Guidelines, EC Risk Assessment and Mapping Guidelines for DRM, FEMA, Em-DAT, NatCat, etc. National Scientific Institutions.

GAR, PreventionWeb, UNISDR web-site (MCR campaign), Global Earthquake Model, the database of the Ministry of Emergency Situations.

“...attenuation equations, validity of the proposed seismo-tectonic model, construct the logic tree to be used in the analysis, preparing the seismic parameters for seismic hazard software, results mapping using GIS, and finalizing the map of spectral acceleration of 0.2 s and 1.0 s period.”

How is the information validated?



“Inaccessibility to the Internet is a problem. Transition from the paper method to electronic”.



“Lack of data is a problem. With some data being unavailable, applying these risk models is almost impossible.”



“...our system is not very accurate. We use sea temperature to make our predictions. Other organizations have other ways based on satellite information, we hope to have access to that.”



“If risk information was unified and standardized by format, content, scale, administrative division..., this would solve a big part of the problem.”



“Past events records, death and economic losses are compared to the estimated risk. Field investigations to validate risk models and estimations.”

Have you used risk information from the Global Risk Assessment for your work?

“I just learned about it but don’t know how I will use it.”

“...using the GRA a lot because many data are available for the country specifically.”

“...both data and risk profiles. The data was used in developing our national strategy.”

“We consult it but largely use our own tools and data products. We have more control over our data and don’t worry about quality control as much.”

Knowledge of Risk Metrics

- No respondent indicated high level of familiarity with all or most risk metrics
- Some respondents indicated good familiarity with a small number of tools (INFORM, Tableau, etc.)
- Responses related to Hybrid Loss Exceedance Curves (HLEC), Average Annual Loss (AAL) and Probable Maximum Loss (PML), were either blank or indicated no familiarity.

