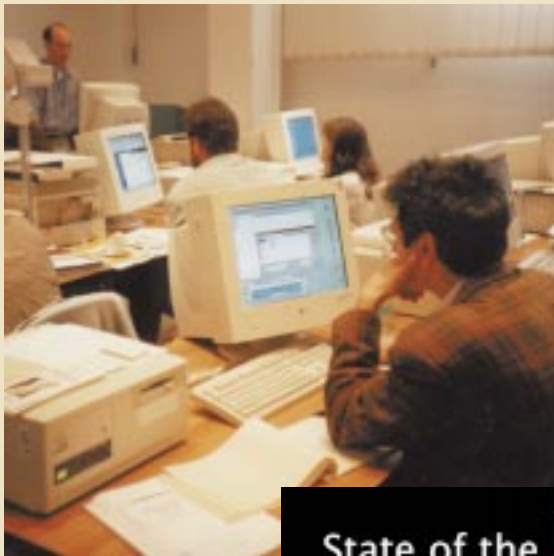


1998

GRID-Arendal Annual Report



Greeting from UNEP's Executive Director Klaus Töpfer

When the Government of Norway in 1989 took the initiative to establish GRID-Arendal, it inaugurated a new and innovative model for supporting UNEP. For the first time, a foundation, fully dedicated to strengthen UNEP and the UN system in the field of environmental information, was established.

Ten years later, this model has proven to be an extremely successful and working example on how a non-profit organisation with strong government support can make invaluable contributions to a multi-lateral environment organisation, UNEP.

UNEP, as the world's environmental conscience, must develop increased capacity to respond to continuing and emerging challenges facing the global environment.

With limited internal capacity, UNEP must increasingly engage all relevant major actors in developing the basis for environmental policy-making and action. The focus must be on forging strategic partnerships and networks involving all players that can contribute the best possible information base for decision-making and public awareness.

The role and importance of GRID-Arendal, through the increased capacity it provides to UNEP in this field, cannot be underestimated.

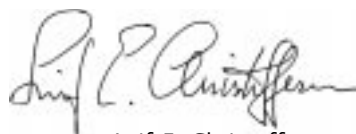
In this year of the 10th anniversary of GRID-Arendal, I take this opportunity to congratulate the Government of Norway with their visionary thinking when they established GRID-Arendal in 1989. I also congratulate the Board of Directors, the Managing Director and the staff on their admirable performance in developing GRID-Arendal to the extent that it can deliver the impressive array of outputs and services described in this report.



Klaus Töpfer
Executive Director,
UNEP

Annual Highlights

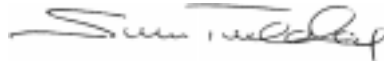
One of GRID-Arendal's main objectives is to support the global activities of the United Nations Environment Programme (UNEP). Having earlier provided UNEP with technical expertise in establishing its global telecommunications programme (UNEPnet), we were asked by UNEP last year to administer and maintain the technical side of this global programme and to develop it further. During 1998, major progress was made. A separate UNEPnet unit was established in GRID-Arendal, led by a newly recruited senior manager with considerable telecommunication experience. Its work has boosted UNEP's capacity to communicate globally. It has also been able to demonstrate that the programme has considerable further potential, that it is operating on a cost-effective basis, that UNEP can benefit from its cost-saving features, and that it is technically sound.



Leif E. Christoffersen
Chairman of the Board

Our Arctic activities continue to be emphasised. GRID-Arendal contributed more than 500 maps and graphics for AMAP's new and comprehensive Assessment Report "Arctic Pollution Issues". We helped to bring together leaders for 29 Indigenous Groups in Arctic Russia to a meeting in Moscow last March. A high-level international meeting in Rovaniemi, Finland, agreed in June to support an expansion of technical networks initiated by GRID-Arendal in both the Arctic and the Baltic regions. Towards the end of 1998, we stationed one of our technical experts in Canada to strengthen our Arctic network.

Our State of the Environment (SoE) activities have been expanding. A CD-ROM was produced with 14 national SoE reports from Central and Eastern Europe for the European Ministerial meeting in Aarhus, Denmark; in



Svein Tveitdal
Managing Director

February GRID-Arendal participated in an international agreement to establish a global programme for developing tools for use in presenting SoEs for Cities; an SoE for Moscow was released on the Internet in June; and China's first SoE on the Internet was launched in August with technical support from both GRID-Arendal and GRID-Bangkok, and with the use of UNEPnet.

Other annual highlights include reaching a final agreement at a meeting in Brazil to continue work on information networking and innovative tools designed with assistance from GRID-Arendal for the international agricultural research system (CGIAR); holding seminars on poverty mapping in Arendal and in Washington D.C., resulting in a request for GRID-Arendal to take on the associated technical secretariat functions; and a record of 3,6 million hits on our own web site, together with a record high of 36,000 maps and graphics downloaded from our database.

GRID-Arendal has seen a continuing expansion of staff, our most important resource. More than half of our highly skilled and deeply motivated experts have been recruited internationally. It is encouraging that experts from many different countries find our institution to be an interesting and attractive place to work. In light of this growth, various efforts have been made to strengthen management capacity and quality control systems in the institution. We are pleased to report that the institution is financially sound and that it has further growth potential.

Mission

The United Nations Environment Programme¹ (UNEP)'s mission within the UN system is to provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations.

The role of GRID within UNEP

The global system of GRID centres is administered by UNEP under its programme for environmental information and assessment (DEIA). Under DEIA (Division of Environmental Information, Assessment and Early Warning), GRID addresses the following needs:

- keep under review the state of the world's environment
- improve access to multi-disciplinary environmental information
- enhance capabilities to use this information for decision-making, action planning and setting policy.

GRID-Arendal

Mission statement

GRID-Arendal² aims to be an internationally recognised information centre providing decision-makers and the public with improved access to high quality environmental information and supporting UNEP in expanding the use of such information for awareness-raising, policy-making and action.



Longum Park Technology Centre

Purposes

The main purposes of GRID-Arendal are to help strengthen UNEP, and through it the UN system, in putting environmental information into practical use, and to serve as a working example of how a non-profit foundation with strong government support can make such a contribution.

Location

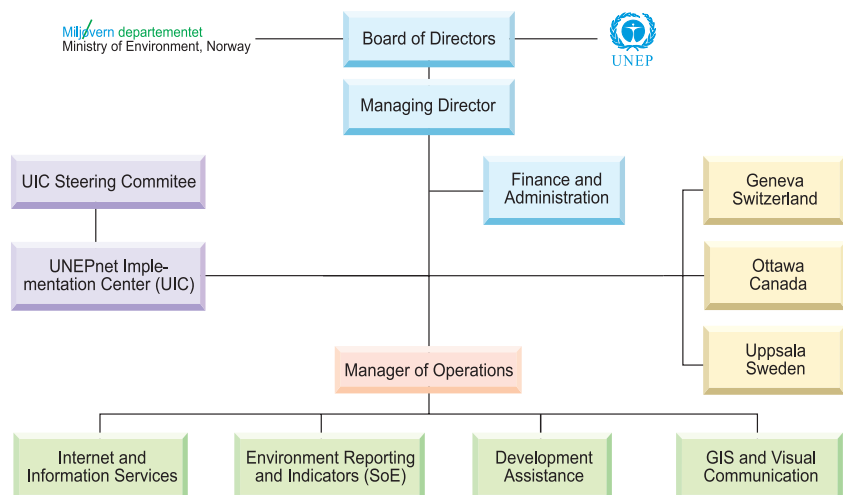
GRID-Arendal is located in the Longum Park Technology Centre in Arendal, a city on the southern coast of Norway. Longum Park houses 22 institutions and firms mainly relating to information technology, with a total of 200 employees.

Organisation

GRID-Arendal's revised organisational structure focuses on the areas of expertise represented within the institution. The new structure aims to develop organisational units' strategic areas while encouraging interaction between the units.

GRID-Arendal has staff members posted in Uppsala, Sweden, dealing with Nordic/Baltic issues; in Geneva, acting as liaison with UNEP's Regional Office for Europe and GRID-Geneva; and Ottawa, Canada, working on a joint project with the Canada Centre for Remote Sensing.

GRID-Arendal's organisational structure from January 1999



Statement of Accounts 1998 in NOK

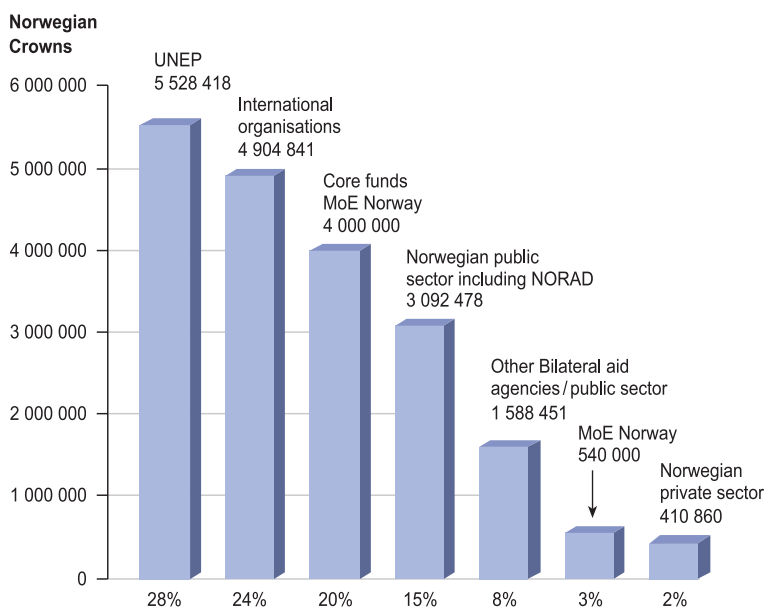
Balance sheet as per December 31, 1998	1998	1997
Current assets	14,491,590	8,947,842
Fixed assets	450,427	394,804
Total assets	14,942,016	9,342,646
Short-term liabilities	9,063,520	4,391,425
Equity	5,878,496	4,951,221
Total liabilities and equity	14,942,016	9,342,646

Profit and loss account for the period January 1, to December 31, 1998	1998	1997
Operating revenues	20,065,048	17,045,810
Operating expenses	19,167,631	16,621,865
Operating result	897,418	423,945
Net financial items	29,856	273,787
Result for the year	927,274	697,732

The above statement of accounts has been audited by State Authorized Public Accountant Terje H. Holst, KPMG Peat Marwick, Arendal.

