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Centre for Research on the Epidemiology of Disasters (CRED)

Office of U.S. Foreign Disaster Assistance (OFDA)

EM-DAT: the OFDA/CRED International Disaster Database

Final Report January 15, 2002– July 14, 2004

The final report of the OFDA/CRED initiative is covering the period of January 2002 to July 2004. It is divided in 4 main parts. The first section describes the different activities related to the 4 main objectives undertaken within this project. The second section focussed on the different collaboration and mission carried out in the context of the project. The third section gives an overview on the EM-DAT citation in the national and international press and other publications as well as different outputs of EM-DAT (external to CRED). A statistical overview summarizing the use “EM-DAT.NET” will conclude this report.

1. Global activity report

1.1. Develop a search engine (SEARCH) for disaster data available on the CRED/EM-DAT website to allow users to extract required data from EM-DAT and be able to download the search results or print them out

By the end of 2001, the EM-DAT database could only be used by downloading the entire database consisting of 12,500 records, or smaller static data set containing only the last 10-year disaster data or current year data. For many users this was unwieldy and essentially unusable unless the person is well-versed in database management software and has the time to extract, refine and reconstruct the data he/she really needs. Including a query capacity to the databank could allow users to extract data more rapidly and according to their needs.

The aim of CRED was then to have active server pages that dynamically generate web pages for the search of an online database.

Following the third EM-DAT Technical Advisory Group meeting which was hosted by UN-OCHA in New York in March 2002, the Climate Information Project (CIP/OGP/NOAA) offered to help CRED developing web-based services to allow for dynamic display (tables, graphs, etc.) of EM-DAT information as well as online management of its products.

The EM-DAT Technical Advisory Group (TAG) concluded that EMDAT should:

1. Review its current configuration and transform it to a relational database such that differences between Reliefweb and CRED will be minimised and data management will be rationalised;
2. Develop a search engine to facilitate the data extraction;
3. Rework the data entry procedures as a function of the relational model and to reduce interval between addition of records and availability on the net.

Since then, several technical meetings have been held in Brussels and Washington between the EM-DAT team and CIP group in order to achieve this mission. The first one as been held in Brussels in July 2002 and was convened to discuss the above three issues focused around prototypes prepared by CIP/NOAA. The meeting hammered out the detailed technical questions between the programmers and those involved with data management. The goal was to finish the finalised prototype and the detailed specifications for related modifications. This meeting has been followed by 3 working meetings in Washington during 2002 and 2003 in order to fix all the related technical problems of the management and visualisation part of the new EM-DAT system. And finally, for the handing over of CIP to CRED of the complete management of the system and website “em-dat.net”, 3 training session had been taken place in Brussels. The new website “em-dat.net” as well as the new CRED website are accessible to the public since in March 2003.

1.1.1. EM-DAT Management (data entry)

The “managers” section is where CRED can develop their databases, edit material, and send e-mail updates, etc..

The first objective on the management part was to review the current configuration of EM-DAT and transform it into a relational database. A new structure and data entry methodology has been worked out and consisted in entering the information on 3 levels: event, country and sources levels. Once the information is entered, the final figures are validated before being made available to the public.

This new structure of EM-DAT requested some more works on the set of data (12,000 data) transferred from the previous database maintained in Access into the new system. This ‘retrofitting work’ didn’t affect the final figures available to the users. It consist mainly in:

- identifying the multi-country events such as the cyclones, drought, floods, etc.
- encoding information in the new field (disasters impact on the infrastructure, the origin and associated disaster, etc ...)
- encoding the source figures/information in separate sheet

Actually, half of the work has been achieved but as is it a long and laborious process, it will be ongoing in 2005.

The second objective is to rework the data entry procedures as a function of the relational model and to reduce interval between addition of records and availability on the net. This issue has been completely achieved in May 2002 and the data entry system runs since more than one year without any difficulties.

1.1.2. EM-DAT public management (visualisation)

The “mainpage” is designed to allow visitors to access charts, tables, download data, as well as sign-up/register to receive e-mail notices.

The entire site has been re-designed and restructured in 5 main sections:

- a) EM-DAT: The international disasters database
- b) EM-BIB: Documentation Center
- c) Disasters of the week
- d) EM-SEANET: Emergency Southeast Asia Network
- e) CE-DAT: Conflict database

The only three first sections are related to the EM-DAT project and will be developed within this report.

