



Wilton Park



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Conference report

**Environmental emergencies:  
strengthening the multilateral humanitarian and  
environmental response**

Monday 12 – Thursday 15 September 2011 | WP1093

Held in Glion sur Montreux, Switzerland



## Conference report

# Environmental emergencies: strengthening the multilateral humanitarian and environmental response

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### Summary

- There is an increased frequency and severity of disasters, whether natural or caused by human action; these have serious impacts on lives, livelihoods and the environment. Environmental emergencies are defined by the United Nations Environment Programme (UNEP) as “sudden-onset disasters or accidents resulting from natural, technological or human-induced factors, or a combination of these that cause, or threaten to cause severe environmental damage as well as loss of human lives and property”. Such disasters can result from increasingly extreme weather events linked to climate change, or from deforestation and land degradation, industrial accidents such as chemical spills, marine pollution or other accidents (such as the Fukushima Nuclear Accident in March 2011, itself due to a tsunami resulting from an earthquake). The environmental causes and impacts may be exacerbated by conflict situations.<sup>1</sup>
- Improved resilience and disaster preparedness was identified by Member States and other stakeholders as one of the new and emerging challenges to be discussed at the United Nations Conference on Sustainable Development in Brazil in June 2012. Preparations for the so-called “Rio + 20” Conference provide a unique opportunity for the humanitarian and environmental communities to highlight the need for strengthened governance and institutional frameworks to address environmental emergencies and disasters within a broader sustainable development context.
- Greater resilience is needed to prevent, prepare for and cope with such disasters which have significant and long-lasting social and economic consequences as well as environmental impacts, the latter often less visible and immediate.<sup>2</sup>
- Pre-prepared arrangements and the co-ordinated actions of civil responders, humanitarian organisations and environmental actors are crucial in responding to environmental disasters. The better the response, the better the chances of saving lives, improving development and protecting the environment in the long term.
- Notable progress has been made in strengthening the worldwide system to prevent, prepare for, and respond to such disasters including most recently the UNEP Governing Council decision (2011).<sup>3</sup> However, there are a number of practical challenges at national and international level; national capacities are lacking and the multilateral system, led by the UN, is often overwhelmed. Such challenges reduce the effective response and put lives, livelihoods and the environment at greater risk. Additional efforts are needed to strengthen international norms for notification of incidents, clarify procedures for emergency assistance and improve critical coordination among humanitarian, disaster relief, environmental protection and development bodies. Greater emphasis is also needed in prevention of environmental disasters as much as in preparedness for and response to such a disaster.

## Rio Conference 2012 and beyond

1. The humanitarian and environment communities have a unique opportunity in the next few months to help shape the outcomes of the Rio Conference and ensure progress in addressing the increased frequency and severity of disasters and the need for enhanced resilience which is one of the seven emerging challenges so far identified by UN member states to be addressed.<sup>4</sup>

Questions which should be addressed by the humanitarian and environmental communities in preparation for the Rio Conference include:

- a. What policy measures on environmental emergencies should be incorporated into the menu of policy options for Rio?
  - b. How to implement such policy measures? What good practices in addressing environmental emergencies should be included in the toolkit?
  - c. How to measure progress through targets and indicators? How would Member States conduct a review of their role in environmental emergencies, for instance peer review or voluntary review?
  - d. If Member States agree on the idea of sustainable development goals, what kind of goals on environmental emergencies could be included, while bearing in mind the principle of common but differentiated responsibilities? How to support developing countries in strengthening the prevention of environmental disasters, mitigation, preparedness, response, and recovery?
2. In addition, when considering the institutional framework appropriate for sustainable development as part of the Rio Conference, a series of questions and scenarios could be considered for environmental emergencies:
    - a. Is the current inter-agency arrangement, including the Joint Environment Unit (of the UN Office for the Co-ordination of Humanitarian Affairs (OCHA) and UNEP, sufficient for coordinating multilateral response and preparedness to environmental emergencies?
    - b. Should this inter-agency arrangement include other UN entities, such as UN-HABITAT, UNDP, FAO, UNIDO, WHO, WMO, and other specialized agencies?
    - c. How could coordination mechanisms at the global, regional and national levels, best involve the private sector and civil society?
    - d. Should these be placed within a strengthened UNEP, or a possible future World Environment Organisation or United Nations Environment Organisation, or outside UNEP?
    - e. Assuming UN Member States agree to elevate the current Commission on Sustainable Development (CSD) into a Sustainable Development Council, will the Council be mandated and equipped to review the sustainable development goals, including those on environmental emergencies? Could strengthening multilateral responses to environmental emergencies and disaster be an item on their agenda?
  3. At the UN Conference in Rio it is also suggested that one or more **side events** should be organized to raise political awareness of environmental emergencies for instance using a case study to highlight a successful intervention. It could also launch or revitalise one or more processes or partnerships,<sup>5</sup> for example the launch of the Environmental Emergencies Centre and/or launch a process for improving information sharing. Such an event should engage the widest possible group including the private sector.