(1 USD = 7,61 NOK pr. 31.12.98)

Funding Sources 1998 in NOK



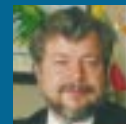
Board of Directors



Leif E. Christoffersen
Chairman of the GRID-Arendal Board
[1990-2002]



Hans Alders
Commissioner of the Queen
Province of Groningen
Netherlands
[1995-2002]



Daniel van R. Claasen
Chief, EIN/DEIA, UNEP
[1999-2002]



Øystein Dahle
Board Chairman of the
World Watch Institute Norden
[1999-2002]



Kari Elisabeth Fagernæs
Head of Section
Section of Environmental
Assessment, Norwegian
Pollution Control Authority
[1999-2002]



Takahiko Hiraishi
Assistant Executive Director
Division of Environmental
Information and Assessment,
UNEP
[1996-1998]



Domingo Jiménez-Beltrán
Executive Director
European Environment Agency
[1996-1998]



Lars-Erik Liljelund
Director
Dept. of Natural Resources,
The Environmental Protection
Agency, Sweden
[1991-1998]



Hanne Petersen
Director
Dept. of Arctic Environment,
National Environmental
Research Agency, Denmark
[1996-2002]



Odd Rogne
Executive Secretary
International Arctic Science
Committee
[1990-2002]



Anu Pärnänen-Landtman
Environmental Co-ordinator
Dept. for Development Co-
ordination, Ministry of Foreign
Affairs, Finland
[1998-2002]



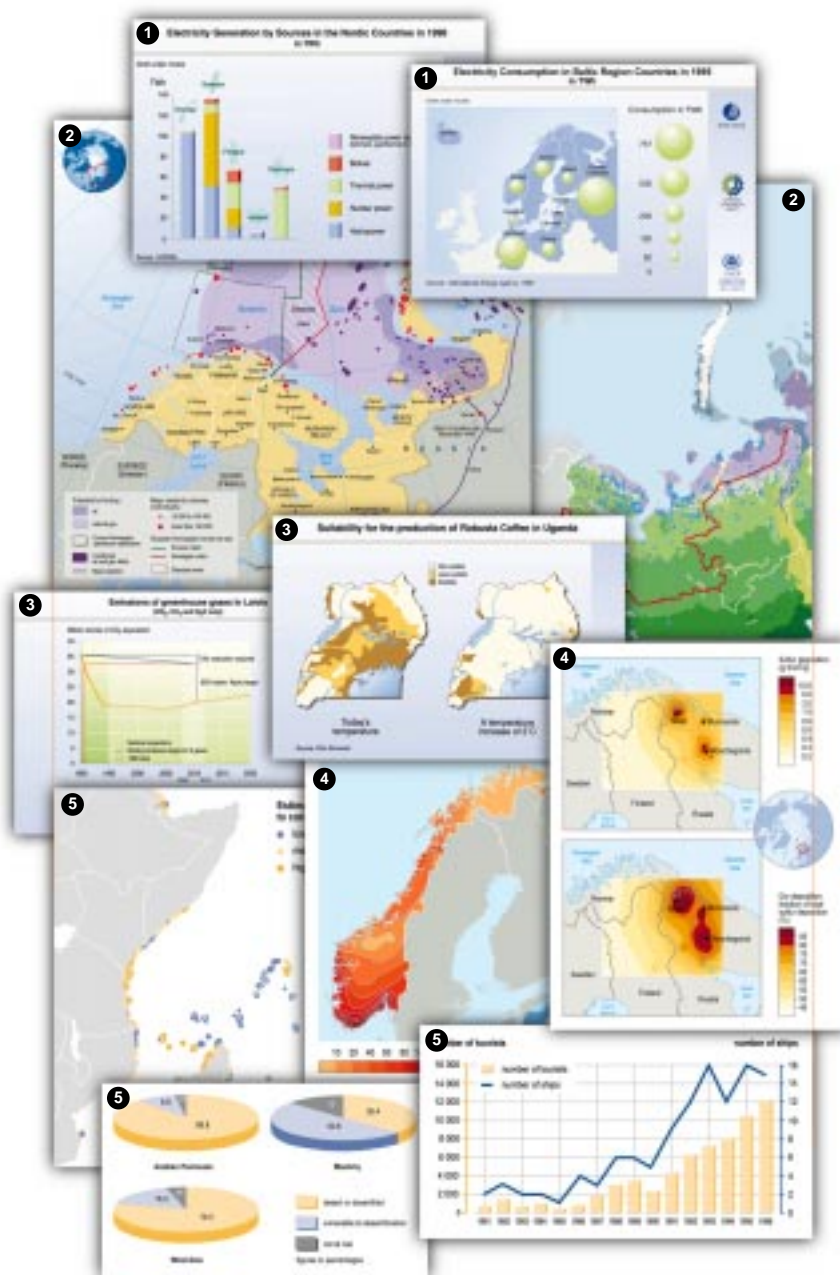
Per Wranner
Director General
Ministry of Agriculture and
Fisheries, Sweden
[1999-2002]

Cartographic and Graphic Support

Visual Communication Tools

In various media presenting environmental information such as reports, reviews and websites, maps and graphics¹ are used as a tool to make scientific data more easily and more rapidly comprehended. GRID-Arendal has devoted considerable resources to the careful production of high-quality,

effective images in this process of communicating environmental knowledge. During 1998, GRID-Arendal strengthened its visual communication capacities and was thus able to substantially assist and support its partners (EU, EEA, UNEP, AMAP) with their projects.



Cartographic support to regional assessments of the environment

- 1 In February 1998, GRID-Arendal, with the help of the EEA, prepared a set of 40 maps and graphics² for a thematic conference of the Nordic Council of Ministers in Göteborg. This conference focused on energy production, consumption, and exchanges.
- 2 In collaboration with the Norwegian Polar Institute and the Directorate for Nature Management, GRID-Arendal was responsible for the production of 25 maps³ for the atlas of the Barents region. This resulted in the 1998 publication of "BARENTSwatch".

Cartographic support to conventions

- 3 GRID-Arendal created a set of 40 graphics⁴ for the UN Framework Convention on Climate Change, 4th Conference of the Parties held in Buenos Aires, Argentina. The graphics showed factual information on the state of greenhouse gas emissions among the reporting Parties to the UNFCCC.

Cartographic support to SoE reporting

- 4 GRID-Arendal was responsible for the maps and graphic production of the report on the state of the environment in the Arctic (AMAP) and in the production of UNEP's second edition of the Global Environment Outlook (GEO-2), 550 and 150 maps and graphics respectively.
- 5

¹<http://www.grida.no/db/maps/prod/level0/>

²<http://www.grida.no/db/maps/collection/nordic/index.htm>

³<http://www.grida.no/db/maps/collection/barents/index.htm>

⁴<http://www.grida.no/db/maps/collection/climatechange/index.htm>

Environmental Reporting

SoE reports and indicators

In 1998 GRID-Arendal continued interaction with leading organisations involved in the development of SoE reports¹ and indicators, including EUROSTAT, HABITAT, ICLEI, OECD, WCMC, WHO, World Bank, WRI, UNCSO. GRID-Arendal led the development of methodology for urban SoE reporting², supported regional indicator and reporting initiatives in the Baltic and the Aral Sea basins, and provided specific assistance to countries and cities in the CEE/NIS region, China and South Africa. The Cookbook for SoE reporting on the Internet³ was released at the Aarhus Conference and successfully used for SoE training in Budapest, Arendal and Baku.



Jointly with NERI (Denmark) and ITE (UK) GRID-Arendal provided support to EEA's Expert Group on SoE Reporting and Guidelines. This included the preparation of a checklist for SoE reporters, as well as an overview of institutional and legal arrangements for SoE reporting in Europe, and the development of the on-line State of the Environment Reporting Information System (SERIS) which made part of the European Environmental Reference Centre (E²RC)⁴. In Norway GRID-Arendal is involved in the development of a new edition of the Norwegian SoE report on the Internet⁵, and has started a pilot project where an SoE report will be prepared by students of several schools.

Looking ahead

Priority activities in 1999 will include continuing networking with SoE reporters in Europe and world-wide,

advancement and documentation of GRID-Arendal's approaches, and further support to building capacities in SoE reporting.

CEROI (Cities Environment Reports On the Internet)

CEROI⁶ aims to bring together a network of cities that want to make information about their environment available on the Internet in an easy-to-understand, well-structured and internationally comparable format.

A tool and a template that will simplify the preparation of a city SoE report is being developed by GRID-Arendal together with Uglund Totalkart (UTK) in Norway, with support from the Norwegian Trade and Development Agency.

Seventeen cities are actively participating in project activities. Moscow was the first city in the network to officially launch its report on the Internet, on World Environment Day, 5 June 1998. A workshop for South African cities was held in Arendal in September 1998.

From the launching ceremony of SoE-China in Beijing.



In July 1998, the CEROI team visited a comprehensive list of international organisations working on relevant initiatives to investigate possibilities for co-operation. Co-operation with ICLEI's Cities' project began in October 1998. Another outcome of this mission was the establishment of an Advisory Board for the project, which includes the OECD, the EEA, the WHO and UNCHS (Habitat)/GUO.

