



DEWA/GRID-Europe

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IMOS Project Nearing Completion

by Jean-Michel Jaquet

In conjunction with UNEP's Post-Conflict Branch (PCoB), GRID-Europe staff continued working on the Iraqi Marshland Observation System (IMOS) during the first half of 2006. The objectives of this third project phase were the following:

- Improvement of the methodologies used to derive marshlands water and vegetation maps based on MODIS, IRS and ASTER satellite sensors.
- Production of weekly MODIS-based simplified land cover and inundation maps, with accompanying statistics, in order to extend the time series starting in 2003. This includes validation of these maps using field data collected by UNEP's Iraqi partners.

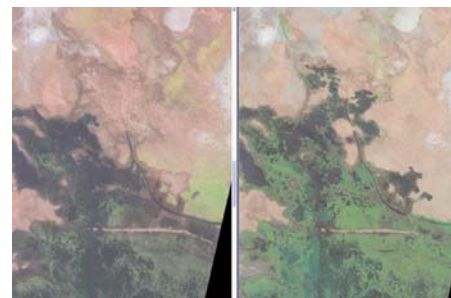
- Detailed mapping of the vegetation types and dynamics, using the high-resolution IRS and ASTER imagery.

- IMOS website maintenance.

- Conception and presentation of a ten-day training session on remote sensing and IMOS to three Iraqi professionals.

The surprisingly rapid greening of the marshes in Al Qurnah this Spring is a strong sign indicator of the resilience of this ecosystem and its capacity to recover if it is left relatively undisturbed.

The team was particularly glad to witness the multi-annual trend in water and vegetation surface area, indicating a favourable evolution of marshlands. Marsh vegetation in particular has been expanding steadily since January 2003.



Drying of terrestrial vegetation and growth of hydrophytes in Al Qurnah between 03.02.06 (left) and 16.04.06 (right). IRS false colour composite.

A first-hand account of this was given during the training, from the stories told by

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Lake Balaton Project Gets Under Way

by Bruno Chatenoux

The condition of Lake Balaton, also known as the 'Sea of Hungary', is a high-priority issue for Hungarians, the Government of Hungary and the millions of foreign tourists visiting its unique habitat, shorelines and upland protected areas.

Following many years of water quality problems, a negative water balance induced a water shortage starting in 2000 and lasting for four years. This raised and continues to raise serious sustainability concerns in the Lake Balaton area, Hungary and the region. Because of these trends, the sensitivity of Lake Balaton to climate change and its impacts came to the fore both for policy and scientific reasons.

Besides Balaton, there are also many other shallow lakes and reservoirs of significant economic and ecological importance in Hungary, and other regions facing similar vulnerability and adaptation problems, where lessons from this initiative can be applied.

Lake Balaton's uniquely vulnerable situation is the combined result mainly of its very shallow profile, and the fact that through heavy reliance on tourism as a primary source of livelihoods, the socio-economic

consequences of ecological deterioration can be severe and immediate. If the frequency of years with negative water balance indeed increases in the future, as indicated by applicable climate change scenarios, Lake Balaton and the coupled socio-economic system are expected to emerge as a highly sensitive and internationally-unique indicator of vulnerability to global change. On a more positive side, it could also serve as a high-profile example of adaptation measures consistent with sustainable development.

Considering this potential, UNEP's Division of Early Warning and Assessment, the Lake Balaton Development Council (LBDC) and the International Institute for Sustainable Development (IISD) launched the "Lake Balaton Integrated Vulnerability Assessment, Early Warning and Adaptation Strategies" project.

The overall purpose of the project is to contribute to a better understanding of Lake Balaton's ecological and socio-economic system vulnerability and resilience arising from multiple forces of global and local change, including land use, demographic, economic and climate change, and build capacity for

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The Changed Face of the Earth: 30 Years of Human Impacts as seen by Satellite

by Pascal Peduzzi

The History of Science Museum of the city of Geneva invited UNEP for an outdoor exhibition of its Atlas "One Planet Many People - Atlas of our changing environment". Forty panels featuring satellite images were strategically placed in its surrounding park (Perle du Lac), along the lake of Geneva. The high quality of the printing, the frames and the exceptional location provided unique visibility for the message delivered by the Atlas.

