

Global Runoff Data Centre  
Federal Institute of Hydrology  
Koblenz, Germany

**Report No. 24**

**Use of GRDC Data  
1993 - 1999  
A Comprehensive Summary**



**November 1999**

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## Foreword

A global hydrological database is considered essential for research and application-oriented hydrological and climatological projects at global, regional and basin scales. This includes Water Balance Studies, investigation of trends in long-term hydrological time series, coupling of hydrological and meteorological models, flux of fresh Water and pollutants into the Oceans, and the coupling of runoff with Water quality Data.

The documentation of the use of GRDC Data is an important indicator of the kind of Data and services which users prefer to obtain from GRDC. This information enables GRDC to recognize priorities for Data acquisition and to further develop its service capacity. Likewise, the documentation of Data use is a feed-back to the providers of national hydrological Data and the global research community who wish to know which kind of research is undertaken with Data submitted to the Global Runoff Data Centre (GRDC). In this manner it becomes evident, that many contributing hydrological services of the world cooperate in a joint effort to enable GRDC to compile and maintain a truly global hydrological archive. So far, 144 countries have contributed Data to GRDC, which contains daily and monthly discharge Data from more than 3900 river basins worldwide.

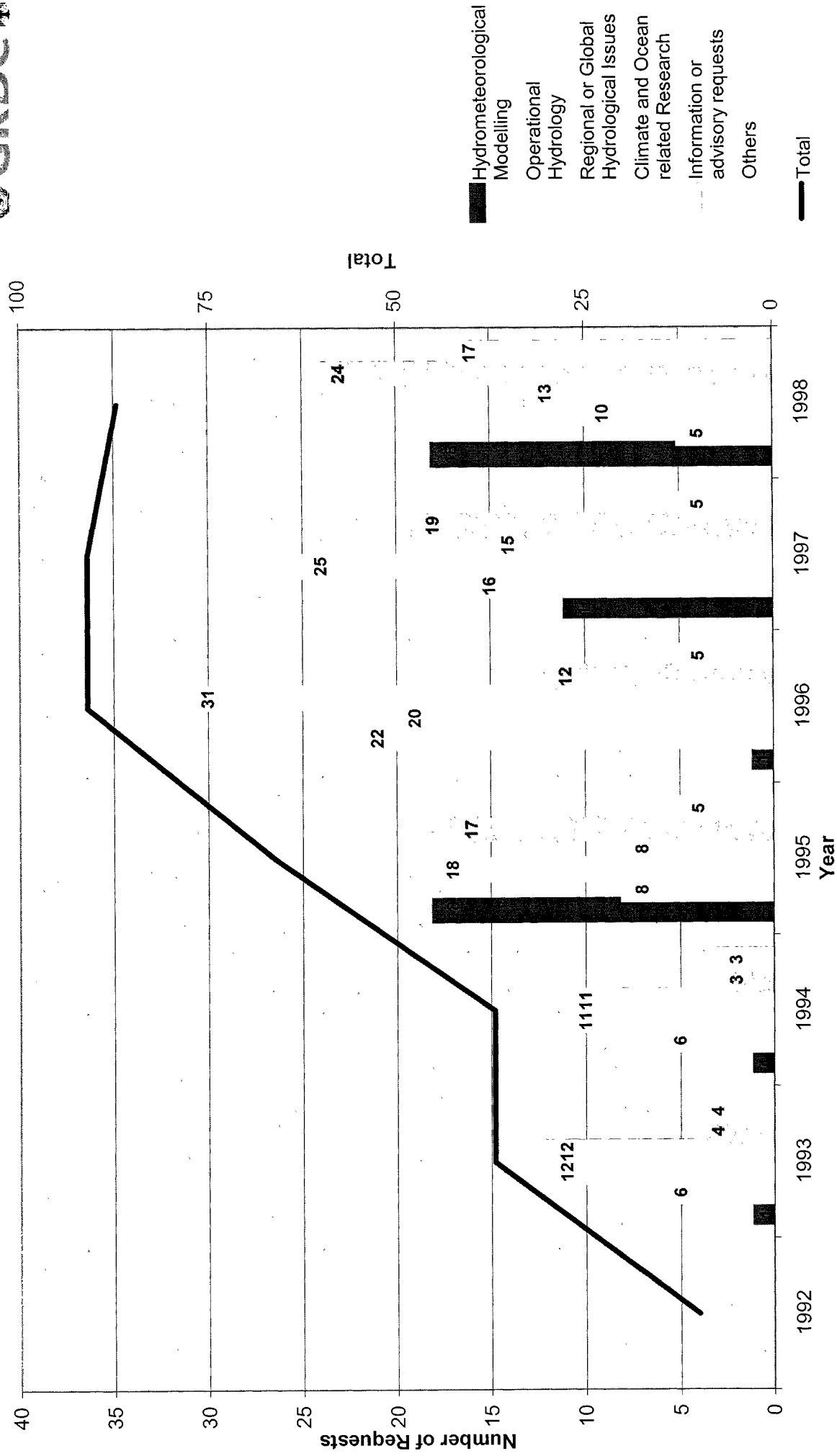
The following summary of the use of GRDC Data shows the increase of demand for regional and global discharge Data and the trend of research priorities. In the past years, Hydrometeorological modeling and the request for advisory services i.e. for regional and global freshwater assessments has been constantly rising. Climate and ocean related research, where discharge Data are used for the validation of global Climate models traditionally have a comparatively high number of requests for Data and information. Regional interests can also be linked to research and interests in the management of transboundary rivers.

The first page of the report shows the categorized use of GRDC Data; the following pages depict the global coverage of received Data and the size of basins including sub-basins of large rivers. The figure showing the availability of Data along the time-line demonstrates, that on average the time-lag between observations and transfer of Data to GRDC from many services takes years. This limits the use of Data especially when the use of hydrological Data is coupled with satellite observations and is embedded in models/assessments using most recent information. This is clearly a subject which needs attention from Data providers. In this respect, several countries are now publishing hydrological Data on the Internet, and some other services send their Data on an annual basis to GRDC.

Readers of this report are invited to contact GRDC if direct contacts are requested to some of the listed research institutions or individual researchers. All institutions and researchers have been registered as users of GRDC Data and have complied with GRDC's policy for the use of GRDC Data.