1.1.2.1. EM-DAT: The international disasters database

The EM-DAT section give the users information on the database but also allow them to have access to updated and validated information on disasters. CRED in collaboration with CIP/NOAA has developed different search tools, which allow users to access:

1. **Country profiles** given by natural and technological disasters. It represents 438 country profiles for both categories
2. **Disasters profiles** given by natural and technological disasters. It represents 16 disasters profiles for both categories
3. **Disasters list** accessible by selecting a data set (region or country, period or period in years, disaster group or disaster type)
4. **Statistics:** allow users to generate datasheets based on the overall EM-DAT records. Three statistical options are available to generate tables and data sets: Frequency, cross tabulations and totals.
5. **Maps:** based upon the EM-DAT database, maps providing geographical summaries of natural disasters events and impacts over the period 1974-2003 are available. It represents 3 global maps, 7 disaster type maps and 2 human impact maps based on the last current year (2003).
6. **Trends:** This section provides numerous pre-made graphs and other figures, which display various trends and relationships within the EM-DAT. It represents 14 figures (occurrence, deaths, affected and damages) on disaster trends overall the world since the beginning of the century given by three main categories: global, natural and technological disasters.

All the sections (except maps and trends, which will be updated every year,) are accessible through a search engine in a very friendly and dynamic way.

The entire set of data is updated and uploaded to the public every month.

In the same section, users can also access to different information on EM-DAT such as: criteria and conditions of use, glossary, meeting reports, etc....

The new EM-DAT website has also been launched publicly on May 5th 2004, in Geneva, in the context of the Inter-Agency Task Force on Disaster Reduction. This public launch included a complete demo of the database and presentation of its different

services. The demonstration was followed by a discussion on the best ways to promote use of data as evidence base for national and international policy.

1.1.2.2. EM-BIB: Documentation Center

See section 1.3.2 page 7

1.1.2.3. Disasters of the week

The list of new occurring disasters is available in a separate section entitled “Disaster of the week”. Each Monday, a new list is generated at CRED, based on the disasters (natural and man-made) that have occurred during the previous week (from Monday to Sunday). This section replace the GLIDE numbers (**see section 1.4.2, page 11**), but still keep links with Relief-Web for linking information.

It represents more than 800 records entered each year and posted on the website.

1.1.3. Technical Advisory Group Meetings (TAG)

Two Technical Advisory Group meetings (TAG) and one pre-TAG meeting have been organised within the time contract period.

1.1.3.1. 3rd EM-DAT Technical Advisory Group Meeting, hosted by UN-OCHA, New York, March 2002

As the two previous TAG meetings, organised respectively in August 2000 (Geneva) and in February 2001 (Washington), the third TAG-Meeting, hosted by the United Nations Office for the Co-ordination of Humanitarian Affairs (UN-OCHA) in New-York in March 2002, was an important step towards the improvement of EM-DAT database and the GLIDE initiative.

The meeting was focussed on 3 main topics:

- the problematic of some disaster data (famine/drought data, disaster in developed countries, economic damage and transport accidents data) which need to be improved;
- the first conclusions of the GLIDE initiative reported by the different partners and the next steps to be undertaken;
- the ongoing and future contributions of partners in the development of the EM-DAT database .

One of the main conclusion of this TAG-Meeting was the necessity for CRED to: (1) review the current configuration of the EM-DAT database and transform it to a relational database such that differences between Reliefweb and CRED will be minimised and data management will be rationalised; (2) develop a search engine to facilitate the data extraction; (3) rework the data entry procedures as a function of the relational model and to reduce interval between addition of records and availability on the net.

1.1.3.2. Pre-TAG Meeting, hosted by CRED, Brussels, December 2003

The aim of this meeting was to present to the TAG-members the new EM-DAT system and the different products and services to which users could have access, before launching the new system online and in preparation of the next TAG-meeting.

1.1.3.3. 4th EM-DAT Technical Advisory Group Meeting, hosted by UN-ISDR Secretariat, May 2004

The 4th TAG-meeting has been preceded by a public launch of the new EM-DAT website on May 5th including a complete demo of the database and presentation of its different services.

As CRED has achieved all technical issues related to the new EM-DAT version, its objective was to concentrate more on the different outputs of the database in order to give more visibility to EM-DAT. This 4th TAG meeting focussed on two main issues:

- 1) Further development on EM-DAT website and contributions of the TAG-members : visibility and inter-activity
- 2) Drought/famine data problematic: checking historical data and new classification: The aim of the meeting was to expose the drought/famine (long-term disasters) problematic and propose an (or some) appropriate solution to ensure the quality and reliability of drought and famine data in EM-DAT.

The three meeting reports are available on our website (EM-DAT section).

1.2. Strengthen internal capacities (INTCAP) for georeferencing, mapping and creation of relevant summary data for public and scientific use

CRED has received within the first phase of the EM-DAT development (1999-2001) a contribution from the Global Information and Early Warning System (GIEWS), a FAO unit, in support of the production of a time-series, digital geo-referenced natural disaster data set for Asia based on the CRED/EM-DAT database that contains information on the occurrence and effects of mass disasters in the world from 1900 to the present.