SoE China

With technical support from GRID-Arendal and GRID-Bangkok, and with the use of UNEPnet, an indicator-based electronic State of Environment report for China⁷ was produced. The project was sponsored by NORAD and NEPA. The report was launched on the 25th of August, in the presence of Executive Director of UNEP Klaus Töpfer and Xie Zhenhua, China's Minister of Environment. A follow-up project for updating this report funded by NORAD is planned for 1999.



¹<http://www.grida.no/soe/>

²<http://www.grida.no/prog/global/citysoei/index.htm>

³<http://www.grida.no/soe/cookbook/>

⁴<http://www.eea.eu.int/frdb.htm>

⁵<http://www.mistin.dep.no/>

⁶<http://www.grida.no/prog/global/citysoei/index.htm>

⁷<http://svr1-pek.unep.net/soechina/index.htm>

New web products

External web sites:

ADD

Two major features were created for the 'Gateway to the Arctic' web site¹ which GRID-Arendal hosts for the International Arctic Environment Data Directory (ADD). A new user interface was created at the beginning of the year to facilitate access to the data directory and to background information about the project. Later in the year individual country web page templates were created so that institutions in the participating Arctic countries could maintain their own data directory homepages.

Arctic Parliamentarians Homepage

A new homepage² was created for The Standing Committee of Parliamentarians of the Arctic Region. The web site features background information, news relating to past and future conferences, and profiles of Arctic Parliamentarians. A large section of the web site features a compilation of sustainable development initiatives, programs, policies and organisations that contribute to sustainable development in the Arctic.

EIS-SSA

Work continued throughout the year to support the Environment Information Systems in Sub-Saharan Africa (EIS-SSA) web site³. Along with a new, simplified user interface, cases of 'best practices' of environmental information systems publications and new issues of the EIS-SSA newsletter were added to the site.

REDUCE

A new homepage was created for REDUCE⁴. The objective of this European project is to help reduce the use of chemicals that are dangerous to health, environment and safety. The site features information about the project, how individuals can get involved and presents the information in English, Norwegian, German, Spanish, Italian, and Danish.

¹<http://www.grida.no/add/>

²<http://www.grida.no/parl/>

³<http://www.grida.no/eis-ssa/>

⁴<http://www.ext.grida.no/reduce/>

Internal web sites

New GRID-Arendal Homepage

A new design for the GRID-Arendal web site⁵ was launched in March. The new layout features easier access to information products from the homepage, a more harmonised design throughout the site and improved use of html code for improved registering and placement on public search engines.

CEROI

A new web site⁶ was created for the CEROI project, which provides the framework to create simple and easily understood Cities Environment Reports On the Internet. The site provides a project description, information on the methodology of environmental reporting and indicators, and includes the Fennario (template) which will be the basis for creating the cities reports.

Maps and Graphics

A new web site⁷ was created to showcase GRID-Arendal cartographic products. Co-operation between the web, database, and cartography groups was used to redesign, restructure and automate the new web site, which features over 100 cartographic products. A special set of graphics was created and made available on the GRID-Arendal web site for the 4th Conference of the Parties to the UNFCCC.

ENRIN

A new web site⁸ was launched for the ENRIN programme. The site features a new design and interface which provides improved navigation and easy access to ENRIN publications, national contacts, country summaries, links, and national State of the Environment Reports (SoEs).

Poverty Mapping

A new web site⁹ highlighting the joint GRID-Arendal/CGIAR project on poverty mapping was launched. The site includes background information

about the project, material on upcoming events, and a page of links to related publications and organisations.

Database development

Database activities continued with the development of a new tool that is used for constructing various sections of the GRID-Arendal internet. The tool is now used to automatically update the cartographic maps and graphics section of the web site. Database population of maps, graphics and GIS data sets from the AMAP reports continued with the assistance of the Norwegian Mapping Authority and the AMAP secretariat.

GRID-Arendal statistics

The total number of web page views on the GRID-Arendal server increased by more than a million to a record 3,6 million from 1997 to 1998. Downloaded maps and data sets increased from 18 000 in 1997 to 36 000 in 1998.

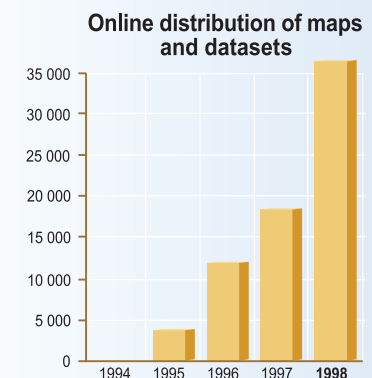
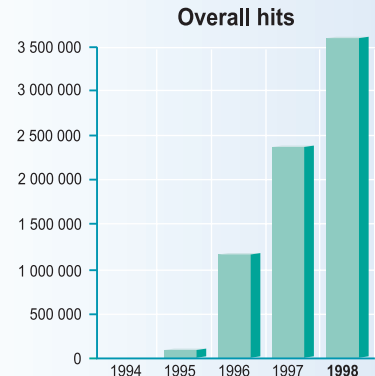
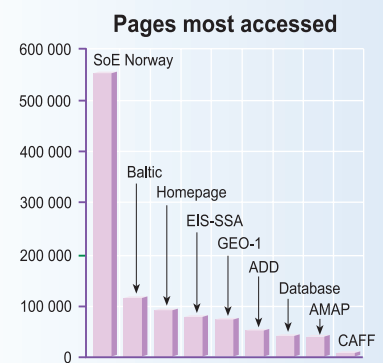
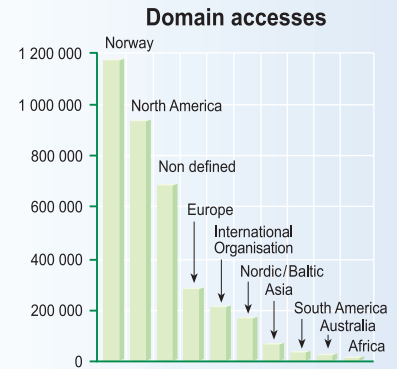
GRID-Arendal as host server

The GRID-Arendal server acts as a web site hotel for 23 environmentally related NGOs, UN offices in Norway, and international Arctic programmes.

Looking ahead

The GRID-Arendal web site is expected to grow considerably during the coming year:

- we plan to build up a "web shop" where customers can purchase UNEP and GRID-Arendal information products on-line;
- a new website for on-line courses will be added;
- a "News" site with daily links to environmental news in Norwegian newspapers will be an added feature.



⁵<http://www.grida.no>

⁶<http://www.grida.no/prog/global/citysoei/index.htm>

⁷<http://www.grida.no/db/maps/prod/level0/>

⁸<http://www.grida.no/enrin/>

⁹<http://www.grida.no/prog/global/poverty/>

Nordic/Baltic Activities

Baltic Ballerina

The overall objective of the BALLERINA¹ initiative is to improve the availability and accessibility of Internet-based information on environment and sustainable development for decision-making.

In 1998 a number of new features were added to BALLERINA, including an advanced search engine and a BALLERINA-L mailing list. BALLERINA is currently linking more than 1,000 external web sites with information on environment and sustainable development.

The BALLERINA network met in Rovaniemi in June. About 50 representatives from 35 organisations in Belarus, Finland, Hungary, Latvia, Lithuania, Norway, Poland, Russia, Sweden and Ukraine participated in this second Annual Conference.

In 1998, BALLERINA was financially supported by the Norwegian Ministry of Environment, the Swedish EPA and the InfoDev Programme of the World Bank.

Baltic Agenda 21

GRID–Arendal provided input to the Baltic 21² process in the form of a discussion paper "Information for Joint Policy and Decision-making Towards a Sustainable Baltic Sea Region". The document outlines how a scientifically based institutional framework could be set up to ensure the provision of indicators and assessments to monitor the implementation of the Baltic 21 Goals and Action Programme.

Following the adoption of Baltic 21 by the Ministers of Foreign Affairs from all the countries in the Region in June, GRID–Arendal was commissioned to prepare a report with proposals for a draft set of indicators and targets to be presented to the intergovernmental Steering Group responsible for the follow-up of Baltic 21.

Transboundary Rivers and Lakes

Latvia, Belarus and the Russian Federation have initiated a regional management initiative for the Daugava/Zapadnaya Dvina (DZD) river basin. The DZD programme is expected to result in, *inter alia*, the establishment of an intergovernmental management commission.

GRID–Arendal provided assistance in the fields of Internet support and GIS. The internet work, including the creation of a DZD website³, was undertaken in co-operation with the Transboundary Environmental Information Agency (TEIA) in St. Petersburg.



Looking ahead

Main priorities in 1998 will be:

- The further development of the BALLERINA as an operational programme. A significantly revised and improved BALLERINA web site will be launched during the spring.
- Continued efforts in the field of capacity building and training. Focus will be on institutions in Belarus and NW Russia where the availability and accessibility of information on environment and sustainable development is still low.
- Start-up of a regional programme to improve access to information and reporting on environment and sustainable development in Belarus and the north western regions of Russia.
- Continued support to the Daugava/Zapadnaya Dvina river basin initiative.
- Continued co-operation between GRID–Arendal and Baltic 21. According to plans, GRID–Arendal will be given a key role in elaborating the indicator chapter of the report to ministers on the follow-up and implementation of the Baltic Agenda 21.

