

AGREEMENT
BETWEEN
THE UNITED NATIONS ENVIRONMENT PROGRAMME
AND
THE UNITED STATES
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION,
THE UNITED STATES GEOLOGICAL SURVEY
OF THE DEPARTMENT OF THE INTERIOR,
THE UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY,
THE UNITED STATES FOREST SERVICE
OF THE DEPARTMENT OF AGRICULTURE
CONCERNING
THE OPERATION OF A GLOBAL RESOURCE INFORMATION DATABASE FACILITY

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SECTION 1 INTRODUCTION

- 1.1 The Parties to this Agreement are: the United Nations Environment Programme (hereinafter referred to as UNEP) on the one hand, and four agencies of the United States Government, namely the National Aeronautics and Space Administration (hereinafter referred to as NASA), the United States Geological Survey (hereinafter referred to as USGS) of the Department of the Interior, the United States Environmental Protection Agency (hereinafter referred to as USEPA), and the United States Forest Service (hereinafter referred to as USFS) of the Department of Agriculture, on the other hand. The Participating organizations to this Agreement are: UNEP, NASA, USGS, USEPA, and USFS (hereinafter referred to as the Participants.)
- 1.2 UNEP and NASA have collaborated on the Global Resource Information Database (GRID) programme since its inception in 1985. From the outset, UNEP has benefitted from the technological expertise made available by NASA, and NASA has found within UNEP the outreach to the world, in particular the developing world, needed for the correlation of global in-situ measurements with its satellite data.
- 1.3 The evolution of the USGS Earth Resources Observation Systems (EROS) Data Center (EDC) and the GRID programme as repositories for global scientific data and as centers for the conduct of global scientific research, along with the development of NASA's Mission to Planet Earth programme and its need for a worldwide scientific constituency of global researchers resulted in the decision by the Parties to an Agreement to co-locate the North American Facility of the GRID Programme with EDC in Sioux Falls, South Dakota. The Agreement has been renewed since January 1991. The current termination date is 31 December 1997.
- 1.4 The facility supports and enhances North American contributions to global change research and other major environmental assessment programmes. It offers mutual benefits to UNEP and other UN agency programs as well as to experts, scientists, resource managers, and other users in developing countries.
- 1.5 Environmental protection and environmental science are two main activities of the USEPA, and in carrying out its mission to improve and preserve the environment, the USEPA works with its partners to protect human health, ecosystems and the beauty of the environment using the best available science. The mission of the USFS is to achieve quality land management under the sustainable multiple-use management concept to meet diverse needs of people. In their roles as ecosystem managers, the USEPA and USFS require geospatial data both for research and operations.

SECTION 2 PURPOSE OF THIS AGREEMENT

The purpose of this Agreement is to provide for the cooperative operation of a UNEP-designated Global Resources Information Database (GRID) facility for North America at the USGS's EROS Data Center (EDC) in Sioux Falls, South Dakota, USA.

SECTION 3 OBJECTIVES OF THE COOPERATIVE EFFORT

The objectives of this cooperative effort are to develop a center to facilitate the flow of high-quality regional, continental, and global environmental data sets (which serve as the basis of GRID); to provide a facility where earth science data may be input, collated, stored, retrieved, analyzed, and distributed; to provide support to environment-related projects requiring geographic information system (GIS) and satellite image processing technology; and to provide support for training and capacity building in such technology, particularly for developing countries' experts and institutions.

SECTION 4 DESCRIPTION OF THE PARTICIPANTS

4.1 United Nations Environment Programme (UNEP)

UNEP is responsible for initiating and stimulating environmental action and awareness at all levels of society worldwide and for coordinating the environmental work of all UN organizations and agencies. UNEP has established GRID to provide the world community with access to timely, usable environmental data. It also was established to provide access to the necessary GIS, satellite image processing and telecommunication technologies. This was done so that each data recipient may make the best use of such information for global science applications, wise resource management and sustainable development planning. GRID is designed to become a network with major centers in various regions of the world. There are a growing number of regional and sub-regional centers forming a globally distributed data and information system.