FAO/GIEWS and CRED collaborated to georeference EM-DAT data (i.e. each disaster has been related to the first administrative level of the country where it has occurred). The procedure has been developed assigning a code to each province (ADM1) and then assigning the same code to each disaster that occurred in that particular province; this allows data and maps linking, in order to produce disaster maps. FAO/GIEWS has undertaken the georeferencing process from 1975-2000 for natural disaster data reported in South, East and Southeast Asia. Modification at that time, within EM-DAT MS Access database structure, have been made by developing new modules within MS Access. It enabled CRED to integrate natural and man-made disasters sub-national scale information. By the end of the 2001, it represented more than 2,300 events georeferenced, resulting in 3,900 records georeferenced at the first administrative level. The georeferenced maps are available on our website. The years 2001 and 2002 data have also been geo-referenced but only for the South East Asia region, it represents 83 events georeferenced and 149 records geo-referenced at the first administrative levels.

As the EM-DAT system has changed in 2003 and data were entered in the new structure, all the georeferenced data has not been yet incorporated in the database.

At another side, data have been disaggregated for natural disasters time period 1975-2003 for the following countries: Soviet Union, Czekoslovakia, Yugoslavia, Ethiopia and Indonesia.

This several preparation work lead to the conclusion that a clear methodology of data aggregation has to be set up before going further in georeferencing development.

CRED had also plans to carry on with this process, by working on other continents, and all types of disasters (not only natural) with the technical support from FAO/GIEWS.

The georeferencing of natural disaster in Latin America and Asia was discussed during the 3rd TAG Meeting held in New York. CRED concludes that the concordance between the FAO/GIEWS system and the GIS group was essential before starting our work to ensure compatibility progress and developing a standard format has been slow. We have acquired specialised softwares including ARC-GIS and limited hardwares to support map-making activities. CRED also have a cartographer expert in its team who has undertaken some preparation work in this area. CRED hopes to achieve a better project in the next phase with regard to mapping EM-DAT database.

1.3. Importing new modules of data in EM-DAT

1.3.1. Conflict impact data (EM-CID)

CRED has compiled a conflict database covering 1975-2001 that includes variables such as country, region, type of conflict, dates, intensity, persons killed, internally displaced, refugees, repatriated, injured and other special comments.

The two main goals of CRED within this project were to:

- Fully review the rest of conflict database to offer EM-DAT users reliable information on conflicts, especially their human impact and create a friendly data entry sheet format so that CRED staff can easily undertaken the daily process of data entering. This part of the project included some programming: specific data entry mask has to be designed and some queries have to be created to facilitate the compilation of conflict data for summary tables and graphs.
- Give an easy access to these data through our website. As for the natural and technological disasters; conflict data will be available onto CRED/EM-DAT website through a search engine.

Beginning 2003, CRED has undertaken a additional project aimed to improve evidence based policy on conflict prevention and response by providing standardized and comprehensive data on the human impact of conflict. The aim of this project was to produce an online, publicly accessible database that is a compilation of quantitative and qualitative information from numerous credible sources. A new model for a conflict database was designed and proposed during a USAID/PPC internal meeting on March 2003.

Based on the review of the conflict data existing in EM-DAT and work undertaken under OFDA grant, a new initiative (Conflict Database - CE-DAT) funded separately by State/PRM was launched. This initiative allows developing the conflict data in much greater details and robustness. CRED plans to link CE-DAT to EM-DAT in the second phase to allow users a more efficient search functions at the country level.

Further details on the CE-DAT project and progress can be found on the CRED WebPages (CE-DAT section)

1.3.2. Bibliographic documents (EM-BIB)

Since 1988 CRED has been maintaining a bibliographical database containing references to published and unpublished documents, books or chapters from them, articles from journals, reports, conference proceedings related to many aspects of disasters all around the world (natural and man-made disasters (health, medicine, engineering, legislation, history, etc.), in different languages (70% of the documents in English, 20% in French, 10% in other languages), without any geographical limitation.

Currently there are more than 13,000 such references, with reference entries standardised with specific keywords. The database has until now been mainly used for internal purposes, but it has also been used by researchers and policy makers who are working in the disaster area and use the database to complete their work.

The aim of this project was to take the current internal bibliographical database and place the information within a user friendly informative Internet framework. The end result was that users/visitors could search for references on particular countries or regions, or examine particular complex emergencies and natural disasters and see a list of relevant publications.

A new module “biblioweb” has been installed in order the users to be able to search bibliographic references into the EM-BIB database. The initial current internal bibliographic database information has been placed within a user-friendly informative Internet framework. Users are now able to search for references on particular countries or regions and examine particular complex emergencies and natural disasters by making selections based on author name and/or list of keywords and get a list of relevant publications.

In addition, each month, a list with all the new acquisitions of the CRED documentation Center is posted on the CRED/EM-DAT website and send through e-mails. It represent 500 new references related to health, humanitarian assistance, disasters and conflict entered into the database each year with an average of 40 new references per month.

