



# DEWA/GRID-Europe

Bulletin No. 1 - 2009 (September - December)

## Signing of the 4th DEWA/GRID~Europe "Partnership Agreement"

By Géraldine Boezio

On 23 December 2009, the Swiss Federal Office for Environment (FOEN), the University of Geneva (hereafter UniGe), and the United Nations Environment Programme (UNEP) signed a new four-year "Partnership Agreement" in support of the DEWA/GRID~Europe office. This fourth Partnership Agreement extends the previous arrangement (n.b. - in place since 1998) through December 2013. Not only it is a clear signal of the high confidence the Partners have in DEWA/GRID~Europe, but also the arrangement as a way of supporting the office's activities.

The major goals of this unique Partnership between a UN agency, the Swiss Government and a local/academic institution (in fact, the canton/Univ. of Geneva) are first and foremost to improve access to environmental data and information for decision-making, and secondly to reinforce the scientific base of UNEP's assessment and early warning activities and outputs.

A small and informal signing ceremony took place at UniGe on 23 December 2009, which included the Rector, Mr. Dominique Vassalli, two Vice-Rectors Mrs. Fluckiger and Spierer, and the Secretary-General Mr. Berthet, while UNEP was represented by its Regional Director Mr Christophe Bouvier (on behalf of UNEP's Executive Director, Mr Achim Steiner), the DEWA Regional Coordinator for Europe Mr Ron Witt, and other GRID-Europe staff.

The "Partnership Agreement" had already been pre-signed by the Director of the FOEN, Mr Bruno Oberle, as mandated by the Swiss Federal Council and President of the Swiss Confederation.

As noted above, the DEWA/GRID~Europe Partnership focuses on environmental data and information-related activities, services and projects that are carried out on behalf of the three Partners. These activities and services will once again include during 2010-13:

- Collecting, analysing, and facilitating access to a wide range of environmental data and information for UNEP's and other partners assessments and early warnings;
- Adding value to the same data and information for use in publications/as graphics;
- Broadening and strengthening governmental and civil society networks in support of environmental assessment and early warning activities/outputs/processes;
- Providing assistance and know-how for the use of information technologies and tools (GIS, remote sensing, spatial data and related information use via Internet/web); and
- Contributing to a strengthened scientific and policy role of UNEP as a central pillar of international environmental governance.

To sustain the work of DEWA/GRID~Europe, the three Partners complement and reinforce each other in mutually supportive and useful ways. Through the fourth "Partnership Agreement", DEWA/GRID~Europe remains an integral part of UNEP, while continuing to be guided by an Advisory Board ("Comité de Pilotage") composed of two members from each of the three partners. The Advisory Board also assures that DEWA/GRID~Europe is mainstreamed into the programmes and priorities of the three Partner organisations, in working for a more environmentally sustainable future for Switzerland, Europe and Planet Earth as a whole...

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UNEP Regional Director C. Bouvier (l) and UniGe Rector D. Vassalli (c) at signing on 23 December 2009

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## The 'Resource Panel' comes up to speed

By Jaap van Woerden

The International Panel for Sustainable Resource Management – in short, the Resource Panel – is a new global think tank providing scientific assessments of policy relevance on environmental impacts of resource use on a global level. The Resource Panel was initiated in 2007 by UNEP with the support of various governments and civil society organizations. The assessment reports are to address global issues of urgency in the sustainable resource management agenda - such as biofuels production, global metals flows or water efficiency - in the context of the cross-cutting and overarching issue of 'decoupling' i.e. how to reduce and avoid negative environmental impacts from economic growth and raise the efficiency of resource use. The Resource Panel will also identify priority products and sectors that would make most sense to tackle first.

