



UNEP

GRID Arendal



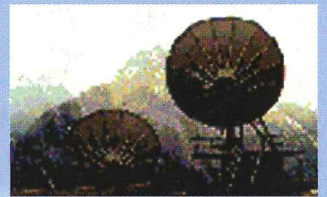
january
february
march



april
may
june



july
august
september



october
november
december

annual report 1996

1989

1990

1991

1992

1993

1994

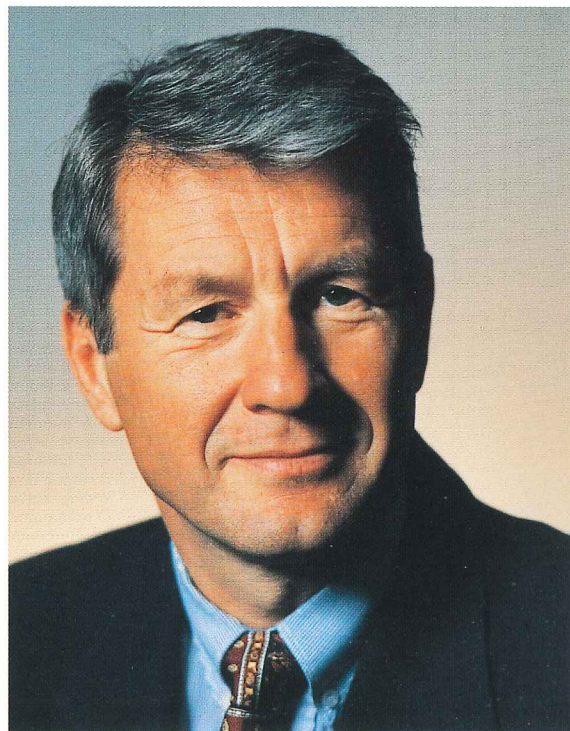
1995

1996

1997



THE PRIME MINISTER



In 1997 we will be taking stock of the achievements in the fields of environment and development 5 years after the UN Conference in Rio, and 10 years after the Brundtland Commission delivered its report on sustainable development. It is with delight we conclude that GRID-Arendal, as the first Norwegian institution to bear the UN flag, has contributed importantly towards the implementation of its relevant chapter in Agenda 21.

GRID-Arendal is a joint effort between UNEP and the Government of Norway. Protection of the environment based on scientific knowledge has been a high priority of the Norwegian government and will play an increasingly important role also on the global agenda towards sustainable development.

As the complexity and scope of environmental challenges increase, the need for efficient use of information technology becomes indispensable. Institutions like GRID-Arendal are needed to make progress in this process.

I am pleased to see that GRID-Arendal is serving decision-makers and the public all over the world with reliable and easily understandable environmental information. Particularly the task of disseminating environmental information is a success for GRID-Arendal.



Thorbjørn Jagland

UNEP/GRID-Arendal: The Year in Review

A main objective of GRID-Arendal is to provide environmental information to decision-makers and the public. This is achieved through on-line dissemination of data and information from our database, preparation of electronic state-of-the-environment reports, written reports, production of environmental maps and graphics, organising workshops and executing capacity building in environmental information management.

We note with pride that 1996 was another very productive year for GRID-Arendal. Some of the highlights were:

- 1.2 million hits were registered on our World Wide Web server and 12 000 data sets were disseminated on-line to users from our database, making us the major on-line provider of environmental information in the Nordic countries.
- Major input has been given to the preparation of several environmental reports under the Arctic Environmental Protection Strategy - the international initiative to protect the Arctic Environment.
- GRID-Christchurch was opened May 30 in the presence of the UNEP Executive Director, Elizabeth Dowdeswell, and the Director of GRID-Arendal. Our co-operative agreement with the new centre, signed during the opening, will significantly increase our capacity to work jointly on tasks for the Antarctica.
- GRID-Arendal was selected winner of The Princes' Award - the European "Environmental Oscar" for best audiovisuals on Europe's environment. It was

presented to the Director by the two patrons His Royal Highness Crown Prince Frederik of Denmark and His Royal Highness Crown Prince Felipe of Spain at a ceremony in Copenhagen.

- 18 countries are now participating actively in the Environmental Information Networking programme (ENRIN) in Central and Eastern Europe. On November 29 and as the first CEE country, the Georgian Minister of the Environment launched a comprehensive national State of the Environment Report on the Internet as part of this programme.
- Our co-operation with the CGIAR in the use of GIS in agricultural research was further developed. 13 out of 16 of the International Agriculture Research Centres participated in the annual workshop in Arendal.
- We have arranged 8 international workshops in Arendal focusing on environmental information in the Arctic, Nordic, Central and Eastern European and developing countries.
- GRID-Arendal staff has in co-operation with other institutions or alone produced 33 scientific or popular reports on environmental information.

Our success factors are a highly competent and motivated staff, a well-functioning Board, and active feedback from our clients as well as from UNEP and the Norwegian Ministry of Environment. We would like to express our appreciation to all those who contributed to GRID-Arendal's encouraging performance in 1996.

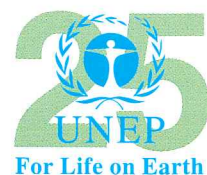



Leif E. Christoffersen
Chairman of the Board



Svein Tveitdal
Director

UNEP/GRID-Arendal



UNEP
The Mission of the United Nations Environment Programme

"To provide leadership and encourage partnership in caring for the environment by inspiring, informing and enabling nations and people to improve their quality of life without compromising that of future generations."

UNEP's programme of work for 1996-97 focuses on the following areas:

- sustainable management and use of natural resources
- sustainable production and consumption
- a better environment for human health and well-being
- globalisation and the environment

GRID-Arendal



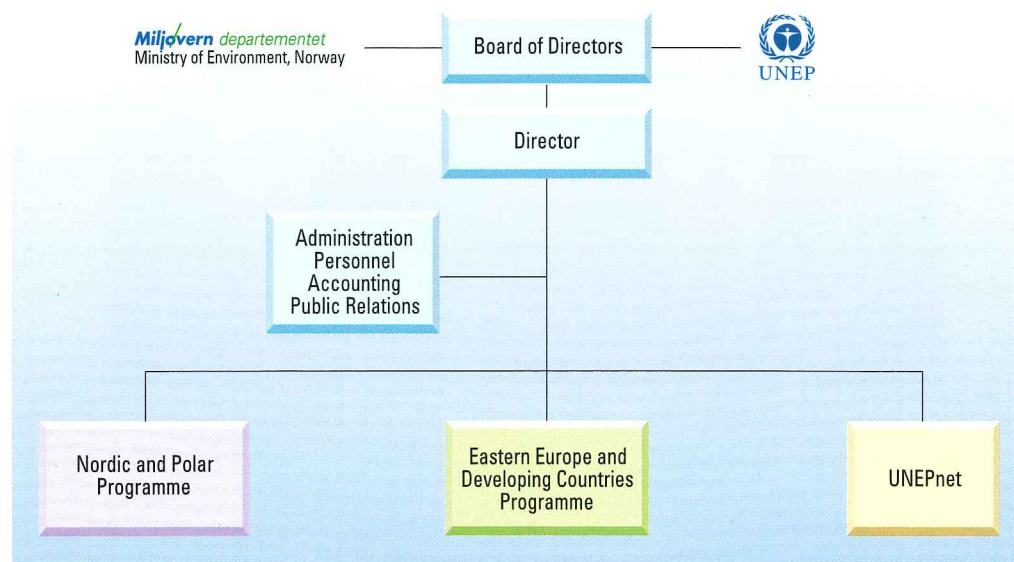
GRID-Arendal is located in Arendal, a city on the southern coast of Norway. Photo: Åke Bjørke

As an integral part of UNEP's Division of Environmental Information and Assessment (DEIA), GRID-Arendal aims to provide decision-makers and the public with improved access to meaningful envi-

ronmental data and information, and to help increase the capacity to use environmental information for decision-making, awareness and action. GRID-Arendal was established in 1989 by UNEP and the Norwegian Ministry of Environment as a foundation subject to Norwegian laws and regulations.