¹<http://www.baltic-region.net/>

²<http://www.ee/baltic21/>

³<http://www.baltic-region.net/partners/dzd/>

⁴<http://www.baltic-region.net/partners/dzd/atlas.htm>

Polar Activities

The first Ministerial meeting of the Arctic Council¹ took place on the 17th and 18th of September at Iqaluit, on Baffin Island, Canada. Through the Iqaluit declaration, Ministers, approved rules of procedure for the Council and terms of reference for its new sustainable development programme. The existing working groups (AMAP, CAFF, EPPR and PAME) had their mandates extended through the next two year session of the Council. Marci Yeater, from UNEP headquarters in Nairobi and Svein Tveitdal, Managing Director of GRID-Arendal represented UNEP at the meeting. UNEP's statement can be read online².

Indigenous Peoples Seminar

GRID-Arendal, together with the Indigenous Peoples' Secretariat (IPS), supported the Russian Indigenous Peoples organisation RAIPON in the first initiative to assess environmental threats affecting the traditional lifestyles of indigenous peoples in the Russian north, through a seminar held in Moscow in March 1998. Participating in the seminar were relevant Russian organisations and institutions, representatives from Danish/Greenlandic initiatives, Norwegian institutions, the European Parliament, IPS, and GRID-Arendal. The seminar resulted in a report (in English and Russian) with thematic maps produced by GRID-Arendal.



AMAP

The long awaited AMAP Assessment report was released at the first Ministerial meeting of the Arctic Council. The 859-page report presents over 6 years work of the first phase of AMAP's work to assess pollutants in the Arctic. The report contains over 500 maps and graphics produced by staff at GRID-Arendal. Ordering details for the report can be found on the AMAP web site³.



Barents Atlas

BARENTSwatch 1998 was published by the Svanhovd Environmental Centre in March of 1998, as an environmental atlas of the Barents Region. The atlas covers a variety of issues from human impacts on the landscape to the wild-life of the region. The atlas speaks to the general public with the aim of raising general awareness of environmental issues. GRID-Arendal was primarily responsible for the preparation of all data sets and final graphical production. BarentsWatch 98 can be obtained from Svanhovd Environmental Centre and is available in three languages (English, Norwegian and Russian).

GEO-2

In 1998 GRID-Arendal's polar group completed the co-ordination of the Polar sections for UNEP's 2nd Global Environmental Outlook Report (GEO-2). GEO-2 will provide up-to-date information on the state of the global environment and assess the effectiveness of current policy and international agreements that seek to protect the environment. GRID-Arendal's position as a key provider of Polar environmental information has rendered valuable support to UNEP's needs in this process.

GRID-Arendal technical support to The Canada Centre for Remote Sensing (CCRS)

UNEP, CCRS and GRID-Arendal have signed a one-year project contract (Sept. 1998 - Sept. 1999) aiming at a sustainable GRID-Ottawa operation. This project will contribute considerably to the availability of environmental information for the Arctic and Antarctic regions. A revitalised GRID-Ottawa will collaborate with GRID-Arendal, GRID-Sioux Falls and DEIA in North America to provide timely and easily understandable environmental information for policy- and decision-making. This in turn will ensure a polar project portfolio with high quality outputs providing vital information in an easily understandable manner for UNEP's regional and global assessments.

Looking ahead

The main focus for 1999 will be to further develop the formal links with UNEP on GRID-Arendal's polar role, to secure funding and a well-planned launch of the programme for support to Russian Indigenous Peoples, and to continue with support to the programmes under the Arctic Council.

¹<http://arctic-council.usgs.gov/>

²<http://www.grida.no/inf/news/news98/news75.htm>.

³http://odin.let.rug.nl/arctic/soaer_direct.html.

Central and Eastern Europe

ENRIN

GRID-Arendal is implementing UNEP's ENRIN (Environment and Natural Resources Network) programme in the 27 countries of Central and Eastern Europe and the NIS. Information about the initiative is disseminated through the newly re-designed and regularly updated web site¹ and brochures printed in English and Russian. Most recently, a GRID-Arendal Occasional Paper on ENRIN has been published, containing an evaluation of the programme's implementation to date and a directory of activities and contacts in the participating countries.



'Environment for Europe'

ENRIN highlights in 1998 were a joint exhibition and a 'cyber cafe' with the EEA at the Ministerial Conference 'Environment for Europe' in Aarhus, Denmark in June. On this occasion, the 'State of the Environment Reports Sampler' CD-ROM - containing a selection of national SoE reports from Central and Eastern Europe and the Newly Independent States, environmental maps and graphics and a 'cook-book' for production - was launched.



UNEP, GRID, EEA in Aarhus, Dk.

Phare Countries

The SoE Reports from the 13 Phare countries were produced in a joint effort with the EEA Phare team and the ENRIN-EIONET national focal points. Two training workshops, funded by Phare were held in Budapest and Arendal.



The training workshop in Arendal

GRID-Tbilisi

As the 16th node in the GRID network, GRID-Tbilisi was formally opened in a ceremony headed by the Georgian Minister of Environment, Nino Ckhobadze. The inauguration was attended by 50 representatives of the Georgian Government, NGOs and international organisations. The implementation project is funded by the World Bank. GRID-Tbilisi will take an active role in networking with Armenia and Azerbaijan and producing information products for the Transcaucasus.



The opening of GRID-Tbilisi

Other externally funded projects under ENRIN are a feasibility study for an environmental information network in Azerbaijan (funded by GTZ), the establishment of GRID-Budapest (funded by Switzerland) and an electronic SoE report for the Aral Sea Countries (World Bank).

EURO-GRID

GRID-Arendal was represented in the first meeting of the European GRID nodes which took place in Geneva in November 1998. As an outcome of this meeting, more active networking and co-operation between the GRID centers in Europe can be expected.

Status	1	2	3	4
CENTRAL EUROPE				
Poland	■	■	■	■
Czech Republic	■	■	■	■
Slovakia	■	■	■	■
Hungary	■	■	■	■
SOUTH EUROPE				
Romania	■	■	■	■
Bulgaria	■	■	■	■
BALKAN, FORMER YUGOSLAVIA				
Slovenia	■	■	■	■
Croatia	■	■	■	■
Bosnia-Herzegovina	■	■	■	■
Yugoslavia	■	■	■	■
Macedonia	■	■	■	■
Albania	■	■	■	■
BALTIC				
Estonia	■	■	■	■
Latvia	■	■	■	■
Lithuania	■	■	■	■
Belarus	■	■	■	■
Russia	■	■	■	■
Ukraine	■	■	■	■
Moldova	■	■	■	■
CAUCASUS				
Armenia	■	■	■	■
Azerbaijan	■	■	■	■
Georgia	■	■	■	■
ASIAN REPUBLIC				
Kazakhstan	■	■	■	■
Kyrgyzstan	■	■	■	■
Tajikistan	■	■	■	■
Turkmenistan	■	■	■	■
Uzbekistan	■	■	■	■
Completed ■				
Planned □				
	1. Letter/Assessment/Workshop			
	2. Feasibility Study/SoE on the Internet (prototype)			
	3. Implementation			
	4. Operational Status			

Looking ahead

Three issues will be ENRIN priority in 1999:

- Continue the integration process with the EEA;
- Focus on the NIS in allocating seed funding; and
- Closely follow the developments related to the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters.

CGIAR Co-operation

The project 'UNEP-CGIAR' co-operation for use of GIS in agricultural research' reached its final stage in 1998. The end of this UNEP-GRID support project marked a new beginning: the formation of a CGIAR-sustained "Consortium on Spatial Information for agricultural research" (SCI). Most efforts went into developing the necessary concepts and seeking the support of the involved parties. A letter of agreement² for the consortium was signed by nine center directors general at the CGIAR mid-term meeting in Brasilia in May. This agreement was based on a project proposal developed jointly by GRID-Arendal and CIAT.



The consortium began its activities at the Arendal V workshop in October 1998. Activities include the areas of human welfare and poverty mapping, impact assessment, crop improvement, and natural resources degradation.

Poverty Mapping

Back to back with the Arendal V CGIAR workshop in October, an international workshop on Poverty Mapping was held at GRID-Arendal, which gathered 40 participants from international organisations (FAO, UNEP, the World Bank and internationally renowned research institutions and CGIAR centres). This workshop was funded by The Norwegian Ministry of Foreign Affairs and the Technical Committee of the CGIAR (TAC). The workshop focus was to agree on an approach to poverty mapping; the final goal is the production of a global

CGIAR Participation			
CIAT	■ ■ ■ ■ ■ ■ ■ ■	Tropical Agriculture	Colombia
CIFOR	■ ■ ■ ■ ■ ■ ■ ■	Forestry	Indonesia
CIMMYT	■ ■ ■ ■ ■ ■ ■ ■	Maize - Wheat	Mexico
CIP	■ ■ ■ ■ ■ ■ ■ ■	Potato	Peru
ICARDA	■ ■ ■ ■ ■ ■ ■ ■	Dry Areas	Syria
ICLARM	■ ■ ■ ■ ■ ■ ■ ■	Aquatic Resources	Philippines
ICRAF	■ ■ ■ ■ ■ ■ ■ ■	Agroforestry	Kenya
ICRISAT	■ ■ ■ ■ ■ ■ ■ ■	Semi-Arid Tropics	India
IFPRI	■ ■ ■ ■ ■ ■ ■ ■	Food Policy	USA
IIMI	■ ■ ■ ■ ■ ■ ■ ■	Irrigation	Sri Lanka
IITA	■ ■ ■ ■ ■ ■ ■ ■	Tropical Agriculture	Nigeria
ILRI	■ ■ ■ ■ ■ ■ ■ ■	Livestock	Kenya
IPGRI	■ ■ ■ ■ ■ ■ ■ ■	Plant Genetic Resources	Italy
IRRI	■ ■ ■ ■ ■ ■ ■ ■	Rice	Philippines
ISNAR	■ ■ ■ ■ ■ ■ ■ ■	Service	The Netherlands
WARDA	■ ■ ■ ■ ■ ■ ■ ■	Rice	Côte d'Ivoire

poverty map. Maps showing distribution and intensity of poverty will facilitate decisions for resource allocation in aid projects and will help analyse possible causes and effects.