4.2 National Aeronautics and Space Administration (NASA)

NASA is the principal United States civilian agency responsible for research and development of Earth and Space Science Satellite Sensor and Data Systems. Through its Office of Mission to Planet Earth, NASA conducts and sponsors research and development in a broad range of Earth System Science and Information Systems areas.

Working internationally, as well as through its field centers, and by sponsoring research at universities and other research and development facilities, NASA is developing the Earth Observing System (EOS) and its data and information system (EOSDIS). EOS will play a central role in the study of global change in the coming decades. EOS will be capable of providing global data sets. These data sets, some of which will be handled by the Land Processes Distributed Active Archive Center at EDC, which is part of the EOSDIS, and at the NASA Goddard Space Flight Center Distributed Active Archive Center (GSFC DAAC), will provide valuable input to GRID, and through GRID, to scientists involved in studies aimed at understanding the environment and global change. NASA looks to GRID to provide valuable in-situ and validation data, complementing and enhancing NASA's earth observation satellite data, through interactions with regional users.

4.3 United States Geological Survey (USGS)

The USGS is the principal earth science organization of the United States Government which conducts and sponsors research in geology, hydrology, biology, mapping, and related sciences. It produces, archives, and disseminates cartographic and remotely-sensed data to users worldwide and provides scientific and technical assistance, domestically and internationally, for effective use of earth science information.

The EDC, a facility of the USGS National Mapping Division, maintains the National Satellite Land Remote Sensing Data Archive including a worldwide archive of land remote sensing data; operates a real-time Advanced Very High Resolution Radiometer (AVHRR) data reception and production capability which has been expanded to acquire data of the entire globe; is developing a real-time Landsat 7 facility to receive data and generate products; uses state-of-the-art product generation systems to develop national land data and information management systems; develops and maintains software systems used by many organizations, including UNEP/GRID; and does research and develops cartographic products and data management systems of an international scope.

4.4 United States Environmental Protection Agency (USEPA)

The USEPA has set environmental goals in the following national areas: clean air, clean surface water, cleanup of contaminated sites, climate change, ecological protection, improved understanding of the environment, prevention of oil spills and chemical accidents, prevention of wastes and harmful

chemical releases, safe drinking water, safe food, and safe indoor environments. Progress to all of these goals is measurable, and geospatial data is needed to determine progress toward meeting these goals. The USEPA looks to GRID-Sioux Falls for a wide range of geospatial data and information for environmental research and to measure progress toward achieving the USEPA's environmental goals both inside and outside the United States of America.

4.5 United States Forest Service (USFS)

The USFS is responsible for achieving quality land management under the sustainable multiple-use management concept to meet the diverse needs of people. In addition to providing financial and technical assistance to cities and communities and to State and private forest landholders in the United States, the USFS provides international technical assistance and scientific exchanges to sustain and enhance global resources and to encourage quality land management. Using geospatial data for research and as a tool for forest management is an important aspect of the USFS's research and management, and both UNEP and USFS will benefit from exchange of geospatial data and scientific collaboration.

4.6 NASA, USGS, USEPA, and USFS support existing domestic and international agreements for data management, dissemination, and analysis. Furthermore, the four agencies have executed agreements with American universities to cooperate in global research activities. In addition, private-sector firms are involved in and benefit from global research and data collection efforts. It is important that data from the groups supported by the four agencies flow into UNEP/GRID in an open fashion and that, in turn, UNEP/GRID data flow to institutions and organizations in an open fashion.