Within the global UNEP/GRID system, GRID-Arendal focuses on the two polar regions, on the Nordic countries with their adjacent seas, on Central and Eastern Europe, and on strengthening the global environment system of UNEP and the UN system as a whole.

GRID-Arendal is located in the Longum Park Technology Centre in Arendal, a city on the southern coast of Norway. Longum Park represents a unique hi-tech co-location of 20 firms and 170 employees. GRID-Arendal's branch office for Nordic/Baltic activities is located at the Department of Systems Ecology, University of Stockholm, Sweden.



UNEP/GRID-Arendal's Board of Directors



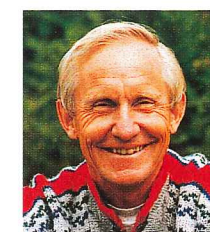
Leif E. Christoffersen
Chairman of the Board



Hans Alders
Director
Regional Office for Europe UNEP
From September 1996, Commissioner of
the Queen in the Province of Groningen
The Netherlands



Harvey Croze
Assistant Executive Director
Division of Environmental
Information and Assessment,
UNEP (until September 1996)



Øystein Dahle
Board Chairman
World Watch Institute Norden
(from September 1996)



Harald Dovland
Director
Norwegian Institute for
Air Research
(until September 1996)



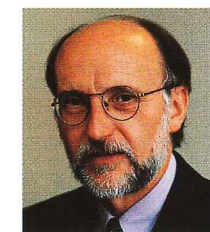
Herdis Meihack Engen
County Council
Representative
(until September 1996)



Tove Strand Gerhardsen
Director
The Research Council of Norway



Takahiko Hiraishi
Assistant Executive Director
Division of Environmental
Information and Assessment,
UNEP (from September 1996)



Domingo Jiménez-Beltrán
Executive Director
European Environment Agency
(from September 1996)



Lars-Erik Liljelund
Director
Environmental Advisory
Council, Ministry of
Environment, Sweden



Hanne Petersen
Director
Department of Arctic Environ-
ment, National Environmental
Research Institute, Denmark
(from September 1996)



Odd Rogne
Executive Secretary
International Arctic Science
Committee



Øyvind Schreiner
Head of Division
Norwegian Pollution
Control Authority
(until September 1996)

UNEP/GRID-Arendal's Statement of Accounts

Balance sheet as per December 31, 1996

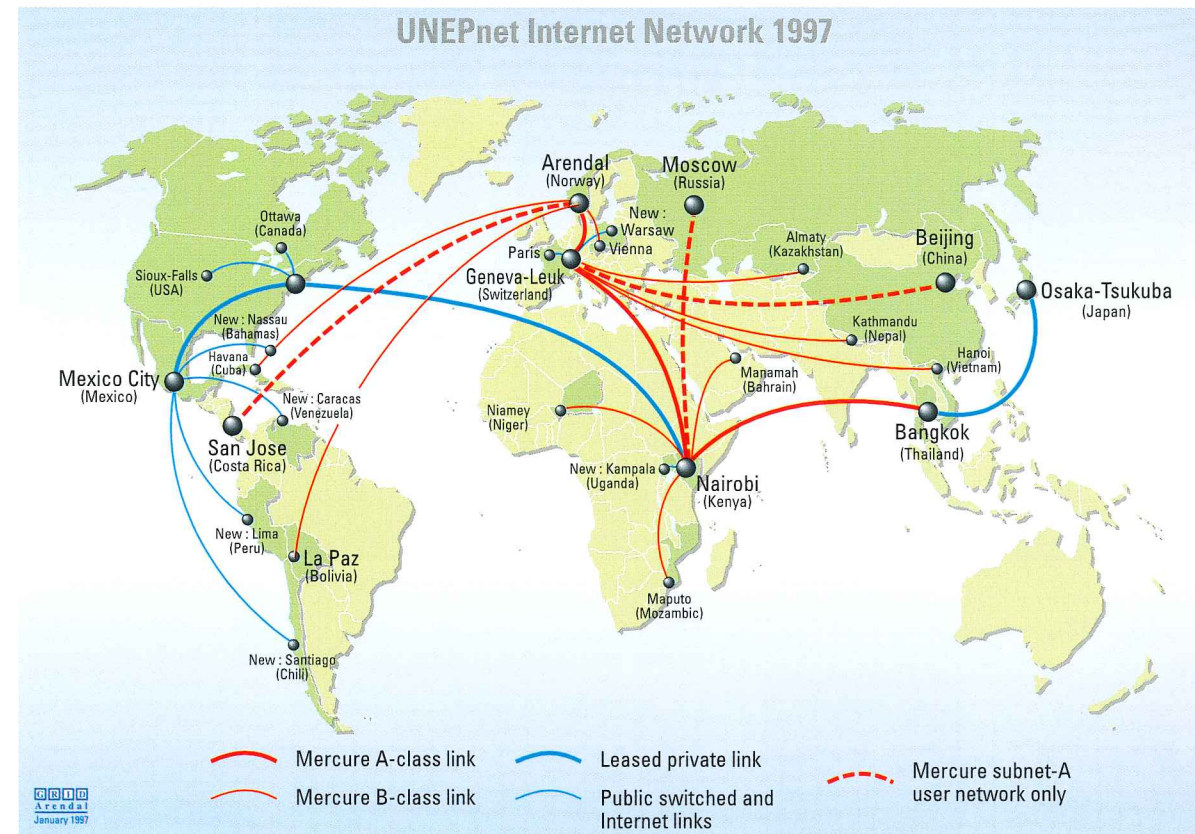
	1996	1995
Current assets	6 946 667	7 562 473
Fixed assets	371 255	524 297
Total assets	7 317 922	8 086 770
Short-term liabilities	3 064 433	4 576 461
Equity	4 253 489	3 510 309
Total liabilities and equity	7 317 922	8 086 770

Profit and loss account for the period January 1, to December 31, 1996

	1996	1995
Operating revenues	16 891 450	16 082 388
Operating expenses	16 381 758	15 639 009
Operating result	509 692	443 379
Net financial items	233 488	258 378
Result for the year	743 180	701 757

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

UNEP/GRID-Arendal's Focus on UNEPnet



The global Internet for the environment and sustainable development

UNEPnet, the Green Lane on the global Internet

UNEPnet is the international environmental Internet developed by the United Nations Environment Programme (UNEP) to better meet the needs of its users world-wide. Essential to the viability of UNEPnet in developing countries and countries with economies in transition is Mercure, a rare and exciting innovation in global telecommunications. Mercure enables access to timely and comprehensive environmental and sustainable development information through modern and cost-effective data communications within UNEPnet and through links to the global Internet.

In order to meet these objectives UNEPnet has to adopt technologies with broad acceptance, yet accessible to the widest range of capabilities amongst its users. Today, the internet technology standards are providing the best basis for such an

outreach, giving users common tools used on the Internet such as electronic mail and World Wide Web services, and making them able to provide information to the outside world. UNEPnet is an autonomous internet, and will be linked to the global Internet at selected regional centres.