After various meetings of the Resource Panel and its multi-disciplinary expert teams, its very first report on Biofuels was launched at UNEP Headquarters in October 2009 by UNEP's Executive Director, Achim Steiner, and the Panel's Steering Committee Co-Chair of the European Commission, Timo Makela. The report, called 'Towards sustainable production and use of resources: Assessing Biofuels', provides an overview of the key problems and perspectives toward sustainable production and use of biofuels, focusing on the so-called "first generation" biofuels. More reports on biofuels are expected in 2010 and beyond, as well as initial reports on metals and recycling, decoupling, and environmental impacts and prioritization.

The Resource Panel provides significant added value to existing global, regional and national initiatives. From the outset, UNEP has encouraged effective synergies with other key initiatives, such as the 10-year framework programme on sustainable consumption and production (10YFP) under the Marrakech Process following the WSSD Johannesburg Plan of Action, and also the G8's 3R work programme (Reduce, Reuse and Recycle). Cooperation has also been established with the World Resources Forum (WRF), highlighted by a side-event organized during the WRF gathering in September 2009 in Davos (Switzerland). In 2008, UNEP and the Organisation for Economic Co-operation and Development (OECD) organized a large conference on Resource Efficiency i.e. how improved resource efficiency can reduce the negative environmental impacts of resource extraction, processing, use and disposal, while securing adequate supplies of materials to sustain economic activity.



November 2008, Santa Barbara (CA)

The work of the Resource Panel is closely related to the Green Economy Initiative launched in 2008 and the Global Green New Deal in 2009. The main challenge is how the transition to the Green Economy can be carried forward through actions and policies to promote more resource-efficient, low carbon production patterns and lifestyles. A Green Economy Report is currently being prepared which will focus on how food, fuel and financial crises are also unique opportunities for a reform of the world economy that re-focuses investment, growth and employment towards green sectors, for fairer and more sustainable economic growth.

UNEP/DEWA is actively supporting the Resource Panel and these related initiatives, most notably by:

- discussing with the Panel and advising on assessment concepts;
- linking with ongoing and planned integrated environment assessments such as

the Global Environment Outlook (GEO) process and the fifth GEO report scheduled for 2012;

- providing tangible support through sharing and accessing core data sets and indicators on natural resources, socio-economic topics and environmental issues. Examples include:

- preparing a UNEP contribution on the overuse of natural resources for the World Resources Forum held in Davos in September 2009;

- providing data inputs to the Panel's thematic report on environmental impacts and prioritization;

- organizing a special session on data and indicators needs for the work of the Panel;

- extending data support on energy and transport sectors for the Green Economy Report.



November 2009, Beijing

## The 2009 Global Assessment Report in Disaster Risk Reduction

By Pascal Peduzzi

During 2008-2009, the DEWA-Europe Early Warning Unit was involved in the 2009 Global Assessment Report (GAR) on Disaster Risk Reduction. The Report is the first biennial global assessment of disaster risk reduction prepared in the context of the implementation of the International Strategy for Disaster Reduction (ISDR). It was coordinated by UNISDR, in collaboration with UNEP, UNDP, the World Bank, the World Meteorological Organization (WMO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), the ProVention Consortium, the Norwegian Geotechnical Institute and a wide range of other ISDR partners. The Report provides hard-hitting evidence to demonstrate how, where and why disaster risk is increasing globally and presents key findings from a global analysis of disaster risk patterns and trends, including where high mortality and economic loss is concentrated.

The 2009 GAR is available in four languages (English, French, Spanish and Arabic) and was launched by the UN Secretary General Ban Ki-moon in Bahrain in May 2009 - then in the following cities: Hyogo (Japan), Bangkok (Thailand), New York (USA), Geneva (Switzerland), London (UK), Oslo (Norway), Paris (France), Cuzco (Peru) and Barbados. More information can be found at: [www.preventionweb.net/gar](http://www.preventionweb.net/gar)

The PREVIEW Global Risk Data Platform is a multi-agency effort to share spatial data and information on global risk from natural hazards. Twenty-five new data sets were created and, in order to allow end-users to visualise and access them, this interactive web platform was created. It replaces the previous version of PREVIEW interactive mapping, with a new SDI technology allowing total interoperability for sharing data. Sixty layers of information can be viewed and downloaded.