Looking Ahead

GRID-Arendal will continue working with the CGIAR through the poverty mapping initiative, with joint funding provided by the Norwegian Foreign Ministry and TAC. A network of individual scientists and institutions is planned.

¹<http://www.grida.no/prog/global/cgiar/>

²http://www.grida.no/prog/global/cgiar/htmls/loa_csi.htm

Workshops, Seminars and Conferences

Workshop on html-programming and training for the state-of-the-environment reporting using indicators Bangkok, Thailand. February 28-March 15

- 1 GRID-Bangkok hosted a workshop for 8 representatives of NEPA, Beijing. GRID-Arendal staff trained participants in creating a pilot version of SoE-China 1998 on the Internet.

Training course for Indian Ocean Region Mercure site operators Bangkok, Thailand. March 16-20

Twenty trainees from 9 countries were trained by GRID-Arendal and UNEP HQ staff. Hardware and software was distributed to participant sites, as well as technical documentation from the training course.

GRID-Arendal Training Workshop (Meta-workshop Workshop) Arendal, Norway. April 2-3

- 2 This internal workshop focused on tools, techniques and approaches when arranging and facilitating workshops. Moderation techniques, attendee involvement and participation, as well as follow-up action plans were highlighted. The workshop resulted in an Internal Paper "Successful Workshops".

A course on SoE reporting Budapest, Hungary. April 27-May 3

- 3 Twelve Phare countries of Central and Eastern Europe were trained by GRID-Arendal staff on how to produce state-of-the-environment reports for the Internet.

Earth Resources and Environmental Data Discovery Workshop

Arendal, Norway. May 6-8

- 4 An International Arctic Environmental Data Directory (ADD) workshop with participants representing environmental institutions/organisations from USA, Finland, Sweden, Russia, Germany, Norway, UNEP, NASA and the European Commission. The aim of the workshop was to assess metadata content and services in order to adopt a standard for ADD member directories. The workshop was facilitated by the FGDC (Federal Geographic Data Committee) Clearinghouse Coordinator.

GRID-Arendal Seminar with the Norwegian Minister of Environment

Arendal, Norway. August 14

- 5 The Norwegian Minister of Environment, Guro Fjellanger, participated in a seminar held at GRID-Arendal where she was informed of UNEP/GRID-Arendal activities. The seminar included a roundtable discussion focusing on GRID-Arendal's international role with the UNEP, and a video-conference with UNEP Headquarters.

GIS Workshop

Arendal, Norway. August 17-26

Seven participants from Belarus, Latvia and Russia participated in this workshop which aimed to support the Daugava/Zapadnaya Dvina (DZD), Transboundary River Basin Management Initiative.

Html-programming for the production of the national and Cities' State of the Environment report of South Africa

Arendal, Norway. August 31-September 5

- 6 Sixteen officials from the Ministry of Environment and cities in South Africa participated in a workshop and introductory course in html-programming, layout and structuring of web-pages. The workshop was a result of an agreement between the Department of Environmental Affairs and Tourism in Pretoria and GRID-Arendal to cooperate in preparing a State of the Environment Report for South Africa on the Internet.

Seminar on "Use of State-of-the-Environment Information for Action: User and User Needs"

Arendal, Norway. September 7

Participants included Phare workshop attendees, high government officials from Slovenia and the Czech Republic, representatives from EEA and GRID-Arendal staff.

Phare Training Workshop "SoE on the Internet"

Arendal, Norway. September 8-11

- 7 Fifteen participants from Albania, Bosnia-Herzegovina, Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovak Republic, Slovene, and the EEA took part in this training. GRID-Arendal staff arranged the workshop and were responsible for the actual training.

**BALLERINA III Web/HTML
Training Workshop**
Arendal, Norway. September 10-18

- 8 Fourteen participants from the 3 Baltic States learned how to put environmental and sustainable development information on the web. The Eastern European programme of the Swedish EPA sponsored the event. The group represented a mixture of NGOs, national ministries and agencies.



**SoE Reporting on the
Internet Training Workshop**
Baku, Azerbaijan. September 12 - 20

- 9 Twenty-three participants from 13 organisations in Azerbaijan and 4 countries in Central Asia were trained. This workshop was a component in a feasibility study on environmental information systems in Azerbaijan.



**Workshop of the Consortium
on Spatial Information for
Agricultural Research**
Arendal, Norway. October 12-13

The aim of the workshop was to advance the planning of consortium activities. There were 18 participants representing 9 centres of the Consultative Group on International Agricultural Research (CGIAR) and representatives from 2 observer institutions.



**International Workshop on
Poverty Mapping**
Arendal, Norway. October 14-16

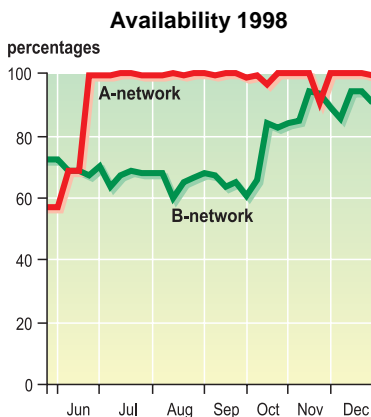
- 10 This workshop focused on the possibilities of mapping poverty and subsequently of producing a set of poverty maps on a global scale. 40 participants representing CGIAR, FAO, World Bank, USAID, Norwegian Foreign Ministry, UNEP and private research institutions participated.



UNEPnet / Mercure

The contract between UNEP and GRID-Arendal was signed just before Christmas 1997. This contract is based on a ten-year strategic perspective and contains guidelines and financial mechanisms for the next four years. The new director of the UIC, Harald Holt, started his work at GRID-Arendal on the first of April 1998, and met early with industrial partners SINTEF/RUNIT, NEWTECH, NERA, ESA and SWISSCOM for negotiations related to the future of the network and reporting relationships. All parties agreed to contribute towards a common goal: To improve the quality of the network.

Improved quality of service has remained the primary objective for UNEPnet¹ in 1998. The objective has been that all stations will be brought into reliable operation, the suppliers should provide the necessary spare parts, and local network administrators are trained to operate the systems. All stations except Almaty have been put into reliable operation. Spare parts have been ordered, and training has taken place.



A contract with RUNIT was signed early June 1998. RUNIT will operate and maintain the IP level in UNEPnet. RUNIT has finalised the build-up phase. New operational procedures and structures have also been developed through a co-operation between UIC and SWISSCOM.

Three vital documents have been developed during the last part of 1998. The first document is a cost-benefit analysis, which aims at finding an answer to the value of UNEPnet. The study was conducted by the Eurodata Foundation on behalf of UIC in close co-operation with UNEP, UNON, ESA and UIC. The results were encouraging, showing a potential benefit from full utilisation of UNEPnet, which clearly exceeds the cost of operation.

The second document is a Business Plan for UNEPnet. This plan is a summary of financial, technical and policy considerations for UNEPnet viewed in a business context. The report concludes that UNEPnet represents a valuable asset for UNEP.

The last report is a Technical Development Plan. This plan describes in detail the recommended development of the network in a 5-year perspective.

Looking Ahead

The major challenge for UNEPnet in 1999 is to develop the application of the network further. This is comprised of two main aspects.

For the environmental applications, the main challenge is to help the UNEPnet sites develop and implement environmental applications on the network. A programme supported by the Swiss government is now being developed. This programme is expected to run over a two-year period.

The second challenge is to utilise the network for telecommunications applications mainly for traffic out of Nairobi. Examples of services, which have been tested and which are now being used more and more, are inter-continental video conferences and fax traffic. A five-year technical development plan has been created which outlines the development of new services, backbone technologies, and network access technologies.



User Focus

In keeping with GRID-Arendal's role within UNEP, the quality and usefulness of our environmental information products and services are of utmost importance. In order to be on the cutting edge of environmental reporting, GRID-Arendal's outputs and their impacts must be evaluated from time to time.

During 1998, recognising the value of user feedback, GRID-Arendal held a user survey which was primarily conducted via e-mail. The survey results are summarized below, together with some of the comments received.

Since the establishment of GRID-Arendal in 1989, achievements of your organisation are widely recognised and highly appreciated by many environmental institutions all over the world, including the Ministry of Nature Protection of Tajikistan. Your organisation plays an especially important role in the field of formatting, popularising and visualising of environmental information, as well as making environmental information more widely accessible to policy-makers, planners and the general public.

I am a student in Canada who is researching for a project on acid rain. Of all the sites I came across, yours was by far the best. Your information sources are made very clear, it's well organized and looks great. Well done.

Currently I am completing my Ph.D. thesis titled: "Reconstructing the character of the Eastern Sector of the Scandinavian Ice Sheet Using Remote Sensing". I have found your data extremely useful during this study. The coastline and administration coverages I used to create basemaps, and the land cover and agricultural grids provide important information when interpreting satellite imagery. While you are, of course, fully acknowledged within the text of my thesis, I would like to take this opportunity to thank you for making your data base freely available.

UNEP/GRID-Arendal Internet Workshop Evaluation Form

Dear workshop participants,

It is our pleasure to evaluate the workshop. Your comments and suggestions, and be able to deliver a better training next time, we would much appreciate if you fill out the evaluation form below.

Please do not hesitate to also express negative points to us, that's the only way we can improve!

Please use scales: 1=not very good, 2=OK, 3=very good

Relevance of the topics (Please check the right boxes)

1. Executive summary: 1/2/3/4	1/2/3/4 why? / comments
2. Suggestions for improving: 1/2/3/4	1/2/3/4 why? / comments
3. Quality of graphics: 1/2/3/4	1/2/3/4 why? / comments
4. Quality of program: 1/2/3/4	1/2/3/4 why? / comments

Comments (did we choose the right things to say about each of the topics?)

