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UNEP/Global Resource Information Database

GRID-Europe gives boost to the EnviroInfo 2004 Conference focusing on "Sh@ring"

by Karine Bachmann, Hy Dao & Jean-Philippe Richard

The 18th Conference EnviroInfo 2004 of the German Informatics (GI) Society took place in Geneva, Switzerland on 21-23 October 2004. It continued the successful series of conferences dedicated to information exchange among scientists, public administrations, and private and public companies involved in environmental information processing, as well as environmental informatics end-users. GRID-Europe was one of the main partners and collaborators of this Conference organised by the State of Geneva.

EnviroInfo 2004 was dedicated to "Sh@ring" in the field of environmental information systems: sharing information technologies, in order to comply with the principles of sustainable development; and sharing data and knowledge.

During these three days, 87 papers from 22 countries and 50 high-quality posters from 17 countries were presented. GRID-Europe was heavily involved from the planning stages, to support the organisation and moderate some sessions.

As a keynote speaker, Norberto Fernandez (Head of UNEP/DEWA's Early Warning section) presented the experiences and plans of UNEP in the context of "Sharing Global Environment Assessments".

Hy Dao and Pascal Peduzzi made a presentation on "Global evaluation of human risk and vulnerability to natural hazards". Stefan Schwarzer presented the GEO Data Portal and UNEP.Net. The Swiss catalogue for sharing environmental information "Envirocat", elaborated by the BUWAL in collaboration with GRID-Europe, was also the subject of one presentation by Karin Fink.

Six posters concerning current projects of GRID-Europe were exposed. The poster "Multi-source object-oriented classification of landcover using very high resolution imagery and digital elevation model" of Akiko Harayama and Jean-Michel Jaquet won the third price of the poster competition.

More information about the conferences and the posters are available at the website (www.enviroinfo2004.org). It is to be noted that the proceedings and the webcasts of the talks can be freely consulted on line, a first in EnviroInfo history.

Robert Magnin, Danitle Lajust, Jean-Philippe Richard et Alberto Susini, members of the logistics team.

The participation was a record in terms of number of attendees. 350 persons came to the conference from 45 nations: 79% from Western Europe, 12% from Eastern Europe, 5% from the United States, Canada and Australia and 4% from developing countries. For the first time, Eastern Europe and developing countries were rather well-represented at EnviroInfo, thanks to financial help given to some delegates and attendees.

The next conference "EnviroInfo 2005" will be held in Brno, Czech Republic, on 7-9 September 2005. More information is available at the website (www.enviroinfo2005.org). ■

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South Asian Tsunami Assessment Coordination

by Stephane Kluser & Pascal Peduzzi

Following the earthquake and tsunami that devastated Indian Ocean coasts on 26 December 2004, GRID-Europe has been acting as the cartographic, GIS and remote sensing centre for the UNEP Task Force (www.unep.org/tsunami) in charge of responding to the disaster. Klaus Toepfer, UNEP Executive Director, asked GRID-Europe to support UNEP, OCHA and all UN colleagues within the United Nations Development Group (UNDG).

GRID-Europe coordinated satellite imagery interpretation with UNOSAT, to avoid duplication of on-going efforts. A close collaboration between the two centres was achieved by exchange of imagery and other files.

In order to provide efficient support, the cartographic and other products developed have been posted to the GRID website (www.grid.unep.ch).

Anyone in charge of assessments in South Asia has access to general maps, GIS files and output products generated by GRID-Europe. Thus far, three assessments have been finalised: "Model of potential impacts from both eartquakes and tsunami in Sumatra", "Impacts as detected by satellite imagery over Banda Aceh (Sumatra)" and "Impacts as detected by satellite imagery over Nicobar Islands (India)". Moreover, Landsat satellite imagery has been downloaded for the region, for time periods from before and after the catastrophe.

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7th Meeting of European GRID Centres "EuroGRID-7"

by Ron Witt

The seventh annual meeting of European GRID centres "EuroGRID-7" returned to the site of the first Euro-GRID Meeting, being hosted by DEWA/GRID~Europe at UNEP's International Environment House in Geneva, on 6-7 December. The purpose of the meeting was to address the current status of and possibilities for future collaboration among the existing (five) GRID and other centres in Europe, such as the Ukrainian Land and Resource Management Center (ULRMC) and the Russian Ecological Federal Information Agency (REFIA)/ National Information Agency (NIA), with a far-ranging agenda.