It represents 11% on the overall visits on the CRED web-site.

1.4. Support to international humanitarian community for improved co-ordination, preparedness and mitigation, using EM-DAT disaster data

1.4.1. Trends and impact analyses of disasters (ANALYSES)

This activity reflects one of the CRED's competences, which is specialised in analysing and studying the effects of disasters on human populations. The ultimate use of data is in its analysis that helps policy and programme officers to take decisions based on evidence and analyse rather than *ad hoc* information. In this context, CRED wanted to provide EM-DAT users with regular specific analyses on natural and technological disasters.

Several studies has been undertaken, published as internal working document and posted on the website or has been undertaken in the context of a collaboration or on special request (see also section 2, page 12)

1.4.1.1. Working papers and workshops presentation based on EM-DAT

Paper on the comparative analyse on 3 global disasters database (2002): After the 2nd TAG Meeting held in Washington in February 2000, it has been decided to finalise the comparative analyse of the 3 global disasters data sets (EM-DAT/CRED, NatCat/MünichRe and Sigma/SwissRe) initiated during the meeting. The study conducted by CRED and the World Bank has resulted into a working paper document which has been distributed and posted on CRED as well as on Disaster Management Facility Group of the World Bank websites: GUHA-SAPIR D., BELOW R. (2002). The quality and accuracy of disaster data: A comparative analyses of 3 global data sets. Working paper prepared for the Disaster Management facility, World Bank. A similar study comparing DesInventar database (LaRed) and EM-DAT conducted by UNDP is still ongoing.

Study on “Ten years human impact of natural disasters and conflict : a world perspective”(2002): The purpose of the analysis was to make a first assessment of the impact of natural disasters and conflicts on the population of most of the countries and territories around the world during the decade 1991-2000. The reason of choice for this decade was the availability of data on victims of conflicts. A human impact measure has been computed for natural disasters and conflicts respectively and for both catastrophes. All type of natural disasters has been considered. Each impact measure is a rate per 100.000 with all victims (killed + injured + homeless + affected) - of natural disasters or conflict – during the decade as numerator and the cumulated total number of people who, each year, had been at risk of disaster during the decade (to summarise : sum for years 1991-2000 of average mid-year population). Taking into account the different nature of natural disasters, their variability in occurrence and impact over space and time, the results give a first raw estimate of the human impact of natural disasters and conflicts in each country, territories and regions of the world. Limitations of these results and necessary refinements are actually discussed. This analyse constitutes the preliminary work of the CRED publication on natural disasters (see section 1.4.1.2, page 10).

Data analysis on natural disasters in mountain regions (2002) : Relating to the meeting “World heritage mountain cities and natural hazards” in Chambéry in September 2002, an analysis of the EM-DAT data on “slides” (landslides and avalanches) has been performed, completed with an analysis of accessible scientific documents on risks and vulnerabilities in mountainous regions. A working paper is ongoing.

Development at risk (2002): Brief for "The World Summit on Sustainable Development", Johannesburg, South Africa, 26 August - 4 September, 2002, distributed during the conference and posted on CRED website

Data analysis on Floods in European Region : 1976 – 2000 (2002-2003) : Relating to the meeting “Floods : Climate change and adaptation strategies for human health” in London in July 2002, an analysis of the EM-DAT data on floods in the European region has been performed. The trends in their number and countries of occurrence, the distributions of their human and economic impact had been computed. The details given by the sources of information and their completeness have been examined. This study resulted in an internal working paper: HOYOIS Ph. GUHA-SAPIR D. (2003). Three decades of floods in Europe : a preliminary analysis of EM-DAT.

Three decades of natural disasters in ASEAN countries: analysis from EMDAT data (2003): Paper presented at the “Workshop on Improving Data Quality for Disasters and Complex Emergencies”, held on 3-4 June 2003, Manila Diamond Hotel, in Manila, Philippines. There were also a background paper distributed at the meeting on “Understanding Natural Disasters and Complex Emergencies in Southeast Asia”.

Thirty year of floods in the world (2004): Paper prepared for the International workshop organised by the Tyndall Centre for Climate Change Research University of East Anglia, Norwich , 18th to 20th July 2004

Systematic risk and natural disasters in Europe: Issues in data collection, validation and use (2004) : Presentation on the “Joint Seminar on Systemic Risks and Lessons Learned”, Karlskoga, Sweden, September 2004. This presentation constitutes a preliminary work of a forthcoming analyse and working paper on natural disasters data in Europe

1.4.1.2. CRED publication

One of the specific studies based on EM-DAT data that CRED wanted to undertake was a separate and unique publication, focused both on the impact of natural disaster, in terms of people killed and affected, and on how assess risk to prevent the recurrence of these catastrophic events.

In collaboration and with the support of the Hazard Management Unit of World Bank and CIP/NOAA group, CRED has undertaken its first official publication on natural disasters over the last 30 years (1974-2003). The publication in its final editing phase and expected to be printed end October 2004: “Thirty years of natural disasters 1974-2003: The numbers”.