SECTION 5 RESPONSIBILITIES OF THE PARTICIPANTS

5.1 UNEP will use reasonable efforts to meet the following responsibilities:

- a) To operate a GRID center at EDC as a clearly identified UNEP/GRID North American facility (called GRID-Sioux Falls) under the auspices of the United Nations and under the coordination of the UNEP Assistant Executive Director, Division of Environment Information and Assessment.
- b) Provide one full-time, on-site Regional Coordinator who will be the facility manager.
- c) Coordinate day-to-day activities at GRID-Sioux Falls with the appropriate authorities through regularly scheduled meetings at the management level.
- d) Coordinate GRID cooperative research and development activities with NASA, USGS, USEPA, USFS, and cooperating universities and organizations.
- e) Provide cash support in the GRID project from the fund of UNEP towards the operating costs of GRID-Sioux Falls (approximately US \$100,000 per annum plus travel as covered by paragraph f below). The allocation of these funds will be detailed in the UNEP internal project document covering GRID operations.
- f) Provide costs of overseas travel and per diem at standard UN rates for staff supported by USGS, NASA, USEPA and USFS for official travel on mission, as appropriate, within the GRID work plan.
- g) Mobilize resources to cover the travel and living expenses of two scientists/technologists from developing countries to work in residence at GRID-Sioux Falls (approximately US \$100,000 per annum). Candidates will be selected by UNEP for a period of one (1) year and the travel and expenses for the candidates will be administered by EDC with the concurrence of the UNEP Facility Manager. Candidates are to receive training in the latest scientific and technology procedures and are to provide increased support to projects of mutual interest to UNEP, NASA, USGS, USEPA, and USFS. Selection of candidates and training exercises will support specific UNEP activities in capacity building in developing countries.

5.2 NASA will use reasonable efforts, in accordance with Section 7 of this Agreement, to meet the following responsibilities:

- a) Provide for full-time personnel for research and development at Sioux Falls (not to exceed 3.0 FTE/year).
- b) Provide networking and communication links as mutually agreed to by the Participants as appropriate.
- c) Provide research and development support to GRID global scientific and technical activities as appropriate.
- d) Provide expert support as deemed appropriate in the development and use of advanced information acquisition, transmission, processing, analysis, communication, storage, and archiving technologies and software systems which facilitate GRID operations.

5.3 USGS will use reasonable efforts, in accordance with Section 7 of this Agreement, to meet the following responsibilities:

- a) Provide, as necessary, at no cost to UNEP, suitable office and work space for the GRID staff, as well as space to accommodate the GRID computer equipment.
- b) Provide, at no cost to UNEP, the standard line of Government office furniture for the dedicated GRID office and work space.
- c) Provide, at no cost to UNEP, electrical power, air conditioning, and custodial services for office and work space; and provide secure, environmentally controlled computer room space on a 24-hour basis.
- d) Provide, at no cost to UNEP, access to EDC's local area network which will give GRID staff use of existing hardware/software capabilities and output devices in EDC's computer center.
- e) Provide, at no cost to UNEP, shared use of EDC personnel for secretarial support, computer systems operations, systems maintenance, software maintenance of EDC's existing computer equipment, custom image processing, data management, customer service, photo laboratory processing, remote sensing/GIS consultation, technical assistance, and guest lectures (not to exceed 4.0 FTE/year).
- f) Provide, at no cost to UNEP, a reasonable quantity of computer supplies, tapes, diskettes, paper, photo laboratory supplies, and miscellaneous office supplies and materials used at GRID-Sioux Falls.
- g) Provide, at no cost to UNEP, domestic telephone, telefax, e-mail, cable, and telegram services (e.g., Federal Telecommunications System).
- h) Provide, at no cost to UNEP and by mutual agreement, available environmental datasets held by EDC of relevance to the work of UNEP and its international partners within the GRID network.
- i) Provide, on a cost reimbursable basis, and in accordance with other applicable agreements, other available services in accordance with USGS regulations and cost structure for favored customers (e.g., new AVHRR data, digitizing services, international communications, publishing of reports, etc).

5.4 USEPA will use reasonable efforts, in accordance with Section 7 of this Agreement, to meet the following responsibilities:

- a) Provide research and development support to GRID global scientific and technical activities as appropriate.
- b) Provide expert support as deemed appropriate in the development and use of advanced information acquisition, transmission, processing, analysis, communication, storage, and archiving technologies and software systems which facilitate GRID operations.

5.5 USFS will use reasonable efforts, in accordance with Section 7 of this Agreement, to meet the following responsibilities:

- a) Provide for full-time personnel for research and development at the Geometronics Service Center in Salt Lake City, Utah (not to exceed 0.5 FTE/year).
- b) Provide research and development support to GRID global scientific and technical activities as appropriate.
- c) Provide expert support as deemed appropriate in the development and use of advanced information acquisition, transmission, processing, analysis, communication, storage, and archiving technologies and software systems which facilitate GRID operations.