1. Executive summary: 1/2/3/4	1/2/3/4 why? / comments
2. Suggestions for improving: 1/2/3/4	1/2/3/4 why? / comments
3. Quality of graphics: 1/2/3/4	1/2/3/4 why? / comments
4. Quality of program: 1/2/3/4	1/2/3/4 why? / comments

Quality of presenter (how teaching good?)

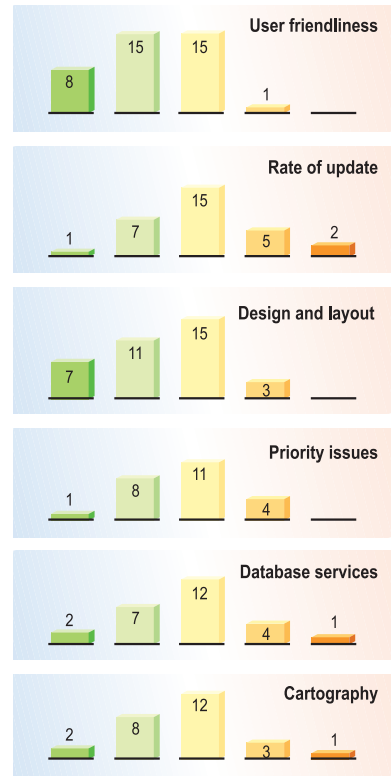
1. Executive summary: 1/2/3/4	1/2/3/4 why? / comments
2. Suggestions for improving: 1/2/3/4	1/2/3/4 why? / comments
3. Quality of graphics: 1/2/3/4	1/2/3/4 why? / comments
4. Quality of program: 1/2/3/4	1/2/3/4 why? / comments

Other issues

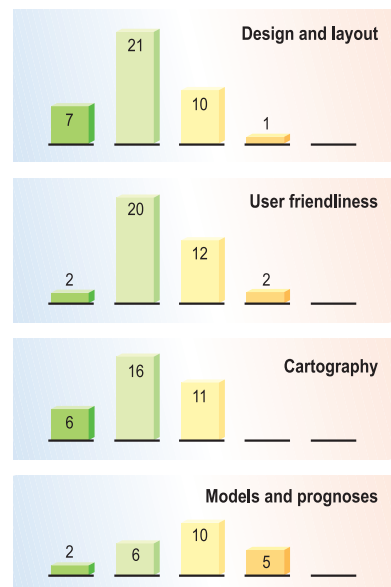
1. Executive summary: 1/2/3/4	1/2/3/4 why? / comments
2. Suggestions for improving: 1/2/3/4	1/2/3/4 why? / comments
3. Quality of graphics: 1/2/3/4	1/2/3/4 why? / comments
4. Quality of program: 1/2/3/4	1/2/3/4 why? / comments

Thank you very much!

Rating of GRID-Arendal web-pages



GRID-Arendal publication usefulness



Key



Selected Publications

Highlights

UNEP/GRID-Arendal and EU Phare. **State of the Environment Reports Sampler CD-ROM**. 1998. A special edition for the European Ministerial Conference "Environment for Europe" in Aarhus. (The CD features 14 national state-of-the-environment reports from Central and Eastern Europe and the NIS, the GEO I report, the Baltic GIS and statistical database, and more than 150 "Vital environmental graphics".)

Denisov, N., Hislop, L., Rekacewicz, P., Simonett, O. **Cookbook for State of the Environment Reporting on the Internet**. UNEP/GRID-Arendal and EU Phare, 1998. ISBN: 82-7701-007-9.

Mansfield III., William H. **UNEP's Information Services and Reforms in the UN System – Potential Opportunities for GRID and UNEP/GRID-Arendal**. Christoffersen, L.E. and Tveitdal, S. **The Experiences of GRID-Arendal and the UN Reform Process. Environmental Information in UNEP and GRID-Arendal during UN reforms**. GRID-Arendal Occasional Papers 1/1998.

Simonett, O., Claasen, D., Denisov, N., Heberlein, C. **The Environment**

and Natural Resources Information Network (ENRIN) in Central and Eastern Europe and the NIS. UNEP's Capacity Development in Environmental Information Management. GRID-Arendal Occasional Papers 2/1998.

Suliandziga, P., Henry, D. **Environmental problems affecting the traditional lifestyles of Indigenous Peoples in the Russian North**. GRID-Arendal, RAIPON, Indigenous Peoples Secretariat, 1998. A seminar report, Moscow, March 1998.

Wyatt B., Kristensen, P., Denisov, N. **State of the Environment Reporting. Institutional and Legal Arrangements in Europe**. ITE, NERI, UNEP/GRID-Arendal 1998. Report to European Environment Agency's Expert Group on SOE Guidelines and Reporting.

Harrison, J., Heberlein, C., Denisov, N., A. Shmurak. **Streamlining and Harmonisation of Biodiversity Information and Reporting in the NIS**. UNEP/GRID-Arendal and WCMC 1998.

Scientific and Conference Papers

Langaas, S. editor, Tidlund, A. rapporteur. **BALLERINA Proceedings**.

First Annual Conference 22-23 May 1997, Riga, Latvia, Organised by the Ballerina Interim Steering Committee in co-operation with Latvian Fund for Nature (LFN), Latvian Environment Data Centre (LEDC) and Baltic Environmental Forum (BEF) ISBN 82-7701-005-2.

Langaas, S. **BALLERINA Proceedings**. Second Annual Conference 8-9 June 1998, Rovaniemi, Finland.

Denisov, N. **Frameworks and Issues. State of the Environment Reporting in Central and Eastern Europe**. Presentation at the Workshop of the Expert Group on SoE Reporting European Environment Agency, Copenhagen, 16-17 March 1998.

Langaas, S., Hägerhäll, B. **Information for Joint Policy and Decision-making towards Sustainable Development in the Baltic Sea Region**. 1998, Submission to the Baltic Agenda 21 Senior Officials Group.

Jansson, Å., Folke, C., Langaas, S. **Quantifying the nitrogen retention capacity of natural wetlands in the large-scale drainage basin of the Baltic Sea**. 1998, Landscape Ecology 13, pp 249-262.

Project Reports

Lelevkin, V., Desyatkov G., Bozov, K., Denisov N. (Eds). **State of the Environment in the Aral Sea Basin**. International Seminar Report, Bishkek, 27-28 November 1997. (English and Russian). UNEP/GRID-Arendal 1998. International Fund for Saving the Aral Sea (IFAS), Scientific & Information Centre "Aral" (SIC-Aral), Kyrgyz-Russian Slavic University (KRSU).

Langaas, S. **An Integrated Executive 1997 Annual Report & Funding Proposal 1998 for BALLERINA**. Project report for the Norwegian Ministry of Environment. UNEP/GRID-Arendal 1998.



Simonett, O., Denisov, N. **ENRIN Central & Eastern Europe and the NIS**. Project Report 1997. UNEP/GRID-Arendal 1998.

Langaas, S., Henry, D. **Persistent Organic Pollutants (POPs) in the Baltic Sea Region. Report** prepared for the project Environmental Cycling of Selected Persistent Organic Pollutants, Environment and Climate Research Programme of the EU Fourth Framework Programme GA-TR/202031/98/1.

Langaas, S. **Support to CIS and CEE participation. Second Annual Ballerina Meeting**. Final report prepared for the Information and Development Program/The World Bank, 202.028, 14 pp – app.

Langaas, S. **Capacity Building in Information Publishing on the Internet for the Baltic Countries within the BALLERINA framework**. 1998, Project report to the Swedish Environmental Protection Agency.

Langaas, S. **The Daugava/Zapadnaya Dvina Co-operation Initiative THE GIS SUPPORT ACTIVITY**. Report for 1998 to the Swedish Environmental Protection Agency.

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Denisov, N., Hislop, L., Rekacewicz, P. **State of the Environment Reporting on the Internet**. Training course manual for the PHARE countries, 27 April - 3 May 1998, Budapest. UNEP/GRID-Arendal 1998.

Denisov, N., Hislop, L., Rekacewicz, P. **Podgotovka dokladov o sostoyanii okruzhayushchey sredy v seti Internet. [Preparation of State of the Environment Reports on the Internet]**. Training course manual for Azerbaijan and Central Asia, 16-20 September 1998, Baku (partly in Russian). UNEP/GRID-Arendal 1998.

Kristensen, P., Anderson, L., Denisov, N. **State of the Environment Reporting: a Checklist for SOE Reporting**. Report to the European Environment Agency's Expert Group on SOE Guidelines and Reporting. NERI, ITE, UNEP/GRID-Arendal 1998.

Folgen K. **ADD Council Meeting No. 5**. Proceedings. (The International Arctic Environment Data Directory). 5-7 June 1998, Rovaniemi, Finland. UNEP/GRID-Arendal 1998.

Deichmann, U., Heberlein, C. **An International Workshop on Poverty Mapping**. Synthesis report. 14-16 October 1998. Arendal, Norway. UNEP/GRID-Arendal 1998.

Contributions to other publications

Henry, D., Rekacewicz, P., Bournay, E. Graphic production. **AMAP Assessment Report: Arctic Pollution Issues**. ISBN 82-7655-061-4.

Denisov, N., Simonett, O. Phare-UNEP: **Working Together in Building Capacities for Reporting**. Phare CORINE/EEA Newsletter, No. 7, 1998.

Langaas, S. **European Geographic Information Infrastructures: Opportunities and pitfalls, 1998**. Chapter 3: **Transboundary European GIS databases: Review of the Baltic region experiences**. Edt. P. Burrough & I. Masser, Taylor & Francis.

Rekacewicz, P., Desforjes, M. Map production "**BARENTSwatch 1998**". An environmental atlas. UNEP/GRID-Arendal, Svanhovd Environmental Centre, the Directorate for Nature Management (DN) and the Norwegian Polar Institute (NP). ISSN 0806 – 5403.