The meeting was attended by nearly 12 participants, including representatives of EuroGRID and other centres (GRID-Arendal, GRID-Budapest, DEWA/GRID-Europe (formerly GRID-Geneva), GRID-Tbilisi, GRID-Warsaw, ULRMC and REFIA/NIA) and a representative of UNEP's Regional Office for Europe.

Each of the participating centres presented their core activities during 2004, identified concrete priorities for collaboration and exposed their future expectations regarding these networking initiatives. UNEP/DEWA presented an overview of experiences in the GEO process, including global, regional and sub-regional outlook reports. In particular, there was focus on the preparation of the Carpathians Environment Outlook (KEO) report, which represents the most unifying project for many of the participating GRID centres. The next steps in project preparation and fund-raising activities were also thoroughly discussed.

All of the participants were positive about both the annual meeting and the broader Euro-GRID process. Many thought that the briefing about UNEP's and DEWA's programme and activities, and the opportunity to describe their offices' activities and exchange such information with the other GRID centres, was the most useful part of the meeting. A few comments were made that it would be even better if the annual EuroGRID could take advantage of other, similar gatherings (UNEP National Committees, GEO et al.) for back-to-back sessions, and should also if possible involve someone from DEWA at UNEP Headquarters, as has occasionally been the case with previous Euro-GRID meetings.

It was stated that the KEO project, some aspects of Env&Sec and the idea of completing a brochure in which all of the EuroGRID centres would somehow be represented, seem to offer the best possibilities for collaboration in 2005.

The representatives from REFIA (Russia) and ULRMC (Ukraine) asked if they could continue in the process and join the GRID network of centres more formally; a separate meeting with the Regional Coordinator was held later to discuss this point. Offers of a venue for the next Euro-GRID meeting were made by GRID-Warsaw, REFIA and ULRMC. ■

UNEP Launches Tisza River Assessment

from UNEP Press Release

GRID-Europe has completed preparation of a report entitled *Rapid Environmental Assessment of the Tisza River Basin*. The report was presented to the first Ministerial Meeting of the Danube River Protection Convention, in Vienna on 13 December, where Ministers launched the development of a River Basin Management Plan for the Tisza.

The report notes that the Tsiza river basin ecosystem is regenerating itself after the cyanide accident, with wildlife largely recovering. But, it says more concerted action is needed to address environmental threats or “insecurities”, and recommends an “Integrated Sustainable Development Strategy” for the entire catchment area of the river Tisza, which includes Romania, Ukraine, Slovakia, Hungary and Serbia and Montenegro.

Almost five years after a cyanide spill from a gold mine in northern Romania travelled down the Tisza river in Hungary, leaving a trail of ecological destruction in its wake, local communities in the region remain at risk from floods and industrial pollution.

Despite the lessons learned from the Baia Mare catastrophe in January 2000, the Tisza river basin, its people and nature remain threatened by environmental insecurity, in particular from floods and accidental pollution risks.

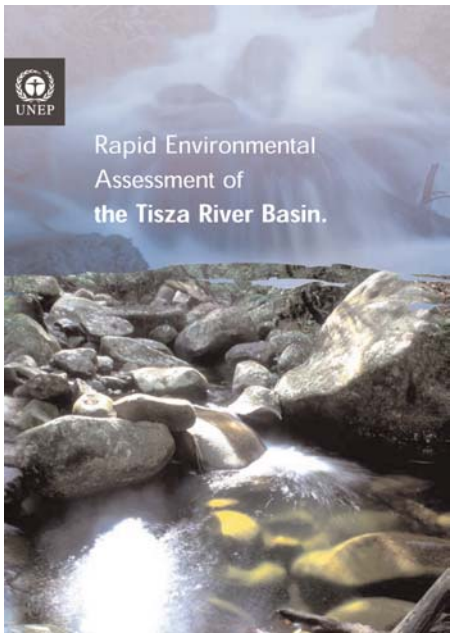
UNEP welcomes and supports the Tisza initiative launched at the Danube River Basin Ministerial Meeting. In this connection, a new regional strategy for sustainable development is necessary to integrate land and water use aspects, as well as conservation measures (such as the prevention of deforestation or restoration of alluvial forests) in support of better flood management.