2500 copies will be edited and distributed to all concerned organisations and partners.

1.4.1.2. CRED Bulletin

CRED intended also to publish on regular basis a bulletin based on the current year data on EM-DAT. The first issue is under process and will be edited in December 2004. The new template as been set up and the first issue will be focussed on the water-related hazards (within the UN International year of Fresh Water Awareness campaign). A second issue is foreseen in January 2004 for the World Conference on Disaster Reduction in Kobe.

1.4.2. Creation of a GLObal IDentifier number for disasters (GLIDE)

This new initiative has been launched and led by a consortium of interested parties (World Bank, FAO, OCHA-Reliefweb, Asian Disaster Preparedness Centre-Japan, OFDA and CRED) for the creation of a global standard system for a GLObal IDentifier number for disasters (GLIDE) leading to easy access to information from multiple sources. CRED/EM-DAT has been charged with the task of assigning and distributing the unique identifier number. Development of products from this integrated information tracking has also being discussed as a priority for the major bilateral and multilateral donors and for the affected governments. The strengthening of the internal capacity of CRED staff has also addressed this global initiative.

The project initiated at the start by ADRC, CRED, FAO, OCHA/Reliefweb, USAID/OFDA and the World Bank aimed mainly to develop a format for a GLObal IDentifier (GLIDE) disaster number and establish procedures for generating and disseminating this unique identifier for each disaster. Since 2002, CRED has generated a weekly GLIDE number list for all new events which was posted on the CRED/EM-DAT website and sent through a weekly e-mail list to all its partners. The first conclusions of these initiative and next steps to be undertaken has been exposed during the Third TAG Meeting held in New York in March 2002.

In addition, CRED has generated GLIDE numbers has also generated GLIDE numbers for all disasters posted on Relief-Web for the years 2000 and 2001 and the links have been implemented between the two sites. CRED has also produced a half page in order to promote the existence and use of GLIDE, which has been included in the WDR 2002.

Information search on particular events with GLIDE were available on ReliefWeb and ADRC home pages. It represents for 2003, more than 800 events.

The concept and methodology for generation of GLIDE numbers was developed by EM-DAT team and three meetings were organized by CRED for this purpose, two in Brussels, respectively in August 2001 and July 2002 and one within the TAG-meeting hosted in New York in March 2002.

Following this, a decision had been taken by ADRC on the continuation of GLIDE resulting in the handing over of this task to ADRC. Since then, some slow progresses has been achieved and CRED has assisted as an expert to GLIDE meetings organize by

ADRC (July 2003 and May 2004) but has decided to no longer take the leadership for its continuation.

On the other hand, CRED continue to post a list of new disasters occurring every week on its website with a unique identifier number (“DisN^o”). This section replace the GLIDE numbers, but still keep links with Relief-Web for linking information.

2. Collaborations and missions

This section gives an overview on the different collaborations and missions lead within the time contract period.

2.1. Climate Information Project (CIP/NOAA)

The collaboration between the Climate Information Project (CIP, a joint project of NOAA/OGP and USAID/OFDA) and CRED started following the TAG-Meeting held in New York in March 2001. CIP/NOAA offered to help CRED develop web-based services to allow for dynamic display (tables, graphs, etc.) of EM-DAT and GLIDE information, as well as online management of its products. The main objective and output was the development of a dynamic EM-DAT website. The CIP group brought also its contribution and support to the CRED publication on natural disasters.

2.2. International Research Institute for Climate Prediction (IRI)

In the context of the 4th TAG-Meeting, IRI team (Columbia University) team has presented a study made from EM-DAT on: “Drought and disaster” (E. Grover – M. Dille – J.del Corral, and B. Blumenthaln), which objective was to characterise a drought hazard event . Following this presentation, IRI and CRED have planned to collaborate on review of drought/famine disaster classification. CRED would like to develop a consistent methodology of recording drought disasters and improve the data on drought-related losses. And on its side, IRI would like to provide a characterisation of drought hazard associated with drought disaster events. A new agreement including workplan is under process and a working meeting has been held in CRED on September 2004 in order to finalise the agreement and working plan. This work will start in the upcoming months.

2.3. International Federation of Red Cross and Red Crescent Societies (IFRC)

Since 1993, CRED has provided the International Federation of Red Cross and Red Crescent Societies (IFRC) with statistical data tables on an annual basis for their annual World Disaster Reports (WDR). A revised agreement has been signed in May 2004 between the both parties. The CRED within this contract period, has participated to the WDR 2002, 2003 and 2004 by producing each year 13 tables, based on human and economic disaster impact data, as well as an analysis of OECD financial data and footnotes for clarification.

