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INTERNATIONAL LOSS DATA RECORDING: WHERE ARE WE GOING?

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DRAFT MINUTES

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Opening of the meeting

The one-day workshop on international loss data recording organised by the European Commission gathered representatives of Member States (MS), the private sector, academia, international organisations and staff from Commission services. Presentations were given on the various tools currently used to record loss data and provided an opportunity for comments and remarks on the recently-published JRC Scientific and Policy Report 'Recording Disaster Losses: Recommendations for a European approach' (2013). Member States were also given the floor to present a state of play of current activities in the field of loss data recording.

The workshop was opened by the **European Commission** underlining the importance of loss data recording in the face of increased frequency and severity of disasters. This workshop, the JRC report as well as the work carried out by other organisations underline the value and the need to pursue evidence-based decision-making and disaster risk management (DRM). Loss data recording is therefore of relevance to ECHO's focus on the long-term through its resilience agenda alongside its work on the immediate effects of disasters. Loss data recording should not omit the various forgotten or silent disasters, and help to inform policy such as the economic opportunity to invest in DRM within the EU and beyond.

European Loss data collection standards, JRC

The report 'Recording Disaster Losses' was introduced by the **JRC**. The study was launched at the start of 2013 upon ECHO's request. The report aims to develop a more coherent European approach to loss recording. It is important to understand at Member State level the value of sharing loss data, which is a key dimension of Disaster Risk Reduction (DRR). The conceptual model of the study was presented: its three application areas (accounting, forensics and risk modelling) and two dimensions (scope and scale). The goal at EU level is record data at fine scale, take stock of national, regional and municipal databases. Loss data collection standards are needed for aggregation, particularly when recording at asset and municipality levels, as well as for evaluating damage and losses to improve

comparability of results. Non-technical elements of standards were discussed, focusing on the recognition of the role of loss data recording, the mandated organisation and the data assessment. The technical standards of loss data recording should be developed on some guiding principles (transparency, reference to existing standards), three points of focus (hazard, affected element, loss) and recognising sources of uncertainty and how these should be handled. Finally, a roadmap was proposed: three technical working groups to be scheduled in 2014 (February, May and November).

Roundtable – Summary of own approaches and comments on Commission study and potential for common standards

The **European Environment Agency** presented its activities in disaster loss reporting and its current work on climate change. The Climate-ADAPT portal and an indicator-based report on climate change adaptation (2012) were presented. With different data sources on natural hazards (global, European, national), it is important to consolidate efforts to avoid conflicting information and data. On floods – the bulk of the EEA's work – information is available but not always comparable. The obligations of Member States under the Flood Directive may play an important role. Attention was drawn to a working paper prepared with the JRC on a possible European flood impact database.

The **CRED/EM-DAT** shared experiences on the scientific value of loss data. The parameters of the EM-DAT database were presented (time frame: 1900-2013; 184 countries; etc.), as well as its relevance in measuring a trend of increasing natural disasters between 1950-2010. The effectiveness of EM-DAT is measurable using figures such as number of citations, downloads, use of data in technical documents and requests for data. A point was made on the danger of absolute values in recording loss data – these should be standardised. The presentation suggested a number of areas that can be strengthened at EU level: the systematic reporting of disaster impact; impact measurement methods in a European context; common data standards; realistic and clear data collection requirements. The production of an attractive tool may facilitate this.

A presentation was given by the **University of Cambridge** on the work on the Global Earthquakes Consequences Database (GEMECD). The main focus of this project is risk modelling and the objective of working together on global data, methods and tools – the GEM has sought to link up with and facilitate regional initiatives. The GEMECD involves a wide range of partners and captures the full spectrum of earthquake consequences. The focus of the work on risk modelling has been on buildings/infrastructure and ground-shaking. Information on the Openquake portal was developed. In relation to the JRC study, comments were made on the importance of scale & scope, the fitness-for-purpose in the application areas, and the adherence to standards.

A presentation was given by **UNISDR** on the Desinventar database standard. Linked to the HFA, the approach of Desinventar is scalable territorial rather than event-based. The territorial approach allows capturing small scale events and nuances in the impacts; it is used to capture physical damage and human impacts; offers a standardised method on modelling economic loss. Desinventar provides national to global observation, but with local resolution. Since 1993, 71 countries have developed national databases using Desinventar methodology. This approach presents strengths with room for improvements such as its momentum, scalability (possible downscaling to asset level), modelling capability (economic loss models and empirical loss exceedance curves could be enhanced) and is open structure (allows for new models and new languages); a future challenge is the shift from polygons to points and networks in its territorial approach. Points were raised on the varying level of completeness and maintenance of the 71 databases as well as the lack of event-based aggregated data.

A presentation by **UNDP** of its report 'A comparative review of country-level and regional disaster loss and damage databases' (2013) focused on the main technical issues, issues of institutionalisation and implementation and the need to move towards improved data quality and operability identified. Technical issues address currency; database completeness; unclear parameters; economic valuation inconsistencies of damage and loss; lack of application of a standardised indexing system. Institutionalisation and implementation address the long-term process with many elements of databases; definition of support steps (enabling environment for DRR, identify a 'home' database;

management on the long-term); the legislation and capacity issues; the degree of national ownership; the quality of data and analysis. Issues related to the improvement of data include hazard identification, availability of primary data, differences across databases, lack of standardisation (value of WMO standards?). An ideal situation would include a multi-tiered system of disaster impact data collection using harmonised set definitions and methods. Recommendations for the JRC study include: quality and sustainability of data; improved standards for identifying and characterising hazards; procedures for more systematic official designation of hazards; integrating hazard-related standards with other standards.