UNEP is also required to engage in close partnerships with governments, academic and competence centres, as well as other UN organisations, to be able to fulfil its role in sustainable development and protection of the environment as stated in Agenda 21 (the UN Conference on Environment and Development - UNCED - in Rio).

GRID-Arendal has contributed to the successful development and implementation of UNEPnet and Mercure, based on its own and Norwegian and European competence in information systems development and implementation.

UNEP/GRID-Arendal's Focus on UNEPnet

Mercure: A satellite telecommunications system project that ties the world of UNEPnet together.

Mercure is a satellite-based global telecommunications network project. The project reaches its final implementation phase during the first quarter of 1997. As international telecommunication links are very expensive, Mercure constitutes the main global connectivity for UNEPnet. The integration of satellite telecommunications and internet technology has been crucial in creating a network implementing UNEP's role in its outreach to developing countries and countries with economies in transition. Through the direct lease of satellite capacity, and UNEP ownership of the core investments in such a network, UNEP can provide connectivity through the UN programmes to regional and national partners at a considerably lower cost than through commercial services.

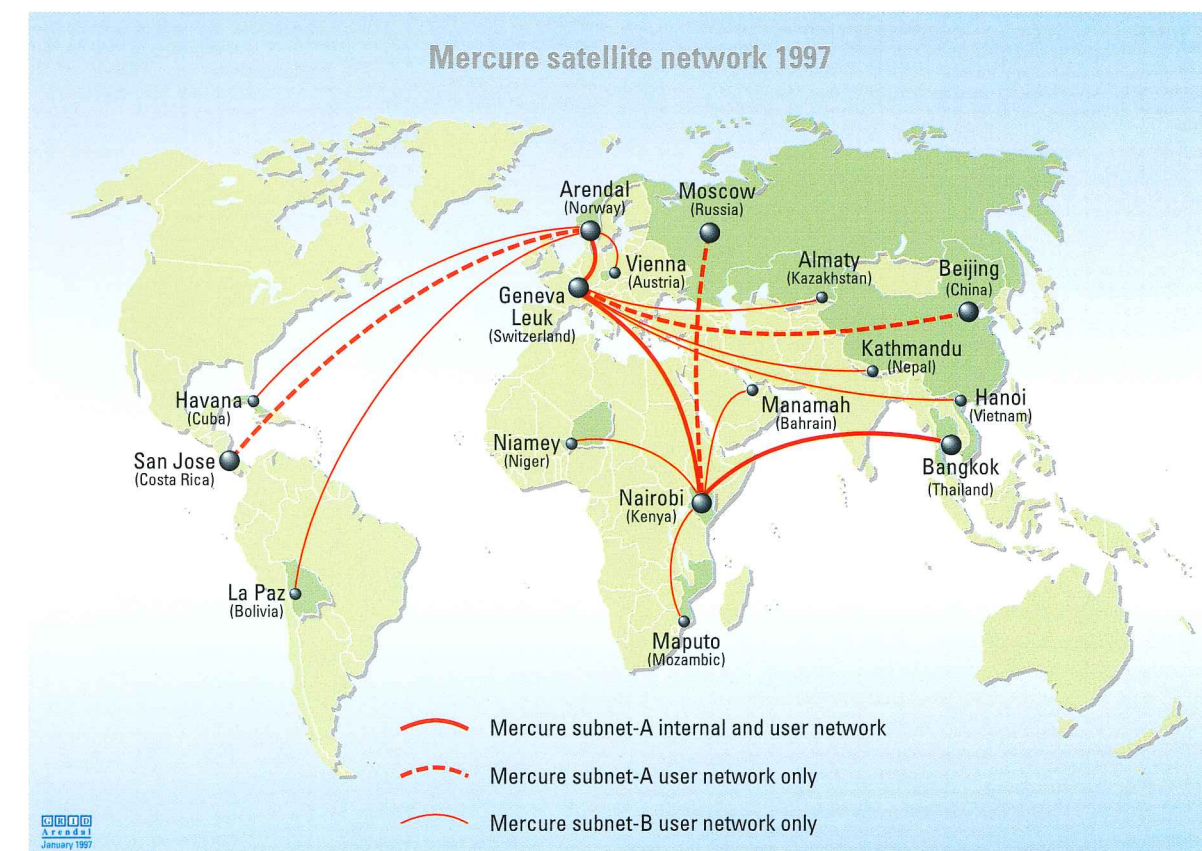
The Mercure project is funded by 6 European Space Agency (ESA) countries: Austria, Belgium, Norway, Spain, Switzerland, and the United Kingdom. ESA has also been responsible for the procurement and

implementation through a group of European industry contractors, including Newtec (Belgium), NERA (Norway), Softlab & Osiconsult (Austria), Andrew (UK), CIR/Swiss Telecom PTT (Switzerland), Alenia (Italy) and Indra (Spain). ESA is responsible for the industrial implementation on behalf of the 6 donor countries.

GRID-Arendal has the technical responsibility within UNEP for the implementation of Mercure, including the preparation of all sites.

UNEPnet objectives

Through UNEPnet and Mercure, UNEP offers its partners a cost-efficient, global network for environmental and sustainable development, information and knowledge exchange, capable of reaching countries with less robust infrastructure, thus enabling access to information and competence on an equal basis. This represents a major step in making possible sustainable development and better management of the environment.



UNEP/GRID-Arendal's Polar Focus

GRID-Arendal's Polar programme provides geo-referenced (spatial) environmental information for decision-makers, scientists and the general public interested in the Polar environments. It aims to serve as an effective regional node for these regions within UNEP.

Arctic Environmental Protection Strategy (AEPS)

GRID-Arendal has a recognised position as a data provider and communicator of circum-Arctic environmental information within the Arctic Environmental Protection Strategy (AEPS) process and its constituent programmes. AEPS is the major initiative to protect the Arctic environment.

Arctic Monitoring and Assessment Programme (AMAP)

The primary objective of AMAP is the measurement of levels of anthropogenic pollutants and the assessment of their effects in relevant component parts of the Arctic environment. Monitoring covers the atmospheric, terrestrial, freshwater and marine environments and human health. The assessment will be presented in status reports to Ministers in June 1997 as a basis for necessary steps to be taken to reduce pollution.

GRID-Arendal is playing a central role in co-ordinating graphical production for these reports. In addition to paper copies of the reports, GRID-Arendal will create a database of all source material, GIS data sets and final graphics. These will then be available for the production of CD-ROM and Internet versions of the reports.