The principle of the Atlas is very simple and straightforward, ensuring a direct and powerful impact on the public. How does it work? Instead of providing figures (e.g. 130 000 Km² of annual deforestation), the panels juxtapose for each location two satellite images, taken between 10 to 30 years apart. Statistics can be difficult to grasp, people will argue about the validity of figures, but with two images of "before" and "after" impacts from humans on the environment, it is not possible to dispute the massive changes that have occurred in the earth's surface. Deforestation, desertification, desiccation of lakes and seas, pollution, urban growth or climate change inducing glacier retreat: in total, 40 examples taken out of the 334 pages of the Atlas.

The exhibition was launched on 22 June and will remain until 31 October 2006. During the summer, hundreds of thousands of people are walking, exercising and relaxing in the Park of the "Perle du Lac". On 8-9 July, the "Night of Science", attracted more than 35 000 people. During this special event, UNEP/GRID-Europe had a tent where a team of nine staff were rotating to inform the public about environmental changes and consequences.

The UNEP Atlas preparation was led by GRID-Sioux-Falls with contributions from different DEWA entities, including a major collaboration from GRID-Europe. This publication continues its successful diffusion among the public. Already all secondary schools in the Geneva Canton ordered a hard-copy of the Atlas, and each geography teacher received a digital copy. The exhibition and the diffusion of the Atlas will facilitate the understanding of ongoing environmental changes and, contribute to awareness-raising on the impacts of humans on our planet Earth. ■

40 panels are located in the park along the lake of Geneva and GRID-Europe stand at the "Nuit de la Science".



Lake Balaton Project

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more effective policy-making and adaptation measures in response.

Within this project GRID-Europe is involved in:

- the development of the conceptual framework,
- the conception and population of a geo-database,
- the elaboration of an Internet MapServer using ESRI ArcIMS technology,
- the identification of indicators and study areas. ■



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Iraqi participants/trainees. The session was quite successful, although planning was a compact, due to the complexity of the system and the large amount of knowledge to be transmitted. The trainees, from the Centre for the Restoration of the Iraqi Marshlands and the Iraq Foundation, were very receptive and, through hands-on exercises, acquired expertise to operate the system in their country. To this end, methodologies, software licenses and computers were handed over to them. But this is not the end of the story!

In spite of the expertise transferred during the training, and because of the overall situation in Iraq, it was acknowledged that IMOS would not be able to operate without outside help. After discussions amongst the



Evolution of water and vegetation surface area in Iraqi marshlands between 2003 and 2006.

Project's partners, PCoB agreed to fund some extra support from GRID during a transitory phase lasting until December, in order to facilitate a deep and durable rooting of the System in Iraqi institutions. ■

GEO-4 European Regional Consultation

by Ron Witt

The GEO-4 European Regional Consultation (ERC) took place from 21-23 June in Geneva at the Headquarters of the International Labor Organisation (ILO), with over 50 participants from governments, civil society including several prominent NGOs, the private sector and youth representatives, along with a strong presence of UNEP, other UN agencies and multi-lateral environmental agreements, and close partners from the GEO family team, including many of UNEP's Collaborating Centres network.

GEO is UNEP's "flagship" integrated environment assessment (IEA) process, involving hundreds of participants and stakeholders from all sectors of society. As of June 2006, the preparation of the GEO-4 report is approximately two-thirds completed from the starting point of the drafting/planning cycle, and thus an appropriate moment to take stock of the first draft contents and provide feedback to UNEP and the various Chapter Lead Authors (CLAs) and their drafting teams/working groups on how to improve the document. The ERC was just one of the many Regional Consultations taking place during June-July 2006, and together

these constitute an important phase of the overall internal and external review of GEO-4, prior to production of draft two by September.

The ERC was chaired by DEWA's Regional Coordinator for Europe Ron Witt, with support from UNEP Headquarters (Ms. Tessa Goverse) and the European Environment Agency's David Stanners. The entire event was organised as a working meeting, with a half-day of orientation in plenary for all of the participants, followed by break-out groups for the next two days and a final plenary to summarise all results and deal with a number of general issues the last half day. During the first morning, background information on the entire GEO process and the preparation of GEO-4 (overviews of all chapters) were provided by UNEP staff, chapter representatives including CLAs and European CCs present.