Bjørke, Åke. **Public Education and Awareness – How to put it into Practice**. Global Biodiversity Forum Workshop Report. 1998. IUCN and the Norwegian Ministry of Environment.

Tveitdal, S. **GRID-Arendal: A Global Environmental Information Centre under the United Nations Environment Programme (UNEP)**. Norway Mapping 1998.

GRID-Arendal Internal Papers

Folgen, K. **GRID-Arendal Personnel/Office Administration Manual**. Internal Papers 1/1999.

Henry, D., Tveitdal, S., Thorsen, T.A. **GRID-Arendal Project Administration Manual**. Internal Papers 2/1999.

Holt, H. **GRID-Arendal User Survey**. Internal Papers 3/1999.

Holt, H. **GRID-Arendal Job Satisfaction Analysis**. Internal Papers 4/1999.

Folgen, K. **Successful Workshops. GRID-Arendal's internal guide to workshop planning, facilitating and follow-up**. Internal Papers 5/1999.

Tveitdal, S. **GRID-Arendal Organisational Structure. Unit Responsibilities**. Internal Papers 6/1999.

Jørgensen, R. **GRID-Arendal Database Application. User Manual**. Maps and Graphics Collection and GIS Data Sets. 1998.

Green Office - Green Organisation

"Goal 33" in "GRID-Arendal Strategy 2000" aims at establishing "green office" guidelines. During 1998 GRID-Arendal devoted project resources to raise awareness among staff and implement some measures for a more environmentally friendly office. A week of green action was organised and fact sheet summaries were produced.

This initiative will be expanded during 1999, not only with emphasis on a greener office, but also on a greener organisation. The internal results will



be shared with institutions co-located within Longum Park, and reported to UNEP.

Guest Trainees



Marika Korpilaakso
Student of Environment Management
Tampere Polytechnic University, Finland
(January - June 1999)



Kaarina Lappalainen
Student of Environment Management
Tampere Polytechnic University, Finland
(January - June 1999)



Petri Meriä
Student of Economy
Finnish Environment Institute, Finland
(June 1998)



Carsten Pipel
Student of Landscape Ecology
Univ. of Muenster, Germany
Europlacements Exchange Programme
(October 1998 - January 1999)



Christoph Uhlenkueken
Diploma Student of Geography
University of Muenster, Germany
(August 1998)

Acronyms

ADD	International Arctic Environment Data Directory	ICLEI	International Council for Local Environmental Initiatives
AEPS	Arctic Environmental Protection Strategy	IFAS	International Fund for Saving the Aral Sea
AMAP	Arctic Monitoring and Assessment Programme	Internet	International electronic communication network
BALLERINA	BALTic Sea Region On-Line Environmental Information REsources for INternet Access	IP	Internet Protocol
BALTIC 21	Agenda 21 for the Baltic Sea Region	IPS	Indigenous Peoples' Secretariat
BEF	Baltic Environmental Forum	ITE	Institute of Terrestrial Ecology
CAFF	Conservation of Arctic Flora and Fauna	LEDC	Latvian Environment Data Centre
CCRS	Canada Centre for Remote Sensing	LFN	Latvian Fund for Nature
CD-ROM	Compact Disc-Read Only Memory	NGO	Non-governmental Organisation
CEE	Central and Eastern Europe	NERI	National Environmental Research Institute
CEROI	Cities' Environment Reports on the Internet	NIS	Newly Independent States
CGIAR	Consultative Group for International Agricultural Research	NORAD	Norwegian Agency for Development Co-operation
CIAT	International Centre for Tropical Agriculture	OECD	Organisation for Economic Co-operation and Development
DN	Directorate for Nature Management	PAME	Protection of the Arctic Marine Environment
DZD	The Daugava/Zapadnaya Dvina River Basin Co-operation	Phare	EU Assistance for the Reforms of the Economies (Central and Eastern Europe)
DEIA	Division of Environmental Information, Assessment and Early Warning	RAIPON	Russian Association of Indigenous Peoples of the North
EEA	European Environment Agency	REDUCE	Reduction in the use and effects of hazardous chemical-products
EIONET	European Information and Observation Network	RoE	Regional Office for Europe
EIS-SSA	Environment Information Systems in Sub-Saharan Africa	SERIS	State of the on-line Environment Reporting Information System
ENRIN	Environment and Natural Resources Information Network	SKME	Norwegian Mapping Authorities - Environmental Unit
EPA	Environment Protection Agency	SOE	State of the Environment
EPPR	Emergency Prevention, Preparedness and Response	TAC	Technical Advisory Committee
ESA	European Space Agency	TEIA	Transboundary Environmental Information Agency
EUROSTAT	Statistical Office of the European Union	UIC	UNEPnet Implementation Centre
FAO	United Nations Food and Agriculture Organisation	UNCHS	United Nations Centre for Human Settlements (Habitat)
FGDC	Federal Geographic Data Committee	UNCSD	United Nations Commission for Sustainable Development
FIVIMS	Food Insecurity and Vulnerability Information Mapping System	UNEP	United Nations Environment Programme
GEO	Global Environmental Outlook	UNEP-IE	UNEP Industry and Environment
GIS	Geographic Information Systems	UNEP-IETC	UNEP Industry and Environment Technology Centre
GRID	Global Resource Information Database	UNEPnet	The Global Internet for the environment and sustainable development
GTZ	German Agency for Technical Co-operation	UNFCCC	United Nations Framework Convention on Climate Change
GUO	Global Urban Observatory	UNON	United Nations Offices in Nairobi
HABITAT	United Nations Centre for Human Settlements	USAID	U.S. Agency for International Development
HTML	Hypertext mark-up language	UTK	Ugland Totalkart
IASC	International Arctic Science Committee	WCMC	World Conservation Monitoring Centre
		WHO	World Health Organisation
		WRI	World Resources Institute
		WWW	World Wide Web

GRID-Arendal Staff



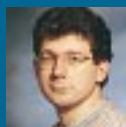
Åke Bjørke, B.Sc.
Internet and Information
Services Unit



Emmanuelle Bournay, M.Sc.
GIS/Visual Communication
Unit
(until 31.01.99)



Tormod Brommeland
Civil Worker
(from 01.07.98)



Arnt W. K. Brox, B.Sc.
UNEPnet Implementation
Centre
(until 28.02.98)



Loran Czaran, M.Sc.
UNEPnet Implementation
Centre



Nickolai Denisov, Ph.D.
Head,
Environmental Reporting/
Indicators Unit



Manon Desforges, B.Sc.
GIS/Visual Communication
Unit
(until 15.02.98)



Karen Folgen, B.A.
Secretary to the Managing
Director/Personnel



Bertil Hägerhäll, M.Sc.
Uppsala Office
(from 01.10.98)



Øystein Halvorsen, M.Sc.
UNEPnet Implementation
Centre



Claudia Heberlein, M.Sc.
Geneva Office



David Henry, B.A.
Ottawa Office



Lawrence Hislop, M.A.
Head,
Internet and Information
Services Unit



Harald Holt, M.B.A.
Director,
UNEPnet Implementation
Centre



Ingrid Høgeli
Finance and Administration



Roy Jørgensen
Civil Worker
(until 02.08.98)



Inge Tuseth Knudsen
Internet and Information
Services Unit
(until 31.08.98)



Lars Kullerud, M.Sc.
Head,
GIS/Visual Communication
Unit



Sindre Langaas, Ph.D.
Uppsala Office



Wenche Lien
Finance and Administration



John Mugwe, M.S.S.
UNEPnet Implementation
Centre



Margaret Ohldieck
Finance and Administration
(until 01.03.98)



Vigdis Pedersen
Finance and Administration
(from 20.01.99)



Philippe Rekacewicz, Ph.D.
Geographer/Cartographer
GIS/Visual Communication
Unit



Emma Lisa Schipper, B.Sc.
Development Assistance Unit



Petter Sevaldsen
GIS/Visual Communication
Unit



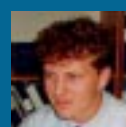
Otto Simonett, Ph.D.
Geneva Office



**Janet Fernandez Skaalvik,
M.A.**
Environmental Reporting/
Indicators Unit



Morten Sørensen, M.Sc.
Head,
Development Assistance Unit



Thore-André Thorsen, B.A.
Head,
Finance and Administration
(from 01.03.98)



Svein Tveitdal, M.Sc.
Managing Director

Outlook for 1999

Our major institutional development programme in 1998 included a reorganisation of the institution effective from January 1999.

The new organisational structure focuses on the key areas of expertise which GRID-Arendal aims to develop further. These areas include new units for

- Internet and Information Services,
- Environment Reporting and Indicators,
- Development Assistance, and
- GIS & Visual Communication.

In addition, we host the UNEPnet Implementation Centre (UIC) which was established in 1998.

We have also established two new arrangements for outposted staff. In addition to our office in Sweden, which has now moved from Stockholm to Uppsala, we have new "GRID-Arendal ambassadors" in Geneva and Ottawa. These two outposted staff members will work to increase our co-operative capacity with UNEP's Regional Office for Europe and the rest of the UN family in Geneva, and with our Arctic Programme in Canada and the US.

1999 is also the year in which we will review our strategic plan for the period 2001-2003. This process will include comprehensive involvement from the GRID-Arendal management and staff, UNEP, and our Board of Directors.