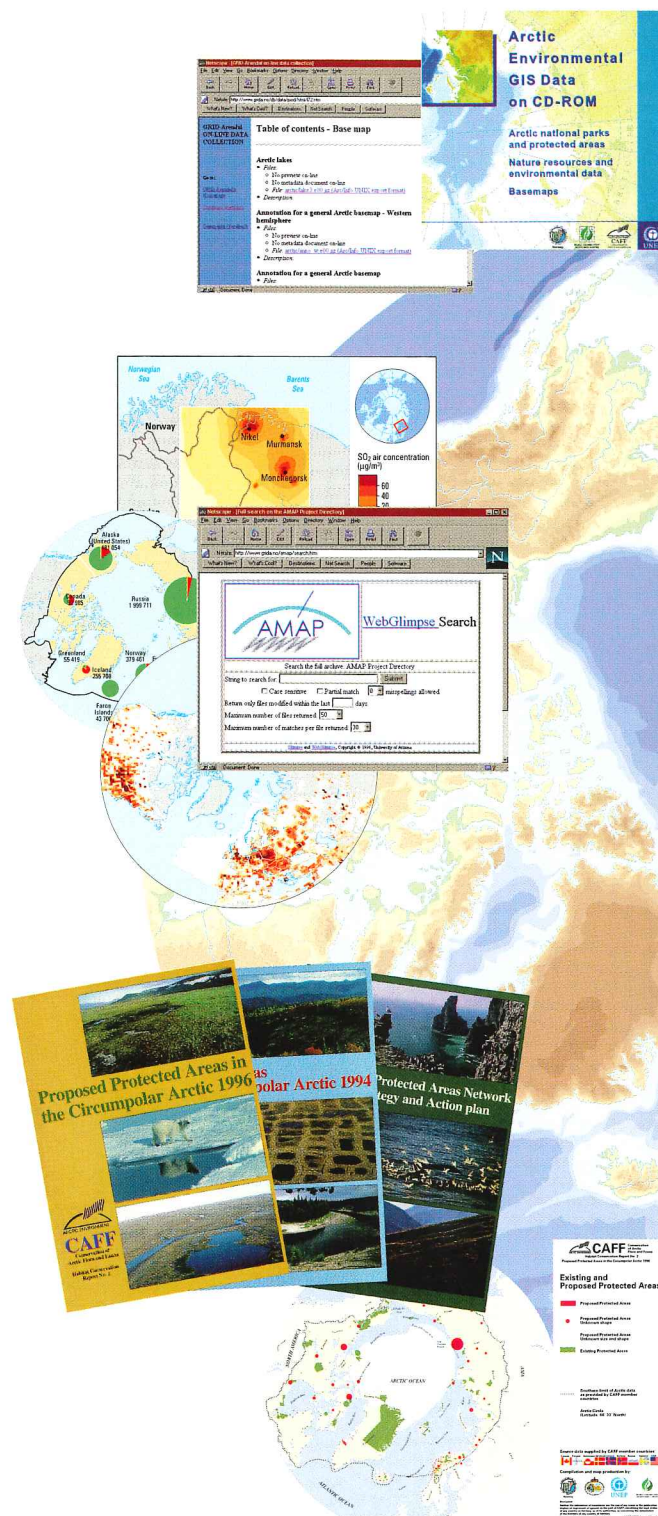
As support to the radioactivity group of AMAP, GRID-Arendal has also been compiling a circum-polar database on human population (total, urban/rural, indigenous) and the output of selected products of agriculture (livestock, meat, milk, potatoes) and harvesting (berries, mushrooms, fish, reindeer). The database covers the northern parts of the Arctic countries and are, wherever possible, represented by the first and second level sub-national units.

More AMAP information can be found on the Internet at: <http://www.grida.no/prog/polar/amap/>

Conservation of Arctic Flora and Fauna (CAFF)

GRID-Arendal provided database, GIS and cartographic support to the working group on the Conservation of Arctic Flora and Fauna (CAFF). Recent publications under the Circumpolar Protected Area Network (CPAN) sub-programme include: "Proposed Protected Areas in the Circumpolar Arctic" and "CPAN Strategy and Action Plan". GRID-Arendal continues to host CAFF's homepage on the Internet. Details of all CAFF activities, together with downloadable data sets can be found on the Internet at:

<http://www.grida.no/prog/polar/caff/>



UNEP/GRID-Arendal's Polar Focus

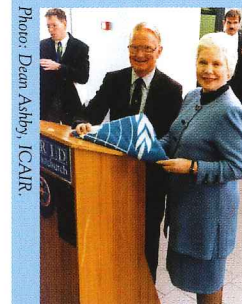
THE ANTARCTIC

UNEP/GRID Christchurch was officially opened at the International Antarctic Centre, Christchurch, New Zealand on May 30, 1996. The Executive Director of UNEP, Elizabeth Dowdeswell, opened the new GRID node with several high-ranking UNEP and also New Zealand government officials in attendance.

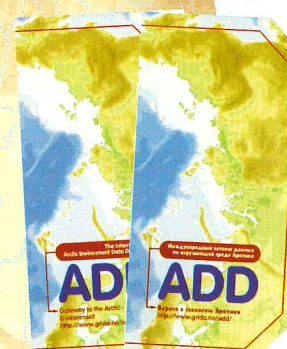
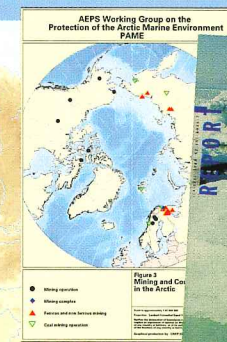
GRID-Christchurch will co-operate with GRID-Arendal to prepare environmental information for decision making and raising awareness on matters relating to the Antarctic environment.

At the opening, a collaborative agreement was signed between the Director of GRID-Arendal, Svein Tveitdal, and the new Director of GRID-Christchurch, Steven Smith.

GRID-Christchurch's first task was to contribute to the preparation of the Secretary General's report on the "State of the Antarctic Environment" which was tabled at the United Nations General Assembly in November 1996. A copy of this document can be requested from GRID-Christchurch (see address on back cover).



Chairman of the ICAIR Board, Sir Robin Irvine, receives the UN flag from Elizabeth Dowdeswell.



Protection of the Arctic Marine Environment (PAME)

The working group on the Protection of the Arctic Marine Environment (PAME) presented its report to the third Ministerial Conference on the Protection of the Arctic Environment held during March 1996 in Inuvik, Canada. The report assesses the nature of pollution threats and determines the need for improved or new international and national legal instruments. GRID-Arendal provided GIS and cartographic support in the production of the report.

International Arctic Environment Data Directory (ADD)

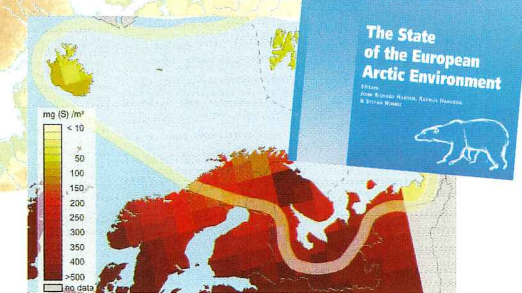
The International Arctic Environment Data Directory, ADD, is a network co-operation between major Arctic environmental data holders. This co-operation makes Arctic data available to Internet users. ADD users represent governments, environmental planning and management groups, industry, researchers, public interest groups, educators and the general public. GRID-Arendal is a main contributor to ADD, and hosts the ADD homepage and secretariat. Details of all ADD activities, together with downloadable data sets can be found on the Internet at:

<http://www.grida.no/prog/polar/add/>

State of the European Arctic Environment

The Norwegian Polar Institute in co-operation with the European Environment Agency has published a report on the State of the European Arctic Environment. The report provides an overview of the characteristics of the environment and addresses the many threats placed upon it due to human activities. The majority of maps presented in the report were produced by GRID-Arendal in collaboration with the World Conservation Monitoring Centre and the Norwegian Polar Institute. Copies of the report can be obtained directly from the European Environment Agency. More information can be found on the Internet at:

<http://www.eea.dk/>

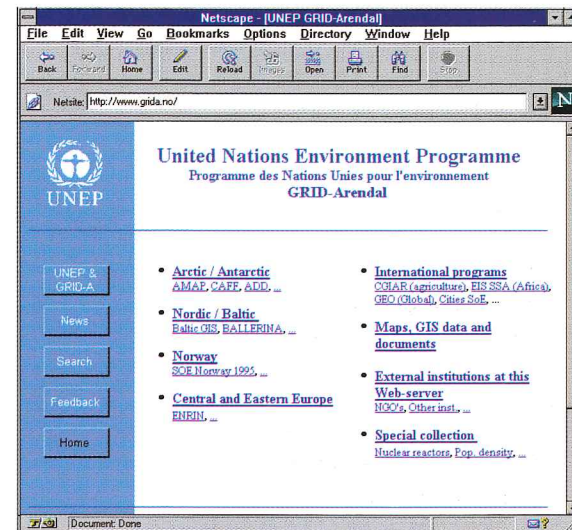


UNEP/GRID-Arendal's Focus on the Internet

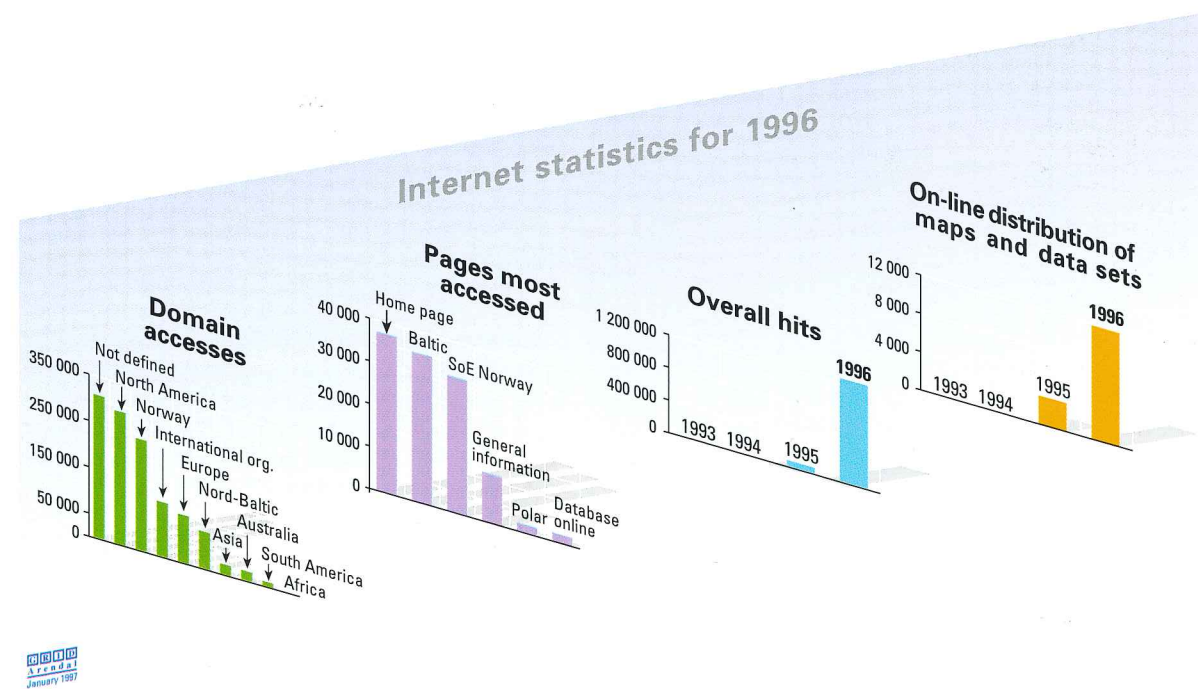
During 1996, GRID-Arendal has consolidated its position as a leading disseminator of environmental information on the Internet. 1.2 million hits were registered on our World Wide Web server, and 12 000 data sets were disseminated on-line to users from our database, making GRID-Arendal the major on-line provider of environmental information in the Nordic countries.

Some highlights of 1996:

- A new homepage was released.
- A revised and updated State of the Environment Norway 1996 was launched at the beginning of the year. SoE-Norway and maps of the Baltic area were the most popular environmental information items on the GRID-Arendal server.
- Considerable expansion in the presentation of Arctic Environmental Information.
- The ENRIN programme built up an important section under the GRID-Arendal homepage.
- State of the Environment Georgia was launched on the GRID-Arendal server.
- International programmes like the UNEP/CGIAR co-operation, Environmental Information Systems of Africa and the GEO-programmes have their own homepages on the GRID-Arendal server.
- Several hundred maps and data sets became available for downloading.
- Five Norwegian environmental NGOs operate their homepages and disseminate their environmental information via the GRID-Arendal server.



<http://www.grida.no/>



UNEP/GRID-Arendal's Focus on the Internet

State of the Environment Norway on the Internet

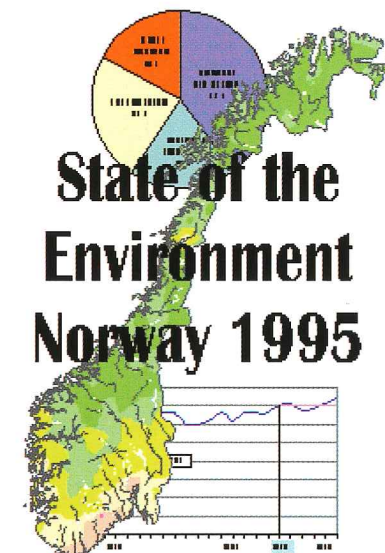


SoE-N 1995 received the prestigious Princes' Award 1996 in Copenhagen on June 5.

The Princes' Award is initiated by the European Environment Agency as a competition for the best audiovisuals on Europe's environment. The objective of the Award is to emphasise the importance of public participation in solving Europe's environmental problems and public involvement in the move towards sustainable development across the European continent.

The competition for The Princes' Award is open to all sectors of European society, the audio-visual and publishing community, TV companies, independent producers, business, NGOs, etc.

At the Award ceremony, the chairman of the jury, EU Commissioner Ritt Bjerregaard, praised the Norwegian product for its innovative and pioneering role as an environmental information product on the Internet.



The SoE-N has been produced in co-operation with the Norwegian Ministry of Environment. Main contributors have also been the Norwegian Mapping Authority - Environmental Unit (SKMe), the State Pollution Control Authority (SFT), the Directorate for Nature Management (DN) and Statistics Norway (SSB).
<http://www.grida.no/prog/norway/soeno95/>



The award was handed over to the GRID-Arendal Director, Mr Svein Tveitdal by the two patrons: His Royal Highness Crown Prince Frederik of Denmark and His Royal Highness Crown Prince Felipe of Spain

Comments from the Jury:

"The starting point for many multimedia productions is, effectively, a database: a mountain of information which can be made more accessible on CD-ROM than by traditional means such as directories, library indexes and publications. At best, such productions provide the data required in a way which allows easy access to the user and, very importantly, permits the data to be used for specific purposes, such as research or comparison.

In the opinion of the Jury, 'State of the Environment Norway 1995' meets and surpasses these requirements. In that respect it sets a high standard for multimedia productions founded on the 'database' approach. Quite simply, 'State of the Environment Norway 1995' contains all you might ever need to know about Norway's environment. In addition to a CD-ROM, the production also

has an Internet web site which will enable the project to be constantly updated. It is clearly targeted (at decision-makers, the media, the concerned public and schools) and aims to raise general awareness about the environment in the spirit of Agenda 21.

In the opinion of the Jury, this production is an accomplished piece of work which will act as an important aid to decision-making and to secondary research."