4. The key in preparing for the Rio Conference is to identify a couple of concrete measures in relation to environmental emergencies to generate political support and identify a vision framing direction of travel and a roadmap of implementation.

Additional actions recommended at the international level, beyond the UN Conference, include:

- Initiating a high-level meeting in the margins of the opening of the 67th session of the General Assembly (September 2012) on strengthening the global response to environmental emergencies and disasters; a like-minded group of countries could set up a working group which should include broader representation of member states than the Advisory Group on Environmental Emergencies (AGEE), and engaging envoys, high-level politicians as well
- Identifying specific ideas and proposals for strengthening environmental emergency response within broader proposals to strengthen UNEP.
- Ensuring the agenda of a future intergovernmental body on sustainable development should include strengthening multilateral responses to environmental emergencies tapping into the advice from the AGEE.

### Challenges in facing environmental disasters and approaches to overcoming them

5. A number of challenges need to be overcome in the global system to prevent, prepare for and respond to environmental disasters. Challenges include: limited awareness in affected countries of services which might be available to them internationally; lack of formal notification procedures, leading to delays, confusion and increased risk to populations and the environment; lack of clear responsibilities and overarching governance in a multilateral response; ambiguous ownership of environmental emergency management and co-ordination, as well as operational difficulties such as the transport of equipment of samples of hazardous material, for example soil or water.
6. Significant efforts have been made to resolve these challenges within the Advisory Group on Environmental Emergencies<sup>6</sup> and the International Disaster Response Law (IDLR)<sup>7</sup>. A large body of operational experience has been built up over the last almost 20 years in responding to environmental emergencies and it is important that lessons are learnt and norms, practices, and institutions are codified based on those experiences. More emphasis is needed on prevention and preparedness of environmental disasters, and ensuring environmental considerations are key in the longer term recovery plans.

Recommendations for future action include:

- Increasing **awareness** of what services might be available internationally to countries suffering from environmental emergencies and the procedures in place to request and receive assistance. Increased awareness building at national and local level is needed through training courses (particularly of identified national focal points in each country), seminars, capacity building activities and contingency planning. A number of guidelines have been developed for supporting donor and recipient countries for being able to give an effective and efficient support. The Environmental Emergency Centre (EEC) currently being set up will enhance awareness activities. Country-led approaches are needed based on specific risks and the evaluation of previous disasters. The International Civil Defence Organisation can also play a valuable role in strengthening national civil defence organisations to ensure better preparedness and response capacities to environmental disasters. Increased use of **specific scenario planning** is recommended to identify the gaps in preparedness and response capacity and capabilities. Examples such as the successful co-ordination at bilateral level between Argentina and Chile following the Puyehue-Cordon Caulle volcanic eruption in June 2011 should be shared and built up. Such co-operation depends

on sharing information and knowledge across national borders. Increased awareness of industrial hazards is also needed.

