



# STATE OF THE ART OF DISASTER LOSS DATA RECORDING IN THE EU: PROGRESS TOWARDS EU GUIDELINES

*Third technical workshop on an EU approach for recording loss data*

Joint Research Centre of the European Commission, Ispra, Italy

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## MINUTES

### Participants

- *Almudena Bustamante Gil, Procivil, Spain*
- *Ana Gaikonen, Ministry of Interior, Department for Rescue Services, Finland*
- *Ana Jaksic, ACPDR, Slovenia*
- *Andrea Lambrecht, DG REGIO, Brussels*
- *Annegret Thieken, Universität Potsdam; Institut für Erd- und Umweltwissenschaften, Germany*
- *Christina Corbane, DG JRC*
- *Daniele Ehrlich, DG, JRC*
- *Edgaras Geda, Permanent delegation of the Republic of Lithuania to NATO, Lithuania*
- *Gregorio Pascual Santamaría, Procivil Spain*
- *Grzegorz Malachowski, Ministry of Administration and Digitization, The Department of Disaster Prevention and Recovery and Crisis Management, Poland*
- *Ian Clark, DG ECHO*
- *Jaroslav Mysiak, FEEM, Italy*
- *Joao Verde, ANPC - National Authority for Civil Protection, Portugal*
- *Johannes Wachter, DG REGIO, Brussels*
- *Jongen Golocuks, State Fire and Rescue Service, Latvia*
- *Julio Serje, UNISDR Geneva*
- *Laetitia Kröner, Permanent Representation of The Netherlands, Netherlands*
- *Laura Schmidt, DG ECHO*
- *Luca Rossi, UNISDR Brussels*
- *Lyubomira, Raeva, DG Fire Safety and Civil Protection, Bulgaria*
- *Magnus Johansson, Swedish Civil Contingencies Agency (MSB), Sweden*
- *Marc Brincat, Civil Protection Department, Malta*
- *Roberta Rudari, CIMA foundation, Italy*
- *Roberto Schilli, DG ECHO*
- *Roger Bellers, DG ECHO*
- *Roland Nussbaum, Mission Risques Naturels (ONRN), France*
- *Rudolf Schmidt, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria*



- *Sami Zeidan, DG CLIMA*
- *Scira Menoni, Politecnico di Milano, Italy*
- *Sisi Zlatanova, IRDR*
- *Spyros Georgiou, Permanent Representation of Greece to the EU, Greece*
- *Taito Vainio, Ministry of Interior, Department for Rescue Services, Finland*
- *Thomas de Lannoy, DG ECHO*
- *Tom De Groeve, DG JRC*
- *Tomas Matusek, Civil Protection Liaison Officer, Czech Republic*
- *Valeria Silvestri, DPC, Italy*
- *Wouter Vanneuville, EEA*
- *Xavier Romão /Esmeralda Vila Pouca, Faculdade de Engenharia da Universidade do Porto, Portugal*

## Objective of the workshop and summary of key conclusions

The third meeting of the EU Loss Data working group aimed at reviewing progress and defining a roadmap towards EU guidelines and minimum standards for recording disaster loss data. The workshop gathered 32 experts from 21 Member States, 7 academic/scientific institutions (FEEM, CRED, Faculdade de Engenharia da Universidade do Porto, Kings College London, Universität Potsdam, CIMA Foundation, Politecnico di Milano), 5 Commission services (JRC, ECHO, REGIO, CLIMA, EEA) and international organizations (IRDR, UNISDR). There was broader interest from other services (DEVCO, ENV) and organizations (FINANS NORGE, FORSIKRING PENSION, Polish Insurance Chamber) that could not attend. The working group seems to have achieved critical mass and raises interest in many organizations.

The lessons learnt from available Member States inventories of loss recording system as well as comparison and compatibility of the EU loss data inventories with the international development of standards were compiled and analysed in the draft report: "Current status and Best Practices for Disaster Loss Data recording in EU Member States EU". This report written with joint authorship/collaboration of EU Member States and other Working Group participants was received well by all participants. Overall, the structure, content, analysis and recommendations of the report were accepted. In the first part of the workshop, all participants provided corrections, additions, comments and suggestions to improve the report. This is the last step in the peer review process, and the report will be finalized within 2 weeks. This concludes the second phase in the process towards better EU disaster loss databases.