UNEP/GRID-Arendal's Focus on Eastern Europe



- CEE Country
- I Letter-Assessment
- II Feasibility-SoE Internet
- III Implementation
- Operational GRID node

Central Europe

- Poland
- Czech Republic
- Slovakia
- Hungary

South-Central Europe

- Romania
- Bulgaria

- Belarus
- Russia
- Ukraine
- Moldova

Baltic

- Estonia
- Latvia
- Lithuania

Caucasus

- Armenia
- Azerbaijan
- Georgia

Asian Republics

- Kazakhstan
- Kyrgyz Republic
- Tajikistan
- Turkmenistan
- Uzbekistan

Balkan, Former Yugoslavia

- Slovenia
- Croatia
- Bosnia-Herzeg.
- Yugoslavia
- FYROM
- Albania

ENRIN (Environment and Natural Resources Information Network) is designed to catalyse and assist capacity building of environmental information networks in developing countries and countries with economies in transition. The project's main objective is to improve the availability of SoE reports and other environmental data and information for decision-makers and the general public. It thus contributes to the implementation of Agenda 21, Chapter 40 by strengthening the national environmental information management capacities. For more information visit: <http://www.grida.no/prog/cee/enrin/>

ENRIN (Environment and Natural Resources Information Network)

GRID-Arendal in co-operation with UNEP ROE and GRID-Geneva is the implementing agency for ENRIN in countries with economies in transition of Central and Eastern Europe. During the year the ENRIN programme has:

- been met with high interest (18 out of 27 countries officially participating)
- thoroughly evaluated national environmental information systems in 12 countries and published these assessment reports (three more are under preparation)
- established one operational centre (GRID-Warsaw), with three more to become operational in 1997 (Budapest, Moscow, Tbilisi);
- through co-operating partners, compiled easily understandable and accessible environmental information products (7 countries with SoE on the Internet according to UNEP methodology approximating internationally accepted indicators).

The ENRIN programme has been presented and discussed with other international organisations, regional programmes, bilateral and multilateral donors, NGOs and private enterprises. Co-operating international organisations are the EU (EEA, PHARE, TACIS), OECD, WHO/ECEH, UNDP, UN/DPCSD, UN/ECE, UNITAR, UNHCR, the World Bank, GEF, REC, WCMC and the regional bodies concerned with the Baltic Sea (HELCOM), the Danube, the Black Sea, Caspian Sea and the Aral Sea.

The "New Phase of Environmental Co-operation between UNEP and EEA on the road to the 1998 Ministerial Conference in Denmark" was announced at the PHARE Corine EEA project launch seminar in Copenhagen on June 10, 1996. Through this very active co-operation EEA's EIONET and UNEP's ENRIN programme are in the process of being closely harmonised.

UNEP/GRID-Arendal's Global Focus

Use of Geographic Information Systems in Agricultural Research

GRID-Arendal is implementing a joint UNEP/CGIAR project. This project particularly focuses on the use of the GRID and CGIAR networks to compile and distribute high-quality natural resource and socio-economic digital data sets, and to assist CG centres to ensure capacities to use such technologies and data sets in agricultural research.

CGIAR is supporting 16 international agricultural research centres dedicated to promoting sustainable agriculture for food security in developing countries. There has been an increasing interest among the CG Institutes in the use of GIS, as research activities are shifting from single crop analysis to integrated ecoregional approaches, opening a broad field for GIS applications.

Project activities and outputs in 1996 included a report on the status of GIS activities, needs and plans in the CGIAR centres as a conclusion of the first phase of the project. With the renewal of the grant by the Norwegian government until April 1998, the path was open for a third annual "Arendal III" workshop in June, where the outcomes of the Requirement Studies served as basis for discussions of the future direction of the project. Networking efforts concentrated and will continue to concentrate on creating a sustainable forum for GIS within CGIAR. The newsletter has evolved into an e-mail list server, where project proposals are being discussed. In order to spread the knowledge of the usefulness of GIS in agricultural research, a first version of an "Awareness Package" was prepared for the CGIAR's International Centre's week. The project became visible with its own homepage on the WWW, where general information about the

project is available, as are downloadable relevant data sets. Examples of applications of GIS in agricultural research can also be viewed. A metadata catalogue gives an overview of spatially referenced data held in the CG centres. During 1996 the project has been successful in connecting individuals, institutions and initiatives dealing with GIS in agricultural research both within and outside CGIAR. For more information, visit <http://www.grida.no/prog/global/cgiar/>

Use of Geographic Information Systems in Agricultural Research Management

CGIAR Participation

	Arendal I, 1992	Arendal II, 1995	Requirement Study	Arendal III, 1996		
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

UNEP/GRID-Arendal as a Conference Host

CAVM Workshop

The Second Circumpolar Arctic Vegetation Mapping Workshop

Arendal, May 19-24, 1996



Workshop group session focusing on the further development of an Arctic vegetation map. Photo: Per Lunden

24 participants from Denmark, Finland, Germany, Iceland, Norway, Russia and the US were gathered to further develop a vegetation map of the circumpolar Arctic tundra region. The goals were to develop a legend framework, establish methods for international co-operation, outline a funding strategy, and agree on a set of proposals for map production. The workshop was funded by the US National Science Foundation through the Arctic System Science Program.

Arendal III Workshop

UNEP and CGIAR Co-operation on the Use of GIS in Agricultural Research

Arendal, June 17-21, 1996



34 representatives from 13 out of 16 CG centres and 10 other international research institutions participated in the workshop. Photo: Per Lunden

The primary purpose of this traditional (third in a row) annual UNEP/GRID/CGIAR workshop was to establish the overall project direction for the next

two years, based on the needs identified during visits by GRID-Arendal experts to the majority of CG centres. Only two centres were not able to send a representative. Other participants of the workshop included experts from UNEP, FAO, USAID, UNSD and several private institutions. The programme focused on the following specific outputs:

- production of proposals for sub-projects relating to institutional development, data set production and/or application of GIS technology,
- defining and planning assistance to Centres to ensure continued productive use of GIS technology in the long-term, including organisational arrangements required for the operation of the project in a sustainable fashion,
- establishment of methods and procedures for data dissemination and maintenance activities among CG centres and beyond CGIAR.

The workshop proceedings have been displayed on the WWW at:

<http://www.grida.no/prog/global/cgiar/arendal3/a3wsrep.htm>

They can also be requested from GRID-Arendal in paper format or via e-mail.

Nordic Policy Seminar

on Arctic Development and Environmental Challenges: Information Needs for Decision-Making and International Co-operation

Arendal, September 8-10, 1996



GRID-Arendal Director Svein Tveitdal and member of the Russian parliament Andrei Kozyrev at the seminar. Photo: Per Lunden

36 parliamentarians, government officials and experts discussed priority needs for information to formulate future policies which will have impact on the Arctic. Lectures from keynote speakers: Prime Minister Lars Emil Johansen of Greenland, member of the Russian Parliament and former Minister of

UNEP/GRID-Arendal as a Conference Host

Foreign Affairs Andrei Kozyrev, and Director Willy Østrem from the Fridtjof Nansen Institute in Norway, are available, together with a preliminary summary of the workshop on the Internet:

<http://www.grida.no/inf/news/index.htm>

ADD Workshop:

Arctic Environmental Information on the Net: Implementing a Gateway to the Arctic

Arendal, November 11-12, 1996



Participants gathered to implement a "Gateway to the Arctic". Photo: Per Lunden

The ADD (the International Arctic Environment Data Directory) workshop offered a unique opportunity for Arctic environmental institutions to enhance their information dissemination skills and understanding, jointly produce a new version of the ADD homepage, promote institutional co-operation, and contribute to the "pooling of information resources" on an international scale. 32 participants from 15 countries contributed to 9 recommendations to the ADD Council regarding organisational and funding challenges and their solutions, the future scope of ADD including future products, and an evaluation of ADD, and the further development of the ADD Homepage on the Internet:

<http://www.grida.no/prog/polar/add/>

Cities' SoEI Workshop

Launching Workshop on Cities' State of the Environment on the Internet

Arendal, December 17-18, 1996



Workshop participants focusing on urban environment priority issues. Photo: Per Lunden.