2.4. Inter-Agency Secretariat of the International Strategy for Disaster Reduction (ISDR)

The collaboration with ISDR started in 2001 and a collaborative agreement has been signed in October 2003. Several working and informal meetings have been held in Brussels and Geneva, respectively, in January 2003, June 2003, November 2003 and July 2004. The areas of the collaboration are:

- Information and data management support
- Capacity buildings initiatives support

- Data verification
- Interns staff exchange
- Promotion and information material

Actually, this collaboration has been made concrete by several actions and publications.

2.4.1. Data verification

ISDR secretariat has proposed CRED to help in sending out country files with the historical data to all ISDR focal points (platforms and other national contacts) for their information and also to request them to review the data. This work has been achieved in May 2003 and resulted in sending letter and country data set to more than 100 countries. Even if the results of this exercise was not very productive (only 15 countries has replied), it confirms that further more contact and collaboration at a national level need to be set up. Some countries like Philippine and Mozambique has sent complete set of their national data, which encourage us to pursue this exercise.

2.4.2. Contribution to publications

- Contribution to the special issue of ISDR “Campaign information kit” which includes figures and maps based on EM-DAT (2003)
- Contribution to the ISDR “Living with risk” publication which includes figures and maps based on EM-DAT (2003)

2.4.3. The CRED contribution for a CD compiled for the Kobe conference

The ISDR secretariat takes the opportunity of the venue of the World Conference on Disaster Reduction held in Hyogo/Kobe, Japan, from 18-22 January 2005, to complement the report of the review of the Yokohama strategy and plan of action with a set of CD-ROMs containing disaster risk reduction information (1994-2004) compiled throughout the review and other supporting materials.

This CD-ROM includes selected disaster statistics based on EM-DAT for the period of 1994-2004 (period covered by the Yokohama Review Process). The information is presented in series of tables and graphs and the analysis and compilation of the data provided by CRED.

This CD will be disseminated worldwide, free of charge, to communities, universities, scientific and technical organisations, and other ISDR partners. It will be regularly updated.

2.4.4. Country profiles

New country profiles will be accessible on ISDR website by the end of October and linked to EM-DAT country profiles webpages. The country profiles will be related to 20 national platform countries (e.g. Mozambique, Iran, Nicaragua, etc....). Cross-references between EM-DAT country profiles and ISDR's country profiles will ensure a higher visibility and access for users to both institutions.

2.5. Hazard Management Unit World Bank

The Hazard Management Unit brought its collaboration and support to the CRED publication on thirty years of natural disasters 1974-2003.

3. EM-DAT citation and other recent external outputs

One of the CRED goals within this EM-DAT project is also to give more visibility to EM-DAT, developing links with other institutions and products and increasing the traffic on the EM-DAT website. For this purpose, a new section has been posted on our website and includes two main parts:

3.1. Who use EM-DAT?

This first section give an overview of EM-DAT as the international reference disaster database which is used for numerous white paper, researches, thesis and for program resource allocations. This bibliographical references list links also to the document in pdf/html format (when available) or with a direct link to the appropriate webpage .

The following list (non-exhaustive) is related to the time contract period (2002-2004). A more complete list is available on our website.

- Cornford C.G. (2004). Some socio-economic effects of high-impact weather events in 2003, forthcoming in WMO bulletin, July 2004
- Baunay Y. (2004). Comparison of the evolution of the vulnerability in third world countries and developed countries facing natural hazards, Thesis, Institute of Geography of University of Paris 1 Panthéon-Sorbonne. [Thesis]
- Jonkman, S.N. (2004). Global perspectives of loss of human life caused by floods, accepted for publication in : Natural Hazards.[Article]
- United Nations Development Programme (2004). A global report reducing disaster risk : A challenge for development, New York : UNDP [Report].
- Asian Disaster Reduction Center (2004). Natural Disaster Data Book 2003: An analytical overview, Kobe : ADRC [Monograph].
- United Nations International Strategy for Disaster Reduction (2003). Living with risk, ISDR : Geneva. [Monograph].
- Boyd, E.C.K. (2003). The Political Determinants of Natural Disaster Response: A Cross-Country Comparison, Master of Arts, Political Science, University of New Orleans. [Master's Thesis].
- Yates R., Alam K., Twigg J., Guha-Sapir D., Hoyois P. (2002). Development at risk. Brief for "The World Summit on Sustainable Development", Johannesburg, South Africa, 26 August - 4 September, 2002. [Leaflet] -
- Asian Disaster Reduction Center (2003). Natural Disaster Data Book 2002: An analytical overview, Kobe : ADRC [Monograph].