Flood management and the prevention of transboundary pollution risks will have the double added value to protect people and the environment, and to provide regional stability across national borders.

Sustainable tourism can offer a development alternative for the prosperity of the region when environmental security is guaranteed, in particular in the precious mountain landscapes of the upper Tisza basin in the Carpathian mountains.

In the wake of the Baia Mare spill, hot spots of potential accidental pollution risk from mining operations (including from obsolete mining sites) are singled out by this new report for particular attention. Assessments and urgent risk mitigation measures are called for.

The report is available in the web at: http://www.grid.unep.ch/ ■



Environmental Assessment of the Tisza River Basin report, released by UNEP in December 2004.

The Global Environment Outlook: GEO-4 gets underway

by Ron Witt

Several meetings were held during the last quarter of 2004 that served to initiate the GEO-4 reporting process at the global and regional levels. One of the first of these meetings was the up-front "Ad-hoc Experts Consultation on GEO-4" in the European region. One of seven regional expert consultations held around the world, the purpose of the meeting was to expose UNEP's current plans for the preparation of GEO-4 and take the advice of governments, international agencies with a regional role, the scientific community, civil society, the private sector and youth in designing GEO-4 from a European perspective.

UNEP anticipated gaining more knowledge and insights into the user requirements for GEO assessment information, and involving all of these stakeholders right from the start.

The objectives of the Consultation were to examine different aspects of the GEO reporting process, and try to elicit answers/feedback on questions and subjects such as: the overall GEO assessment framework; how the GEO process can help to bridge the gap between science and policy; how GEO reports are being used to date; how participants would like to be using them in future; how to best present findings and messages for policy action; the overall outline and structure for GEO-4; what the major environmental and cross-cutting issues and themes are that GEO-4 should cover, specifically for the European region; which tools to use for a GEO-4 outlook chapter; and what the major challenges are for GEO and for the European region.

A wide variety of stakeholders participated, from government representatives and policy-makers, to international organisations, researchers, scientists/university participants and civil society representatives (NGOs), including the private sector and youth. Break-out groups and plenary discussions were conducted on all the subjects mentioned above. At the end, the participants expressed their great satisfaction with being involved in the process of defining both the European and global aspects of GEO-4 from the beginning.

In mid-November, the first GEO-4 global meeting of the Collaborating Centres (CC) network, UNEP and other partners (UN agencies, scientific bodies et al.) took place in Nanyuki, Kenya. Some 60 persons gathered at the foot of Mt. Kenya to discuss the detailed terms of reference for the fourth GEO global report, plan the contents of the various chapters and the institutional arrangements for work on the document over the next two-and-a-half years. "Core groups" of individuals were established to oversee the work on each of the chapters, and GEO Working Groups (such as on core data sets and indicators, policy issues and scenarios), reported to the meeting on progress since the conclusion of GEO-3. Indeed, the GEO Data Working Group headed by Ron Witt and Jaap van Woerden held its third full gathering on the heels of the Design Meeting, at UNEP Headquarters in Nairobi. Finally, the Nanyuki meeting heard from each of the regions on their perspectives and plans for GEO-4, based on results of the earlier "ad-hoc experts consultations" and other relevant assessment activities.

The major results of the GEO-4 Design Meeting in Nanyuki were the production of a game plan or road map and time schedule, leading over 2.5 years to the GEO-4 report and associated products, and a much improved sense of common understanding among an ever-broader network of GEO collaborators and participants from around the world.

The significance of the GEO-4 production process and its timing is especially critical and noteworthy for the European region and assessment activities there, given that UNEP's major partner in the region, the European Environment Agency, is charged with preparing the next pan-European assessment report for the Belgrade Ministerial Conference by the same date; that is, September 2007. Relevant staff of DEWA~Europe and the EEA have thus been exploring even greater synergies than were found in the process of preparing the last major global and regional assessments several years ago.

After the global meeting in Kenya, the GEO-4 European Regional Partners Meeting took place on 2-3 December 2004. The major purpose of this meeting was to thoroughly discuss the proposed contents of the GEO-4 report and determine with representatives of European Collaborating Centres (CCs) and other potential partners the roles of each in preparing the GEO-4 report. The first half-day of the meeting allowed for the participants, in a free-wheeling, give-and-take discussion, to describe their past experiences with the GEO process and reporting, along with several background presentations concerning GEO-4.