In the 200 p. report, experts from Member States discuss the current practices in loss data recording in their country. Although excellent systems exist, very few countries are currently in the position of providing aggregate statistics on overall disaster losses (all hazard, all sector, and all owner categories). There is a need for common terminology, frameworks, and a standard way of sharing information among Member States. Establishing appropriate loss databases will require also the development of broadly based consultation processes in Member States, both top-down and bottom-up, to build systems that can serve all stakeholders and are cost-beneficial due to economies of scale.

The second part of the meeting was forward looking, i.e. (1) towards EU guidelines for sharing disaster loss data, (2) setting appropriate and realistic targets and indicators in the post-2015 framework for disaster risk reduction and (3) towards EU guidelines for establishing national, regional and local loss databases. A number of challenges were discussed, which can be addressed in future meetings of the working group: framework for human loss data and economic loss data, modelling economic losses, handling uncertainty.

The workshop participants agreed to take further this work with the following actions:

- To work together towards the preparation of EU guidelines for loss data recording. A first version of the guidelines is planned for February 2015 and will be finalized by April 2015.
- To prepare the next meeting of the working group for discussing the guidelines (early April 2015, in Ispra Italy). Once finalized, the guidelines will then be proposed at DG meeting under Latvian semester (29-30 April 2015, in Latvia).

## *DAY 1: State of the Art of Loss Data recording in EU Member States*

### 1 Introduction

Ian Clark (DG ECHO) opened the workshop highlighting the increased interest in the project and in loss data. Improved evidence for disaster risk prevention and reduction is increasingly important. It is supported by the new civil protection legislation, which encourages the Commission to improve the practice and sharing between Member States. It is also taken up by the private sector as evident from a recent World Bank conference ([UR2014](#)). At international level, the discussions around the renewal of the Hyogo Framework for DRR emphasize the need for improved data. The [post-2015 framework](#) will be based on monitoring and accountability; self assessment and linked to targets. These need to be backed up by data, and indicators (also other targets on input, e.g. Early Warning systems). The parallel process on sustainable development goals also includes important targets on disasters (e.g. in poverty, water, urban: by 2030 deaths/economic losses needs to be reduced.)

### 2 Presentation of the report

Tom De Groeve (JRC) presented the status of the practice of loss data recording in Member States, as well as an analysis of best practices, gaps and aspirations. The JRC derived recommendations for improving the status. Minimum requirements for loss data recording do not exist, but the EU and UNISDR are interested in those requirements. On the First Meeting of the [Expert Group on Disaster-related Statistics in Asia and the Pacific](#) (27 – 29 October 2014, Sendai, Japan), there is a question the EU will need to answer “When will the European process for loss data will be ready?”. Following the presentation, all the contributing Member States were invited to give their feedback on the draft report.

### 3 Feedback from Member States on the report and discussion

#### 3.1 Austria

- The database in Austria is good, but not linked to all sectors, levels
  - o Mainly collected by provincial governments
  - o Not publicly available

- The summary statistics in the report will be updated
- HFA zero-draft: national DRR platform, in there national database
  - o Agreement on participating parties
  - o Currently informally shared, may be difficult to convince provincial governments to share with federal level
- Agree on the minimum standards defined in the report.

### 3.2 Bulgaria

- No database yet but an Emergency Information System
  - o Strategy with roadmap, legislation proposed for loss in national platform DRR
  - o Multi-stakeholders: private, public, academic, insurance...
  - o Compile data from different institutions
  - o Plan to have a national common DB as a legislative obligation.
  - o JRC report will be very useful for the development national database.
  - o Bulgaria welcomes the development of guidelines
- DG ECHO: can be announced at Hyogo Framework?