Dr. Wolfgang Grabs  
Head, GRDC

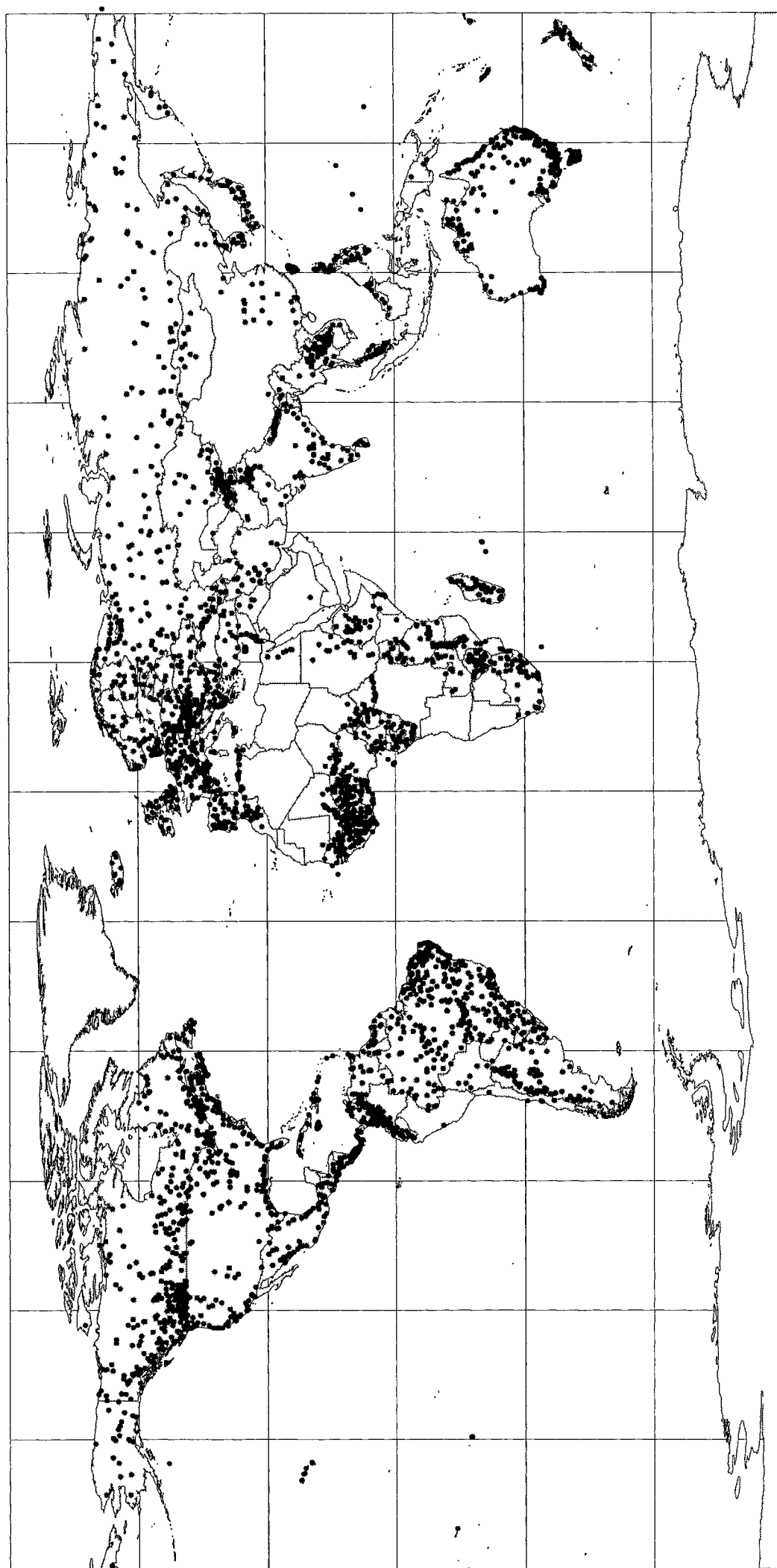
# GRDC-Database Requests 1992 - 1998





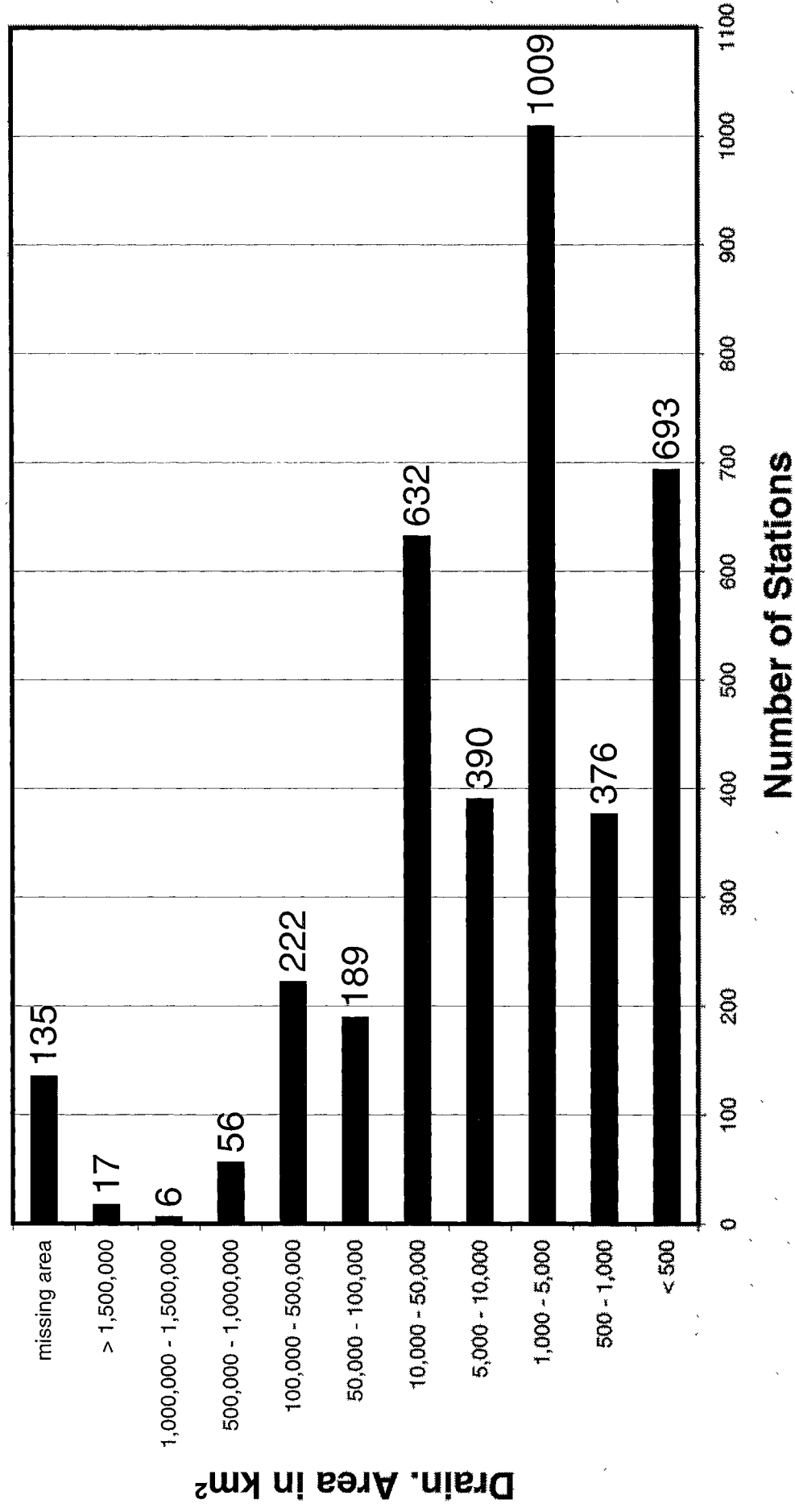
# GRDC STATIONS

Status : July 1999



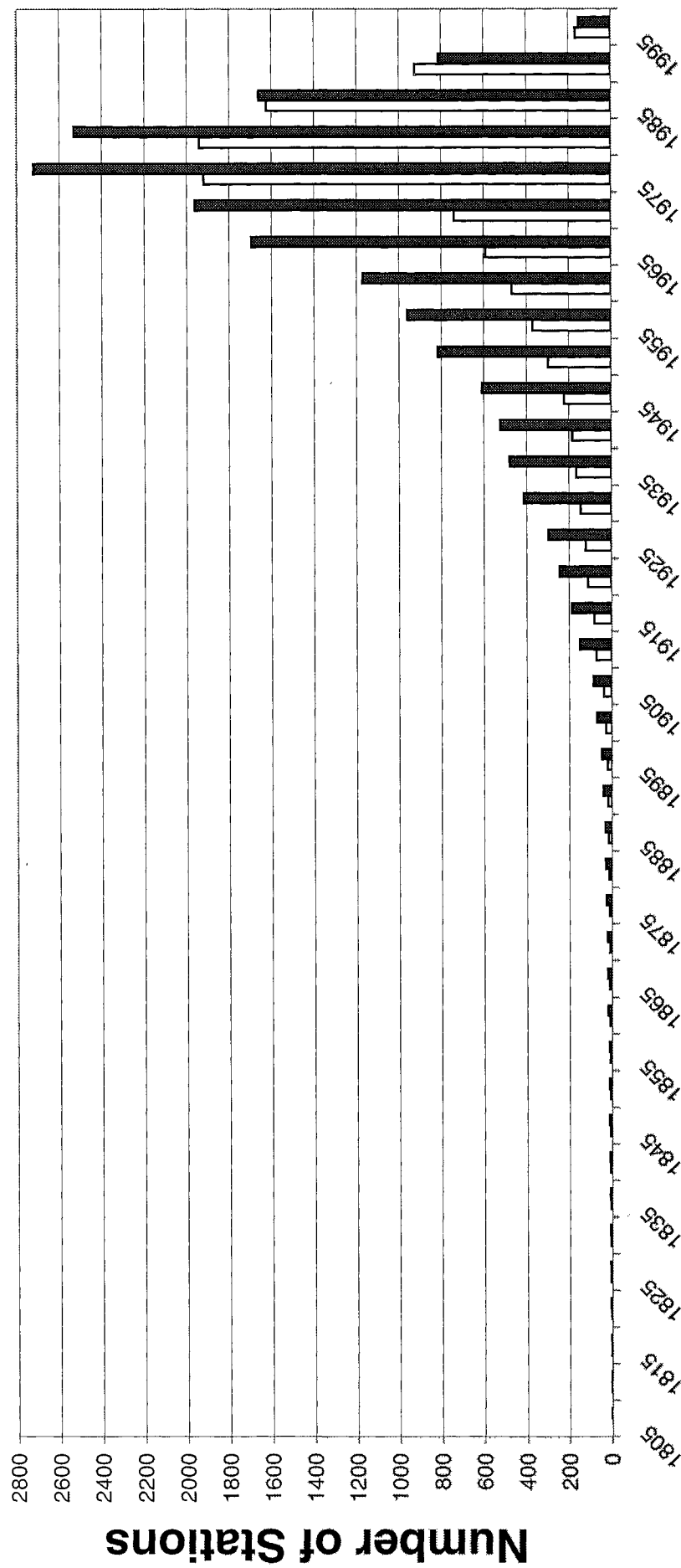
## GLOBAL RUNOFF DATA CENTRE (GRDC)

### Stations Classified by Drainage Area (Global Overview)



# GLOBAL RUNOFF DATA CENTRE (GRDC)

## Available Data in the GRDC Database

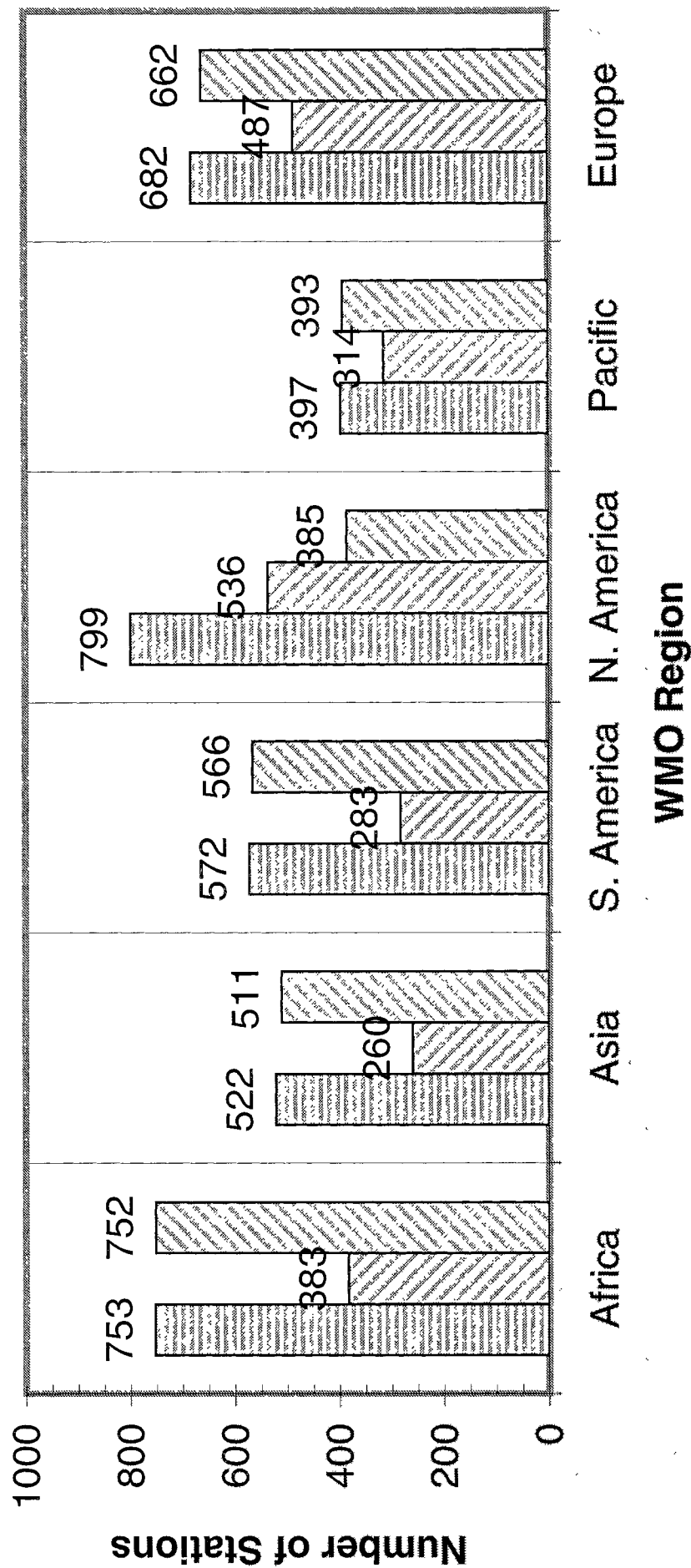


5 Years Interval

□ Day ■ Month

# GLOBAL RUNOFF DATA CENTRE (GRDC)

## Number of Stations in the GRDC Splitted in WMO Regions



Number of Stations ☐ Number Daily Data ☒ Number Monthly Data

### Database Requests 1993

| Request made by<br>(Name, country)                                                 | Country or river for which<br>data were requested | Purpose of data use                                                            |
|------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------|
| Bishop, J.M., Institute for Scientific Research, Kuwait                            | Iran, Kuwait                                      | Design for prawn industries                                                    |
| Buren, T., International Institute for Applied Systems Analysis, Austria           | Altogether 114 river basins in all regions        | Climate change impact on regional water resources                              |
| Drange, H., Nansen Environmental and Remote Sensing Centre, Norway                 | Report 100 MPI/GRDC                               | Discharge from 50 selected rivers of the world for GCM validation              |
| Cunnane, C., University College, Dept. Hydrology, Ireland                          | GRDC catalogue                                    | Selection of rivers for trend analysis of discharge                            |
| Ebel, Ch., State Environment Agency, Germany                                       | Argentina                                         | Environmental protection in the Rio Colorado basin                             |
| Freon, P., ORSTOM, France                                                          | Italy                                             | EC-program in Marine research                                                  |
| Friederich, State Agency for Agriculture and Water Resources, Germany              | Rivers flowing in the Baltic Sea                  | Pollution fluxes in the Baltic Sea                                             |
| Hastenrath, S., Univ. of Wisconsin, Dept. Atmospheric and Oceanic Sciences, U.S.A. | Zaire                                             | Research on mechanisms of tropical climate anomalies                           |
| Zhou, J., Institute of Atmospheric Physics, China                                  | Report 100 MPI/GRDC                               | Discharge from 50 selected rivers of the world for GCM validation.             |
| Kisiel, K., Univ. Arizona, Dept. Hydrology, U.S.A.                                 | 12 large river basins globally                    | Development of GIS-system                                                      |
| Lee, T., UN Economic Commission, Chile                                             | GRDC catalogue                                    | Latin-American integrated water resources planning and management              |
| Lal, M., Indian Institute of Technology, India                                     | India                                             | Validation of GCM's                                                            |
| Lean, J., U.K. Met. Office, U.K.                                                   | Report 100 MPI/GRDC                               | Discharge from 50 selected rivers of the world for GCM validation.             |
| Mahfouf, J., Meteo-France, France                                                  | Report 100 MPI/GRDC                               | Discharge from 50 selected rivers of the world for GCM validation.             |
| Mamayev, V., Central Research Centre, Oceanographic Institute, U.S.A.              | Selected rivers in Eastern Europe                 | Sea level rise in the Black Sea                                                |
| Manley, R., Cambridge Univ., U.K.                                                  | Euphrat, Tigris                                   | Marshes at the southern end of Euphrat and Tigris for World Conservation Union |

| <b>Request made by<br/>(Name, country)</b>               | <b>Country or river for which<br/>data were requested</b> | <b>Purpose of data use</b>                                         |
|----------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------------------|
| Hua-Lu, P., NOAA, U.S.A.                                 | Report 100 MPI/GRDC                                       | Discharge from 50 selected rivers of the world for GCM validation. |
| Tonderski, A., Linköping Univ., Sweden                   | West European and East European rivers                    | Hydrological data for research in water quality changes            |
| Tateishi, R., Chiba Univ., Japan                         | Selected rivers over the world                            | Global water resources and water use                               |
| Braithwaite, D., EOS Project, Univ. of Arizona, U.S.A.   | Selected rivers over the world                            | Preparation of selected global data sets for GCM modellers         |
| Kwadijk, J., Univ. Utrecht, Netherlands                  | Ganges, Brahmaputra                                       | Adaption and test of water balance model                           |
| Winnegge, Th., Fed. Inst. Hydrology, Germany             | Niger river                                               | Comparative studies with precipitation data held in the GPCC       |
| Yamagata, T., University of Tokyo                        | Report 100 MPI/GRDC                                       | Discharge from 50 selected rivers of the world for GCM validation. |
| Roth, R., Int. Meteorology & Climatology, Univ. Hannover | Report 100 MPI/GRDC                                       | Discharge from 50 selected rivers of the world for GCM validation. |