After that, the meeting turned to an in-depth discussion of each of the proposed chapters in turn, the idea being how each of these could be addressed from a European perspective and with the CCs currently involved. Finally, the last half-day of the meeting was spent addressing "practical issues" such as the capabilities, preferences and roles of each CC, financial/human resources, preparation of enabling documents (contracts or MoUs) for the work to be done, and time scheduling for the whole of the GEO-4 process.■

First GEO-4 global meeting of UNEP, the Collaborating Centres network and other partners, in Nanyuki, Kenya.

UN System-wide Earthwatch - Revisited

by Jaap van Woerden

"Earthwatch" was established at the Stockholm United Nations Conference on the Human Environment in 1972 as a UN System-wide mechanism to "monitor major global disturbances in the environment and to give early warning of problems requiring international action". Coordinated by UNEP, Earthwatch was reinforced through the 1992 UN Conference on Environment and Development (UNCED) in Rio de Janeiro and its Agenda-21 chapter “Information for Decision-Making”.

The organisations participating in Earthwatch have since focused on the priority requirements of Agenda-21 and on the delivery of information for decision-making, following the Secretary-General's report to the Commission on Sustainable Development on Agenda-21 (Chapter 40), and UNEP Governing Council decisions in response to the General Assembly resolution on "Strengthening International Cooperation in the monitoring of Global Environmental Problems".

UNEP hosts the Earthwatch secretariat within its Division of Early Warning and Assessment (DEWA). Earthwatch is led by the Assessment Branch at UNEP Headquarters in Nairobi and supported by a small unit at DEWA-Europe in Geneva. The role of Earthwatch is further accentuated by UNEP Governing Council establishment of a consultative process to identify gaps and needs in the current assessment structure and means to address them (see “science.unep.org”).

Aside from organising regular meetings and maintaining contacts with UN agencies, an important activity is the development of the Earthwatch website “earthwatch.unep.ch” or “www.un.org/earthwatch”. This tangible and award-winning window into Earthwatch gives comprehensive and up-to-date information on activities related to integrated environmental reporting and sustainable development across the UN, and is a major source of information for UN partners, the scientific community, civil society and the general public.

Since UNCED in 1992, regular interagency Earthwatch "Working Party" meetings have been held, confirming Earthwatch as a broad UN initiative to support, harmonize and catalyze environmental observation and socio-economic data collection activities in support of integrated assessment purposes among all UN agencies. Through the Earthwatch mechanism, UN agencies work together on global environmental issues, by exchanging and sharing data and information related to early warning activities, environmental assessments and reporting initiatives.

Major inputs also stem from the 2002 World Summit on Sustainable Development in Johannesburg, the Millennium Declaration and formulation of Millennium Development Goals, the Integrated Global Observating Strategy - Partners initiative, and the Global Earth Observation summit ~ all calling for better data collection and monitoring, as well as for improving coherence, coordination and transparency among partners within and outside the UN system.

The 8th Earthwatch meeting took place in mid-October (2004), with the aim to revitalize the Earthwatch mechanism in light of today's context and current reality, and to review the added value relative to the many ongoing initiatives and mechanisms related to global observation, monitoring, data and information. The meeting was attended by more than a dozen UN agencies and programmes, all underscoring the need to exchange information as a minimum activity.

Several possibilities and opportunities were identified to revitalize the role of Earthwatch. One option identified is to foster a common position of UN agencies with respect to global observation such as addressed through the GEOSS and IGOS mechanisms. Clearly, more cooperation is foreseen with the UN Environment Management Group, which has been established to enhance UN system-wide inter-agency coordination related to specific issues in the field of environment and human settlements. The EMG complements Earthwatch in the area of policy setting, and it was felt that both inter-agency activities could very well benefit from each other's work, as is already taking place through the EMG website.