3.2.EM-DAT citation

This second section lists the EM-DAT citation in the national and international press, scientific journals, magazines, training manuals and international reports

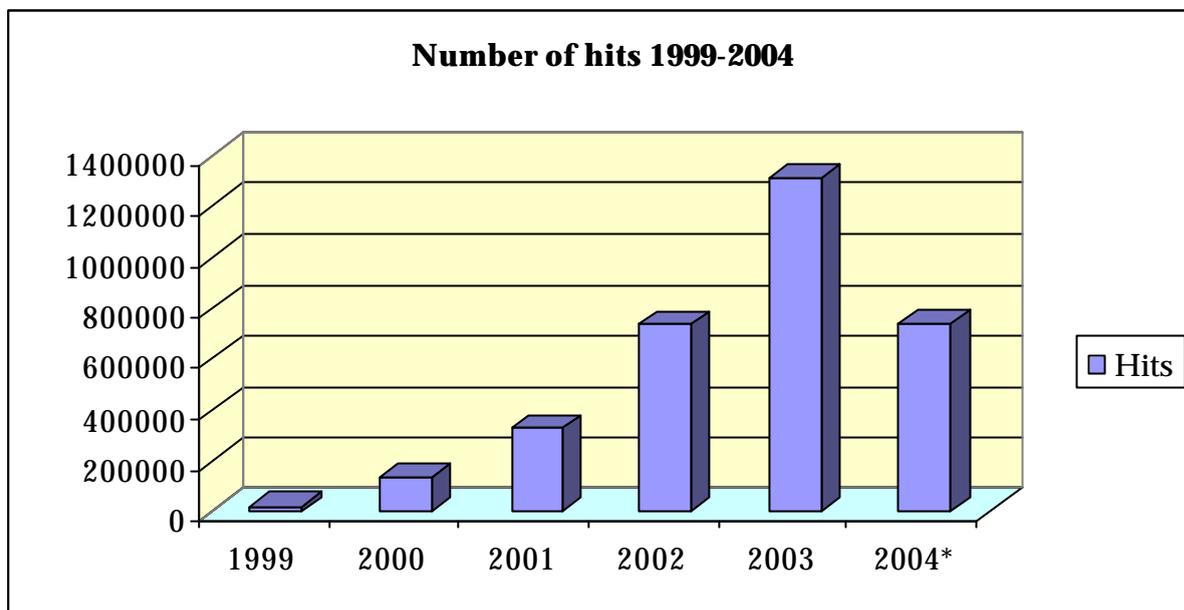
The following list (non-exhaustive) is related to the time contract period (2002-2004). A more complete list is available on our website

- Ford P. (2004). In Jeanne's wake, new efforts to prevent 'natural' disasters, Christian Science Monitor, 29 September 2004.
- László S. (2004). A szegényeket a katasztrófa is jobban sújtja, Népszabadság, 22 September 2004.

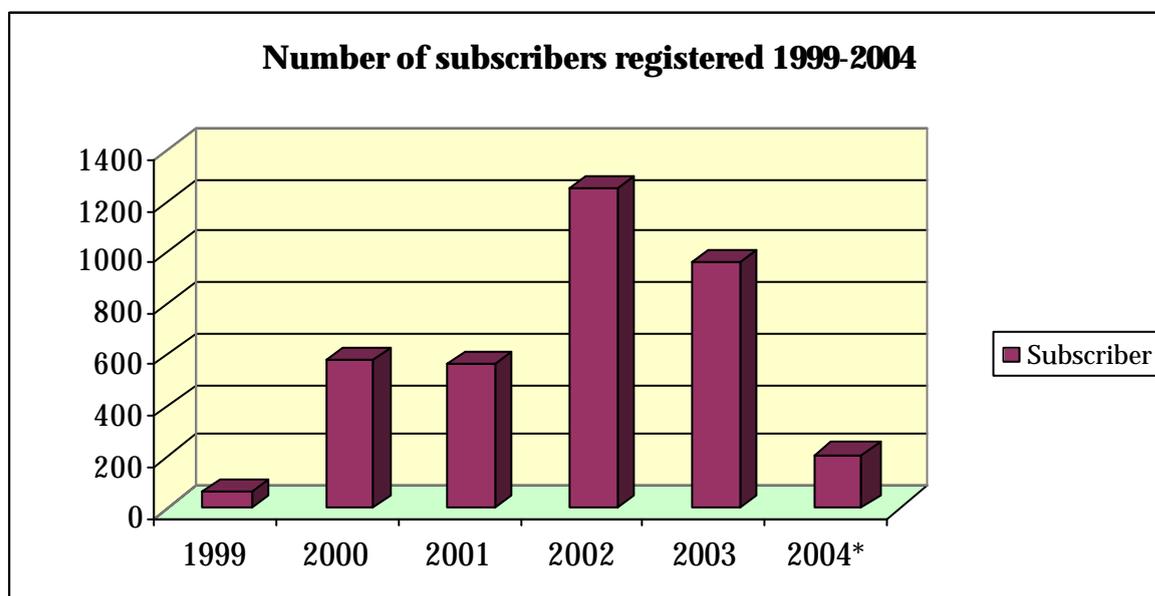
- Leoni B. (2004). 254 million people affected by natural hazards in 2003: Figures on the rise, UN/ISDR Press Release, 16 September 2004.
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4. Statistical overview of EM-DAT use

