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Strengthening Capacity Building and Regional Coordination in Europe

Two major events in the DEWA-Europe calendar during October 2002 were the fifth meeting of the European GRID centres and a training workshop on Integrated Environment Assessment (IEA) via the Internet for Caucasus countries. Both of these events were held in Tbilisi, Georgia, from 10-16 October, and brought together GRID centre managers and other staff for the EuroGRID meeting, and government agency representatives of southern Caucasus countries (Armenia, Azerbaijan and Georgia) and NGOs for the training workshop.

EuroGRID-5

The "EuroGRID-5" meeting was held over one-and-a-half days and dealt with all of the major – and several minor – issues of coordination and cooperation between the GRID centres located in Europe. The purpose of this annual meeting is to discuss and

examine opportunities for collaboration and interaction between the European-based GRID centres, particularly as this region has the highest concentration of such offices (in Arendal, Norway; Budapest, Geneva, Tbilisi and Warsaw). At the same time, the EuroGRID process has always served as a direct means for GRID managers to meet and inform each other in detail about the activities engaged in by their offices, and to look for potential synergies or common approaches to priority projects, as well as linkages with other institutions.



Representatives of GRID Centers at the EuroGRID-5 meeting in Tbilisi, Georgia.

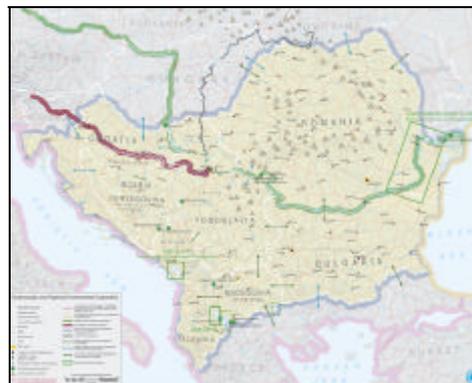
After opening of the meeting by the host organisation GRID-Tbilisi, DEWA's Regional Coordinator-Europe briefed all of the centre participants on the outcomes of WSSD and the current strategic directions of UNEP/DEWA, including the GEO process and other events. Following a mutual exchange of information on major activities and projects being conducted by each of the centres, the participants discussed specific means of collaboration, both existing and potential. The Caucasus Environment Outlook (CEO) reporting process was mentioned as one particularly close interaction between DEWA-Europe/GRID-Geneva and GRID-Tbilisi. Clearly more such processes are needed to bring the European GRID centres closer together; to give some of the less financially-endowed centres more resources, and to bring them further into the "UNEP family".

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UNEP Embarks on new "Environment and Security" Initiative

During the second half of 2002, a new initiative of UNEP's Regional Office for Europe (ROE) that is supported by DEWA-Europe and other UNEP units was initiated, under the theme of "Environment and Security". The general purpose of this project, being carried out in collaboration with UNDP and the Organisation for Security and Cooperation in Europe (OSCE), is to identify linkages between major environmental concerns within European sub-regions and countries, and existing or potential security problems that impact on people and states. Environmental concerns relating to shared natural resources range from threats to biodiversity and human livelihoods to land degradation and international waters. Other issues are obsolete or polluting industrial and waste sites, including nuclear ones, and their impacts either locally within countries or especially as trans-boundary phenomena.

DEWA-Europe/GRID-Geneva is supporting this initiative at both the conceptual, management and technical levels. This includes taking part in the project's steering committee meetings and workshops, and through preparation of digital cartographic products, which demonstrate existing



A sample of the maps produced by GRID-Geneva for the "Environment and Security" initiative. This one is entitled "Transboundary and Regional Environmental Cooperation" in SouthEastern Europe.

environmental concerns and issues, as well as relevant policy measures (conventions, treaties, etc.).

The project and its activities are initially
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Using SeaWiFS Imagery to Monitor Coastal Pollution

Proliferation of poorly planned post-conflict reconstruction activities in Lebanon's coastal zone has been a major source of environmental stress, especially on coastal waters and habitats. The situation is aggravated by the fact that only a fraction of the 2.3 million people living in coastal cities are served by wastewater treatment plants. As a result about 300,000 cubic meters per day of raw sewage are discharged into the Mediterranean sea.