### Database Requests 1994

| Request made by<br>(Name, country)                                                                                                                         | Country or river for which<br>data were requested                                 | Purpose of data use                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------|
| Adams, D., National Remote Sensing Centre Limited, Hampshire, UK.                                                                                          | Rivers Bosna, Fojnicka, Neretva (50 km around Sarajevo)                           | GIS-Input for flood modelling                                |
| Alexiou, A.G. Intergovernmental Oceanographic Commission, UNESCO, France                                                                                   | River discharge into the Indian Ocean                                             | Global ocean observing system                                |
| Aureli, A., UNESCO, IHP, France                                                                                                                            | Niger basin                                                                       | GIS based assessment of water resources                      |
| Bainto, E.V., Climate Research Division, Scripps Institution of Oceanography, University of California, San Diego, U.S.A.                                  | Major river inputs to North Pacific and Atlantic basins                           | Runoff computation into oceans                               |
| Barsoum, N., RITSEC - Regional Information Technology and Software Engineering Centre, Cairo, Egypt                                                        | Arab region and Europe                                                            | Regional information system update                           |
| Bergström, St., SMHI-Swedish Meteorological and Hydrological Institute, Sweden                                                                             | Baltic region                                                                     | BALTEX-Project                                               |
| Braithwaite, D., University of Arizona, U.S.A.                                                                                                             | Data of gauges in all regions                                                     | Earth Observation Project of NASA                            |
| Buchtele, W., Charles University, Prague, Czech Republic                                                                                                   | Niger Basin                                                                       | Water balances and rainfall-runoff modeling (Student-course) |
| Cayan, D., Scripps Institution of Oceanography University of California, San Diego, Climate Research Division, La Jolla, U.S.A.                            | Station in Canada, U.S.A., Europe with drainage area above 50 000 km <sup>2</sup> | -                                                            |
| Chalise, S.R., International Centre for Integrated Mountain Development, Kathmandu, Nepal                                                                  | Rivers in the Hindu Kush Himalayas                                                | Hydrological studies in the Himalayan region                 |
| DeLiberty, T.L., Cooperative Institute for Meteorological Satellite Studies, Space and Engineering Centre University of Wisconsin-Madison, Madison, U.S.A. | Discharge data for rivers in Brasil; Amazon Basin                                 | Research on moisture budget in the Amazon Basin              |
| Dethleff, T., Forschungszentrum für Marine Geowissenschaften, Christian-Albrechts-Universität, Kiel, Germany                                               | Discharge data of Sibirien rivers flowing to the Arctic Ocean                     | Research on Arctic Shelf zones                               |
| Dinar, A., Water Resources Economist, The World Bank, Washington, U.S.A.                                                                                   | Indian and Brazilian rivers                                                       | Research on Global Warming effects in India and Brazil       |

| <b>Request made by<br/>(Name, country)</b>                                                                                                    | <b>Country or river for which<br/>data were requested</b>                                      | <b>Purpose of data use</b>                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| Dümenil, L., Max Planck<br>Institute for Meteorology,<br>Hamburg, Germany                                                                     | Metadata only                                                                                  | GRDC-Catalogue, Research on<br>global climate change                  |
| Fernandez-Jauregui, C.A.,<br>UNESCO, Montevideo, Uruguay                                                                                      | GRDC diskette                                                                                  | LACHYCOS project South<br>America                                     |
| Flachs, F., Friedrich-Alexander-<br>Univ. Erlangen-Nürnberg,<br>Germany                                                                       | River basins Kongo/Zaire, Nile,<br>Mekong, Parana                                              | Research on river discharge and<br>flood plain ecology                |
| Gelder, van A., Vakgroep<br>Fysische Geografie, Univ.<br>Utrecht, Netherland                                                                  | Yellow River (Huanghe), China                                                                  | Research on sediment transport                                        |
| Georgiadi, A., IGAN. Moscow,<br>Russia                                                                                                        | Monthly flow of all rivers of<br>GRDC                                                          | Information on rivers in former<br>SU                                 |
| Hamad, O., Freshwater<br>Resources Management Program<br>Centre for Environment &<br>Development Arab Region and<br>Europe, Oman, Giza, Egypt | GRDC catalogue                                                                                 | Establishing regional data base                                       |
| Heller, H., Lehrstuhl für<br>Geobotanik, Systematisch-<br>Geobotanisches Institut,<br>Göttingen, Germany                                      | Discharge in Rivers Odra and<br>Vistula                                                        | Vegetation Research                                                   |
| Hladny, J., Czech<br>Hydrometeorological Institute,<br>Praha, Czech Republic                                                                  | Elbe-basin                                                                                     | WCP-Water Project B.3                                                 |
| Immendorf, R., Geographisches<br>Institut der Universität Köln,<br>Germany                                                                    | Rivers in Western Europe                                                                       | Research Project: Floods in<br>Western Europe                         |
| Iyama, S., River Bureau, Ministry<br>of Construction, Tokyo, Japan                                                                            | GRDC information                                                                               | Catalogue of rivers in SE-Asia                                        |
| Kasalski, K., Poznan, Poland                                                                                                                  | Rivers Thames and Lee                                                                          | Analysis of long-term time series                                     |
| Kleeberg, H.-B., Institut für<br>Wasserwesen, Universität der<br>Bundeswehr München, Germany                                                  | GRDC information                                                                               | Organisation of database and<br>datastructure                         |
| Kwadijk, J., Geografisch<br>Instituut, Vakgroep Fysische<br>Geografie, Univ. Utrecht,<br>Netherland                                           | Rivers Ganges and Brahmaputra                                                                  | Water balance with Rhine flow<br>model for climate change<br>research |
| Laval, K., Laboratoire de<br>Météorologique Dynamique,<br>Centre National de la Recherche<br>Scientifique, Paris, France                      | Runoff and precipitation in river<br>basins: Mississippi, Amazon,<br>Europe, Sahel and Yenisey | Runoff simulation in Global<br>Circulation Models                     |

| <b>Request made by<br/>(Name, country)</b>                                                                      | <b>Country or river for which<br/>data were requested</b>                      | <b>Purpose of data use</b>                         |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------------------------------------|
| Lemmelä, R., National Board of Waters and the Environment, Hydrological Office, Helsinki, Finland               | GRDC catalogue                                                                 | Hydrological models for BALTEX project             |
| Maidment, D.R.<br>Centre for Research in Water Resources, University of Texas, Austin, U.S.A                    | GRDC catalogue. Streamflow data of the Niger and Benue basins                  | FAO/UNESCO Water Balance of Africa                 |
| Maier-Reimer, D.,<br>Hamburg, Germany                                                                           | Runoff-data of rivers in Canada and Alaska. Runoff-data of rivers in France    | Doctoral thesis on Hydrological Regimes            |
| Malm, B., UNESCO, Division of Water Science, Paris, France                                                      | Station catalogue of rivers in Africa                                          | Comparison of databases                            |
| Matsuoka, Y., Environmental and Sanitary Engineering, Univ. Kyoto, Japan                                        | Runoff-data of 522 stations                                                    | Analysis of climatic change on East and South Asia |
| Matsuyama, H., Department of Geography, Tokyo Metropolitan University, Tokyo, Japan                             | Discharge data of 8 rivers, which drain into Lake Balkhas and of the Ili river | Studies on water budget around Lake Balkhash       |
| McClimans, SINTEF NHL, Norwegian Hydrotechnical Laboratory, Trondheim, Norway                                   | Data of Ob and Yenisei                                                         | -                                                  |
| Naff, Th., School of Arts and Science, Dept. of Asian and Middle Eastern Studies, Univ. of Pennsylvania, U.S.A. | GRDC information                                                               | Middle East water issues project                   |
| Oki, T., Hydrology and Water Resources Engineering, Institute of Industrial Science, Tokyo, Japan               | Selected global runoff data                                                    | Research on global soil wet-ness                   |
| Pelt, Ph., UNEP/GRID, Geneva, Switzerland                                                                       | GRDC catalogue                                                                 | User-guide for data base on natural hazards        |
| Perlmutter, M.A., Texaco, Houston, Texas, U.S.A                                                                 | GRDC information                                                               | Elevations and hypsometry of river drainage areas  |
| Qu, W., Institut für Pflanzenökologie, Justus-Liebig Univ. Gießen, Germany                                      | GRDC information                                                               | Water Cycle Model                                  |
| Rohde, F., Lehrgebiet für Wasser-Energie Wirtschaft, RWTH Aachen, Germany                                       | GRDC information                                                               | Structure of data and organisation of database     |
| Sakho, M.A.<br>Abidjan, Ivory Coast, Africa                                                                     | Country catalogue, Catalogue of missing data                                   | update of database                                 |

| <b>Request made by<br/>(Name, country)</b>                                                      | <b>Country or river for which<br/>data were requested</b>                                                                                                                                                                                                                                             | <b>Purpose of data use</b>                                                   |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| Schmitt-Heidrich, P., Institut für Hydrologie und Wasserwirtschaft, Univ. Karlsruhe, Germany    | Gambia river                                                                                                                                                                                                                                                                                          | Irrigation projects (Salinization)                                           |
| Singh, A., GRID-Sioux Falls, EROS Data Centre, Sioux Falls, U.S.A.                              | GRDC information                                                                                                                                                                                                                                                                                      | Digital elevation model                                                      |
| Sungwon, J., Korea Institute of Constuction Technology, Water Resources Eng. Div., Seoul, Korea | GRDC information (Korea)                                                                                                                                                                                                                                                                              | Hydrologic data systems, update of regional database                         |
| The Hydrological Advisor to His Majesty's Government of Thailand                                | GRDC catalogue, catalogue of missing data                                                                                                                                                                                                                                                             | GRDC request for data: Comparison of databases                               |
| Tomé, A. R., Universidade da Beira, Covilha, Portugal                                           | Spain: Ebro, Júcar, Liobregat, France: Rhône, Italy: Po, Arno, Tibre, Greece: Akhelóos, Axiós, Evros, Aliákman, Yugoslavia: Krka, Cetina, Neretva, Albania: Mat, Drin, Shkumbi, Devoli, Vigose, Lebanon: Litani, Egypt: Nile, Morocco: Moulouya, Tunesia: Medjerda, Algeria: Cheliff, Turkey: Cheyhan | PhD thesis intra and inter-annual variability in the Mediterranean region    |
| Try, P. International GEWEX Project Office, Washington, U.S.A.                                  | GRDC information (8 stations)                                                                                                                                                                                                                                                                         | Preparation of CD-ROM for GEWEX (ISLSCP)                                     |
| Vandewiele, G.L. Vrije Universiteit Brussel, Belgium                                            | 31 rivers (globally)                                                                                                                                                                                                                                                                                  | PhD thesis; development of stochastic runoff models for engineering purposes |
| Wiese, B., Geographisches Institut, Universität zu Köln, Germany                                | Senegal river                                                                                                                                                                                                                                                                                         | Desertification in Senegal                                                   |
| Wilkinson, W.B., Institute of Hydrology, Wallingford, UK                                        | GRDC catalogue                                                                                                                                                                                                                                                                                        | Comparison of databases                                                      |
| Yang, R., Climate and Radiation Branch, NASA/GSFC, Greenbelt, U.S.A.                            | Global river flow data; 42 rivers                                                                                                                                                                                                                                                                     | Research on global climate change                                            |
| Zober, St.,IHP/OHP Secretariat, Koblenz, Germany                                                | River Vistula                                                                                                                                                                                                                                                                                         | Floodplain pollution control                                                 |

