



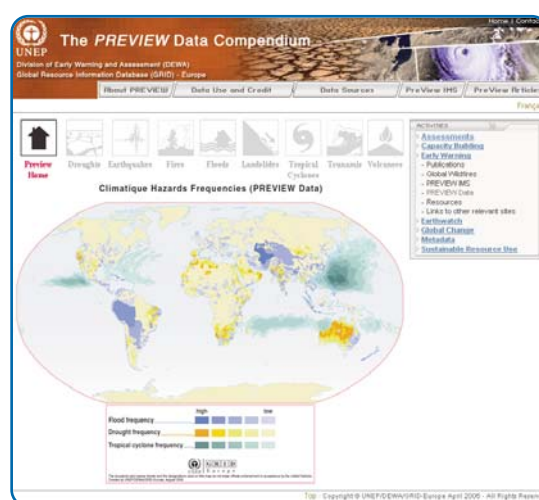
Programme on Risk Evaluation, Information and Early Warning (PREVIEW)

A unique collection of hazards datasets (cyclones, droughts, earthquakes, floods, tsunamis, landslides, volcanoes, forest fires), collected and/or produced by GRID-Europe. This collection of datasets is being used by various international partners in a number of projects/publications.

Background

The Project for Risk Evaluation, Vulnerability, Information and Early Warning (PREVIEW) is a GRID-Europe project initiated in 1999. It aims to help identify risks related to natural hazards in a quantitative way, and includes a unique collection of data sets for several hazard types (droughts, earthquakes, fires, floods, landslides, tropical cyclones, tsunamis and volcanoes). Some of these hazards were further modeled using Geographical Information Systems (GIS), as in the case of tropical cyclones (which were modeled to produce asymmetric wind speed profiles), earthquakes, droughts and floods.

Most of these datasets are original, produced by GRID-Europe. This collection of data has been used by UNDP for their study "Reducing Disaster Risk", as well as for the World Bank project "Disaster Risk Hotspots". It is currently being used by ISDR for building country profiles, the European Space Agency, which use the flood frequency layer to point their radar satellite for detecting floods, and the Hiogo Framework for Action (see below).



Data Collection

The data collection includes past hazard events from 1979 to 2005. Data sets were then compiled to produce maps of average frequencies (based on a 21-year period) as well as average number of population exposed to droughts, earthquakes, floods, landslides and tropical cyclones. This data collection benefits from a significant

number of data producers (too numerous to be listed here, but found on GRID-Europe's website), financial support from UNDP and ISDR, and a link to WMO for the tropical cyclones and the International Research Institute (IRI) for drought modeling.



Objectives & Outputs

An interactive mapping application was developed in 2000 with first generation of Internet Map Servers (IMS) technology. This does not allow the interrogation of information layers, nor does it allow interoperability with other map servers.

The application has now been upgraded by transferring it to Minnesota Map Server technology, thus allowing new features and interconnectivity with other agencies (including ISDR, ESA, UNOSAT,...).

PREVIEW Partners

Current PREVIEW partners are ISDR, ESA, UNOSAT.

The clients/end users of the project are decision-makers in- and outside of UNEP, other UN agencies, UNDP, WMO, ISDR, NGI, national and regional governmental bodies, and the general public.

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PREVIEW Data Compendium

The PREVIEW Data Compendium has been designed to facilitate the dissemination of global data sets related to human risks from natural hazards. This unique collection of data sets has been used to produce the Disaster Risk Index (DRI) published in the UNDP/BCPR report "Reducing Disaster Risk" in 2004, as well as for generating UNDP/BCPR country profiles. The PREVIEW data for tropical cyclones and volcanoes were used in the ProVention Consortium / WorldBank / Columbia University project: Natural Disaster Hotspots: a global Risk Analysis. The PREVIEW mapping application is also being used and supported by the UN International Strategy for Disaster Reduction (UNISDR) for generating their country profiles.

Hazards events, frequencies and physical exposure for seven different hazard types are ready for download with 24 refined data sets. Nearly 300 files for forest fires and tropical cyclones are also available for direct download. The website also provides links to direct data producers; for example, near real-time data for earthquakes and monthly updated data on forest fires.

These data sets allow to link poverty and low development with the level of risk. For instance, they show that although least developed countries represent altogether 11% of the physical exposure to hazards, they account for 53% of casualties. On the other hand, while the most-developed countries represent 15% of the physical exposure to hazards, they only account for 1.8% of the victims. Similar exposure leads to drastically different levels of casualties. Other results, including scientific publications, can be found through the PREVIEW Data Compendium website :

www.grid.unep.ch/preview/data/.

If these data sets are useful to identify countries most at risk from natural hazards, they are intended for global-scale analyses only. They can be used to visualize where more detailed data should be collected for risk reduction measures. The data can be viewed using PREVIEW-MAP: www.grid.unep.ch/preview/.

About GRID-Europe

UNEP/DEWA/GRID-Europe is one of UNEP's major centres for data and information management, with a unique, "value-adding" mandate in the handling of global and regional environmental data, which in turn support the environment assessment and early warning activities of UNEP and its partners. Located in the "Maison Internationale de l'Environnement" or "International Environment House" (MIE/IEH) in Geneva, GRID-Europe serves as the unique francophone centre for the global GRID network. DEWA/GRID-Europe is supported by a "Partnership Agreement" between UNEP, the Swiss Federal Office for the Environment (FOEN) and the University of Geneva.