GRID-Arendal focused on the environment in cities through the initiative "Cities' State of the Environment reporting on the Internet". The initiative is a follow-up to Local Agenda 21 from the UN Environmental Conference in Rio 1992.

31 participants contributed to the workshop. In addition to Norwegian and international experts, the attendees represented: HABITAT, the World Bank, the Norwegian cities of Arendal, Kristiansand, Oslo, Risør and Tromsø, and the cities of Katowice, Ismalia, Durban, Dar es Salaam and Beijing. The workshop focused on cities' needs for environmental information, pinpointing urban environment priority issues, and discussing suitable indicators. The aim of this initiative is to develop a model for presenting easily understandable environmental information for cities on the Internet. The initiative is supported by the Research Council of Norway and the Norwegian Ministry of Environment. For further information:

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

UNEP/GRID-Arendal's Focus on the Baltic

A BALLERINA starts dancing.....

In 1996 a comprehensive initiative was taken by GRID-Arendal to address the regional needs of the Baltic Sea area for improved access to environmental and sustainable development information. The initiative is named BALtIC Sea Region On-Line Environmental Information Resources for INternet Access - BALLERINA. The main objectives behind the BALLERINA initiative are:

- to bring more substantive and relevant environmental information from and about the Baltic Sea region to the Internet, in particular to support the development of the Baltic Sea region Agenda 21 Programme
- to make it easier for the increasing number of Internet users to find Baltic Sea region environ-



Experts from national environmental information centres in Estonia, Lithuania, Latvia, Poland, Hungary and Ukraine participated in a training course at GRID-Arendal June 3-10, 1996. They were trained in the noble art of disseminating environmental information on the Internet.

Photo: Erik Holand, Agderposten

mental information by offering a "top-level" BALLERINA WWW homepage

- to develop a personal and institutional network of environmental information providers in the Baltic Sea region that use the Internet in environmental information dissemination

In June 1996 a BALLERINA workshop was held in Stockholm, jointly organised by the Swedish Environmental Protection Agency (EPA) and GRID-Arendal, with 65 representatives from 35 institutions in 10 Baltic Sea countries. The workshop strongly supported the development of BALLERINA. In the BALLERINA context, a two-week training course in the use of the Internet for environmental information dissemination and communication was held in Arendal with 10 participants from Estonia, Lithuania, Latvia, Poland, Hungary and Ukraine. Funding in 1996 was provided by Swedish EPA and UNEP.

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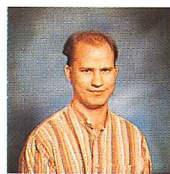
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UNEP/GRID-Arendal Staff



Frode Abrahamsen
M.Sc. GIS
Civil Worker
(until 29.05.96)



Aake Bjørke
B.Sc. Biology/Law
(BLL)



Arnt W.K. Brox
B.Sc. Biology
Programme Manager,
UNEPnet



Nikolai Denisov
Ph.D. Geography/Environmental Science



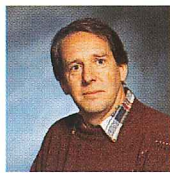
Manon Desforges
B.Sc. in Geography
(from 18.11.96)



Karen Folgen
B.A. Literature
Administration/
Personnel Manager



Dawn Marie Freund
B.A. Business
Mgmt/French
(until 08.05.96)



Øystein Halvorsen
M.Sc. Physics



Claudia Heberlein
M.Sc. Geography



David Henry
B.A. Computing/
Geology
Programme Manager,
Nordic and Polar



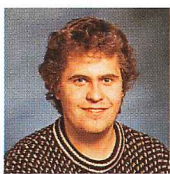
Even Husby
M.Sc. Geography



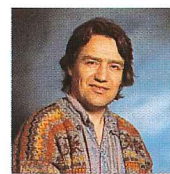
Ingrid Høgli
Administration
Assistant



Beate Strøm Johansen
M.Sc. Zoology



Inge Tuset Knudsen
Civil Worker



Lars Kullerud
M.Sc. Geology



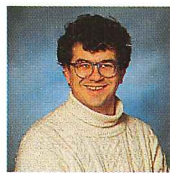
Sindre Langaas
Ph.D. Remote Sensing
Stockholm Office



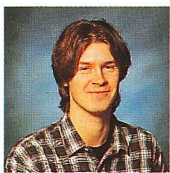
Wenche Lien
Administration
Secretary



Margaret Ohldeick
Chief Accountant



Philippe Rekacewicz
Ph.D. Cartographic
Geography
(from 01.05.96)



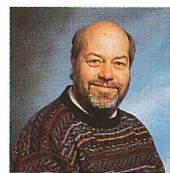
Petter Sevaldsen
Civil Worker
(from 06.08.96)



Otto G. Simonett
Ph.D. Geography
Programme Manager,
Central and Eastern
Europe - Developing
Countries



Anders Volle
B.Sc. Computer
Science
(from 09.04.96)

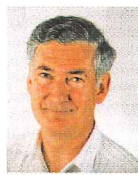


Morten Sørensen
M.Sc. Geography



Svein Tveitdal
M.Sc. Photogrammetry
Director

UNEP/GRID-Arendal Guest Researchers/Consultants



Hugh Bath
Space Operation Centre
European Space Agency
Germany
(July 1996)



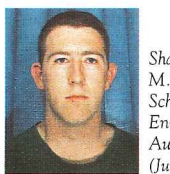
Bjørn Bore
Internet Consultant



Lorant Czarán
M.Sc. Geography/Russian
Department of Geography
University of Cluj
Romania
(from 15.02.96)



Bruno Dery
GIS Training Programme
Norway
(January-February 1996)



Shawn Laffan
M.Sc. Geography
School of Resource and
Environmental Management
Australian National University
(June-August 1996)



Sonia Raison
M.Sc. Geography
University of Paris
France
(from 18.11.96)

Message from UNEP Headquarters



Ass. Executive Director,
Takahiko Hiraishi,
DEIA, UNEP

When GRID-Arendal was established in 1989 as a joint effort between the Government of Norway and UNEP, the intention was to strengthen UNEP in its capacity to provide environmental information for decision-making and awareness.

Clearly, this objective is being achieved. Beginning as a centre with mainly GRID database responsibilities for the Nordic Countries and the Polar Regions, GRID-Arendal is today an important partner in completing the work programme of UNEP's Division for Environmental Information and Assessment. For 1996, I would specifically like to mention GRID-Arendal's achievements in mobilising resources for, and implementing UNEP's ENRIN (Environmental and Natural Resource Information Networking) programme in Central and Eastern Europe, the preparation for the installation of UNEP's GEO-1 (Global Environment Outlook) report on the Internet and the contribution to the implementation of MERCURE.

I would in particular congratulate you on the pioneering work you have done in making available the State of the Environment Norway on the Internet, now a model for many governments participating in our ENRIN programme, and for which you received the meritorious «Princes' Award» - the European

«Environmental Oscar» for best audiovisuals on Europe's environment in 1996.