- The development of an **expanded global network** of experts and organisations on a national and international level, maximising the national expertise in laboratories and scientific institutes to ensure the smart use of existing capacity and capabilities and sharing of expertise. Such networks have a unique and cost efficient collaboration and effectively assist in emergencies on a national level but also internationally. They should include those with specialist expertise gained by countries which suffer from natural disasters such as volcanic eruptions, floods, earthquakes, landslides etc. Investment in these countries is recommended to improve their knowledge, ability to share information, through the EEC or by them giving assistance to other countries facing a severe disaster of a similar type. An expanded global network of experts could be identified and readily deployable with equipment to support operations where international assistance is requested (such as the Environmental Assessment Module, a Dutch mobile laboratory). Such expertise can be combined into multidisciplinary or interdisciplinary teams when there is a need for it. It would be beneficial if countries and organizations would have a 24/7 roster of readily available specialists. This depends on excellent bilateral and multilateral cooperation, recognition that expertise may be found elsewhere (for instance in the BP Deepwater Horizon oil spill, deepwater capping capacity could be found outside the USA) and sufficient funding
- **Expand the range of partners** to broaden expertise in prevention, preparedness and response. In addition to encouraging a stronger partnership with academia and scientific institutes, partnerships with Non-governmental organisations (NGOs) and the private sector are also very important.<sup>8</sup>
  - a. Environmental and humanitarian **NGOs** are already working together but more collaboration is welcomed, not least given the proliferation of NGOs and the longer-term nature of environmentalists vis a vis the focus on the immediacy of humanitarians. NGOs such as Green Cross International should identify an added value, for example supporting prevention and preparedness at a community level given their local knowledge and ability to undertake local risk assessments. For communities affected by a disaster there is no difference between an environmental or humanitarian NGO – the key is an effective response with NGOs supporting national governments. Responses will be more effective after collaborative preparedness work. Fora and platforms for co-operation are recommended; NGOs should keep each other informed, sharing information, evaluations and strategies. Existing programmes between environmentalists and humanitarians such as the WWF (World Wildlife Fund) and American Red Cross need to be scaled up. Many environmental NGOs, whilst they may be advocacy groups and potentially less neutral or impartial, can provide expert advice to humanitarians during a response and have shared interests (with longer-term development NGOs) on deforestation, land degradation, water and sanitation, poverty eradication, security.
  - b. The private sector can play a number of roles in disaster and risk management: in the primary/immediate response phase private companies of different types can work with first responders to provide evacuation, fire-fighting, Hazmat experience, clear up as well as delivery of services such as food, water, communications, medical and logistics. The private sector can also play a serious role in supporting policy planning through setting high quality risk analysis and economic impact assessments, advising governments, advocacy of best practice, provision of services such as technical advice, education (hygiene and insurance schemes) and compliance advice as well as practical provision of equipment. In the case



of companies which may be the source of an environmental threat such as the extraction or transport of oil, chemicals or other hazardous material regulatory arrangements set by governments are critical and questions of liability and disclaimers, for instance in the clean up of an oil spill, need to be addressed. Companies which might be the source of an industrial accident can catalyze local and national capabilities through exercises and strong crisis management. Private sector companies can be the target or victim of disasters themselves. How governments sustain the private sector's contribution is important. In Indonesia companies pay 1% into a Corporate Social Responsibility Trust to assist with environmental disasters. Governments can engage the private sector in ongoing risk management and preparedness. In the US a Business Fora exists focused on disaster preparedness. What the private sector needs from government in working to prevent, prepare for and respond to environmental emergencies is also important.<sup>9</sup>