Initiatives that are planned for 1999 within our current programme areas are:

- focus on user feedback and quality control
- continued development of UNEP's ENRIN programme in Central and Eastern Europe, and stronger support to this programme in Africa
- continued development of the Polar and Baltic Programmes subject to availability of funds
- in close co-operation with UNEP HQ, setting up a Web Shop where all UNEP publications and information products can be purchased via the Internet
- expand the operations of the UNEPnet Implementation Centre to improve communications within UNEP and its constituencies in developing countries

Feasibility studies and workshops in 1998 have paved the way for starting two new major programme elements in 1999:

- The first one is in support to the Indigenous Peoples of Arctic Russia, and
- the second, a major Poverty Mapping programme in co-operation with CGIAR, FAO/FIVIMS and other UN agencies. This is a follow-up to our 5-year co-operation with the CGIAR on the use of GIS in improving efficiency in agricultural research.

Our strategic development and planned activities for 1999 represent a strengthening of our contribution to UNEP's programme as well as the UN, both on a short-term and long-term basis.

We look forward with anticipation to the celebration of GRID-Arendal's 10th Anniversary in August. It is our aim to mark this occasion by creating an event which will contribute with constructive inputs to UNEP's mission.



A handwritten signature in dark ink, appearing to read "Svein Tveitdal".

Svein Tveitdal
Managing Director
GRID-Arendal

Message from UNEP Headquarters

The year 1998 proved a momentous one for UNEP. We welcomed our new Executive Director, Mr. Klaus Töpfer, and re-organised the institution along functional lines with particular emphasis on environmental information, assessment and early warning. The major challenge in 1999 therefore will be to adjust the divisional programme to meet the new focus areas while holding on to the foundation of past successes.

A revised assessment strategy will be the major vehicle to ensure a harmonised programme. A draft working paper on assessment was completed in 1998. The report, developed by external advisors, was presented to the Governing Council for information. It will now be reviewed internally by UNEP, then our sister UN agencies and governments to ensure that the programme addresses priority issues in a way that maximises collaboration and allows UNEP to contribute to the process using its areas of comparative strength and advantage. We hope to produce a final draft by June 1999.

A handwritten signature in black ink that reads "Dan Claassen".

Daniel van R. Claassen
Officer-in-Charge
UNEP-DEIA

The fact that GRID-Arendal's unique capacities are fully dedicated to the support of UNEP will ensure that it continues to make notable contributions to international information and assessment. We expect a continuance of the contribution on polar issues, the expansion of SOE on the internet and the furtherance of information and assessment capacity development in Central and Eastern Europe. The linkages being built with UNEP Geneva and CCRS Ottawa, will also improve networking and strengthen capacities for improved coordination and delivery of programmes in European and Arctic issues.

The success of the GRID-Arendal programme will further enhance awareness of the model instituted by the Government of Norway when it established the centre. UNEP would commend similar arrangements to other countries: establishing, with strong government support, not-for-profit foundations which address some of the critical environmental issues facing the globe today. This combination of national support focused on international programme support provides a viable and cost-effective contribution to the resolution of some of those issues while giving much credit to the donor country.

The account of the 1998 GRID-Arendal programme again highlights a number of important projects where the centre made direct net contributions to UNEP's programmes. The ENRIN project to Central and Eastern Europe again deserves mention. Similarly, a major contribution was made to UNEP's premier assessment – the Global Environment Outlook report (GEO-2) – on polar issues and in the support of the production process.

The joint project with CCRS in Canada will enhance the performance of Arctic and Polar activities and strengthen links with North America. The geographic information system enhancement of the CGIAR was successful and we expect much from the more internalised second phase currently underway.

The successful operation of the UNEPnet Implementation Centre is already making a major contribution to UNEP's worldwide communications on environmental issues.

A fine performance for 1998, may you duplicate your performance in the year to come.

The UNEP/GRID Network



UNEP

Division of Environmental Information, Assessment and Early Warning
P.O. Box 30552
Nairobi, KENYA
Tel: +254 2 62 35 12
Fax: +254 2 62 39 43 / 62 39 44
Email: EIAINFO@unep.org
<http://www.unep.org/>

UNEP

Regional Office for Europe
15 Chemin des Anémones
Geneva Executive Center
CH-1219 Châtelaine
Geneva, SWITZERLAND
Tel: +41 22 917 8111
Fax: +41 22 797 3420 / 917 8024
Email: virginie.combaz@unep.ch
<http://www.unep.ch/>

GRID-Bangkok (Thailand)

UNEP Environment Assessment Programme for Asia and the Pacific, Outreach Building
Asian Institute of Technology
P.O. Box 4, Klongluang
Pathumthani 12120, THAILAND
Tel: +66 2 51 62 124 / 52 45 365
Fax: +66 2 51 62 125 / 52 46 233
E-mail: grid@ait.ac.th / grid@eapap.unep.org
<http://www.eapap.unep.org/>

GRID-Budapest (Hungary)

Department for Environmental Information Systems
Ministry for Environment
Fő u. 44-50, H-1011 Budapest I.
HUNGARY
Tel: +36 1 457 33 69
Fax: +36 1 201 43 61
E-mail: bozo@kik.ktm.hu
<http://www.gridbp.meh.hu/indexa.htm>

GRID-Ottawa (Canada)

Canada Centre for Remote Sensing
588 Booth Street
Ottawa, Ontario, K1A 0Y7
CANADA
Tel: +1 613 995 2042
Fax: +1 613 947 1383

GRID-Christchurch (New Zealand)

c/o University of Canterbury
Private Bag 4800
Christchurch, NEW ZEALAND
Tel: +64 3 366 7001
Fax: +64 3 364 2999
Email: smith.@gridc.org.nz
<http://www.gridc.org.nz/>

GRID-Geneva (Switzerland)

Geneva Executive Centre (GEC)
11 Chemin des Anémones
CH-1219 Châtelaine
Geneva, SWITZERLAND
Tel: +41 22 917 82 94/95
Fax: +41 22 917 80 29
E-mail: services@grid.unep.ch
<http://www.grid.unep.ch/>

GRID-Moscow (Russia)

117784, Moscow, Kedrova street 8,
Building 1, of. 413, RUSSIA
Tel.: +7 095 125 57 38
Fax: +7 095 176 26 75
E-mail: grid@space.ru
<http://gridmsk.infospace.ru/>

GRID-Nairobi (Kenya)

Box 30552
Nairobi, KENYA
Tel: +254 2 62 42 14
Fax: +254 2 62 43 15
Telex: 22068 UNEP-KE
E-mail: johannes.akwumi@unep.org
<http://www.unep.org/unep/eia/ein/grid/>



GRID-Kathmandu (Nepal)

International Centre for Integrated Mountain Development (ICIMOD)
4/80 Jawalakhel, GPO Box 3226
Kathmandu, NEPAL
Tel: +977 1 525316 / 525313 Ext. 550/551
Fax: +977 1 536747 / 524509
Email: menris@icimod.org.np / pramod@icimod.org.np
<http://www.unep.org/unep/eia/ein/grid/icimod/>
<http://www.icimod.org.sg/>

GRID-Sao Jose dos Campos (Brazil)

Instituto Nacional de Pesquisas Espaciais
Av. dos Astronautas, 1758
Sao Jose dos Campos, SP, 12227-010, BRAZIL
Tel: +55 123 45 65 20
Fax: +55 123 45 64 68
E-mail: grid@dpi.inpe.br

UNEP/GRID-Sioux Falls (USA)

EROS Data Center
US Geological Survey
Sioux Falls, SD 57198, USA
Tel: +1 605 594 6107 / 6117
Fax: +1 605 594 6119
E-mail: singh@edcmail.cr.usgs.gov.
<http://grid2.cr.usgs.gov/>

GRID-Tbilisi

1, M. Alexidze St., VI fl., # 603
Institute of Geophysics
380093, Tbilisi, GEORGIA
Tel.: +995 32 942808 / 335514
Fax.: +995 32 942808
E-mail: grid@gridtb.caucasus.net
<http://www.gridtb.caucasus.net/>

GRID-Tsukuba (Japan)

Center for Global Environmental Research
National Institute for Environmental Studies
Environment Agency, Government of Japan
16-2, Onogawa, Tsukuba
Ibaraki 305-0053, JAPAN
Tel: +81 298 50 23 49
Fax: +81 298 58 26 45
E-mail: grid@nies.go.jp / cgerdb@nies.go.jp
<http://www-cger.nies.go.jp/grid-e/index.html>

GRID-Warsaw (Poland)

Environmental Information Centre
ul. Merliniego 9
02-511 Warszawa 12, POLAND
Tel: +48 22 62 74 623
Tel/Fax: +48 22 48 85 61
E-mail: grid@gridw.pl
<http://www.gridw.pl/>

GRID
Arendal

GRID-Arendal
Longum Park,
P.O. Box 1602, Myrene,
N-4801 Arendal,
NORWAY
Tel: +47 37 03 5650
Fax: +47 37 03 5050
E-mail: grid@grida.no
<http://www.grida.no/>

GRID-Arendal/Regional Co-ordination for Central and Eastern Europe and the NIS

Regional Co-ordinator Otto Simonett
c/o UNEP ROE
15 Chemin des Anémones,
CH-1219 Châtelaine, Geneva
SWITZERLAND
Tel: +41 22 917 83 42
Fax: +41 22 917 80 24
E-mail: Simonett@grida.no,
Simonett@unep.ch,
<http://www.grida.no/>

GRID-Arendal/CCRS Joint Project

Project Manager David Henry
c/o Canada Centre for Remote Sensing
588 Booth St., Ottawa
Ontario, K1A 0Y7
CANADA
Tel: +1 613 995 2042
Fax: +1 613 947 1383
E-mail: dhenry@NRCan.gc.ca
<http://www.grida.no/>

GRID-Arendal, Programme Co-ordination for the Nordic/Baltic Region

Programme Co-ordinator Bertil Hägerhäll
P.O.Box 2158,
SE-750 02 Uppsala
SWEDEN
Tel: +46 18 60 11 14
Fax: +46 18 12 49 45,
E-mail: hagerhall@grida.c.se,
<http://www.grida.no/>