### 3.3 Germany

- Only HOWAS database (as scientific project)
- German Committee for DRR
  - o Insurance industry: losses due to windstorms; insured losses of flooding and hailstorm
  - o Forest fires: good database
    - Lacking in report
    - Also include International database on fire losses
  - o How to build up a national database
    - Lacking legal framework. If law, than federal statistical office would collect
    - Disaster Management is responsibility of provinces, so a national legal framework cannot be set up
- Cannot agree with minimum requirements
- For HFA-2 targets: working group in Germany on how to implement
  - o Director of DRR Platform is member of parliament
  - o J. Serje (UNISDR): situation of Germany is interesting: (1) as nation, make decision on behalf of states, (2) federal entity has role of consolidation of information
  - o The BBK can be an option, but the obstacle is the missing legal framework
  - o J. Wachter (EU Solidarity fund): Germany has delivered consolidated loss claim to Solidarity Fund

### 3.4 France

- The database does not represent France, but the agreement of the partnership (ONRN)
- PPP/PuP: ONRN was built without funding (except resources dedicated by partners)
  - o Insured loss data, 2 operators are doing harmonization/aggregation exercises: national insurance association (@CRESTA, department zones), reinsurer CCR
  - o CCR works because to get state guarantee, they need to go through CCR (like in Spain) enabling them to have a harmonization effort
    - 4 indicators for 1995-2011 for 36000 municipalities
- France has obligation for insurance/compensation, but no legal basis for collecting loss data
  - o No legal basis for collect data; so achievement even better
    - Obligation about insurance?
  - o More question of harmonizing that of legalizing

- ONRN does not have no legal basis to collect data. France is in favour of not having a legal basis for loss data recording.
- Subsidiarity principle:
  - Success of ONRN came from top-down approach (government, CCR, insurance)
  - Already agreements with regional observatories. Strategy to cooperate at local level
- Feedback
  - Will provide feedback according to survey
  - Cost benefit analysis
    - Structure is the answer
      - level A: aggregation platform
      - level B: producers
      - level C: projects, stakeholders
- National platform for DRR has big role
- It is not an event-based database for all events (only major events)
- Question from France to the JRC: Is there a threshold or entry criteria for recording losses. Answer from the JRC: No, but this can be decided with MS.

### 3.5 Italy

- Summary of statistics can be improved
  - Recommend a more harmonized way of presenting summary statics (maybe be strict; simpler graphs and in a comparative way)
- Mandate/responsibility in Italy
  - Many laws, regional laws, not harmonized
  - Need gentlemen agreement among institutions
- Indicators we'd like to set
  - The four application areas are still too general. Recommend put examples of applications, reference institutions, etc.
  - Present in question targeted manner
    - If you can reply: how would you use the data (let users answer)
- Sustainability: cost/benefit
  - Italy not clear; desired scenarios; e.g. flood directive
- Minimum requirement: give more space to HFA2
- Future: Italy: propose
  - bottom-up approach, network of institutions at ground level willing to participate;
  - top-down approach, willing to try with national platform internal national discussion, bring at table the issue of loss data, aiming at gentlemen agreement
    - FR: chairman of NP is member of parliament; good people on board; report after Xynthia and Var
- Regions are very strong (some)
  - Legal framework is important, maybe not mandatory
  - National level doesn't do it; only indirectly (e.g. compensation, guidelines on how to collect from DPC); left to regional government to do it
  - EU level: something like mapping and risk assessment guidelines
- Distinction between PAST, NOW and FUTURE
  - Past data are somewhere but not centralized; need purpose to curate it: why?
  - Now/future: immediate application of guidelines
- Nice in report/working group: combination of different scale, combination of different level of government (EU, national, regional, field)
  - ICT is enabler
- FEEM:
  - Indirect losses are not difficult to model, so can be included

- Many sources for modelling indirect losses: Amount of state aid (public statistics), Solidarity fund, for sectors (economic accounting system, EUROSTAT)
- Mandatory/voluntary: keep voluntary, use partnerships
- Best way is to push the process through PuP and PPP
- Provide services based on the database: motivating factor, spell out added value; risk models: providing tailored information for citizens/businesses

### 3.6 Portugal

- Standards should be simple; very clear framework and definitions and terminology
- Further monitoring and accountability
  - No culture of accountability: balance loss and cost of reducing loss
- Legislation is necessary – agreement does not suffice: otherwise motivation may lack
- Software is ready, but few field officers report back. Exception: damage to equipment, because they are reimbursed. So collection by firemen is unlikely to work. Operational staff may not be trained enough to collect data.
- Science and academia: independent source

J. Serje (UNISDR): 90% of institutions are successful because they are hosting institutions even if there are few resources. It is possible with way less capabilities because they have a political will.