7. Both NGOs and the private sector need to support those affected by disasters and the humanitarian goals of neutrality and impartiality remain central.
8. Promoting the active participation of more organizations and countries at such bodies as the AGEE might broaden partnerships, for example including the International Council of Voluntary Agencies (ICVA) and Brazil, as hosts of Rio 2012;
  - Strengthening the **partnerships with national Environment Ministries** who are key players in disaster and risk management but may have little collaboration with civil and humanitarian responders. Identifying potential environmental emergencies with cross-border implications and encouraging the Ministers of environment to discuss such issues with Ministries of Foreign Affairs and neighbouring civil defence organisations might be a useful step forward. Regional organisations can provide a useful conduit.
  - Supporting **regional approaches**, to strengthen the national capacity of member states within a region, or through a regional organisation mandated to respond rapidly and effectively to environmental emergencies; for example the new initiative with Association of South East Asian Nations (ASEAN) and the Joint Environment Unit (UNEP/OCHA) or the raising of environmental emergencies on the agenda of Latin American disaster management later this year. Developing such regional approaches will mean deployments of shared experts and equipment will be faster and cheaper and there are fewer linguistic and cultural barriers to overcome. The regions will also become more self supporting with specific expertise brought in from outside the region only when necessary. Regions should be encouraged to share information and best practice with other regional bodies.
  - Improving **risk assessments and early warning**, using scientific input; assessments could work to the "reasonable worst case scenario" as followed in the UK to enable prudent planning. Sharing of such risk data and early warning is crucial in environmental disasters. Open and shared information to improve decision making at government and household level. Reduced funding of hydrological and metrological services in some developing countries is concerning.
  - There is a clear need to increase the **focus on prevention and preparedness** to ensure that a hazard, does not become a disaster. In the case of natural disasters, particularly weather induced, disaster risk reduction (DRR) is critical for example improving pre-flood protection and management. In the case of industrial disasters the work of the Convention on Transboundary Effects of Industrial Accidents (of the UN Economic Commission for Europe) ensures high-level safety in industry and a focus on prevention. Some countries require support to build capacity and enable them to ensure compliance; the "carrot" of funding or peer reviews can be beneficial. The insurance sector can also play a key role in reducing risks and

encouraging preparedness. The increase in extreme weather events provides an opportunity for humanitarian and environmental organizations to work with the insurance sector to mitigate the risks. Humanitarians should also link with those donors financing work to reduce deforestation as part of efforts to mitigate climate change. The wider private sector can also play a key role in prevention. In the longer term it is recommended that countries create a common resilience plan encompassing climate change adaptation, DRR, development and humanitarian needs. The international community needs to focus on those countries unable to afford prevention measures and identify appropriate mechanisms to support them.

- **Improving the response.** During the response phase to an environmental emergency the first 10 days are critical. Co-ordination of all interested bodies is crucial at this stage, led by the government responsible. However, whilst all call for improved co-ordination few organisations like being co-ordinated by others. A new body to co-ordinate an environmental emergency is not thought appropriate; however, greater collaboration with experts who can deal with environmental issues (such as nuclear or scientific experts) is critical. A Joint Plan for Environmental Emergencies could improve coordination among key international (and potentially regional) institutions by clearly delineating the respective roles of relevant institutions and establishing clear procedures for communication, coordination, and cooperation. This could be achieved through the Inter-Agency Standing Committee (which includes both UN and NGO bodies working on humanitarian issues); the UN Environment Management Group (more on the environmental side, and specific to the UN); some combination; or something that is unique. Clearer ownership of environmental emergency management would be helpful given the nature and complexity and intersection between humanitarian and environmental communities. Where international humanitarian assistance is requested UNDAC teams could include environmental competencies. Environmental considerations should be integrated throughout the humanitarian Cluster system (rather than necessarily creating an Environmental cluster) as in the Shelter Cluster to consider what to do with hazardous and other waste and the environmental considerations of location for accommodation and the cutting down timber to build shelter etc. Greater co-ordination of actors involved in longer-term recovery and reconstruction is also important to ensure environmental issues are considered.
- Overcoming **operational issues** to providing clear procedures for States, international organizations, and NGOs and cooperate across borders and a wider application of the Guidelines for Environmental Emergencies:
  - a. Improved notification procedures for example using the “Assistance Request Report” developed by UNEP in partnership with the UN ECE Convention on the Transboundary Effects of Industrial Accidents, and the European Commission’s Monitoring and Information Centre; a new international legal instrument governing notification and response to environmental emergencies could address institutional matters and set forth standards, procedures, and other requirements for notice and assistance.
  - b. Ensuring easier transfer at borders of equipment and potentially hazardous materials, for example soil and water samples; a more effective protocol is needed.
  - c. Implementing Guidelines on Environmental Emergencies adopted by the AGEE that address notification, focal points, and other aspects. Guidance can also be invaluable in providing the necessary detail to operationalize more general mandates in existing frameworks. These operational coordination mechanisms can also facilitate transition from initial emergency response to longer-term recovery.