Users can visualise, download or extract data on past hazardous events, human and economic hazard exposure and risk from natural hazards. It covers tropical cyclones and related storm surges, drought, earthquakes, biomass fires, floods, landslides, tsunamis and volcanic eruptions. The collection of data is made via a wide range of partners and was developed as a support to the Global Assessment Report on Disaster Risk Reduction, replacing the previous PREVIEW Platform already available since 2000.

During this two-year period of research, many improvements were made by DEWA-Europe, such as:

- the first global model for flood hazards was added;
- a global model for tropical cyclone wind and storm surge hazards was added;
- the risk model is based on an innovative approach using past individual events' modelling in order to better identify vulnerability and risk which lead to the production of global risk maps at 1 x1 km resolution for floods, tropical cyclones, earthquakes and landslides. The sum of these provided a multiple risk distribution map;
- finally, the risk was aggregated to the national level to produce the Mortality Risk Index, which allowed the comparison of risk levels across countries.

DEWA-Europe was also responsible for computing human and economic exposure for floods, tropical cyclones, drought, earthquakes, landslides and tsunamis.

The PREVIEW Global Risk Data Platform is supported by three UN agencies - UNISDR, UNEP/GRID-Europe and UNDP (GRIP) – and each of them integrated it in their own website.

UNISDR:

[www.preventionweb.net/english/maps/index.php](http://www.preventionweb.net/english/maps/index.php)

UNDP (GRIP):

[www.gripweb.org/grip.php?ido=1003](http://www.gripweb.org/grip.php?ido=1003)

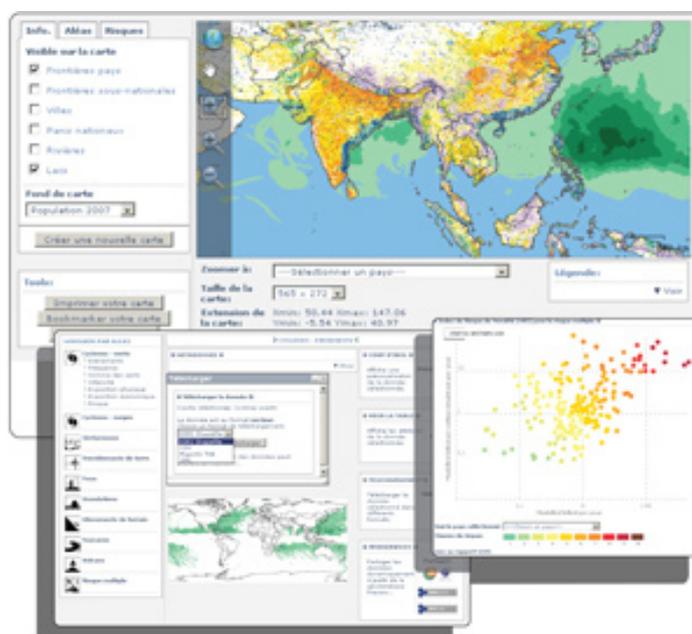
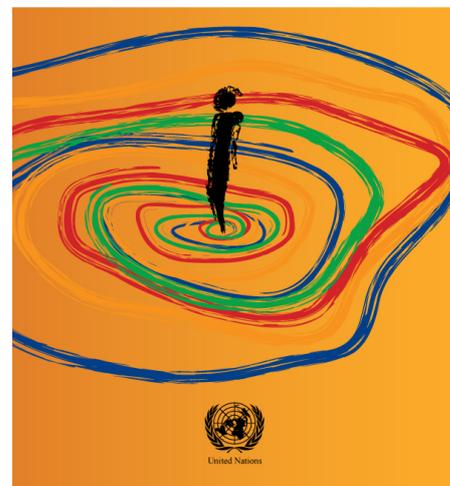
UNEP/GRID-Europe:

<http://preview.grid.unep.ch/index3.php?preview=map>

2009 Global Assessment Report on Disaster Risk Reduction

### Risk and poverty in a changing climate

*Invest today for a safer tomorrow*



<http://preview.grid.unep.ch>

## Building Capacity for Assessments and Early Warning

By Alexandra Serebryakova, Stefan Schwarzer and Ron Witt

During the latter third of 2009, two trainings/workshops were organised with countries of Eastern Europe including the Caucasus, to inform environmental professionals in ministries and civil society about UNEP's upcoming Programme of Work (PoW) for 2010-11, including integrated environment assessments (IEA/ GEO-style reporting), priority activities in the realm of early warning, and related network development.

Firstly, DEWA~Europe offered a four-day in-depth IEA Training Workshop in Tbilisi, organised by the National Environmental Agency of Georgia, which included nearly thirty participants from Armenia, Azerbaijan and Georgia. The objective was to give the participants - mostly people from different governmental ministries, such as the Ministry of Environment, Water, and Energy - an overview of the methodology applied in UNEP's Global Environment Outlook (GEO) report series, along with some hands-on experience with relevant exercises. The Workshop was delivered as eight separate but linked modules, based on updated training materials developed by UNEP and the International Institute for Sustainable Development (IISD) over many years, and covering such subjects as: "the IEA Framework (Driving forces, Pressures, State, Impact and Response or DPSIR)", "Developing an Impact Strategy for an IEA", "Monitoring, Data and Indicators for an IEA", "Policy Analysis", "Scenarios" and "Communication".

The main results of the IEA Training Workshop were a better understanding of, and increased capabilities to apply the integrated methodology at the national level, and improved contacts among environmental professionals in the South Caucasus sub-region.

In addition, the Armenian participants asked for advice and support in the development of a National Data Portal, based on UNEP's GEO Data Portal. A mid-November visit to Yerevan by a GRID~Europe staff member served to catalyse a related discussion and exchange among Armenian ministries/agencies. A meeting on "Environmental Data Access and Sharing" hosted by the Ministry of Nature Protection on 16-17 November 2009 offered an overview of UNEP's GEO Data Portal as well as other, mostly open-source, software packages. The intention was to lay the ground for the establishment of a national portal that would facilitate data search and location and easier access between Armenian ministries and agencies.

In November 2009, DEWA~Europe along with the Regional Office for Europe (ROE) convened a "Regional Environmental Information Networking (REIN) Meeting" for the countries of Eastern Europe in Kyiv, Ukraine, with local organisation and support from the Center for Ecological Consulting and Audit (CECA).

The REIN meeting, a continuation of previous capacity development efforts, was held to:

- discuss environmental networking, observing and monitoring;
- describe and discuss UNEP's PoW 2010-11, and to share data and information;
- support environmental assessments, reporting and early warning of emerging environmental issues and trends in line with UNEP approaches/methodologies.

It was attended by 27 representatives of the Ministries of Environment, universities, governmental and non-governmental organizations, and UNEP (and GRID) collaborating centres from Armenia, Azerbaijan, Belarus, Georgia, Russia, Poland and Ukraine.

Participants discussed their countries' involvement in global and regional assessment and reporting processes such as GEO-5, the Environment and Security Initiative (ENVSEC), the Environment

for Europe process and the plans for the Astana Ministerial Conference. Country representatives also commented on UNEP's thematic priority areas, perspectives and challenges related to GEO-Cities reporting processes, and how UNEP and its partners can play a more effective role in terms of early warning of environmental changes across Eastern Europe and the Caucasus. The main outputs of the meeting were:

- reinforced national environmental information networks, comprised of key governmental and non-governmental institutions assessment and early warning activities at the national level;
- improved communication/knowledge of other countries' work in these realms, and potential cooperation among participating countries' professionals;
- better common understanding among the above-mentioned countries on mainstream approaches, and goals and objectives of the IEA reporting; and
- improved understanding of related global and European assessment and reporting processes in the region, and future plans for the same (GEO-5, Astana et al.).