The role of Earthwatch as a 'one-stop shop' for UN environmental information could possibly be further strengthened by working more closely and directly with partners, and linking to existing or planned activities in this area of 'mapping' activities of environment assessment, reporting and sustainable development. In this way, Earthwatch could help prepare a common, coherent voice for UN agencies, which could further strengthen the UN system as a whole. Translation of the website into other languages was also suggested, making it even more accessible and useful around the world. Also, with the new UNEP series of annual reports, the GEO Yearbooks, the recent start of the fourth Global Environment Outlook (GEO-4), as well as various other global and thematic assessment activities, it was felt that there are now even more opportunities for Earthwatch to strengthen its work. More specifically, joint publications with certain UN agencies in the broad area of early warning was also considered a topic that could be taken up by Earthwatch.■

GRID-Europe Poster wins Award

by Akiko Harayama

A poster contest was organized by ESRI during the poster session at the 18th International Conference on Informatics for Environmental Protection in Geneva, Switzerland (EnviroInfo 2004). One of eight posters presented by GRID-Europe, prepared by Akiko Harayama and Jean-Michel Jaquet won the third prize, among 50 posters.

GRID-Europe Prized Poster

The poster "Multi-source object-oriented classification of land cover using very high resolution imagery and digital elevation model" examines a new methodology of classification using eCognition. It is based on a project mandated by the "Direction cantonale de la mensuration officielle" (DCMO) of the Geneva Canton. ■

' Dominique Hausser

Vital Waste Graphics

by Akiko Harayama

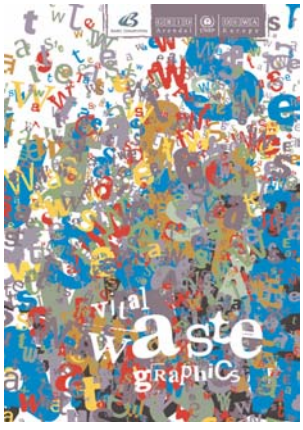
GRID-Europe participated in the elaboration of the publication "Vital Waste Graphics", released on the 28 October 2004 for the seventh meeting of the Conference to the Parties of the Basel Convention (COP7).

This publication was initiated by the Basel Convention Secretariat and produced in partnership with UNEP/GRID-Arendal, together with the UNEP/Division of Environmental Conventions (DEC) and GRID-Europe.

Import of Waste by Germany. Map produced for the *Vital Waste Graphics* publication.

The aim of the publication is to provide an overview of relevant waste-related issues in a user-friendly manner. Different aspects are discussed, including definitions of waste, generation of waste, waste streams, transport and trade issues, cross-cutting themes linked to sustainable development such as climate change and poverty, as well as hopes and solutions.

Graphics and maps were used to transform complex data and relationships into easily-understood information, some aspects being underlined by using different graphical techniques. Facts and figures help the reader to understand better than long and complicated text. Only at a glance, everyone can perceive waste issues easily. (from policymakers, experts, media professionals, and teachers to students)



The publication is available on the Internet at the following sites: vitalgraphics.grida.no/waste and www.grid.unep.ch/waste/. ■

Monitoring Rapid Urban Expansion of Tehran

by Saman Salari Sharif

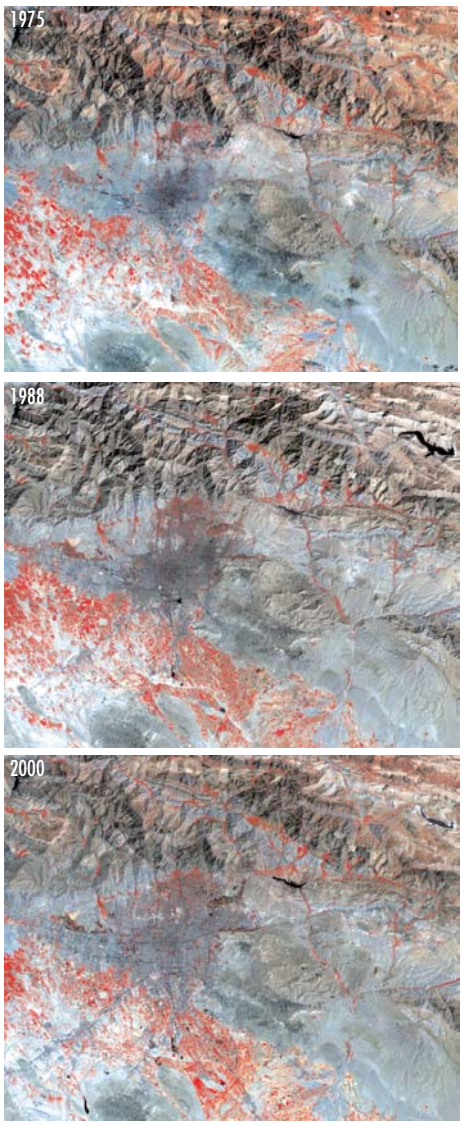
Following DEWA~wide efforts to document environmental changes during the last thirty years in selected sites around the world, several satellite images of Tehran were studied at GRID-Europe.