### 3.7 Slovenia

- Will make available their methodology to collect database (survey forms) and their good practices.

### 3.8 Sweden

- Issues identified well
- Text more about disaster management, with element on loss data; strongly linked to lessons learnt
- Take out statistics summary completely
  - No thresholds, aggregate number are not correct, not comprehensive
  - Impact driven
- Incident reports is another database: 110K reports/year, can give idea on number of events; no threshold, so not consistent
- Minimum requirements: ok, maybe quality assurance need to be better in Sweden

### 3.9 Finland

- Sources
  - Accident statistics: ministry of interior (PRONTO)
  - Sectorial ministries
  - Federation of finish financial services: 80% coverage
  - Finnish statistical institute
- PRONTO – local level
  - Fires, traffic, oil, chemical, **natural**, explosions, inspections, rescue
  - Date, location, address, coordinates, risk class, accident type
  - Killed, injured, were in danger, rescued, evacuated
  - Damage on property, other damage, property in danger: evaluations (not precise)
  - Limitations: evaluations may overlap; are not necessarily very precise
  - Future: involve other authorities
- Access: aggregate statistics available online

J. Watcher (EU Solidarity fund): damage in forests is difficult to assess. Calculation method to assess forest damage? What elements go into calculation?

Finland: The rescue authorities evaluate the size of the forest fires. The difficulties is in having the economic losses. Forest fires are easy to assess. Finland records physical damage but also the economic value and by sector type.

### 3.10 Latvia

- Motivation for loss data collection/recording: mainly compensation
- There's no unified database, lots of information available across agencies
- Few disasters, so no big need for loss databases
- No insurance tradition: public compensation
- case study: storm 2005
  - o regulation 1644: comprehensive assessment from municipalities shared with ministry for environment protection, shared with ministry of finance, reported to cabinet
  - o physical damage, economic losses (fall in GDP)
  - o application to solidarity fund
- daily accidents/fires: existing system; not published in unified database; no financial information, more operative information
- Scenario 2 of JRC report can be chosen (national implementation).
- Data collected by sectors, ministries, then reported to Ministry of Finance.
- Information is public.

EU Solidarity Fund: when ministries collect loss, how do you ensure methods are harmonized? What are the guidelines for municipalities? No information at this time.

### 3.11 Lithuania

- Exchange of information on incidents, emergency events and emergencies
- Statistics are available on number of incidents, also about damage/people
- Large disasters: similarly structured like Latvia.

### 3.12 Czech Republic

- Fire brigade: similar system like Latvia, Lithuania, filled in field; fed to national level
  - o Yearly statistical yearbook
  - o Traffic accident, natural hazard, etc.: detailed for human indicators, few for economic losses; no methodology for economic losses
- At regional level, responsibility for collecting (from municipalities). Must assess damage (analyze) and plan recovery for basic services.
- Ministry of Finance responsible for compensation (with Ministry of regional development) disbursed via ministry of Agriculture, Transport, etc.
- Also insurance companies have data online (?)
- Interested in participating, and filling survey

### 3.13 Poland

- will present in next meeting

### 3.14 Other Member States

Feedback from the following MS is still expected: Croatia, Greece, Malta, UK and Spain

## 4 Final issues on the report

The report is still in a draft format. The feedbacks received from the Member States and all the participants Corrections in report will be taken into account in the final version. In particular, the following actions will be implemented:

- A better harmonization of the summary statistics,
- Expanding the Cost benefit Analysis with more case studies,
- Review the section on the legal instruments,
- Add a glossary at the beginning of the report,
- Include some guidelines for the collection of loss data at the local level,
- Provide more examples on the use of loss data (e.g. build services).

### *DAY 2: Setting the scene for the roadmap*

I. Clark (DG ECHO) opened the second day of the workshop recalling the council conclusions ([13013/14](#)) on risk management capability, as a sign from political level to encourage loss data collection and recording.

## 5 Terminology and definitions

### 5.1 Loss data terminology

T. de Groeve (JRC) presented a proposal for a terminology to be used in the context of the report, which could also be used for revising the UNISDR terminology for Disaster Risk Reduction. UNSIDR terminology is currently lacking a definition of losses and mortality. The definition of affected people is ambiguous. There is also some inconsistency in the definition of direct damages in the UNISDR terminology.