- Strengthening the **legal and policy frameworks** underpinning international governance systems are also essential to ensure more effective response when international assistance is requested. There is a large, but fragmented body of global and regional instruments addressing different geographic regions, types of emergencies, and modalities for responding to the emergencies.<sup>10</sup> This piecemeal patchwork of conventions, guidelines and institutions results in gaps and inefficiencies. The conventions and institutional framework for notifying and responding to nuclear accidents through the IAEA highlights the importance of a clear and comprehensive legal, policy, and institutional framework. A binding international agreement (a so-called “hard law”) may not be possible in the short term, but there is increased use of soft laws such as high-level summits, compacts and agreed principles, peer-reviews which could be developed, especially at regional level. Moreover, building upon and linking regional conventions and protocols may be possible. The impetus of the Rio Conference could see significant progress in enhancing this body of soft law, as well as linking between the existing legal and policy frameworks.<sup>11</sup>
9. Priorities of both political and practical steps will be needed to address the many challenges outlined. Environmental concerns need to be considered throughout the **disaster continuum** from disaster risk reduction to reconstruction. The key to a successful response is the preparedness undertaken prior to disaster striking; public health models may be useful here, for example lessons from preparing for pandemics. **Lessons learned** from the evaluation of varying types of emergencies need to be converted into sustainable solutions and implemented to ensure better prevention, preparedness and a more adequate response.<sup>12</sup>

## Conclusion

10. A more sustainable and robust organisation at local, national and international level is needed to prevent, prepare for and respond to environmental emergencies more effectively. The 2012 Rio Conference offers an opportunity for strengthening governance and institutional frameworks in the face of environmental emergencies. At Rio, engagement is needed at the highest political level to identify principles, intent, and roadmap. Subsequently codification of the outcomes from Rio at the General Assembly through a UNGA Resolution would provide a clear political mandate and a valuable touchstone for many of the measures that need to be taken.

### Robin Hart

Wilton Park | September 2011

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## Annex

### Pakistan Flood - 2010

Due to record breaking levels of precipitation in July and August 2010, the Indus river broke its banks and flooded one fifth of Pakistan. Rainfall during this period ranged between 100-300+ mm; in some areas up to 579mm of rainfall was recorded.

Due to weather patterns data from the past 60 years, events like this are more frequent, with monsoon rains now more likely to affect western (Indus) rivers making flooding a repeated future threat. The Northwest region of Pakistan is particularly vulnerable to flash flooding.

A total of 20.1 million people were affected by the flood waters over a total of 132,000km<sup>2</sup>. The numbers of deaths (1961) and injuries (2907) were relatively low for such numbers affected. A total of 1.4 million people were rescued largely by boats, helicopters and hovercrafts.

The relief effort placed a huge demand on the Pakistan government, requiring health care assistance for 17.6 million people; a total of 5928 relief camps were established and food assistance for 10-12 months required for all of those affected.

In a future response to disasters such as these there is a need for: more efficient weather forecast and flood warning capability through a flash flood alert system and weather radar coverage; the improvement and strengthening of the river banks; raising of flood embankments, with the creation of by-pass channels and breaching sections. Legislation to control habitation in the command area is also recommended.

The Pakistan National Disaster Management Authority (NDMA) plan to have improved storage facilities in such high risk areas, which will contain more effective flood relief equipment as well as emergency food rations and medical supplies. More contingency planning and preparedness are critical.

General recommendations for future events noted by the Pakistan Government: NDMA in consultation with external donors should assist NGOs in developing their governance capacity; disaster reporting needs to become a priority including through the use of social media with information made more widely available. All of these recommendations and lessons learnt should be implemented by a more streamlined NDMA to increase the speed of their operational effectiveness.

### Chilean Volcanic Eruption - June 2011

The Puyehue-Cordon Caulle volcanic complex in Chile started erupting on June 2011. The resulting ash cloud covered an area of 74,000km<sup>2</sup> within the Patagonia region of Argentina due to prevalent eastward winds. The volcanic ash affected local economies through its impact on fishing, cattle and agriculture. The economic impact is estimated at \$1 Billion and a recovery period of 10 years. The threat of Lahars and mud-slides remains for local communities forcing temporary and possible permanent resettlements for some residents. The ash cloud also had a wider effect causing disruption for air travel to many South American countries as well as Australia (more than 3000 flights suspended in Argentina for 60 days).