### Database Requests 1995

| Request made by<br>(Name, country)                                                                              | Country or river for which<br>data were requested                           | Purpose of data use                                                                                       |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Aarup, Th.<br>Cambridge, U.S.A                                                                                  | German Rivers: Elbe, Weser,<br>Ems                                          | Complementary information for<br>image interpretation of North<br>Sea                                     |
| Amano, K.<br>Nat. Inst. for Environment<br>Studies, Onogawa, Japan                                              | Yangtse, Yellow river                                                       | General information                                                                                       |
| Amram, O.<br>Centre D Etude Spatiale De La<br>Biosphere, Toulouse, France                                       | Selected river stations of Niger<br>(46)                                    | Tri-dimensional modelling of<br>hydrological fluxes using<br>satellite data                               |
| Andah, K.<br>WARREDOC, Università per<br>Stranieri die Perugia, Colombella<br>Alta, Italy                       | Awash and Blue Nile Basins                                                  | Training course on management<br>in drought prone areas                                                   |
| Borgman, C.<br>Brando Quilici Produzioni,<br>Roma, Italy                                                        | GRDC information                                                            | Project information for film<br>project about the global water<br>cycle                                   |
| Butzin, M.<br>Institut für Umweltphysik,<br>Universität Bremen, Germany                                         | Amazone, Orinoco, Rio de La<br>Plata, Kongo. GRDC - catalogue               | Tritium fluxes into the South<br>Atlantic through major rivers                                            |
| Braithwaite, D.<br>Dept. of Hydrology and Water<br>Resources Building University<br>of Arizona, Tucson, U.S.A.  | GRDC - catalogue                                                            | Global runoff data base study<br>for GIS appli-cations in the<br>Earth observation study (EOS)<br>of NASA |
| Braun, G.<br>Deutsche Forschungsanstalt für<br>Luft- und Raumfahrt e.V. (DLR)<br>Köln, Germany                  | GRDC - Report No. 9                                                         | General information                                                                                       |
| Conway, D.<br>Climatic Research Unit<br>University of East Anglia<br>Norwich, U.K.                              | GRDC - catalogue                                                            | Catalogue information only                                                                                |
| Costa, M.H.<br>Dept. of Atmospheric and<br>Oceanic Sciences<br>Madison, U.S.A.                                  | Data from the Amazon basin.<br>GRDC - catalogue                             | Study about the effects of the<br>global warming in the Amazon<br>river basin                             |
| Dokoubou, J.R.<br>Foyer 2 Institute of<br>Hydrometeorology<br>St. Petersburg, Russia                            | Data of Chad basins                                                         | Studies on flow regime of the<br>Chari- and Logone- basins and<br>the Lake Chad                           |
| Dracup, J.A.<br>School of Engineering and<br>Applied Science<br>University of California<br>Los Angeles, U.S.A. | GRDC - catalogue, GRDC -<br>Report No. 5 together with data<br>of 20 rivers | Investigations of the influence of<br>ENSO on Pacific Rim regional<br>hydrology                           |

| <b>Request made by<br/>(Name, country)</b>                                                                                                             | <b>Country or river for which<br/>data were requested</b>                             | <b>Purpose of data use</b>                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Ducharne, A.<br>CNRS, Ecole Normale<br>Superieure<br>Paris, France                                                                                     | Data of 26 river basins, GRDC-<br>catalogue, GRDC-Report No. 5                        | GCM-Studies                                                                              |
| Dunne, K.<br>US Geological Survey,<br>Geophysical Laboratory,<br>Princeton, U.S.A.                                                                     | Discharge data for the major<br>rivers of the world, GRDC-<br>catalogue               | Research on monthly and annual<br>river discharges for the major<br>rivers of the world  |
| Ekstrand, O.<br>HEDESELSKABET<br>Environment and Energy<br>Division, Department for<br>Landscape and Aquatic<br>Environment<br>Roskilde, Denmark       | Data for rivers of the West Bank<br>and Gaza, GRDC - catalogue,<br>GRDC-Information   | Catalogue information only                                                               |
| Eltahir, E.<br>Massachuttetts Institute of<br>Technology<br>Dept. of Civil and Envriental<br>Egineering<br>Ralph M. Parson Lab.<br>Cambridge, U.S.A.   | Data for selected rivers:<br>Amazon, Congo and Mississippi                            | Catalogue information only                                                               |
| Entekhabi, D.<br>Massachuttetts Institute of<br>Technology<br>Dept. of Civil and Envriental<br>Egineering<br>Ralph M. Parson Lab.<br>Cambridge, U.S.A. | GRDC information and GRDC<br>reports                                                  | General information                                                                      |
| Flachs, F.<br>Friedrich-Alexander-Universität,<br>Institut für Geographie<br>Erlangen-Nürnberg, Germany                                                | Discharge data for selected rivers:<br>Senegal, Kongo/ Zaire, Nile,<br>Mekong, Parana | Studies on physical geography<br>of humid tropical areas                                 |
| Foucher, C.<br>Institute d'Économie Industrielle<br>Université des Sciences Sociales<br>Toulouse Cedex, France                                         | GRDC - Information, GRDC -<br>Report No. 6 and No.7                                   | Assessment and management of<br>global water resources                                   |
| Gajewski, K.<br>Department of Geographie<br>University of Ottawa<br>Ottawa, Canada                                                                     | GRDC - catalogue, GRDC -<br>Report No. 5                                              | General information                                                                      |
| Gonzalo, R.H.<br>Russian State Hydrometeorol.<br>Institute<br>St. Petersburg,<br>Russian Federation                                                    | Runoff data for 20 stations of the<br>Basin Magdalena-Cauca,<br>Colombia              | Maximum flow estimation for<br>the river basin Magdalena-<br>Cauca, Republic of Colombia |

| Request made by<br>(Name, country)                                                                                         | Country or river for which<br>data were requested                                                                | Purpose of data use                                                                                                                        |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Goosse, H.<br>Institut d'Astronomie et<br>Géophysique G. Lemaitre<br>Louvain-la-Neuve, Belgium                             | GRDC Report No. 5                                                                                                | Sensitivity of a global ice-ocean<br>model to the Bering Strait<br>throughflow                                                             |
| Graham, St.<br>University of Texas at Austin<br>Dept. of Geological Sciences<br>Austin, U.S.A.                             | All stations on rivers with output<br>to the oceans above 50 degrees<br>latitude, GRDC - catalogue               | Global water resources study                                                                                                               |
| Green, B.<br>Environmental Eng. and Health<br>Sciences Lab.<br>University of California<br>Berkeley, U.S.A.                | Data for Varanasi, India<br>GRDC - catalogue                                                                     | Climatological project study<br>within the Ganges river basin                                                                              |
| Guitteaud, E.<br>MARS & Co.<br>San Francisco, U.S.A.                                                                       | All countries of the world, except<br>African continent and Japan,<br>GRDC - catalogue                           | Studies on water supply and<br>waste management                                                                                            |
| Heine, G.<br>Kreditanstalt für Wiederaufbau<br>Frankfurt, Germany                                                          | GRDC - catalogue                                                                                                 | General information                                                                                                                        |
| Heyen, H.<br>Max-Planck-Institut für<br>Meteorologie<br>Hamburg, Germany                                                   | Discharge data of the rivers:<br>Seine, Somme, Maas, Rhein,<br>Ems, Weser, Elbe, Themse,<br>Trent and Loire      | Regionalisation of climate model<br>data in the Northern sea area                                                                          |
| Hofman, P.<br>Library Technician World Data<br>Center A for Glaciology<br>CIRES; University of Colorado<br>Boulder, U.S.A. | GRDC Report No. 8                                                                                                | ACSYS - Study                                                                                                                              |
| Hoinka, K.P.<br>Deutsche Forschungsanstalt für<br>Luft- und Raumfahrt e.V. (DLR)<br>Oberpfaffenhofen, Germany              | Discharge data of rivers of the<br>alpine area. GRDC - catalogue,<br>GRDC - Information                          | Mesoscale alpine programme<br>(MAP)                                                                                                        |
| K. Ichiyonagi<br>Nat. Research Inst. for Earth<br>Science and Disaster Prevention,<br>Tsukuba, Ibaraki, Japan              | Runoff data for the major rivers<br>of the world, GRDC -<br>Information, GRDC - catalogue,<br>GRDC - Reports (6) | Collection of runoff data in<br>major rivers of the world for<br>runoff analysis and to perform<br>simulation coupled with GCM-<br>studies |
| Ide, S.<br>The University of Shiga<br>Prefecture<br>Department of Environmental<br>Planning<br>Shiga, Japan                | GRDC - Information, GRDC -<br>Reports                                                                            | Completion of Data Book<br>computerization project on<br>RAISON                                                                            |
| Isemer, H.-J.<br>GKSS Forschungszentrum, Max-<br>Planck-Institut<br>Geesthacht, Germany                                    | GRDC - catalogue                                                                                                 | General information                                                                                                                        |

| <b>Request made by<br/>(Name, country)</b>                                                                                                                          | <b>Country or river for which<br/>data were requested</b>                             | <b>Purpose of data use</b>                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| James, R.<br>Hydrology Section Bureau of<br>Meteorology<br>Melbourne, Australia                                                                                     | Catalogue of Australien data                                                          | General information                                                                                                                   |
| Kheng, L.Ch<br>Department of Civil and<br>Environmental Engineering<br>Ralph M. Parsons Laboratory<br>Massachusetts Institute of<br>Technology<br>Cambridge, U.S.A. | Data of Pa Sak river basin                                                            | Studies on flood control in<br>Thailand                                                                                               |
| Kochendorfer, J.<br>Colorado State University<br>Department of Civil Engineering<br>Fort Collins, Colorado U.S.A.                                                   | Rivers of Mongolia, Selenga<br>River and tributaries in south-<br>central Siberia     | General information                                                                                                                   |
| Kourafalou, V.<br>Istituto Per Lo Studio Delle<br>Meteorologie Geofisiche<br>Ambientali<br>Modena, Italy                                                            | Runoff data of rivers around the<br>Adriatic Sea. GRDC - catalogue<br>and Information | Catalogue information only                                                                                                            |
| Landwehr, I.<br>United States Geological Survey<br>(USGS)<br>Reston, U.S.A.                                                                                         | GRDC - catalogue                                                                      | General information                                                                                                                   |
| Maidment, D.R.<br>Center for Research in water<br>Resources<br>The University of Texas<br>Austin, U.S.A.                                                            | Runoff data data for the Niger<br>River Basin                                         | Comparison of river basins                                                                                                            |
| Maruyama, M.<br>Nagoya University<br>Forest Resource Utilization<br>Laboratory Nagoya, Japan                                                                        | Discharge data of the Amazon<br>River                                                 | Catalogue information only                                                                                                            |
| Matsuyama, H.<br>Tokyo Metropolitan University,<br>Dept. of Geography<br>Tokyo, Japan                                                                               | GRDC - catalogue, GRDC-<br>Reports 1-5                                                | Update of indicated data                                                                                                              |
| McKinney, D.C.<br>Center for Research in Water<br>Resources<br>University of Texas<br>Austin, U.S.A.                                                                | Discharge data from rivers of the<br>Aral Sea Basin                                   | UNESCO/IHP - project:<br>Construction of a geo-graphic<br>information system based on<br>description of the global water<br>resources |
| McMahon, T.A.<br>Department of Civil and<br>Environmental Engineering<br>University of<br>Melbourne, Australia                                                      | GRDC - catalogue, dates of<br>selected rivers of the world                            | Ph.D. project: Annual runoff<br>variability in a global context.<br>Pacific Rim project                                               |