The current terminology used in the report includes:

- **Impact** = all effects of disaster (positive and negative)
- **Disaster Loss** = market-negative economic impact
  - **Direct** = physical damage to property (stock), converted to €
  - **Indirect** = loss of flow, converted to €
- **Disaster damage** = physical damage to properties

IRDR: it is necessary to clearly state in the report, that business interruption is considered as indirect damage.

JRC: the proposed terminology will be sent for a review and approval by all MS before including it in the report.

### 5.2 Economic Losses

J. Mysiak (FEEM) presented a proposal for a framework for economic losses:

#### 5.2.1 Purpose

Data has multiple purposes

- State Aid: derogation for natural disasters: includes assessment of economic loss
- Civil and environmental liability
- Solvency of insurers: expected annual damage, type of losses you record and indemnity you pay
- Solidarity Clause and Fund and Internal Security Fund
- Water framework directive: economic analysis or resource use and cost efficiency/effectiveness of DRR measures
- Stability and Growth Pact: justify derogation to limits

#### Minimum requirement

- Not more than 100% of damage (no overcompensation)
  - Not replacement value, but depreciated value. Requires accounting system in business
  - Provable, and liabilities of others subtracted

#### 5.2.2 Harmonization of assessment methods is important

Financial, capital losses: value of capital lost, recovery and opportunity costs. But the demand for liquid capital has effect (on price).

Economic (related to GDP): disruption of production webs ideally measured by flows. (Stock damage is only fraction of economic loss.)

- indirect losses are often the biggest part (e.g. volcanic ash)
- indirect losses are difficult to disentangle from other macroeconomic outcomes

#### Indirect losses need to be measured

Indirect losses can be measured. Not by multiplier of direct losses and not correlated with direct losses.

#### Usefulness:

- Financial → liability, fiscal, solvency
- Economic → distributed in economy, induced effect

Existing legislation is contradictory:

- no indirect losses and definition in the thresholds (EUSF expressed in % of flows while damage is expressed in capital loss).

#### 5.2.3 Database must be large (pattern in losses, risk assessment)

##### Pattern

- inflation
- price level differences (purchase power)
- changing wealth and population:
  - limitation: reliance on data that is not readily available or assumptions which limit the scope of the analysis → uncertainty 5-20%

Discussion on finding climate change evidence has not yielded answers

#### 5.2.4 EEA and ETC/CCA efforts towards Flood Impact database

- Not feasible to build a harmonized database across EU
- Proposal: focus on major disaster events, revisit events, serve as basis for harmonized European flood damage model
  - Useful for creating a European damage model

- Can be used to approximate damage for any event (from hazard characteristics)
- Next step: define what constitutes a major significant damaging event (indicator C039 of EEA: damages from weather and climate-related events).

### 5.2.5 Conclusions and discussions

- Indirect damage is important: models exist, applicable
  - Collection needs:
    - Direct damage: list assets / items
    - Proportion of assets in geographic unit (e.g. % fields in agricultural area)
    - Speed of recovery: was there enough liquid capital to recover quickly
- R. Nussbaum (ONRN): insurance industry has lots of data, but it may not be in the form ready to share
  - Direct losses: include business interruption in insurance industry
  - Data collection is organized by specific people with specific tools using specific methodologies
- R. Rudari (CIMA):
  - CP community cannot assess economic losses, they record damage
- (J. Serje) UNISDR:
  - Scale of events makes big differences
    - Extensive disasters (2-3 houses) has little use for indirect loss recording
    - Large disasters: makes sense, methodologies like ECLAC and DALA are useful
  - Europe: 95% of events are small, so direct damage is more useful.
    - GAR: 180 DALA, indirect damage is about 60% of direct damage
- S. Menoni( Politecnico di Milano Politecnico):
  - Insurance data are more reliable in monetary terms, but not useful for risk assessment (damage): large percentage are not of good quality, do not report physical damage.
    - Agree with insurance inspectors to collect risk-related data?
  - What is a disaster: lots of small events make lot of damage
- J. Mysiak (FEEM):
  - threshold for indirect is important. Indirect losses are recorded in unaffected areas: neighboring countries.
  - Take into account spatial proximity (some will be positively impacted, other negatively).
  - Extreme events are very important
  - To study: effect of event in Europe on other countries in Europe
- X. Romao (Universidade do Porto):
  - Area to consider
  - When: period to consider
  - Scale of disaster: relative scale
  - Indicators: new indicators (duration of down-time)