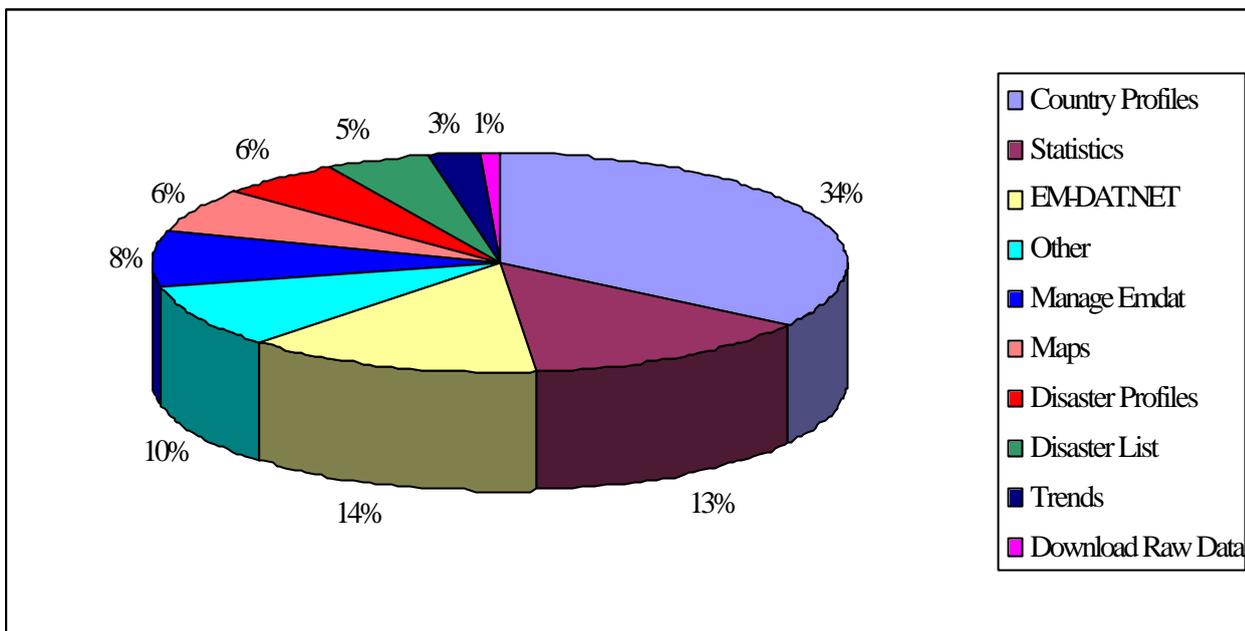
4.1. Number of hits from 1999 to 2004* (January - September)



4.2. Number of subscribers from 1999 to 2004* (3 first months only)



4.3. Percentage of sections visited on EM-DAT.NET since March 2004



The pie chart shows that 34% of the visitors consults the “Country profiles” section/pages which appears as the main section, followed by EM-DAT.Net page (14%), which is the EM-DAT entry page and 10% of “other” which contain different related information on EM-DAT (glossary, criteria and conditions en use, meetings reports, etc....). The option downloading raw data represent actually only 1% and most of the data downloaded are related to the country profiles.

4.4. Miscellaneous statistics related to “em-dat.net” (March 2004 – September 2004)

4.4.1. Global statistics summaries

Visits:	36,832 (21,901 visitors)
Average visits per day:	172
International visits:	31,08%
Visits of unknown origin:	43,48%
Visits from US:	25,44%
Successful hits for entire site:	569,626
Average hits per day:	2,661
Home page hits:	15,244

4.4.2. Report by domain

Domain types	Visits	Views
Unresolved IP Address	20.265	332.559
Commercial	7.576	31.419
Unknown	5.289	149.883
Network	2.067	31.388
Education	777	14.177

Military	343	3.233
Organisation	250	3.681
Government	179	2.180
International	79	1.027
ARPANET	9	77
Informational	2	2
<i>Total</i>	36.836	569.626

4.4.3. Report by country

Countries	Visits
Unknown Origin	16.016
United States (US)	9.372
Netherlands (NL)	2.208
United Kingdom (UK)	1.271
Belgium (BE)	950
Croatia (Hrvatska) (HR)	585
France (FR)	558
Australia (AU)	477
Canada (CA)	463
Japan (JP)	408
Switzerland (CH)	407
Germany (DE)	396
Italy (IT)	267
India (IN)	193
China (CN)	164
Singapore (SG)	155
Sweden (SE)	142
Costa Rica (CR)	138
Spain (ES)	113
Thailand (TH)	111
Other	2,442