| <b>Request made by<br/>(Name, country)</b>                                                                                 | <b>Country or river for which<br/>data were requested</b>                                                                          | <b>Purpose of data use</b>                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Meigh, J<br>Institute of Hydrology<br>Wallingford<br>Oxfordshire, U.K.                                                     | Monthly flow series of rivers<br>from several South African<br>countries                                                           | Assessment of global water<br>resources (surface- and ground<br>water)                                                                                                                |
| Miller, S.<br>State of Israel<br>Hydrological Service<br>Water Commission<br>Ministry of Agriculture<br>Jerusalem, Israel  | GRDC - Report No. 5                                                                                                                | Completion of the library                                                                                                                                                             |
| Mirza, M.Z.<br>Centre for Environmental and<br>Resource Studies (CEARS)<br>University of Waikato<br>Hamilton, New Zealand  | Discharge data of the Ganges-<br>Brahmaputra- Meghna-Basins                                                                        | Impact of climate change on<br>water resources in the Ganges-<br>Brahmaputra-Meghna Basins                                                                                            |
| Mitosek, H.T.<br>Institute of Geophysics<br>Polish Academy of Sciences<br>Warsaw, Poland                                   | Discharge data of the rivers:<br>Wesel/Vlotho, Germany and<br>Raneal/Miemisel, Sweden.<br>GRDC - catalogue, GRDC -<br>Report No. 7 | Transformation of measured<br>flow data to grid points                                                                                                                                |
| Molnar, G.<br>University of Tokyo Institut of<br>Industrial Science, Tokyo, Japan                                          | Data of selected rivers:<br>Irrawaddy, Sittang, Salween,<br>Chao Phraya, Mekong                                                    | Validation of regional water<br>balance model                                                                                                                                         |
| Morley, J.<br>University College London<br>Dept. of Photogrammetry and<br>Surveying<br>London, U.K.                        | GRDC - catalogue; Discharge<br>data for Niger-river in Mali                                                                        | Terrestrial initiative in global<br>environmental Research.<br>Incorporation of land hydrology<br>into global climate models                                                          |
| Naden, P.<br>Institute of Hydrology<br>Wallingford<br>Oxfordshire, U.K.                                                    | Discharge data of the<br>Mississippi- and Amazon-rivers,<br>GRDC - catalogue                                                       | Incorporation of river routing<br>models within coupled land-<br>ocean atmospheric models as<br>part of the TIGER project                                                             |
| Piechota, Th.<br>UCLA, Civil and Environmental<br>Eng. Dep.<br>Los Angeles, U.S.A.                                         | Discharge data of various river<br>stations (77) for the Asian and<br>Pacific region, GRDC -<br>catalogue, GRDC Report No. 5       | Research in the Pacific Rim<br>countries                                                                                                                                              |
| Portis, D.<br>Department of Atmospheric<br>Sciences University of Illinois<br>Urbana, U.S.A.                               | Data of (40) rivers flowing into<br>the Arctic Sea                                                                                 | ACSYS - project                                                                                                                                                                       |
| Shibasaki, R.<br>University of Tokyo<br>Institute of Industrial Science<br>Department of Civil Engineering<br>Tokyo, Japan | Data of selected rivers:<br>Irrawaddy, Sittang, Salween,<br>Chao Phraya, Mekong                                                    | Validation of a regional scale<br>water balance and transport<br>model. Estimation of the<br>quantitative and qualitative<br>changes of water and land<br>resources in Southeast Asia |

| <b>Request made by<br/>(Name, country)</b>                                                                                                       | <b>Country or river for which<br/>data were requested</b>                                      | <b>Purpose of data use</b>                                                                                    |
|--------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Sierek, H.<br>Offenbach, Germany                                                                                                                 | Data of rivers in South America<br>(4), South Africa (4) and Asia (8)                          | Comparison-study on reservoir<br>systems in South America,<br>Africa and Asia                                 |
| Smith, F.M.<br>College of Natural Resources<br>Department of Earth Resources<br>Colorado State University<br>Fort Collins, U.S.A.                | GRDC - catalogue                                                                               | General information                                                                                           |
| Swain, A.<br>Uppsala University<br>Dept. of Peace and Conflict<br>Research,<br>Uppsala, Sweden                                                   | Data for selected rivers: Rhine,<br>Colorado, Rio de la Plata, Nile<br>and Ganges- Brahmaputra | Analyses of conflict related to<br>world water resources                                                      |
| Schloß, A.<br>Institute for the Study of Earth,<br>Oceans and Space<br>University of New Hampshire<br>Morse Hall<br>Durham, New Hampshire U.S.A. | GRDC - catalogue                                                                               | Global water cycle modelling                                                                                  |
| Schmidt, U.<br>Naturhistorisches Museum<br>Mainz, Germany                                                                                        | River basins data of Ruanda,<br>GRDC - catalogue                                               | Research on the Ruanda river<br>systems on the bases of bilateral<br>cooperation                              |
| Steiger, M.J.<br>Centre d'Ecologie des Système<br>Fluviaux<br>Toulouse CEDEX, France                                                             | GRDC information about<br>German and French river basins                                       | Comparison of French and<br>German river basins                                                               |
| Strzepek, K.M<br>Dept. of Civil, Environ. and<br>Architectural Eng.<br>University of Colorado<br>Boulder, U.S.A.                                 | GRDC - catalogue and data of<br>Nile river basin (31)                                          | Project on climate change<br>impacts on water resources                                                       |
| Uvo, C.<br>Dept. of Water Resources<br>Engineering<br>Lund University of Technology,<br>Lund, Sweden                                             | Data for Amazon river basin                                                                    | Study of the influence of the<br>climate variability on water<br>resources for Amazon and<br>Northeast Brazil |
| Volkert, H.<br>Deutsche Forschungsanstalt für<br>luft- und Raumfahrt (DLR)<br>Oberpfaffenhofen, Germany                                          | Data of selected river basins:<br>Rhine, Rhine, Danube, Elbe, Po                               | Heavy precipitation in the Alpine<br>region                                                                   |
| Vörösmarty, Ch.,<br>University of New Hampshire<br>New Hampshire, U.S.A.                                                                         | GRDC - catalogue and GRDC -<br>Report No. 3                                                    | Assessment of global water<br>balances                                                                        |
| Walsh, J.<br>University Urbana Champaign<br>Dept. of Atmospheric Sciences<br>Urbana, Ill. U.S.A.                                                 | GRDC - Report No. 8                                                                            | ACSYS - project                                                                                               |

| Request made by<br>(Name, country)                                                                                   | Country or river for which<br>data were requested | Purpose of data use                                                                                    |
|----------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Wijs, K.de<br>DHW Consultants BV<br>Amersfoort, Netherlands                                                          | Ethiopian and Sudan river flow<br>data            | Regional water resources study<br>in Ethiopia                                                          |
| Zhuravin, S. A.<br>International Cooperation<br>Department<br>State Hydrological Institute<br>St. Petersburg, Russia | Data of selected river basins                     | (WMO Freshwater Assessment)<br>Comprehensive Assessment of<br>the freshwater resources of the<br>world |

### Database Requests 1996

| Request made by<br>(Name, country)                                                                                                   | Country or river for which<br>data were requested                                                       | Purpose of data use                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Aarup, Th. 40 Holworthy Street<br>Cambridge, MA 02138<br>USA                                                                         | UK Rivers: Thames, Wasj,<br>Humber, Tees, Tane and Forth;<br>Rivers from the western part of<br>Denmark | Dissertation on Regional<br>Hydrology                                                                            |
| Amt für Wehrgeophysik (Army<br>Geophysical Survey), Traben-<br>Trarbach, Germany                                                     | Nile at Karthoum                                                                                        | General regional information                                                                                     |
| Arestizabal, E. P.<br>c/o. State Hydrometeorological<br>Institute St. Petersburg<br>Russian Federation                               | Data of the station Greenville,<br>Mississippi                                                          | Graduation project:<br>Hydrological foundation of<br>horizontal drilling methods for<br>river crossing pipelines |
| Arnaud, D.<br>Berthouville, France                                                                                                   | GRDC - catalogue                                                                                        | Research on global water<br>resources                                                                            |
| Arora, V.<br>Dept. of Civil and Environ.<br>University of Melbourne<br>Parkville, VIC, Australia                                     | Discharge data for the Amazonas<br>River basin                                                          | Regional hydrological studies                                                                                    |
| Ballisoy, N.<br>Bodenkundliches Institut Bonn<br>Bonn, Germany                                                                       | Data for Rivers in West Turkey                                                                          | Study on climate changes as a<br>result of rain erosivity in West<br>Turkey                                      |
| Bauwens, W,<br>Vrije Universiteit Brussel<br>Laboratory of Hydrology<br>Brussel, Belgium                                             | GRDC catalogue                                                                                          | Thesis research in water<br>resources of the Zambesi river<br>basin                                              |
| Becker, P.<br>Battelle Marine<br>Science Laboratory                                                                                  | Discharge data for the Yalu<br>(Ammok) River, GRDC<br>catalogue                                         | PhD thesis: The effect of arctic<br>river hydrological cycles on<br>arctic ocean circulation                     |
| Berg, van den J.H.<br>Department of Physical<br>Geography<br>University Utrecht, Netherland                                          | Data of the Allier river, France                                                                        | Research project concerning the<br>morphology and<br>morphodynamics of the Allier<br>river                       |
| Bezanson, D.<br>Westlake Drive<br>Austin, Texas, U.S.A.                                                                              | GRDC catalogue, GRDC report<br>No. 5                                                                    | Research on hydrological<br>regimes of the world's largest<br>river basins                                       |
| Bhatia, R.<br>International Irrigation<br>Management Institute Colombo,<br>Sri Lanka                                                 | GRDC information, GRDC -<br>catalogue                                                                   | Agricultural research, analysis<br>of water resource systems,<br>publication of world water<br>dataset           |
| Birkett, Ch.<br>Mullard Space Science<br>Laboratory<br>Department of Space and Climate<br>Physics<br>University College London, U.K. | GRDC catalogue-extract, General<br>information                                                          | Satellite remote sensing<br>measurements                                                                         |

| <b>Request made by<br/>(Name, country)</b>                                                                                             | <b>Country or river for which<br/>data were requested</b>                     | <b>Purpose of data use</b>                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|
| Bishop, G.<br>Anteon Corps of the United<br>States Environmental Protection<br>Agency<br>Corvallis, Oregon, U.S.A.                     | GRDC information                                                              | Test of runoff mapping methods<br>for varios areas of the world                              |
| Bouhia, H.<br>Harvard University<br>Devision of Applied Sciences<br>Cambridge, Mass., U.S.A.                                           | GRDC information                                                              | Rainfall runoff analysis of<br>major selected rivers                                         |
| Bound, A.J.<br>Mullard Space Science<br>Laboratory<br>Department of Space and Climate<br>Physics<br>University College<br>London, U.K. | Streamflow data of Sudan,<br>GRDC information, Flow data of<br>the White Nile | Studies about the Sudan<br>Marshes                                                           |
| Braithwaite, D.<br>Department of Hydrology,<br>University of Arizona                                                                   | Selected major rivers of the world<br>(32 rivers)                             | Global water balance project                                                                 |
| Brandt, R.<br>GKSS Research Center<br>BALTEX<br>Geesthacht, Germany                                                                    | GRDC catalogue                                                                | General information                                                                          |
| Brigham, L.W.<br>Scott Polar Research Institute<br>University of Cambridge, U.K.                                                       | Data for the Laptev Sea and the<br>Lena River                                 | Research on the sea ice<br>conditions and ocean processes<br>of the Laptev Sea               |
| Calkins, D.<br>Geological Science Division<br>USACRREL<br>Hanover, NH, U.S.A.                                                          | Sava River Basin, Croatia                                                     | US Army Cold Region project<br>in Croatia                                                    |
| Charbonier, F.<br>IMFIA - Hydrology Division<br>J. Herrera y Reisig 564<br>Montevideo, Uruguay                                         | GRDC catalogue                                                                | Interdecadal variability of the<br>runoff and its relation with<br>Pacific Ocean temperature |
| Cluis, D.<br>Institut national de la recherche<br>scientifique<br>Université de Quebec<br>Québec, Canada                               | GRDC catalogue, GRDC<br>information                                           | General information                                                                          |
| Cullen, H.<br>Columbia University<br>Dpt. Geological Sciences<br>Lamont Campus, U.S.A.                                                 | Runoff data of Tigris and<br>Euphrates Rivers                                 | General information                                                                          |
| Demarée, G.<br>Koninklijk Meteorologisch<br>Institut van Belgie<br>Brussel, Belge                                                      | Data of the station Rees at the<br>Rhine river                                | Studies on dynamical<br>climatology                                                          |