### 5.3 Loss data for HFA2 disasters targets and indicators

- T. de Groeve (JRC):
  - There's a need to balance input/output indicators.
  - Inconsistency in the definition of direct losses
  - Deal with extreme events
  - 1 big event skews the loss trends/statistics: Fukushima makes Japan perform badly; intensive disasters dominate losses

- R. Nussbaum (ONRN): The indicators are mainly looking at indirect losses from the political point of view
- J. Serje (UNISDR): The indicators are looking at the problem, the measurements should be used to help the countries to take action for DRR.

Discussion of the proposal of the JRC to consider the 20 years return period to avoid extreme events that create a bias : “reduce disaster direct economic loss for return periods less than 20 years by [a given percentage in function of number of hazardous events] by 20[xx]”

- J. Serje (UNISDR): UNISDR separate intensive and extensive events. 40% of the damage come from smaller events. The bulk of the damage is mortality.
- J. Mysiak (FEEM): we need to be pragmatic in setting targets. Return period should not be taken into account. The suggestion is to have a substantial reduction of damage relatively without fixing numbers.
- T. de Groeve (JRC): welcome suggestion on HFA-2 from MS by email

## 6 European Guidelines: local and national losses

### 6.1.1 EU Solidarity Fund

J. Watcher (DG REGIO) presented the EUSF mechanism emphasizing the relevance of the EU loss data-working group for the EUSF:

- EUSF is a financial instrument intended to be simple and accessible, limited to help finance emergency and recovery operations after the event (natural disaster) occurred.
- Terminology not fully defined in the regulation. Interpretation by Commission.
  - o Natural disasters: includes droughts; excludes biological events
  - o Includes secondary effects (Natech)
- 3.7b euro to 23 countries in 65 accepted claims; major part is floods (20-100 year events). Most extreme events were earthquakes (>10b damage).
  - o Currently 500m/year
  - o Activated by application of affected country
  - o One event may generate multiple applications
- Application form
  - o Requirements almost identical with minimum requirements in report
    - Spatial: NUTS2
    - Temporal: period (series of events)
    - Direct damage: physical damage + intervention costs
      - Includes damage to cultural heritage
    - Disregard long-term impacts: e.g. damage to agricultural production in the future
  - o For (1) eligibility (expressed as GNI) and (2) compensation value
- Issues with claims
  - o Breakdown public/private is sometimes unrealistic, probably incomplete
  - o Varying level of detail
  - o Requires description of methodology
  - o EUSF check the applications for direct damages to see if it's plausible. JRC assists in modelling the losses, evaluation of the damages from satellite imagery.
  - o There's a wide margin in uncertainty, especially for disasters that affect 2 or more countries.
- “Commission should treat application in an equitable manner”
  - o Lever towards minimum requirements

W. Vanneville (EEA) :

- Impact information for Flood Directive should be in line with EUSF: streamlining would be important
- “Significant disaster”: EUSF should be reported as significant event to Flood Directive

J. Watcher (DG REGIO):

- The form can be adapted, and can lead to better, quicker applications (and quicker compensation), in line with other reporting requirements
- MS usually do not provide updated loss assessment later (as this could change the compensation level). MS usually claim that initial figures are correct. (Poland: it was possible to submit revised application with updated loss assessment according to Council Regulation establishing EUSF and it is still possible according to revised Solidarity Fund Regulation, but is marked as possible in justified cases).
- The data collected for EUSF purposes is not put in any database.
- The usability of the data is dependent on each specific case, there is no mean to compare the applications.

I. Clark (DG ECHO):

- Proposal to align the application form with the minimum requirements without contradicting the regulation.

T. de Grove (JRC):

- Invite the EUSF to join the working group.