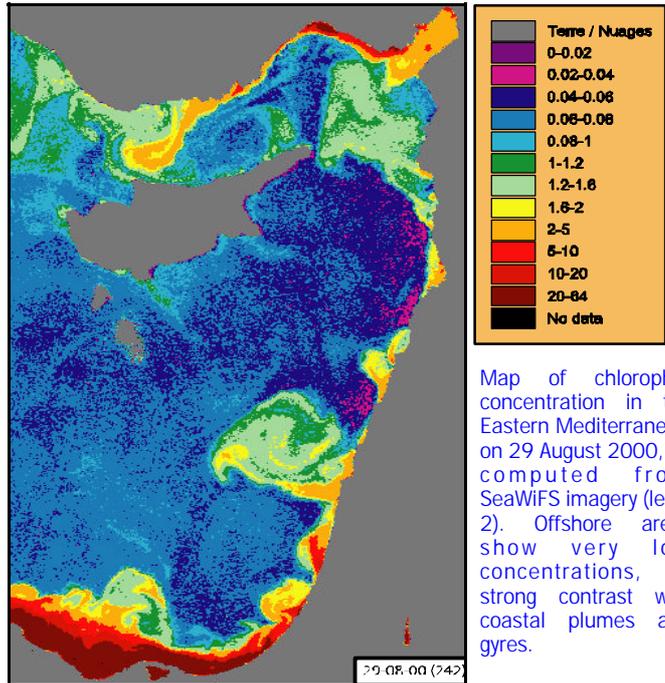
Mapping these pollution sources and their dispersal in the marine environment is therefore an essential component of a national monitoring effort. For this purpose and to provide sound information for the policy community, the Lebanese National Centre of Remote Sensing (LNCRS) and UNEP/GRID-Geneva launched a project in early 2000 to develop a Coastal Zone Information System for Lebanon (CZISL).

As part of the CZISL, imagery from several satellites is being examined to determine the effectiveness of this technology in monitoring marine pollution. The objective is to develop an operational methodology to interpret raw digital image data and produce easily understandable "pollution maps. Initially, only *Landsat TM* images were used, mostly because of their good spatial resolution.

However, it was soon realised that the reflectance in the visible TM bands was somewhat distorted by a complex mixture of signals from the sea bottom, mineral turbidity, chlorophyll and even the sea surface itself (waves and slicks). To further decipher these images, there was a need for other sources of information.

In spite of its coarser spatial resolution, the *SeaWiFS* sensor on board the *Orbview-2* satellite has the crucial advantage of being designed to register sea colour on a daily basis, thus providing calibrated data on chlorophyll concentration. This green pigment is an essential constituent of phytoplankton, whose abundance is mostly dependent on nutrient availability (phosphate). Phytoplankton is nourished from either "natural" internal sea sources (cold water upwellings) or from anthropogenic land sources, such as sewage. With due precautions, satellite-derived chlorophyll maps can, therefore, be used as tracers for polluting inputs.

Barbara Weber and Jean-Michel Jaquet of GRID-Geneva compiled and processed a total of 30 *SeaWiFS* images taken in 2000-2001. They depict the general patterns of planktonic production in the Levantine basin, as well as their seasonal evolution. Spectacular gyres, coastal jets and plumes highlight the dynamism and



Map of chlorophyll concentration in the Eastern Mediterranean on 29 August 2000, as computed from *SeaWiFS* imagery (level 2). Offshore areas show very low concentrations, in strong contrast with coastal plumes and gyres.

complexity of the circulation patterns. From what is known about the basin physical oceanography, the large high-chlorophyll concentration patches seem to be essentially due to upwelling phenomena, bringing to the surface deeper waters rich in nutrients. Smaller features of high chlorophyll concentration are located permanently opposite some points along the coastline (e.g. off Beyrouth). In this case, their presence should be due to land sources.

Preparation of a full water colour inventory for selected *SeaWiFS* images is currently

underway. Establishing correlations with patterns observed by *Landsat* are very complex and vary with time, probably because of changing phytoplankton populations and sea conditions. In the last phase of the CZISL project to be completed by end 2003, the objective is to develop a fully operational marine pollution mapping methodology complemented by fieldwork and other satellite data sources (radar for mapping of slicks, thermal for upwellings).

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Environment and Security Initiative

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focussed on two sub-regions, SouthEastern Europe (SEE) and Central Asia. A series of workshops are envisioned, the first of which was held with SEE countries on 3-4 December 2002 in Belgrade. Key objectives of the workshop ("First Sub-regional Meeting on Environment and Security") were to inform country representatives about the project, elicit their response and initiate a dialogue with and between the countries concerning the relevant issues. Nine governments and

numerous NGOs - a total of some 50 participants - from the sub-region took part.