| <b>Request made by<br/>(Name, country)</b>                                                              | <b>Country or river for which<br/>data were requested</b>                                | <b>Purpose of data use</b>                                                                                         |
|---------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Dettinger, M.<br>U.S. Geological Survey<br>San Diego CA, U.S.A.                                         | GRDC information, GRDC<br>catalogue                                                      | General information                                                                                                |
| Dibi, P.<br>University of Oklahoma<br>Dept. of Geography<br>Norman, Oklahoma, U.S.A.                    | GRDC catalogue                                                                           | Atmosphere/Surface parameter<br>evolutions and interaction over<br>Ivory Coast, West Africa                        |
| Diehl, A.<br>Linden, Germany                                                                            | Discharge data of the Yangtze<br>Kiang river in China                                    | PhD thesis about hydrological<br>regime of the Yangtze River                                                       |
| Dixon, J.M.<br>Institute of Hydrology<br>Wallingford OX U.K.                                            | Data of the rivers: Weser, Elbe,<br>Maas, Vaenern-Goeta, Escault,<br>Ems at Versen       | FRIEND Project: European<br>Water Archive                                                                          |
| Dobrovolsky, S.<br>NASA Goddard Space Flight<br>Center<br>Greenbelt, MD, U.S.A.                         | GRDC - catalogue, GRDC<br>information                                                    | General information                                                                                                |
| Dokoubou, J.R.<br>Institute of Hydrometeorology<br>St. Petersburg                                       | Data of rivers of Central Africa                                                         | Regional hydrological studies                                                                                      |
| Döll, P.<br>Wissenschaftliches Zentrum für<br>Umweltsystemforschung<br>Kassel, Germany                  | Discharge data worldwide,<br>GRDC information, GRDC<br>report No. 10                     | Global model of water<br>availability                                                                              |
| Douville, H.<br>CNRM/GMGEC/UDC<br>Toulouse / France                                                     | Report No. 5                                                                             | GEWEX Global Soil Wetness<br>Project                                                                               |
| Ducharne, A.<br>Laboratoire de Météorologie<br>Dynamique<br>École Normale Supérieure<br>Paris, France   | GRDC report No. 10, GRDC<br>information, leaflet, River<br>discharge data of 58 stations | Forcing an hydrologic model<br>with the continental water fluxes<br>of an atmospheric general<br>circulation model |
| Dümenil, L.<br>Max Planck Institut für<br>Meteorologie<br>Hamburg, Germany                              | GRDC catalogue                                                                           | General information                                                                                                |
| Eltahier, E.<br>Massachusetts Institute of<br>Technology<br>Parsons Laboratory<br>Cambridge, MA, U.S.A. | GRDC report No. 10                                                                       | Information on global<br>freshwater fluxes                                                                         |
| Epstein, D.<br>Battelle Pacific Northwest<br>National Laboratory<br>Richland, WA, U.S.A.                | GRDC information                                                                         | General information                                                                                                |

| <b>Request made by<br/>(Name, country)</b>                                                                                            | <b>Country or river for which<br/>data were requested</b>                                                                | <b>Purpose of data use</b>                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Evans, J.<br>Centre for Resource<br>Environmental Studies<br>Australien National University<br>Canberra, Australia                    | Discharge data of rivers in the<br>Ping basin, Upper Chao Phraya,<br>Thailand                                            | Project on integrated water<br>resource assessment for<br>sustainable management                                                                                    |
| Friederich<br>Amt für Land- und<br>Wasserwirtschaft<br>Kiel, Germany                                                                  | Data of 11 rivers flowing into the<br>Baltic Sea                                                                         | Study of the water pollution<br>loads of the Baltic Sea                                                                                                             |
| Genta, J.L.<br>Instituto de Mecanica de los<br>Fluidos e Ingñieria Ambiental<br>(IMFIA)<br>Montevideo, Uruguay                        | Discharge data for 13 rivers                                                                                             | Study of climate variability in<br>Southeastern South America                                                                                                       |
| Goosse, H.<br>Université Catholique de Louvain<br>Institut d'Astronomie et de<br>Geophysiqze G, Lemaitre<br>Louvain-la Neuve, Belgium | GRDC report No. 10,<br>169 stations in digitized form                                                                    | Global coupled ice-ocean model                                                                                                                                      |
| Hagemann, St.<br>Max-Planck-Institut für<br>Meteorologie<br>Hamburg, Germany                                                          | Data for selected rivers of Africa,<br>Asia, North and Central America,<br>South West Pacific and Europe                 | Validation of global circulation<br>models                                                                                                                          |
| Haller, W.T.<br>University of Florida<br>Institute of Food and Agricultural<br>Sciences<br>Gainsville, FL, U.S.A                      | Discharge data for the White and<br>Blue Nile River and for stations<br>of the Jebel Aulia Dam, Aswan<br>Dam and Dongola | Prediction of aquatic plant<br>interference with hydroelectric<br>production                                                                                        |
| Helbig, A.<br>Universität Trier<br>FB VI<br>Geographie/Geowissenschaften<br>Germany                                                   | Discharge data of the rivers:<br>Lena, Jana, Olenyok, Aldan                                                              | Study of ice conditions of the<br>Laptev-Sea in relation to the<br>discharge data of rivers flowing<br>into the Laptev-Sea                                          |
| Hietala, K.<br>Scott Polar Research Institute<br>University of Cambridge<br>United Kingdom                                            | First and second ACSYS interim<br>report                                                                                 | PhD thesis about freshwater<br>budget of the Arctic Ocean                                                                                                           |
| Hoff, H.<br>IGBP-BAHC Core Project Office<br>Institut for Climate Impact<br>Research<br>Potsdam, Germany                              | Discharge data for the Amazone<br>river basin, GRDC catalogue                                                            | River basin study                                                                                                                                                   |
| Holland, D.M.<br>Lamont-Dohery Earth<br>Observatory<br>of Columbia University<br>Palisades, NY, U.S.A.                                | Two ACSYS Interim Reports,<br>Runoff-data of the Arctic rivers                                                           | Investigation of the effect of<br>rivers on the circulation of the<br>Arctic Ocean and Sea ice using<br>a regional coupled atmosphere-<br>ice ocean numerical model |

| <b>Request made by<br/>(Name, country)</b>                                                                                       | <b>Country or river for which<br/>data were requested</b>                                                                                                 | <b>Purpose of data use</b>                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Horton, R.<br>Center for Environmental<br>Research and Conservation<br>Columbia University in the City<br>of<br>New York, U.S.A. | GRDC catalogue of South-East<br>Asian discharge data                                                                                                      | Integrated assessment of ENSO-<br>related effects in Indonesia                                   |
| Isemer<br>GKSS-Forschungszentrum<br>Baltex-Sekretariat<br>Geesthacht, Germany                                                    | GRDC catalogue                                                                                                                                            | General information,<br>contribution to BALTEX-<br>project                                       |
| Jacobs, N.<br>University of Utrecht<br>Faculty of Geographical Sciences<br>Netherland                                            | Data of the Elbe River stations                                                                                                                           | Hydrological model for the Elbe<br>River                                                         |
| Jakobsen, F.<br>Danish Hydraulic Institute<br>Horsholm, Denmark                                                                  | Data of river discharges of the<br>German Bight                                                                                                           | DYNOCS: Dynamic of<br>connecting seas. A MAST II<br>research project                             |
| James, R.<br>Bureau of Meteorology<br>Melbourne, Victoria, Australia                                                             | GRDC catalogue                                                                                                                                            | General information                                                                              |
| Jennerjahn, T.<br>Universität Hamburg<br>Institut für Biogeochemie und<br>Meereschemie<br>Hamburg, Germany                       | GRDC catalogue, Discharge data<br>of 28 selected rivers from<br>Europe, North and Southeast<br>Asia, North and Central America,<br>Brazil, India and Asia | Biogeochemical research on<br>rivers                                                             |
| Jiabin, Zh.<br>Institute of Atmospheric Physics<br>Chinese Academy of Sciences<br>Beijing, China                                 | Global Datasets of selected rivers                                                                                                                        | Study on the global change of<br>runoff data                                                     |
| Jilk, H,<br>Schwäbisch Hall, Germany                                                                                             | Discharge data of European rivers                                                                                                                         | General information                                                                              |
| Kaczmarek, Zd.<br>Institute of Geophysics<br>Warsaw, Poland                                                                      | Discharge data for rivers in<br>China, Korea, Pakistan and India                                                                                          | Research project on impact of<br>climate change in Southeast<br>Asia                             |
| Kakuta, S.<br>Ocean Research Department<br>Japan Marine Science and<br>Technology Center<br>Yokosuka, Japan                      | Two ACSYS Interim Reports,<br>Runoff-data of the Arctic rivers<br>Mackenzie, Kolyma, Indigirka,<br>Lena, Ktuy, Yenisei, Ob, Pechora<br>and Sev. Dvina     | Arctic ocean model study                                                                         |
| Karim, A.<br>Department of Geology<br>University of Ottawa<br>Ottawa ON, Canada                                                  | Discharge data for Indus River<br>and its tributaries, GRDC<br>information                                                                                | Major elements and stable<br>isotopes: PhD thesis on the<br>Indus River                          |
| Kassian, A.G.<br>Cowes<br>Isle of Wight, U.K.                                                                                    | GRDC information, GRDC<br>Report No. 9                                                                                                                    | PhD. Thesis: A political history<br>of the hydropolitics of the<br>Euphrates-Tigris Rivers basin |

| Request made by<br>(Name, country)                                                                                         | Country or river for which<br>data were requested                                                                                                                                                  | Purpose of data use                                                                              |
|----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| Killingtveit, A,<br>Centre for Environment and<br>Development<br>Dragvoll, Norway                                          | GRDC information on the<br>ACSYS project                                                                                                                                                           | Educational course in Arctic<br>water mangement                                                  |
| Kleeschulte, St.<br>G.I.M. - Geographic Information<br>Management SQ<br>Luxembourg                                         | GRDC catalogue                                                                                                                                                                                     | General information                                                                              |
| Kubota, J.<br>Department of Forest Science<br>Tokyo University of Agriculture<br>and Technology                            | GRDC catalogue                                                                                                                                                                                     | General information                                                                              |
| Lohmann, D.<br>Institut for Atmospheric Physics<br>Geesthacht, Germany                                                     | Discharge data of rivers, flowing<br>into the Baltic Sea                                                                                                                                           | Validation of atmospheric<br>models of the BALTEX project                                        |
| Mader, F.<br>Firma AST & Co.<br>Baugesellschaft mbH,<br>Feldkirchen<br>Austria                                             | Mean monthly discharge data for<br>Rio Mino, Spain                                                                                                                                                 | Feasibility study for dam project                                                                |
| Maidment, D. R.<br>Center for Research in Water<br>Resources<br>University of Texas<br>Austin, U.S.A.                      | Discharge data for 161 stations                                                                                                                                                                    | Fresh water fluxes into the<br>Ocean                                                             |
| Mamaev<br>Coastal Research Center<br>Woods Hole Oceanographic<br>Institution<br>Woods Hole, MA, U.S.A.                     | Discharge data for rivers:<br>Danube, Dniepr, Dniestr,<br>Southern Bug, Don, Rioni,<br>Sakaria, Kizil-Irmak, Kamchia                                                                               | Research on the rising sea-level<br>in the Black Sea                                             |
| Marsh, T.<br>Institute of Hydrology<br>Wallingford, Oxfordshire, U.K.                                                      | Discharge data of the rivers: Blue<br>Nile at Khartoum; Columbia<br>River at Dalles, Oregon;<br>Susquehanna at Harrisberg, Pa;<br>St. Mary's River at Saulte St.<br>Marie; Avoca River at Coonooer | Publication of the second<br>edition of "Hydrometry -<br>Principles and Practices"               |
| Martin, S.<br>University of Washington<br>School Oceanography<br>Seattle, WA, U.S.A.                                       | Update of Arctic River<br>information                                                                                                                                                              | Arctic research                                                                                  |
| Maruyama, M.<br>Forest Resources Utilization<br>Laboratory<br>School of Agricultural Sciences<br>Chikusa-ku, Nagoya, Japan | Discharge data from Brazilian<br>rivers including Rodonia State                                                                                                                                    | The impact of deforestation in<br>Brazilian Amazonia: large-scale<br>clearance in Rondonia State |
| Maus, S.<br>Norsk Polarinstitut<br>Oslo, Norway                                                                            | GRDC Catalogue, Discharge data<br>from different rivers flowing into<br>the Barents Sea                                                                                                            | Transformation of water in the<br>Barents Sea and the influence of<br>the climatical variability |