Lessons learnt from this disaster include the need for interagency cooperation and emphasising the importance of sharing information and knowledge. The Ministry of Interior and the Ministry of Science and Technological Innovation in Argentina created the Joint Commission for Risk management to aid in these developments. Also undertaken in recent months: Mitigation measures along the rivers and in possible flooding areas, mapping and modelling of risks of secondary lahars and mud slides, evacuation of zones at risk, implementation of measures of preparedness, risk reduction and awareness raising of population, authorities and organisations in order to prevent future damage and disasters.

This is the first time that both the Chilean and Argentinean national and regional authorities have cooperated in a natural disaster event. The Ministries of Interior of both countries have already planned a strategic agenda regarding seismic and volcanic risks and there is the plan to create specialised teams to evaluate economic impact and damage of these emergencies. These initiatives will enable longer term bilateral cooperation between Argentina and Chile.

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<sup>1</sup> During the period of the Wilton Park conference a number of environmental emergencies unfolded: the flooding in Pakistan, predominantly effecting Sindh province; a fire of a leaking fuel pipeline in Nairobi, an explosion of a nuclear storage plant in southern France.

<sup>2</sup> The catastrophic flooding in Pakistan in 2010 continues to have lasting impact; whilst the floodwaters have receded much of the flooded area continues to face land degradation, crop losses, shortages of clean water, and sanitation.

<sup>3</sup> [http://www.unep.org/gc/gc26/docs/Proceedings/K1170817\\_E-GC26-19\\_Proceedings.pdf](http://www.unep.org/gc/gc26/docs/Proceedings/K1170817_E-GC26-19_Proceedings.pdf)

<sup>4</sup> The other challenges are the need to create “green” jobs; food security; water shortages; energy access; urbanization and marine protection (oceans and fisheries). Environmental emergencies should also be seen in the context of proposed Global Sustainable Development goals (SDGs) which are likely to be part of a post-2015 development agenda. Possible outcomes at Rio, dependent on UN Member States agreement might encompass the following elements: A green economy roadmap (or guidelines), including a menu of policy options and toolkits of good practices, as well as possible review mechanisms (voluntary or peer review). Decisions on strengthening the United Nations Environment Programme (UNEP), the Commission on Sustainable Development and the Economic and Social Council (ECOSOC) and global sustainable development goals (SDGs) that will be part of a post-2015 development agenda.

<sup>5</sup> See for existing partnerships <http://webapps01.un.org/dsd/partnerships/public/partnerships/64.html> and <http://webapps01.un.org/dsd/partnerships/public/partnerships/65.html>

<sup>6</sup> United Nations 2009: Strengthening International Governance Systems to Respond to Environmental Emergencies: a Baseline Review of Instruments, Institutions and Practice.

<sup>7</sup> The IDLR was endorsed by the Red Cross and Red Crescent Societies in 2007 “Guidelines for the Domestic Facilitation and Regulation of International Disaster Relief and Initial Recovery Assistance”.

<sup>8</sup> The partnership between Medicins Sans Frontiere, Blacksmith and Terra Graphics was recently awarded a Green Star award for their collaborative efforts in Nigeria.

<sup>9</sup> The World Business Council, Chemical Industries Group and International Council on Mining and Minerals are all important partners.

<sup>10</sup> For example, for a country in Southeast Asia, there is a framework for forest fires, but not for industrial accidents; conversely, in Europe and Central Asia, there is a regional framework on industrial accidents, but not on forest fires. In relation to oil spills, the International Maritime Organization has a mandate for oil spills from ships, but not from land-based sources as in the 2006 bombing of a power station in Jiyeh, Lebanon that resulted in an oil spill.

<sup>11</sup> Baseline Review of Instruments, Institutions, and Practice undertaken by the Environmental Law Institute

<sup>12</sup> See annex in lessons learned from the Pakistan floods of 2010 and the Puyehue-Cordon Caulle volcanic eruption effecting Chile and Argentina in June 2011.