During the second day of the workshop, a series of maps prepared by GRID-Geneva were presented and explained to the participants. These maps covering the entire sub-region were: 1) political and infrastructural basemap; 2) land cover classification; 3) biodiversity-rich sites/protected areas and ecological zones; 4) major industrial, power facilities and other sites; and lastly 5) trans-boundary environmental agreements. Workshop participants

gave their feedback and comments about the maps, indicating what other environmental and anthropogenic factors were important to note and add to the maps. Many suggestions were received, including that the contents of multiple maps could be combined and used to analyse or at least indicate existing and potential impacts (e.g., impact of polluting sources on the natural environment and human population centers).

Preliminary maps of the SEE sub-region will be revised prior to and displayed at the

upcoming Kyiv Ministerial Conference on the Environment (May 2003), where "Environment and Security" is the major theme. It will also allow for the presentation of the UNEP-UNDP-OSCE project as a major contribution to the process. Another series of maps is being prepared for Central Asia, and if the project is well-received by governments at Kyiv, it is planned to extend the work to other sub-regions such as the Caucasus.

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Decentralizing the GEO Data Portal at the Regional Level

Now that the global version of the GEO Data Portal has matured into the standard data source for the Global Environment Outlook and similar assessment processes, the time has come to enter a second phase and focus on regional data needs, in particular those of developing countries. Although the GEO Data Portal does provide access to environmental and socio-economic data for all regions and countries of the world, tailored spin-off products and activities are needed to improve support in the regions themselves. This implies, for example, the creation of dedicated regional GEO Data Portals, running from servers and mirror sites within regions. Additional language versions will also need to be developed, containing region-specific data sets, but which are still integrated within the over-arching framework of the global Data Portal. By-products such as CD-ROM's, printed data compendia and user guides are to be published and disseminated. Finally, training workshops are envisioned to better define user needs and help build capacity for environmental assessment



A prototype of the LAC regional portal that was examined during the San Jose workshop in early October 2002.

and reporting.

During the last quarter of 2002, a start on this regional based initiative was made for Latin America and the Caribbean (LAC) at a workshop organized by the UNEP/DEWA-LAC office in Mexico and hosted by the Observatorio del Desarrollo (OdD) in San Jose, Costa Rica. The OdD is the UNEP/GEO Collaborating Centre for environmental data and indicators in the LAC region, and has been at the

forefront of the GEO data process for several years. To broaden the perspective on GEO-related data activities in the region, national representatives from Mexico and Cuba also participated. The workshop discussed regional data needs for environmental reporting, and explored existing tools such as the global version of the GEO Data Portal and the GEO-LAC Data Toolbox CD-ROM. A prototype GEO-LAC Data Portal developed by GRID-Geneva

was also presented at the workshop. Designed as a regional window for the GEO Data Portal, the prototype is to provide access to all LAC data sets, includes an option to add region-specific data and will be available in the Spanish language. The workshop concluded that the available tools form a sound basis to develop a fully-fledged GEO-LAC Data Portal, and recommended a series of follow-up steps to be taken for the implementation of this activity.

General guidelines for the development of regional GEO Data Portals will be drawn up by GRID-Geneva. Similar activities as the LAC workshop are foreseen in the African region in 2003, which will build on existing data networks and tools in support of GEO and related reporting activities. Discussions with the Asia-Pacific, West Asia and possibly other regions will also be followed up or initiated.

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UNEP.Net's Socio-economic Portal Launched

As part of the globally distributed UNEP.Net information network, the Socio-economic Portal was released on-line at <http://socioeconomic.unep.net> and also made accessible through the UNEP.Net homepage (<http://www.unep.net>) in early December 2002. The Socio-economic portal aims to provide authoritative information on socio-economic aspects of society. Major themes addressed include economic growth, population change, school enrolment, trade, transportation and tourism. The portal supports UNEP's environment assessment and reporting work, most notably the Global Environmental Outlook process, by providing basic information on underlying causes of global environmental change. These are often referred to as 'driving

forces' or 'societal pressures'. Where available, information resources have also been added to aid analysis of impacts on human health (e.g. burden of diseases, life expectancy) and societal responses to pressures through governance indicators and environmental policies.

The UNEP.Net system, initiated in 2001, is developing information portals for major environmental issues at global and regional levels, by linking and presenting vital graphics, core data sets and background material for efficient reporting and sound decision-making. The Socio-economic Portal benefits considerably from the work of various international agencies such as the World Bank, the UN Statistical and Population Divisions, UNDP, UNESCO, FAO, WHO, ILO, WTO,



UNEP.Net's newly released Socio-economic Portal can be accessed at: <http://www.socio-economic.net/>

WRI and CIESIN. The development of UNEP's Socio-economic Portal has been led by UNEP/DEWA/GRID-Geneva, which will continue to maintain, expand and improve this key information resource on socio-economic aspects of global

change.