| Request made by<br>(Name, country)                                                                                        | Country or river for which<br>data were requested                                                                                                        | Purpose of data use                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Maus, S.<br>Havforskningsinstitutt<br>Bergen, Norway                                                                      | Discharge data of rivers draining<br>into Arctic oceans                                                                                                  | ACSYS -Project: Water<br>transformation and the<br>variability of climate change in<br>the Barents Sea region                |
| Mcphail, N.<br>Drainage Department of<br>Abozzdord<br>Vancouver, Canada                                                   | GRDC Catalogue, GRDC<br>information                                                                                                                      | Creation of a database for<br>precipitation and discharge                                                                    |
| Milliman, J.<br>School of Marine Science<br>The College of William and Mary<br>Cloucester Point, VA, U.S.A.               | Discharge data from several<br>major rivers draining into the<br>western Mediteranean                                                                    | Studies of the late 20th century<br>changes in the western<br>Mediterranean oceanic climate<br>due to decrease fluvial input |
| Milly, P.C.D.<br>Geophysical Fluid Dynamics<br>Laboratory<br>U.S. Department of<br>Commerce/NOAA<br>Princeton, NJ, U.S.A. | GRDC information, GRDC<br>catalogue, Report No. 10, Update<br>of earlier requested data,<br>discharge data from 43 stations<br>from various river basins | Observed and modeled<br>variations of annual discharge<br>from large river basins                                            |
| Oki, T.<br>Goddard Space Flight Center<br>Greenbelt, MD 20771, U.S.A.                                                     | 200 river discharge stations<br>worldwide                                                                                                                | Global modeling of theWorld<br>Water Balance                                                                                 |
| Oki, T.<br>Goddard Space Flight Centre<br>Greenbelt, MD, U.S.A.                                                           | Data of about 180 stations of<br>varios river basins                                                                                                     | Validation of ISLSCP global<br>soil moisture project under<br>GEWEX and the longterm<br>variation of global runoff           |
| Pasenau, H.<br>PROJETO FEEMA - GTZ<br>Controle Ambiental no Estado do<br>Rio de Janeiro, Brazil                           | Discharge data of Rio Sao<br>Francisco                                                                                                                   | Sedimentological and<br>geophysical investigations on<br>the continental margin off the<br>Sao Francisco river               |
| Pasenau, H.<br>GTZ Feema BZ<br>Brazil                                                                                     | Discharge data of the Paraiba do<br>Sul River and others                                                                                                 | Enviromental monitoring                                                                                                      |
| Paturel, J.E.<br>ORSTOM<br>Cidex<br>Abidjan , Cote d'Ivoire                                                               | Discharge data of Rivers in<br>West- and Central Africa                                                                                                  | Study on climatic variability in<br>West and Central Africa                                                                  |
| Pelt<br>GEC - Geneva Executive Center<br>Chatelain, Geneva, Switzerland                                                   | GRDC catalogue, policy<br>guidelines for data distribution                                                                                               | Update of the Meta-Data guide<br>related to natural hazards                                                                  |
| Plessis, S.C.du<br>CORPORATE HYDRO &<br>WATER CONSULTANT<br>ESKOM Generation Department                                   | Discharge data for rivers in<br>Mosambique                                                                                                               | Study of possibilities for<br>drinking water supply in<br>Mosambique                                                         |
| Portis, D.<br>University of Illinois                                                                                      | 35 ACSYS stations                                                                                                                                        | Verification of P-E for<br>atmospheric models                                                                                |

| Request made by<br>(Name, country)                                                                                | Country or river for which<br>data were requested                  | Purpose of data use                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Potier, M.<br>ORSTOM / HEA<br>Montpellier cedex, France                                                           | GRDC information, GRDC<br>catalogue, GRDC leaflet                  | Studies of pelagic fish<br>populations of the Java Sea,<br>Indonesia                                                               |
| Rodgers, Dr. K.<br>Columbia University's<br>Lamont Doherty Earth<br>Observatory                                   | GRDC information                                                   | Ocean circulation model                                                                                                            |
| Sauerborn, P.<br>Seminar für Geographie und ihre<br>Didaktik<br>Köln, Germany                                     | River discharge data from<br>Germany                               | Study on anthropogenic induced<br>climate change                                                                                   |
| Sharma, A.A.L.<br>Director of Research Studies<br>M.V.P. Colony<br>Visakhapatnam 530 017, India                   | GRDC information, GRDC<br>reports and brochures, GRDC<br>catalogue | Survey of literature on river<br>flows into the World Oceans                                                                       |
| Sipes, J.L.<br>University of Oklahoma<br>College of Architecture<br>Norman, Oklahoma, U.S.A.                      | GRDC catalogue, GRDC<br>information, brochure                      | Article for Landscape<br>Architecture magazine about use<br>of computer technology in<br>irrigation design and water<br>management |
| Stansfield, K.<br>University of Victoria<br>School of Earth and Ocean<br>Sciences<br>Victoria, B.C., Canada       | GRDC catalogue                                                     | Access to river runoff data for<br>Thailand, Vietnam and Malaysia                                                                  |
| Syvitski, J.<br>Institute of Arctic and Alpine<br>Research<br>University of Colorado<br>Boulder, Colorado, U.S.A. | Arctic Sea                                                         | Climate research in connection<br>with the ten largest Arctic rivers                                                               |
| Vargiamidis, G.<br>Thessaloniki, Greece                                                                           | Catalogue information of Greek<br>rivers                           | N.N.                                                                                                                               |
| Wendland, F.<br>Forschungszentrum Jülich<br>Jülich, Germany                                                       | General information                                                | Small-scale area-differentiated<br>classification of the water<br>balance of the Elbe basin                                        |
| Wiley, A.<br>U.S. Army Topographic<br>Engineering Centre<br>Alexandra, VA, U.S.A                                  | All rivers of Nicaragua                                            | Water resources appraisal                                                                                                          |
| Woerden, J. van<br>Rijksinstituut voor<br>Volksgezondheid en<br>Milieuhygiene (RIVM)<br>Bilthoven, Netherland     | Discharge data of 37 stations                                      | UNEP Global outlook project                                                                                                        |
| Xiaoyang, Z.<br>Department of Geography<br>King's College London<br>London, U.K.                                  | GRDC information, GRDC<br>catalogue, Status report                 | Modeling of soil erosion at a<br>global scale                                                                                      |

| Request made by<br>(Name, country)                                                                                                   | Country or river for which<br>data were requested                                                                                 | Purpose of data use                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Xue, Y.<br>Centre for Ocean-Land-<br>Atmosphere Studies<br>Calverton MD, U.S.A.                                                      | Discharge data of different<br>African rivers                                                                                     | GCM modeling study on the<br>ground water balance and use of<br>observed large scale discharge<br>data to validate the model |
| Zhang, H.-M<br>FORD 0230<br>Scripps Institution of<br>Oceanography<br>University of California, San<br>Diego<br>La Jolla, CA, U.S.A. | GRDC catalogue, Mean runoff<br>data of the rivers: Seween,<br>Irrawaddy, Brahma-putra,<br>Ganges, Brahmani, Mahanadi,<br>Godavari | Fresh water budget for the<br>Indian Ocean                                                                                   |

### Database Requests 1997

| Request made by<br>(Name, country)                                                                                | Country or river for which data<br>were requested                                      | Purpose of data use                                                                                                     |
|-------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Tommaso Abrate, Hydrology<br>Division, World Meteorological<br>Organisation                                       | Database catalogue of Albania                                                          | General information about the<br>availability of discharge data of<br>Albania                                           |
| Alfredo Constain Aragon,<br>Hydroproiet Ltd., Cali, Columbia                                                      | Statistical data of Latin American<br>rivers (flow, velocity)                          | Calibration of digital instruments<br>(no data transferred)                                                             |
| Simon Bärtschi, Geographisches<br>Institut der Universität Bern,<br>Schweiz                                       | 22 stations in the Aral-Sea basin                                                      | Study about the media coverage<br>of hydrological and<br>environmental changes in the<br>Aral-Sea region                |
| Connely Baldwin, Civil and<br>Environmental Engineering, Utah<br>State University, USA                            | River discharge data from<br>Columbia, Venezuela, Peru,<br>Brazil (database catalogue) | Dynamic analysis of streamflow<br>data (student) - request pending                                                      |
| Prof. Dr. D.K. Banerjee, School<br>of Environmental Sciences,<br>Jawaharlal Nehru University,<br>New Dehli, India | Yamuna River, India (not present<br>in the GRDC database)                              | Study on the chemical modelling<br>of streams                                                                           |
| Dr. Peter Becker, Battelle Marine<br>Sciences Lab., Sequim, USA                                                   | ACSYS-reports, general<br>information about ACSYS                                      | PhD dissertation: The Effect of<br>Arctic River Hydrological Cycles<br>on the Arctic Ocean                              |
| Dr. J.M. Beckers, Université de<br>Liege, Belgium                                                                 | 6 stations in the area of the<br>Mediterranean Sea                                     | MEDMEX (Mediterranean<br>Models Evaluation Experiment)                                                                  |
| Prof. Dr. Beese, Institut für<br>Bodenkunde und Waldernährung,<br>Universität Göttingen,<br>Deutschland           | GRDC Catalogue                                                                         | Study on hydrology and water<br>quality worldwide for the Scientific<br>Council of the Federal<br>Government of Germany |
| Byron Bodo, c/o GEMS/WATER<br>Collaborating Centre, Ontario,<br>Canada                                            | GRDC catalogue                                                                         | General information about GRDC<br>database contents                                                                     |
| J. Böhner, Geographisches<br>Institut der Universität Göttingen                                                   | Yangcun at Yaluzangbu Jiang<br>River                                                   | Verification of models for the<br>regionalization of climatological<br>parameters                                       |
| A. Brismar, Department of Water<br>and Environment Studies,<br>Linköping, Sweden                                  | GRDC-Report No. 5, database<br>catalogue, report list                                  | General information about the<br>availability of data in the<br>Euphrates-Tigris Region                                 |
| Dr. Axel Bronstert, Potsdam-<br>Institut für Klimafolgenforschung<br>e.V., Germany                                | 16 stations in the North-East of<br>Brazil                                             | Development of a hydrologic<br>model in certain areas in the<br>North-East of Brazil                                    |
| Ted Bryant, University of<br>Wollongong, Australia                                                                | GRDC-Reports 5 and 10                                                                  | Interaction between river<br>discharge and sea level as<br>indicators of the world water<br>balance                     |
| Zhou Caiping, The Chinese<br>Academy of Sciences                                                                  | Data for the Brahmaputra River<br>(database catalogue extract)                         | N.N.                                                                                                                    |