A presentation by **MunichRE** focused on the NatCatSERVICE, an event-driven loss database gathering all loss events since 1980 and consisting of 33,000 entries. The database includes an automatic currency conversion, is structured in three categories (hazard family; main event; sub peril), and regroups a variety of sources (news; scientific services; insurance companies; NGOs; etc.) and is particularly interested in risk accounting. The service aims for a high aggregate level for data, focusing on the big threats with the most direct economic loss impact on insured goods.

A presentation on **IRDR** outlined the goals of the project and its main accomplishments: a modified peril classification, GLIDE operator accounts for some IRDR contacts (to create unique event identifiers), extensive list of perils identified. The next IRDR meeting will be held in Ispra in May 2014, focusing on the measurement of economic losses and impacts.

The Sheldus Database, of the **University of South Carolina**, was introduced. This database does not record large natural hazards (18 in total, no technological events) and focuses on county-level in the US gathering data from a range of different sources (NCDC, USGS, etc.). Its main challenges are the lack of funding, maintenance of data, adaptation to reporting procedures and geographies, the incorporation of new data sources and approaches.

As means of conclusion to the roundtable, the **European Commission** commended the interesting discussions and presentations, pointing to points made deserving further discussion such as the respective advantages and disadvantages of territorial and hazard-based approaches, the extent of data gaps particularly in the case of economic losses, the advantages and disadvantages of different assessment strategies (local, national or international) and the potential benefits of developing a more attractive and appealing document to enhance interest in disaster loss recording.

Example of National Initiatives

The **European Commission** introduced the afternoon session looking at national initiatives in loss data recording with a brief insight into the work at Commission level on climate change adaptation, alongside climate change mitigation. Indeed, the Climate Monitoring Regulation of July 2013 offers a legislative dimension to data gathering on climate change adaptation amongst others.

Slovenia's approach to recording loss data was introduced by the Slovenian **Administration for Civil Protection and Disaster Relief (ACPDR).** The legal basis of the work of the ACPDR dates back to 2003 and was initially focused on the agricultural sector but is now used by various ministries. The work focuses only on natural hazards and looks at impacts on agriculture and buildings. Different damage assessment commissions (200+) nationwide contribute. On the basis of the data gathered, the Government confirms a final assessment of damage to crops and property and a plan is drawn when the level of damage exceeds 0.03% of the national budget. The scope of this initiative is the national level; its scale is asset to municipal levels. The database has proven a useful tool, allowing the government to save money – this may prove a good incentive to other MS.

On-going developments in **Italy** in the field of data loss recording were presented by the **International Centre on Environmental Monitoring (CIMA)**. Work on DRM and loss monitoring had its golden age in 1980-90s, followed by a dark phase in early 2000s, but is now regaining momentum. There are currently many databases being used for different purposes, and suffer from a lack of coordination. Across the databases, different scopes and scales are used. Hence, Italy values

the positive contribution of the JRC report to create a necessary framework and to improve data recording quality. Challenges met so far include: too little data at asset level; loss is rarely reported; semantic confusion over and qualitative scaling of loss data; lots of information under textual form. Future challenges, of interest to the work of JRC and other MS, include: proper ontological classification of events; unique GLIDE-like definitions; proper balance of information and detail of damage; enhancing forensic capacity through full description of events; combining institutional and non-institutional data; attention to indirect loss quantification.

A second presentation on the case of **Italy** was given, focusing on the case of flood loss assessment. Indeed, work carried on floods – floods catalogue for instance – is a compelling example for Italy.
In terms of loss recording, sufficient data is missing to carry out the appropriate tests. A new method on data collection is being tested by the **Politecnico di Milano** and has been put to real-life test in the Umbria region at residential level. This method helps collect and structure data. Attention is given to pre-event vulnerability, through comparison of pre-event risk assessments and actual damage incurred. Its application area focuses on loss accounting and its scope is located between regional and national levels. A specific comment was made on the JRC report looking at the fact that scenarios do not take into account the regional dimension of some assets (example of water purification plants: regional ownership of infrastructure with a regional scope of action). Further points for reflection were raised, such as: the coherent embedment of procedures in recovery phase with public administration protocols; a need for interaction between spatial and temporal scales; links between different local/regional sectoral databases; post-flood damage reporting goes beyond technical skills (ability to interact with victims, network of research centres, etc.).

Meeting Conclusions and Follow-up

The concluding remarks by the **European Commission** once again commended the presentations and discussions held and underlined the relevance of learning more about national initiatives in the field of data loss recording. It will be important to follow the developments in MS, particularly those having presented their initiatives as well as non-European countries such as the US, Albania and Serbia.

The Commission stressed the importance of the road map for future work on loss data recording. The next step will be a technical meeting to be held on 13-14 February 2014 to discuss loss data recording at country level. This session should focus more on discussions as the necessary introductory presentations have been made in this workshop. It should also remain technical in its focus, looking at details of existing databases and technical issues like for example hazard classification and event identification numbers. Finally, points were made that the next technical meeting should seek ways to better link providers of data with those compiling the databases; and focus on the need for greater institutionalisation in the use and management of databases.

Finally, another technical meeting will be held on 21 May 2014 back-to-back with IRDR to look at international and longer-term issues (such as the launch of new WMO standards?) and other technical issues. A third meeting will be held in November 2014 to review the past year's actions and identify deliverables that could then inform the EU discussions/contributions on post-HFA.

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