### 6.1.2 Local loss recording

In joint presentation with A. Thielen (University of Postdam), S. Menoni (Politecnico di Milano) presented two local processes for loss data collection at local level in Italy and Germany:

- Interoperability of local and national systems is important
- Design of database is important
  - o Germany:
    - Project driven database, with support of many stakeholders
    - Standardization process: Workshop (2005), expert survey, guidelines, review and revision (2009)
    - Sectors: industrial, residential, agriculture, lifelines
  - o Italy
    - Joint agreement with Umbria region
    - Standardization process: yearly reports, optimize procedures
    - Sectors: all sectors, also natural environment, lifelines, population; also indirect damage (business interruption, consequences of lack of services after flood for citizens and industry)
    - How
      - Develop survey forms for business and residential sectors
      - Desk research: process data of civil protection
- Why are losses collected at local level?
  - o Germany: For better quality data are local scale for risk assessment at asset level; provide better damage curves
  - o Italy: compensation integrated with forensic investigation; combine with response to national requirements
- Challenges and lessons

- Commitment of public administration is important
  - Germany: agreement with stakeholders, discussions with national DRR platform
  - Italy: good example with Umbria; trying to enlarge the network at national scale
- Need for partnership among stakeholders, including scientific institutions (to dedicate time). Project based systems are not sustainable.
- Data collection is a process
  - You can't collect all data immediately. Some damage only can be measured later. Multiple field visits are required.
  - Updated assessment is a good practice (updated reports)
- Coordination of data is essential
  - For instance across ministries (Umbria: agriculture ministry not involved yet)
- Cost/benefit: there are many usages of data.
- IT design very important
  - Not just database, more about connecting knowledge spread over different organisations
- Collecting losses is a learning experience (for researchers and for civil protection)
  - Systematic lessons learnt

Comments:

- R. Nussbaum (ONRN): cost/benefit. These are two examples of project based academic-driven approaches. From experience of insurance sector, the tax payer would not accept to pay for both processes of data collection (insurance and public). Current insurance data is not suitable for loss damage curves, but new projects are being developed to derive such loss damage curves.
  - S. Menoni (Politecnico di Milano): more for forensics (CP) for future mitigation. Longer forms (for our data) do not increase the assessment time. In Italy, the volunteer force (trained) are a very good resource.

## 7 Implementation

### 7.1 Uncertainty handling

X. Romão (Universidade do Porto) presented the proposed framework for quality assurance and for assessing uncertainty of loss data from its collection, all the way through to its recording and sharing:

- Proposal to have a method for assessing uncertainty as a combination of qualitative and quantitative criteria (NUSAP method).
- Ideally the uncertainty should be per loss event and per loss indicator
- The question is what to do with the levels of uncertainty ? (accept/reject the data?)

Comments:

- J. Wachter (EU Solidarity Fund): uncertainty comes from purpose too (interest in over or underestimation)
- X. Romão: Ideally, an uncertainty level should be assigned to each loss indicator.

### 7.2 Cost-benefit

The cost-benefit section of the report will need to be expanded with additional examples or case studies. For now, only Slovenia has contributed to this section. France will provide a detailed case study.

Recommendations:

- Avoid using the term "requirements" and instead use "guidelines"
- Change "minimum requirements" → use it as based on best practices

## 8 Conclusions and way forward

The two days' workshop ended with a consensus on a number of actions to bring forward the achieved efforts:

- The minutes and presentations of meeting will be shared with all participants.
  - The survey form and data questions will be shared with new participating Member States (deadline for feedback, 30 November 2014).
  - Complete the report: Member States will submit corrections and additions by 31 October 2014. JRC will finalize the report by 5 November 2014.
  - JRC will add section on HFA2 targets and indicators, explaining options to improve (only direct, split extensive and intensive; add goal on resilience). It will be a technical description of advantages/disadvantages of various options, without voicing an opinion on what is best.
  - The draft guidelines for sharing loss data will be extracted by JRC by February 2015 and will be finalized (through a review process by email) by April 2015. The guidelines will be discussed in a workshop at JRC in early April (Ispra, Italy). They will then be proposed at DG meeting under Latvian semester 29-30 April.
  - Future guidelines for recording loss data, tackling local recording, uncertainty, economic losses, IT systems etc. are planned in 2016.
  - Technical assistance: Member States are invited to share loss data with JRC. JRC will check the compliance with minimum requirements.
  - JRC will provide technical assistance to MS on the implementation of the guidelines (e.g. run some aggregation tests and reply with recommendations).
  - JRC will explore the concept of services built on the data as a means to encourage loss data recording.
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