From later in the first afternoon, so-called "break-out groups" (BoGs) were formed to discuss individual chapters or sets of chapters in detail, and make recommendations for their improvement. These discussions and recommendations were captured by BoG rapporteurs and passed on to the plenary in summary fashion; eventually, all comments are

passed on to UNEP Headquarters and the GEO team there, via a GEO-4 template for this purpose, and also summarized in the ERC meeting report prepared by the overall rapporteur Ms. Jane Barr (co-Chapter 6 Lead Author). The types of recommendations and comments received range from general/structural, to precise editorial inputs, and should significantly help to improve the quality and substance of GEO-4 by draft two.

The final half day of the ERC was devoted to broader comments from the participants on the overall GEO reporting process, how well the European region appears in the current draft of the report and other "European" issues, including linkages between GEO-4 and other major assessments that will appear in the same timeframe, and suggested topics for the GEO Yearbook 2007 that UNEP is also working on during 2006.

Participants expressed their satisfaction they were able to take part in the three-day event and influence both the GEO process and product, and many offered as well to provide further detailed inputs on the aspects of the GEO-4 report of most interest to them. ■

New ISDR Database Access Application

by Jean-Philippe Richard

One of the main mandates of the UN International Strategy for Disaster Reduction secretariat (UN/ISDR) is to act as an information clearinghouse for disaster reduction. As part of the overall development of the information clearinghouse for disaster risk reduction, one major component is the ISDR database on individual contacts, organisations and information, that has been developed over the past months with support from UNEP/GRID-Europe. This information has been made available on the Internet and is accessible for different users and stakeholders as part of the services disseminated through the intended information clearinghouse, through the ISDR database Application System.

GRID-Europe was mandated to bring its support for modifying and developing the data model used in the original MS-Access database, and for tailoring a new ISDR database Application. This is a meta-data catalogue designed to allow multi-user access by the Internet with

restricted rights for browsing, as well as for updating information about persons, organisations and projects/information related to disaster management.

The development was realised with open source technologies (MySQL, PHP). Among the main features, a workflow organisation gives different privileges to users according to the roles they have in a specific group. This allows a decentralised management of the data and a quality control process before the publication of the information.

The application was opened for ISDR partners around the world in Spring 2006. The database is very dynamic and grows continually, and already includes more than 9 000 contact addresses and 450 profiles (only 375 contact addresses and 15 profiles are available for non-identified users). The database is used to feed several ISDR web pages and create 'on-the-fly' statistical charts.

ISDR also continues to use the PREVIEW IMS application for their country hazard profiles (see e.g. [http://www.unisdr.org/eng/country-inform/philippines-haz-](http://www.unisdr.org/eng/country-inform/philippines-haz-ard.htm)

[ard.htm](http://www.unisdr.org/eng/country-inform/philippines-haz-ard.htm)), as well as another GRID map server for the country location (recently usable in connection with a small web-service allowing retrieval of the country coordinates for location viewing). ■



Country information (e.g. General information and location, Contacts, disaster profile, and hazard profile for Philippines) available through UNISDR website (<http://www.unisdr.org/>).

Calendar of Events

(September - October 2006)

10-11 September

2nd Preparatory Meeting for first Conference of Parties of the Carpathians Framework Convention (CFC)
Vienna, Austria

15-17 September

Clean Up the World Weekend

16 September

International Day for the Preservation of the Ozone Layer

19-21 September

GEO-4 Chapter 6 re-drafting meeting
UNEP, Geneva

2-4 October

GRID Network of Centres meeting
WCMC, Cambridge, U.K.

18-20 October

Carpathians Environment Outlook (KEO) Consultation with Regional Stakeholders on first draft
Banska Bystrica, Slovak Republic

25 October (provisional date)

18th DEWA/GRID-Europe "Partnership" Advisory Board Meeting
Bern, Switzerland

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GRID-Europe's Latest Outputs

Global landslide and avalanche hot spots. Journal of the International Consortium on Landslides. Farrokh Nadim, Oddvar Kjekstad, Pascal Peduzzi, Christian Herold and Christian Jaedicke. Article.

Illegal Oil Discharge in European Seas. Environment Alert Bulletin. UNEP/GRID-Europe. Four pages, published in English and French.