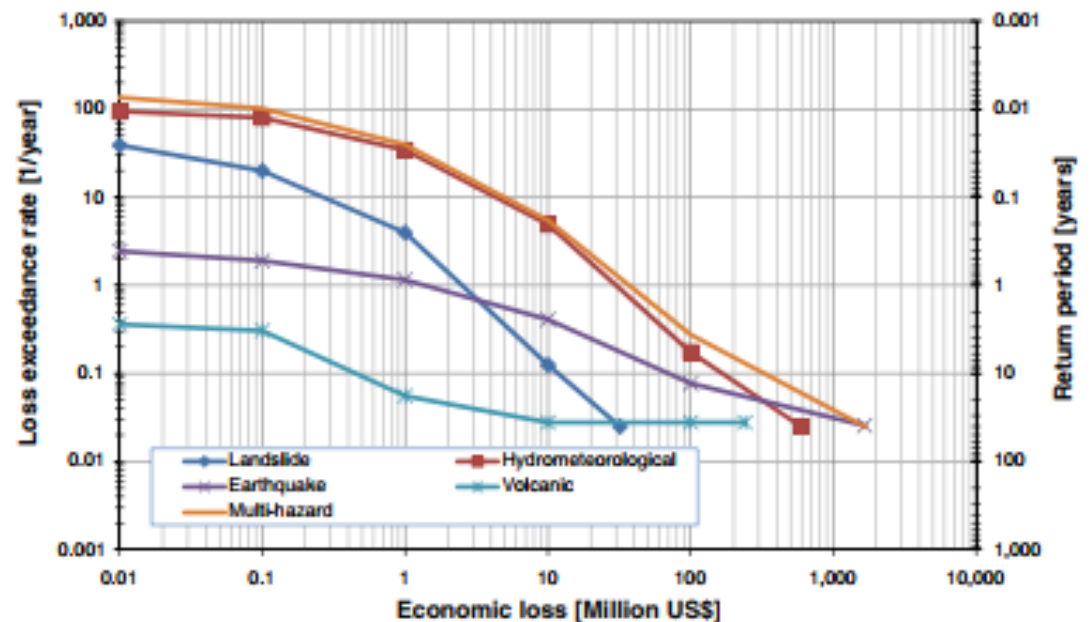
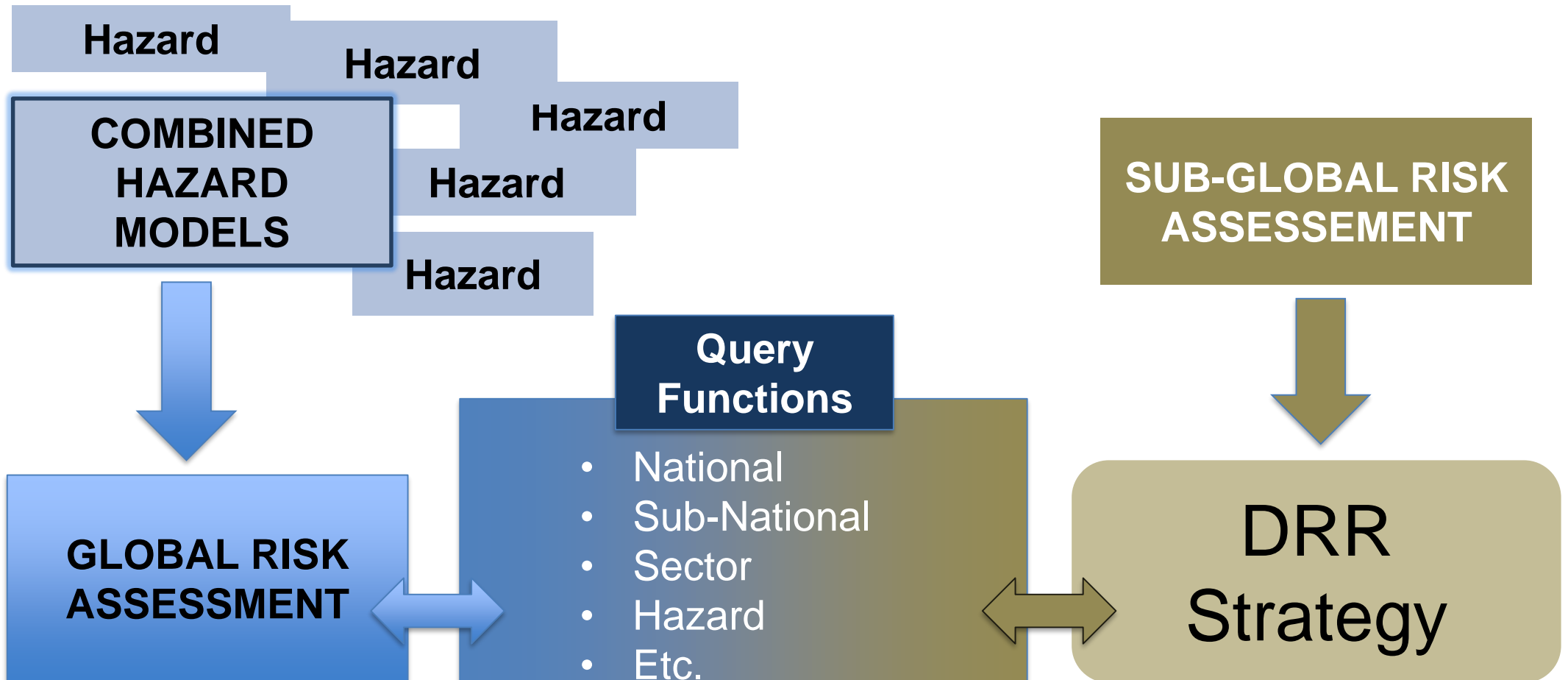


Fig. 4 Economic LEC by hazard category and the multihazard LEC

USE OF RISK ASSESSMENT TOOLS (AFTER)



Thank you

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