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**EUROPEAN AND MEDITERRANEAN MAJOR HAZARDS AGREEMENT
(EUR-OPA)**

PRELIMINARY MEETING OF THE WORKING GROUP ON VULNERABILITY

**18 December 2009
Council of Europe Office, PARIS**

CONCLUSIONS

The Secretariat welcomed the participants (see appendix 2) and recalled the goals of that preliminary meeting on Vulnerability issues: to take stock of what already exists in the field and to define possible lines of action for future work. But given the extent of the subject approached, a first stage is to concentrate the discussion on seismic risk to take into account the Agreement's expertise in that field. The draft agenda (appendix 1) was adopted.

As an introduction, Mr. Mendes Victor made a general presentation on his views on the concept of vulnerability. He recalled that the vulnerability concept was especially important for insurances and consequently they have supported the development of research on the topic, in particular through the Institute for Environment and Human Security (UNU-EHS). Vulnerability assessment is wider than only structures and the definition of thresholds is particularly important for politicians: an increased dialogue between science and decision makers is needed in that domain.

Two main kind of models can be identified: risk hazard models and pressure-and-release (PAR) models, the latter including vulnerability but without being enough comprehensive. Vulnerability is registered not by exposure to hazards (perturbations and stresses) alone, but also resides in the sensibility and resilience of the system experiencing such hazards. Such definition implies that resilience is different from a negative of vulnerability. We have thus to include the social point of view and particularly resilience (a concept originating from ecology), namely the ability to recover. That link between human factors and environmental factors leaves place for a climate change adaptation approach and he highlighted coastal areas risk as a particularly interesting case of study.

Some participants pointed out that the previous presentation was too general for the specific topic to be discussed by the group, namely seismic related vulnerability. The Secretariat recalled that the focus on that specific hazard was simply to restrict the scope and thus discuss on common grounds. Nevertheless, on a longer term, the goal is to address vulnerability related to various hazards. Mr. Milutinovic also emphasized the multihazard aspect of assessment as the main issues are common for all risks.

Data availability was quickly highlighted as a problem: as it is mainly hold by private companies and has thus a significant economic value, we should rely on open data available. Mr. Milutinovic proposed to choose the more complicated model existing in the literature as reference and to see what we can do with the available data in our region (ignoring some aspects is possible as a first approximation). That implies that we must identify the disaster and risk profile for every country and see what are the common interests for various countries according to them. Doing so, we can hope to influence both the emergency planning and the prevention phases. At that point, some participants recalled that Katrina Hurricane proved that a mismanagement of a disaster can even reinforce vulnerability.

Nevertheless, they agreed that fragility is a concept for buildings only and so we have to include society response as a whole in our work on vulnerability. With respect to previous approaches, our main difference should consequently be to study vulnerability with a special orientation towards governments in order to suggest them possible actions to reduce it through their various policies. Several participants pointed out that dealing with vulnerability *in extenso* can be a very costly project but that defining guidelines for possible implementation by governments is feasible.

In that line, Mr. Goerens proposed to adopt a single methodology to use for member countries and develop it. Mr. Milutinovic recalled that even within the United States, states have different methodologies but that FEMA was able to compare those divergent methods using a relative scale, instead of an absolute one. He also pointed out that a full generalization is not good for vulnerability: even for similar buildings in terms of material, the results differ between different zones. We should thus work locally but

thinking globally. Participants also insisted that we have not to focus on mega events but also consider medium size earthquakes as they can have important consequences, in particular in terms of economic losses.

Mr. Georgescu pointed out that we must try to use a language understandable for decision makers to expect to have an impact: we have to convince "non technical" people that they are involved in the phenomena. Mr. Bossu also proposed to explore the contribution of non specialists as they already do concerning earthquakes with quite interesting results. Mr. Milutinovic stressed that, apart from the number of victims, the economic losses seem often a crucial fact for governments. He also remarked that a system trained to handle foreseen events should also be able to react to totally unexpected events.

Mr Makropoulos presented the work done in Greece on that topic, addressing directly well known vulnerabilities such as lack of risk education. He stressed that seismic hazard is given and almost impossible to predict so we have to concentrate on the associated vulnerability. He also reminded the challenge associated to the existing stock as 80% of Greek buildings have been constructed before the strengthening seismic codes were adopted.

Mr. Georgescu also presented the work done in Romania, in particular on buildings vulnerability and recalled the specificities of the Vrancea earthquakes. He insisted on the fact that for political reasons the problem has been often minimised and lately relies too much on private initiative (even if financial incentive schemas exist). As governments matter on resilience, Mr. Georgescu suggested to move from building to people and to try to identify weak links.

The initial evaluation of vulnerability could be useful to identify the actions which have real effect in reducing it: measurability is nowadays crucial. A strategic approach has to be developed and trans-boundary effects play in it an important role which reinforces the need of international guidelines. Nevertheless legal environment and building environment are crucial for vulnerability: decision on such topics is on the side of public authorities. The work can thus benefit from the contribution of existing working groups: "legal vulnerability" (workgroup on legislation) or "education lack" (workgroup on school education).

But vulnerability is in fact a dynamic problem and the study has thus to be done in phases: identify it, define measures to reduce it and ways to implement them. In that line, Mr. Iben Brahim proposed to break the work in different components (such as buildings/structures, society and management) and to organise a workshop devoted each year to one of those components. As a preliminary step, the Secretariat proposed to transform the "state of the art" in a booklet in the Agreement's series to provide visibility to the topic and to draft the Medium Term Plan section on vulnerability in order to develop that topic more in depth in the next years.

APPENDIX 1

Preliminary Meeting of the Thematic Group on Vulnerability

**Council of Europe Office, Room 2
55, avenue Kléber, PARIS, FRANCE**

18 December 2009 (9.30 a.m.)

AGENDA

I. Discussion on the possible scope of the thematic group

- A. Extent of the notion of vulnerability
- B. Vulnerability or resilience?
- C. From local to global or from global to local?

II. Possible work for 2010

- A. Existing work on the subject and remaining gaps
- B. Capabilities within the Centres
- C. Specificities of the Agreement's area

III. Longer actions to propose to the Ministerial Session

- A. Vulnerability assessment
- B. Vulnerability mapping
- C. Measures to reduce vulnerability
- D. Links with climate change

IV. Others

APPENDIX 2

LIST OF PARTICIPANTS

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