Trainees and trainers from the IEA/GEO Workshop in Tbilisi, September 2009

## GRID-Europe in the European 7th Framework Programme

By Anthony Lehmann, Nicolas Ray

The 7th Framework Programme for Research and Technological Development (FP7) of the European Commission bundles all research-related EU initiatives together under a common roof. FP7 will last for seven years (from 2007 until 2013) and has a total budget of over € 50 billion. This budget is spent on grants to research actors all over Europe and beyond, in order to co-finance research, technological development and demonstration projects. GRID-Europe, through its institutional partnership with the University of Geneva (GRID Europe/UniGe), is coordinating and participating in several large trans national FP7 cooperative projects.

The EU/FP7 enviroGRIDS project (<http://www.envirogrids.net>) aims to build capacities for a Black Sea catchment observation and assessment system supporting sustainable development. The project started in April 2009 for a duration of four years and its consortium of 27 European institutions is coordinated by GRID-Europe/UniGe. The Black Sea Catchment covers over 2 mio. km<sup>2</sup> and all or part of 24 countries and is largely following an ecologically unsustainable pathway based on inadequate resource management. This could potentially lead to severe environmental, social and economic problems, especially under a changing climate. The project is addressing these issues through a combination of several emerging information technologies that will help using new international standards to gather, store, analyze, visualize and disseminate crucial information on past, present and future states of this region.

Several key tasks are currently in progress in this first year of the project. A gap analysis is underway in order to identify areas where most efforts are needed to reinforce existing observation systems in the Black Sea region. GRID-Europe is particularly involved in the development of a Spatial Data Infrastructure (SDI) that will permit data interoperability, information sharing and data delivery among all actors and end users within the consortium and beyond. The enviroGRIDS SDI will comply with the new European directive on Infrastructure for Spatial Information (INSPIRE) and will

link with the Global Earth Observation System of Systems (GEOS). Moreover, the enviroGRIDS SDI will plug into the grid computing infrastructure maintained by the European Organization for Nuclear Research (CERN) in Geneva. This will allow the user to tap extensive distributed computational power in order to run a high-resolution hydrological model of the Black Sea catchment.

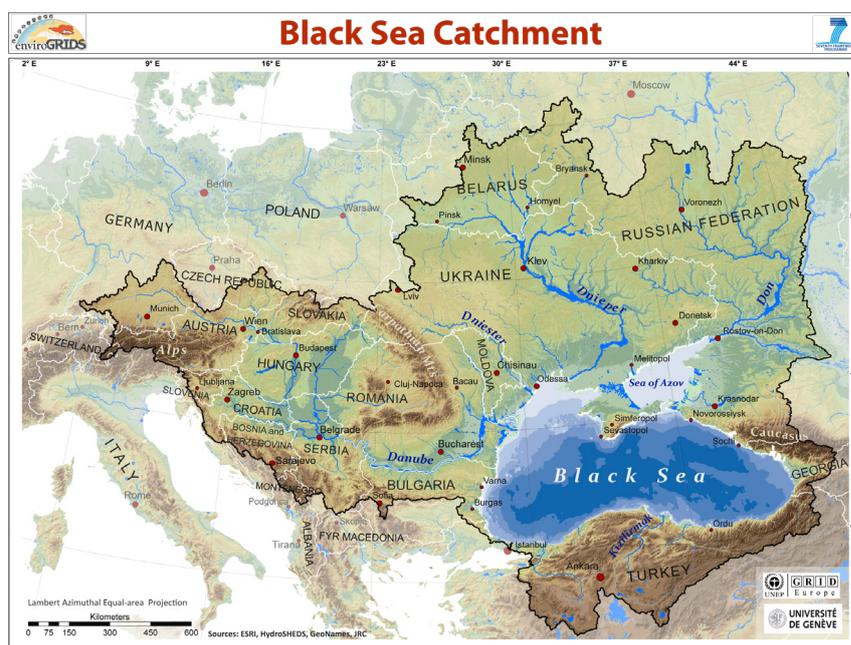
EnviroGRIDS is clearly going beyond the state of the art in the Black Sea region by adopting a catchment approach and by tackling several UNEP priority areas. The project will build capacities and bring crucial information to a relatively data-poor region on future scenarios of expected climate, demographic and land cover changes.