SECTION 6 MANAGEMENT

Technical points of contact for this Agreement are:

Chief, EROS Data Center
National Mapping Division
U.S. Geological Survey
Sioux Falls, South Dakota 57198 U.S.A.

Office of International Activities
U.S. Environmental Protection Agency
401 M Street SW
Washington, D.C. 20546 U.S.A.

Program Integration Manager, EOSDIS External
Mission to Planet Earth Program Office
NASA GSFC, Code 170
Greenbelt, MD 20771 U.S.A.

National Remote Sensing Program
USDA Forest Service
14th & Independence Ave
Washington, D.C. 20250 U.S.A.

Regional Coordinator
UNEP Environmental Information and Assessment Programme-North America
EROS Data Center
Sioux Falls, SD 57198 U.S.A.

SECTION 7 IMPLEMENTATION

Objectives, activities, output, work plan, and reporting schedules of GRID-Sioux Falls will be consistent with the overall GRID project. Budget management for GRID-Sioux Falls will be undertaken by the USGS, NASA, USEPA, or USFS with the exception of the direct UNEP components under the terms of this Agreement pursuant to Section 5.

SECTION 8 FUNDING ARRANGEMENTS

Each Participant will bear the costs of discharging its respective responsibilities as defined in Section 5. It is understood that the ability of the Participants to carry out their obligations is subject to the availability of appropriated funds and personnel through their respective funding procedures.

SECTION 9 PUBLIC INFORMATION

Release of public information regarding activities and products under this Agreement may be made by the appropriate Party for its own portion of the programme as desired and, insofar as participation of the other Party is involved, after suitable consultation.

SECTION 10 DATA ACCESS AND DISTRIBUTION

10.1 The Participants will facilitate full and open access to quality data in support of global change research and applications. NASA, USGS, USEPA, and USFS will provide appropriate data sets to

UNEP which, in turn, will be responsible for maintenance, archiving, access, and distribution. UNEP will provide NASA, USGS, USEPA, and USFS access to data sets acquired or generated in support of UNEP's function of monitoring global resources.

- 10.2 In the event any of the data provided by NASA, USGS, USEPA or USFS under this Agreement comprise remote sensing data subject to legislative and/or contractual restrictions regarding use or disclosure, NASA, USGS, USEPA or USFS will advise UNEP of such restrictions, and UNEP will make such data available on the condition that user recipients agree to abide by the restrictions.
- 10.3 Data archives developed and maintained by UNEP/GRID will include easily accessible information about data holdings, including quality assessments, supporting ancillary information, and guidance and aids for locating and obtaining data. Geospatial and Metadata standards promulgated by the International Standards Organization (ISO) will be used to the greatest extent possible for media and for processing and communication of global data sets.
- 10.4 Data will be available from UNEP/GRID on a public, non-discriminatory basis. There will be no exclusive period of use by investigators for data obtained through UNEP/GRID.
- 10.5 UNEP/GRID will use its best efforts to ensure that analyzed results obtained through the use of UNEP/GRID data will be made available to the international scientific community through publication in appropriate journals or presentations at scientific conferences or electronic networks as soon as possible and in a manner consistent with good scientific practices. In the event such reports or publications are copyrighted, UNEP will pursue acquiring a royalty-free right under the copyright to reproduce, distribute, and use such copyrighted work for purposes of the Participants.
- 10.6 Software exchanged between the Participants under this Agreement will be used only for the purposes of performing the respective responsibilities set forth in the Agreement.
- 10.7 The Participants responsibilities under this Agreement, including the furnishing of data, software, and related services, will be subject to their applicable laws and regulations.