25 years after UNEP was created, following the United Nations Conference on Human Environment in Stockholm, and 5 years after Rio, the global environment is still deteriorating at an increasing rate. This is the clear message of UNEP's Global Environment Outlook report launched at UNEP's Governing Council in Nairobi in January 1997. The need for UNEP to identify emerging environmental problems, mobilise the will to take action and orchestrate appropriate responses is higher than ever. Global environmental monitoring and assessment is a key component in this process.

Ironically, at the very same time, the whole UN system including UNEP is going through a period characterised with severe budget cuts and down-scaling. This paradox presents us with a great challenge to mobilise further the resources needed to fulfil our role and perform the tasks needed to reach the goals set for us by the governments that are our principals. The joint operation of GRID-Arendal with the Government of Norway has proved an exceptional and efficient model for channeling essential resources to implement important parts of our programme. We look forward to a continuing and stronger partnership in 1997.



Takahiko Hiraishi

Glossary

ADD	International Arctic Environment Data Directory	HELCOM	Helsinki Commission - Baltic Marine Environment Protection
AEPS	Arctic Environment Protection Strategy	ICAIR	International Centre for Antarctic Information and Research
AMAP	Arctic Monitoring and Assessment Programme	NGO	Non-governmental Organisation
BALLE	Baltic Sea Region On-Line Environmental Information Resources for Internet Access	OECD	Organisation for Economic Co-operation and Development
RINA	Information Resources for Internet Access	DAC	Development Assistance Committee of OECD
CAFF	Conservation of Arctic Flora and Fauna	PAME	Protection of the Arctic Marine Environment
CAVM	Circumpolar Arctic Vegetation Mapping	PHARE	EU Assistance to Central and Eastern Europe
CEE	Central and Eastern Europe	REC	Regional Environmental Centre
CG/	Consultative Group for International	ROE	Regional Office for Europe
CGIAR	Agricultural Research	SFT	State Pollution Control Authority, Norway
CPAN	Circumpolar Protected Area Network	SKMe	Norwegian Mapping Authority - Environmental Unit
DEIA	Division of Environmental Information and Assessment	SOE	State of the Environment
DN	Directorate for Nature Management	SOE-N	State of the Environment Norway
DPCSD	Division for Policy Co-ordination on Sustainable Development	SSB	Statistics Norway
ECE	Economic Commission for Europe	TACIS	Technical Assistance to the Commonwealth of Independent States (EU)
ECEH	European Centre for Environment and Health	UNCED	United Nations Conference on Environment and Development
EEA	European Environment Agency	UNDP	United Nations Development Programme
EIONET	European Information and Observation Network	UNEP	United Nations Environment Programme
ENRIN	Environmental and Natural Resources Information Network	UNEPnet	The Global Internet for the environment and sustainable development
EPA	Environmental Protection Agency	UNHCR	United Nations High Commissioner for Refugees
EU	European Union	UNITAR	United Nations Institute for Training and Research
FAO	Food and Agriculture Organisation	UNSD	United Nations Statistical Division
GEF	Global Environment Facility	USAID	US Agency for International Development
GEO	Global Environment Outlook	WCMC	World Conservation Monitoring Centre
GIS	Geographic Information Systems	WHO	World Health Organisation
GRID	Global Resource Information Database	WWF	World-wide Fund for Nature
IASC	International Arctic Science Committee		
HABITAT	United Nations Centre for Human Settlements		



The UNEP/GRID Network



UNEP
Division of Environmental Information
 and Assessment
 P.O. Box 30552
 Nairobi, KENYA
 Tel: +254 2 623512
 Fax: +254 2 623943 / 623944
 E-mail: 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 22 979 9111
 Fax: +41 22 797 3420 / 979 9024
 E-mail: SchlingF@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 5162124 / 5245365
 Fax: +66 2 5162125 / 5246233
 E-mail: grid@ait.ac.th

GRID-Budapest (Hungary)
 (to be opened 22.04.97)
 Department for Environmental Information
 Systems
 Ministry for Environment and Regional
 Policy
 H-1011 Budapest I., Fo u. 44-50.
 Tel: +36 1 2012216
 Fax: +36 1 2012361
 E-mail: bozo@kik.ktm.hu

GRID-Canada
 Canada Centre for Remote Sensing
 Geomatics Canada
 Room 330, 3rd Floor
 588 Booth Street
 Ottawa, Ontario, CANADA K1A 0Y7
 Tel: +1 613 947 1227
 Fax: +1 613 947 1382
 E-mail: campbell@ccrs.emr.ca

GRID-Christchurch (New Zealand)
 c/o ICAIR
 P.O. Box 14-199
 Christchurch, NEW ZEALAND
 Tel: +64 3 358 4450
 Fax: +64 3 358 4480
 E-mail: smith@gridc.org.nz
<http://www.gridc.org.nz/>

GRID-Denmark
 Spangsbjerg Kirkevej 111
 DK-6700 Esbjerg, DENMARK
 Tel: +45 75 45 45 11
 Fax: +45 75 45 45 87
 E-mail: grid-hsh@post3.tele.dk

GRID-Geneva (Switzerland)
 Geneva Executive Centre (GEC)
 11 chemin des Anémones
 CH-1219 Châtelaine
 Geneva, SWITZERLAND
 Tel: +41 22 979 9294 / 95
 Fax: +41 22 979 9029
 E-mail: grid_gnv@gridg.unep.ch
<http://www.grid.unep.ch/gridhome/>

GRID-Nairobi (Kenya)
 Box 30552
 Nairobi, KENYA
 Tel: +254 2 62 41 87
 Fax: +254 2 62 43 15
 Telex: 22068 UNEP-KE
 E-mail: mario.hernandez@unep.org

GRID-Kathmandu (Nepal)
 International Centre for Integrated
 Mountain Development (ICIMOD)
 4/80 Jawalakhel, GPO Box 3226
 Kathmandu, NEPAL
 Tel: +997 1 525316 / 525313 Ext. 476
 Fax: +997 1 536747 / 524509
 Email: menris@icimod.org.np
 pramod@icimod.org.np

GRID-Moscow (Russia)
 (to be opened in 1997)
 Federal Centre for Geocological Systems
 State Committee of the Russian Federation
 for Environmental Protection
 PO Box 785, Central Post Office,
 Moscow, 101000, Russia

Tel: +7 095 2692711, 2680284
 Fax: +7 095 2694766
 E-mail: postmaster@fcgs.msk.su
<http://www.fcgs.rssi.ru/>

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 418977 x447
 Fax: +55 123 218743
 E-mail: danton@dpi.inpe.br
<http://www.inpe.br/grid/home/>

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: grid@grid1.cr.usgs.gov
<http://grid2.cr.usgs.gov/>

GRID-Tsukuba (Japan)
 Centre for Global Environmental Research
 National Institute for Environmental Studies
 Environment Agency of Japan
 16-2, Onogawa, Tsukuba
 Ibaraki 305, JAPAN
 Tel: +81 298 50 2349
 Fax: +81 298 58 2645
 E-mail: grid@nies.go.jp

GRID-Warsaw (Poland)
 Environmental Information Centre
 ul. Merliniego 9
 02-511 Warszawa 12, POLAND
 Tel: +48 22 6274623
 Tel/Fax: +48 22 488561
 E-mail: gridw@plearn.edu.pl



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

GRID-Arendal, Stockholm Office
 c/o Dept. of Systems Ecology, Stockholm University, S-106 91
 Stockholm, SWEDEN
 Tel: +46 8 16 17 37, Fax: +46 8 15 84 17
 E-mail: sindre.langaas@grida.no, <http://www.grida.no/>