The ACQWA project (Assessing Climate impacts on the Quantity and Quality of Water) is a large-scale integrating project with 35 partners and a budget of € 6.5 million. This five-year project started in October 2008 and it is coordinated by Prof. Martin Beniston from the University of Geneva. It aims at assessing the future of water resources in vulnerable mountain regions such as the Rhone catchment in Switzerland and the Po catchment in Italy, as well as other catchments in Chile and Kyrgyzstan. GRID-Europe/UniGe plays a crucial role in developing the data warehouse of the project and subsequent Spatial Data Infrastructure (SDI). By sharing infrastructure, human resources and ideas with enviroGRIDS, both projects are benefiting from each other.

For more information, please go to:



[www.acqwa.ch](http://www.acqwa.ch)



The PEGASO project - People for Ecosystem Based Local Government



in Assessing Sustainable Development of Ocean and Coast - started officially on 1 February 2010 for a duration of four years. It is coordinated by Prof. Françoise Breton from the European Topic Centre on Land Use and Spatial Information (ETC-LUSI), at the University of Barcelona. The main objective of PEGASO is to build on existing capacities and develop common novel approaches to support integrated policies for the coastal, marine and maritime realms of the Mediterranean and Black Sea Basins in ways that are consistent with the implementation of the Integrated Coastal Zone Management (ICZM) Protocol in the Mediterranean and the Black Sea. More information can be found at:

<http://www.tourduvalat.org/ozhm/Newsletter/NL8/PEGASO%20presentation.pdf>

FP7, UNEP/GRID and UniGe

With these three new FP7 projects, UNEP/DEWA/GRID-Europe is clearly demonstrating its capacity to contribute positively to large European research projects while enhancing UNEP's presence, visibility and scientific credibility across many European countries and beyond. The concrete objectives of the FP7 research framework for the environment make it an ideal solution to develop UNEP activities beyond its own means by partnering in such larger integrative projects. The ongoing close collaboration with the University of Geneva also serves UNEP well in liaising with educational and research institutions. Let's hope that the early successes in these European projects (enviroGRIDS, ACQWA and PEGASO) will continue. Further information on their progress and status will be provided in future newsletters.

## Other recent past events

### 1. BRINGING GEOSS SERVICES INTO PRACTICES

Date and venue: Monday, 3rd of May 2010, 08h30 – 17h00, University of Agronomical Sciences, Bucharest, Romania

Content: This workshop aims at teaching participants how to install, configure and deploy a set of open source software that allows them to publish and share their data and metadata through the Global Earth Observation System of Systems (GEOSS) using OGC web services & ISO standards.

The workshop will cover interoperability, hands-on experience with web portals, information access, open source software and data sharing through web services and GEOSS registries. More information available at:

[www.envirogrids.net/spip.php?article105](http://www.envirogrids.net/spip.php?article105)

### 2. GEOSS FOR DECISION MAKERS IN THE BLACK SEA AREA

Date and venue: Tuesday, 4th of May 2010, 08h30 – 11h00, Aula of the Romanian Academy Library, Bucharest, Romania

Content: This workshop will provide a high level overview of GEOSS and data interoperability as they relate to the needs of senior government officials and decision makers in the Black Sea area.

Programme: Four plenary speakers are scheduled:

- Dr. Anthony Lehmann (University of Geneva, enviroGRIDS project)
- Dr. Jay Pearlman (IEEE)
- Dr. Ion Nedelcu (Romanian Space Agency)
- Dr. Douglas Cripe (GEO Secretariat)

More information available at:

[www.envirogrids.net/spip.php?article105](http://www.envirogrids.net/spip.php?article105)