SECTION 11 LIABILITY

With regard to activities undertaken pursuant to this Agreement, neither Party shall make any claim against the other, employees of the other, the other's related entities (e.g. contractors, subcontractors, investigators or their contractors or subcontractors), or employees of the other's related entities for any injury to or death of its own employees or employees of its related entities, or for damage to or loss of its own property or that of its related entities, whether such injury, death, damage or loss arises through negligence or otherwise, except in the case of willful misconduct. However, nothing in this Agreement shall prevent claims for any remedy brought by a Party against its own contractors, subcontractors or agents to the extent such claim arises from their contractual relationship; claims brought by any natural person or his/her estate or survivors for injury or death of such natural person; or claims brought by either Party or other person relating to intellectual property.

SECTION 12 EXCHANGE OF TECHNICAL DATA AND GOODS

- 12.1 Nothing in the Agreement shall be construed as granting or implying rights to, or interest in, patents or inventions of the Parties or their contractors or subcontractors.
- 12.2 The Parties are obligated to transfer only those technical data and goods necessary to fulfill their respective responsibilities under this Agreement, in accordance with the following provisions:
 - a) Interface, integration, and safety data (excluding detailed design, development, production, and manufacturing data, and associated software) shall be exchanged by the Parties without

restrictions as to use or disclosure, except as specifically required by national laws and regulations.

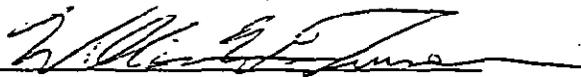
- b) In the event a Party finds it necessary to transfer technical data or goods other than those specified in paragraph (a) above in carrying out its responsibilities under this Agreement, the provisions of this paragraph shall apply. In transferring data and goods which are proprietary or subject to export controls, and for which protection is to be maintained, such technical data shall be marked with a notice and such goods shall be specifically identified to indicate that they shall be used and disclosed by the receiving Party, institutions acting on its behalf, and its contractors and subcontractors only for the purposes of fulfilling the receiving Party's responsibilities under this Agreement, and that the marked technical data and identified goods shall not be disclosed or re-transferred to any other entity without prior written permission of the furnishing Party. The receiving Party agrees to abide by the terms of the notice, and to protect any such marked technical data or identified goods from unauthorized use and disclosure. Nothing in this article requires the Parties to transfer technical data or goods contrary to national laws and regulations relating to export control or control of classified data.
- c) The Parties are under no obligation to protect any unmarked technical data or unidentified goods. However, all technical data and goods transferred under this Agreement shall be used exclusively for the purposes of fulfilling the Parties' responsibilities under this Agreement.

SECTION 13 CUSTOMS

The Parties will use their best efforts to arrange for free customs clearance of all supplies, equipment, and material necessary to carry out this cooperative activity. Such arrangements shall be fully reciprocal.

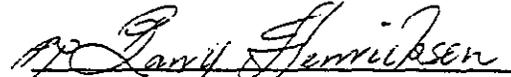
SECTION 14 ENTRY INTO FORCE AND TERMINATION

This Agreement enters into force upon the date of the last signature and remains in effect until 31 December 2002, subject to an annual review by the Parties and their determination that agreed upon goals are being met. It may be modified or extended by mutual agreement of the Parties through an exchange of letters. It may be terminated by either Party upon 90 days written notice.



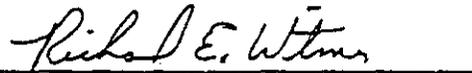
William W. Turner, Acting Director
Mission To Planet Earth Division
Office of External Relations
NASA Headquarters

Date: Dec. 18, 1997



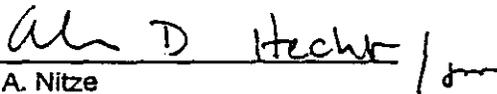
Taka Hiraishi
Assistant Executive Director
Division of Environment Information and Assessment
UNEP

Date: 6 January 1998



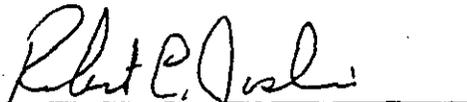
Richard E. Witmer
Chief
National Mapping Division
U.S. Geological Survey

Date: Dec. 16, 1997



William A. Nitze
Assistant Administrator
Office of International Activities
U.S. Environmental Protection Agency

Date: 12/16/97



Robert C. Joslin
Acting Associate Chief
USDA Forest Service

Date: 12/18/97