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UNEP Participation at Ramsar COP8

The Eighth Meeting of the Conference of the Contracting Parties (COP8) to the Ramsar Convention on Wetlands was held from 18-26 November 2002, in Valencia, Spain. The theme of the Conference was "Wetlands: Water, Life, and Culture." A packed agenda faced the more than 1,000 officials from 119 Contracting Parties, as well as a number of observer states, UN agencies and NGOs attending the meeting, which was the biggest Ramsar COP on record. Delegates considered and adopted more than 40 resolutions addressing a broad range of policy, technical, programme and budgetary matters.

During the eight days of COP8, participants convened in plenary and technical sessions, regional and contact groups, and several committees. Several of the new resolutions adopted broke new ground in the vision and philosophy of the Ramsar Convention, which has been gradually evolving from a narrow treaty to save waterfowl to a more comprehensive agreement whose goal is to manage one of the world's most important freshwater ecosystems. Amongst the conference's successes was the adoption of controversial resolutions by consensus on dams, water allocation, climate change, invasive species, culture and agriculture. At the European level, serious concerns were expressed by various quarters about the environmental and social impacts of the Spanish National Hydrological Plan (SNHP), particularly on the wetlands of the Ebro delta.

The outcome of COP8 shows that the Convention is resolved

to "mainstream" its mandate in-line with other global environmental concerns (e.g. climate change, biodiversity, etc.) and finding a suitable niche within the sustainable development arena. This was also evident by the numerous linkages made to the World Summit on Sustainable Development's *Plan of Implementation* and its priorities on water, development and poverty.

UNEP/DEWA-Europe organised a side event presentation on the Mesopotamian marshlands to illustrate the role of earth observation satellites in assessing and monitoring the state of wetlands. Delegates from all the main Tigris-Euphrates basin countries attended the session, including Iraq, Iran, Syria and Turkey, as well as representatives from other countries, space agencies and NGOs. Despite the controversial nature of the study, stimulating discussions ensued which highlighted the important role that international organisations could play in facilitating dialogue between the concerned countries. In this connection, it is noteworthy that in the regional group discussions for Asia, Iran and Iraq stated their readiness to cooperate on the trans-boundary management of the Mesopotamian marshlands. In addition, UNEP/DEWA organised a poster exhibit showcasing examples of wetland assessments and distributed documentation on relevant freshwater activities.

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Capacity Building in Europe



Hands-on training was provided to Caucasus government representatives during the IEA workshop in Tbilisi.

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Other issues, such as "branding" (appropriate naming of UNEP-related centres as GRID or other), fund-raising and publication policy, were also discussed among all of the participants. It was decided to hold the sixth meeting of the Euro-GRID centres in Arendal, Norway, in September 2003.

IEA Training Workshop

The EuroGRID meeting was followed by a jointly organised training workshop on "Integrated Environment Assessment (IEA): methods, processes and supporting tools" from 14-16 October at the *Internet Café* in Tbilisi. Some 20 participants from Armenia, Azerbaijan and Georgia participated, predominantly from their respective Ministries of Environment and/or Natural Resources, as well as several NGOs from the region.

The purpose of the course was to familiarise the participants with on-line tools and methods for accessing and using relevant environmental and other kinds of data. Trainers for

the course came from three GRID centres Arendal, Geneva and Tbilisi, with each presenting different "modules". These included: an introduction to common and alternative IEAs and SoE reports; where to find such documents on the Internet; access to and use of on-line databases; graphical presentation/mapping as an additional means of communication; and some typical products. In addition, country delegations prepared a report on an environmental theme of their choice and presented it to the workshop, as a practical exercise in communicating information.

Participants were largely satisfied with the results of the IEA Training Workshop, as a final evaluation showed, and expressed their desire for further, similar training in the future. Therefore, it is planned, as part of DEWA's capacity building activities in 2003 and beyond, to develop more in-depth courses which can be given in each of the Caucasus countries. A larger number and more diverse group of agency and civil society participants will be invited to attend these "national IEA training workshops".

GRID-Geneva Calendar of Events

(January – March 2003)

21 - 24 January

Inter-Agency Meeting on Outer Space Activities, UNOOSA, Vienna, Austria.

23 - 24 January

TUBE III- 3rd TESEO User Brainstorming Event, ESA, Ispra, Italy.

27–29 January

Mission to Georgian Ministry of Environment and GRID-Tbilisi.

3 - 7 February

Twenty Second Session of the Governing Council/Global Ministerial Environment Forum, UNEP, Nairobi, Kenya.