The rapid expansion of Tehran, as well as its sharp population growth in recent decades, has had many adverse impacts on the environment. Three satellite images from the years 1975 (Landsat MSS), 1988 (Landsat TM) and 2000 (Landsat ETM) were used to study this phenomenon.

Tehran is located at the foot of the Alborz Mountains. The city occupies the northern part of the alluvial Tehran Plain, sloping from the mountains to the flat Great Salt Desert. The urban area is bounded by mountains to the north and east with the ground sloping southward falling 800 m over the 25 km from the northern suburbs to Shahr-e-Rey in the south.

This geographical situation of the city makes it difficult to differentiate the urban area from the mountainous and desert area that surrounds Tehran. Different remote sensing techniques were applied to carry out the land use/cover change detection using multi-temporal Landsat Thematic Mapper data. Analysis of the resulting land cover maps showed that the physical growth of the city is replacing other land cover classes such as farming, water resources, etc.

A map of historical growth of Tehran was geo-rectified, compared to the images and the urban growth patterns were analysed using a GIS-based approach. The results reveal a notable and uneven urban growth in the study area. More detailed results will be published soon ■



Landsat Images (1975, 1988, 2000) showing the historical growth of Tehran (vegetaion in red).

South-Asian Tsunami Assessment Coordination

Continued from page 1

The main threats to the environment are distinguished in two categories: threats from damage to coastal technological infrastructures and facilities (nuclear power plant, harbours and industrial areas), and threats to ecosystems (reefs, vegetation, shores) from which many people depend for their livelihood (fishing and tourism). The assessment of the second type of impacts will come in a later phase of the process, as the main direct threat is from local pollution. A first verification was on the identification of the nuclear power plant located in the area. Apparently, according to information received from local focal points and authorities, very few industrial facilities have been affected to the point of causing environmental concern in the area. All nuclear facilities are reported as safe. Minor oil leaks from vessels have been reported in harbours, which have immediately been brought under control (Madras in India, and Lhokseumawe in Indonesia)

The second phase of the process as well as GRID-Europe's role within UNEP's Tsunami Task Force is still under discussion. The main focus will be on multi-hazard early-warning systems for the Indian Ocean, and sustainable recovery and reconstruction for the affected areas.■

Calendar of Events

(January - March 2005)

5-6 January
GEO Capacity Building Manual authorsí meeting, UNEP, Geneva, Switzerland.

9-12 January
GEO Regional Data Portal Meeting for West Asia, UNEP, Abu Dhabi, United Arab Emirates.

10-14 January
International Meeting to Review the Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States (SIDS), Port Louis, Mauritius.

18-22 January
World Conference on Disaster Reduction, Kobe, Japan.

31 January-2 February
Inter-Agency Meeting on Coordination of Outer Space Activities, UNOOSA, Vienna.

16 February
Entry into force of the Kyoto Protocol.

19-20 February
GEO-4 Global Intergovernmental and Multi-stakeholder Consultation; UNEP Headquarters, Nairobi, Kenya.

21-25 February
23rd Session of the UNEP Governing Council / Global Ministerial Environment Forum (GC-23/GMEF), Nairobi, Kenya.

22 March
World Water Day.

23 March
World Meteorological Day.

GRID-Europe s Latest Outputs

Rapid Environmental Assessment of the Tisza River Basin. Publication.

Vital Waste Graphics. Publication.

GEO Data Portal Users Guide. Publication.

Multi-source object-oriented classification of landcover using very high resolution imagery and digital elevation model. Poster.

Freshwater in Europe: Facts, Figure and Maps. Poster.

Tracking Land-derived Pollution by Satellite in the Eastern Mediterranean Sea. Poster.

Tisza River Basin. Map.

Protected Areas within theTisza River Basin. Map.

Land Use within the Tisza River Basin. Map.

Potential Accident Risk Spots in the Tisza River Basin. Map.

GEO Data Portal CD-ROM Edition. CD.

Read GRID-Europe Early Warning Briefs, available from www.grid.unep.ch

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5 JUNE 2005