| <b>Request made by<br/>(Name, country)</b>                                                        | <b>Country or river for which data<br/>were requested</b>                               | <b>Purpose of data use</b>                                                                                                         |
|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Anny Cazenave, Laboratoire d'Océanographie et de Géophysique, Toulouse, France                    | Data of rivers discharging into large lakes (database catalogue)                        | Study: global climatologies and the annual lake cycles                                                                             |
| Chen-Hua Chung, Dept. of Civil Engineering, Colorado State University                             | Discharge data of the Niger River                                                       | Study: Return period and risk analysis for hydrologic and environmental processes                                                  |
| Arthur Lyon Dahl, DAED, Coordinator, UN System-wide Earthwatch, Geneva, Switzerland               | GRDC report list                                                                        | Preparation of a bibliography of major reviews and metadata sources relating to international waters                               |
| Georgi Daskalov, ORSTOM-HEA, CESMA, Montpellier, France                                           | 27 rivers draining into the Black Sea                                                   | Research project: Evolution of the Black Sea production ecosystem in relation to environmental changes and anthropogenic influence |
| Michael Dettinger<br>U.S. Geological Survey                                                       | River discharge data for 14 rivers from China, Canada, Iceland, Denmark, United Kingdom | Assessment of climatic change and hydrological consequences in the Sierra Nevada and other parts of the Western United States      |
| Dr. Isabelle Niang-Diop, Département de Géologie, Université Cheik Anta Diop, Dakar-Fann, Senegal | -----                                                                                   | Request for general support in the preparation of a database for the coastal zone of Senegal                                       |
| Jay Famiglietti, Dept. of Geological Sciences, University of Texas, Austin, USA                   | GRDC report No. 10                                                                      | Possible incorporation of GRDC data in an oceanic global climate model                                                             |
| Jane Foster, Dept. of Geology and Geophysics, Yale University, New Haven, USA                     | 9 rivers of Southwest Asia                                                              | Investigation exploring climate variation and the effect on agricultural production in Southwest Asia                              |
| Christian France-Lanord, Dept. of Geological Sciences, Cornell University, Ithaca, USA            | GRDC Reports No. 5 and 10                                                               | General scientific interest                                                                                                        |
| Paul Ganahl, Hydrographische Abteilung der Verbund-Elektrizitätswerke Kaprun                      | Discharge data of the Spanish Rivers Tortosa and Zaragoza                               | Examination of possible climatic changes in the Ebro basin                                                                         |
| Philippe Gauzelin, Space Oceanography Departement, CLS, Toulouse, France                          | Mediterranean Region (general information about data availability, request pending)     | PhD thesis about the water and heat flux budget of the Mediterranean Sea                                                           |
| Pieter van Gelder, Delft University of Technology, The Netherlands                                | Discharge data of stations in the Oder catchment (database catalogue)                   | Frequency analysis of extreme values (maxima)                                                                                      |
| Christian Gerbich, Inst. für Biogeochemie und Meereschemie, Hamburg, Germany                      | Several rivers in the tropical and subtropical region of Asia                           | Modelling transport mechanisms of solid and dissolved matters in oceans and rivers                                                 |

| <b>Request made by<br/>(Name, country)</b>                                                                     | <b>Country or river for which data<br/>were requested</b>                          | <b>Purpose of data use</b>                                                                                              |
|----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Marc Gordon, Centre for Arid<br>Zone Studies, UK<br>University of Cambridge                                    | Historical streamflow data for the<br>Benue River Basin (catalogue)                | MSc Dissertation in Water<br>Resources                                                                                  |
| Steve Graham, Dept. of<br>Geological Sciences, University<br>of Texas, Austin, USA                             | Report No. 10, 5, 12, 14                                                           | General scientific purposes                                                                                             |
| Dr. Alan Hall, Australia                                                                                       | GRDC catalogue for Australia                                                       | General reference purposes                                                                                              |
| G. Hartmann, Institut für<br>Wasserbau, Universität Stuttgart                                                  | GRDC database catalogue                                                            | General information about the<br>availability of discharge data in<br>Africa and the Middle East                        |
| Martin Hollingham, University of<br>Wales, Bangor, UK                                                          | GRDC report No. 5 and No. 10,<br>Status Report 1996                                | General research work and<br>educational purposes                                                                       |
| Kaisa Hietala, Scott Polar<br>Research Institute, University of<br>Cambridge, U.S.A                            | 35 ACSYS-stations                                                                  | PhD thesis: Fresh water variation<br>on the Arctic Ocean                                                                |
| Noboyuki Imanishi, Shinko<br>Research Ltd., Tokyo, Japan<br>(research company of Kobel Steel<br>Ltd.)          | GRDC database catalogue                                                            | Global Potential of hydrogen gas<br>production by hydropower (no<br>transfer of raw data - commercial<br>use)           |
| S.R. Jones, Engineering<br>Consultant, The Harroway,<br>Whitchurch, UK                                         | Data of the Casamance River,<br>Senegal (data not available at<br>GRDC)            | Undersea fiber optics cable<br>project South America - Africa                                                           |
| Shinya Kakuta, Ocean Research<br>Department, Japan marine science<br>and technology center, Yokosuka,<br>Japan | Data of the Yukon River                                                            | Model study within ACSYS<br>(Arctic Climate System Study)                                                               |
| Frank Kaspar, Wissenschaftl.<br>Zentrum für<br>Ökosystemforschung, Universität<br>Kassel, Germany              | 43 stations from South America                                                     | Global modelling of consumption,<br>availability of water and<br>prognosis                                              |
| Prof. Kempe, Geologisch-<br>Paläontologisches Institut,<br>Technische Universität<br>Darmstadt, Germany        | Database catalogue of Argentina<br>(request pending)                               | EU-research project:<br>biogeochemistry of of<br>Argentinian Rivers                                                     |
| Chris Kilsby, Water Resources<br>Systems Res. Lab., Univ. of<br>Newcastle upon Tyne, UK                        | GRDC database catalogue<br>(request pending)                                       | General information                                                                                                     |
| Tokuo Kishi, Surface Hydrology<br>Modeling Team, NIED, Science<br>& Technology Agency, Japan                   | General information about<br>availability of data of the GRDC<br>(request pending) | Study on the hydrologic<br>characteristics of major rivers of<br>the world                                              |
| Wulf Klohn, Food and<br>Agricultural Organisation of the<br>United Nations, Rome, Italy                        | 31 rivers of the Amu Darya and<br>Syr Darya region                                 | Study of water resources of river<br>basins in the countries of the<br>former SU within the FAO's<br>Aquastat Programme |

| <b>Request made by<br/>(Name, country)</b>                                                          | <b>Country or river for which data<br/>were requested</b>                           | <b>Purpose of data use</b>                                                                                                         |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Jumpei Kubota, Faculty of Agriculture, Tokyo University of Agriculture and Technology, Japan        | Discharge data for 14 Arctic rivers                                                 | GAME-Siberia (GEWEX related Asian Monsoon Experiment) Project                                                                      |
| Dr. D. Krämer, World Meteorological Organisation, Genf, Switzerland                                 | Discharge data for 8 stations in mountainous regions                                | Edition of the book "State of the World Mountains 1997"                                                                            |
| Dr. Gerhard Lammel, Max-Planck-Institut für Meteorologie, Hamburg                                   | Zaire, Senegal, Nile                                                                | Contribution to a report of the Scientific Council for Environmental Changes of the Federal Government                             |
| Richard Lammers, University of New Hampshire, Durham, USA                                           | Arctic Region                                                                       | Reports 8, 12, 15 (ACSYS-Reports)                                                                                                  |
| Howard Lawes, Noble Denton Europe Ltd., London                                                      | General data (means) for the Irrawaddy River, Report No. 5                          | Design of a submarin pipeline through the Irrawaddy delta                                                                          |
| Prof. Lemke, Institut für Meereskunde, Universität Kiel                                             | Several major rivers of the world                                                   | Educational; general statistical evaluation                                                                                        |
| Winchee Lin, School of Oceanography, University of Washington, USA                                  | Discharge data for 34 rivers in the South East Asia Region                          | Validation of a model for the biogeochemistry of rivers                                                                            |
| Dr. Dag Lohmann, Department of Civil Engineering and Operations Research, Princeton University, USA | 161 stations globally distributed                                                   | Modeling of global soil moisture, evaporation and runoff with the VIC-2L model                                                     |
| Sarith Mahanama<br>Dept. of Civil & Structural Engineering<br>The University of Hong Kong           | 16 stations in the Mekong River Basin                                               | Validation of GCM with respect to daily river runoff                                                                               |
| Lee McKinney, Sverdrup Technology, Stennis Space Center, USA                                        | 10 stations of rivers discharging into the East Asia Sea                            | Ocean modelling project in the East Asia Sea                                                                                       |
| John Maingi, Office of Arid Lands, University of Arizona                                            | Tana River (Kenya), Station Garissa (request for data of 1993-1997 - not available) | Dissertation: Land use and vegetation change in response to river basin development in the lower Tana River Basin in Eastern Kenya |
| Dr. Jonathan I. Matondo, GEP Department, University of Swaziland, Swaziland                         | Several African Rivers (request pending)                                            | Study about the variability of runoff of large African Rivers                                                                      |
| James McManus, NASA/Goddard Space Flight Centre, Greenbelt, U.S.A.                                  | General information (database catalogue)                                            | Database catalogue for general information                                                                                         |

| <b>Request made by<br/>(Name, country)</b>                                                                                                            | <b>Country or river for which data<br/>were requested</b>                                           | <b>Purpose of data use</b>                                                                                                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| Norman L. Miller, Climate & Integrated Systems Atmospheric Science Division, Lawrence Livermore National Laboratory, University of California, U.S.A. | For 30 rivers, globally distributed: monthly time series and extreme values of discharge            | Research project: Large-scale comparison of water vapor convergence, precipitation and evaporation in the NCEP reanalysis with monthly streamflow |
| Mohamed Ali Ahmed, IHE Delft, The Netherlands                                                                                                         | 6 stations from the River Nile, GRDC-report No. 5                                                   | Study: flow prediction with an artificial neural network                                                                                          |
| Ellyn T. Montgomery, Physical Oceanographie Dept., Woods Hole Oceanographic Institution, Woods Hole, USA                                              | Report No. 10 and database catalogue, standard data set of 160 stations                             | Possible use of GRDC data in the research field of oceanic heat and water fluxes, calculation of fluxes into the Atlantic Ocean                   |
| Mool, ICIMOD, Kathmandu                                                                                                                               | Indus, Yangtse, Yellow River                                                                        | Project of FAO and SIDA: Forestry and key Asian watersheds                                                                                        |
| Ragu Murtugudde, NASA/GSFC, Greenbelt, USA                                                                                                            | Discharge time series for major rivers (catalogue, request pending)                                 | Ocean model simulations                                                                                                                           |
| Nicholas O'Connor, UNEP/DEIA/GRID-Geneva, Chatelaine, Switzerland                                                                                     | General information about environmental-related databases                                           | Research project: Information systems with respect to resolving environmental conflicts                                                           |
| Taikan Oki, NASA / Goddard Space Flight Centre, Greenbelt, U.S.A.                                                                                     | 130 river discharge stations worldwide                                                              | Research project: Estimating of global runoff distribution (global gridded runoff)                                                                |
| Taikan Oki, NASA / Goddard Space Flight Centre, Greenbelt, U.S.A.                                                                                     | 80 river discharge stations worldwide                                                               | Research project: Estimating of global runoff distribution (global gridded runoff)                                                                |
| Y. Peyvastehgar, Essen                                                                                                                                | Discharge data from rivers draining into the Caspian Sea (database catalogue)                       | Dissertation: Sea level changes and regional planning in the Caspian Sea                                                                          |
| Tan Yong Piu, Rapporteur for WCP-Water, Government of Singapore, Met. Service                                                                         | Database catalogue files for the countries of the RA V                                              | Information about the GRDC databases contents concerning Regional Association V of the WMO                                                        |
| Edward V. Podgaisky and Laghoali Driss, Russia State Hydrometeorological Institute, St. Petersburg, Russia                                            | Discharge data of 12 rivers from Morocco                                                            | Dissertation / diploma (subject not known)                                                                                                        |
| Matthias Prange, Alfred-Wegener-Institut, Bremerhaven, Deutschland                                                                                    | GRDC Reports 8, 10, 12                                                                              | General scientific interest                                                                                                                       |
| Dr. Roger Proctor, Proudman Oceanographic Lab., Bidston Observatory, Birkenhead, Merseyside, UK                                                       | Data from river discharging into the European Shelf Seas, including Baltic Sea (database catalogue) | Project LOIS (Land Ocean Interaction Study)                                                                                                       |

| <b>Request made by<br/>(Name, country)</b>                                                     | <b>Country or river for which data<br/>were requested</b>                                     | <b>Purpose of data use</b>                                                                                              |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Dr. T.V. Ramachandra, Indian Institute of Science, Bangalore, India                            | Database catalogue, GRDC reports No. 1, 5, 9, 10, 12, 13, 14 and general information material | General information about the availability of GRDC data, data products and software                                     |
| Prof. V.J. Rayward-Smith, School of Information Systems, University of East Anglia, UK         | Ob, Yenesei, Lena                                                                             | Study about interaction between winter precipitation in Central Asia, river flow, Arctic ice cover and European climate |
| Liang Ren, Dept. of Hydrology, Hohai University, Nanjing, China                                | General information about the available GRDC data sets                                        | N.N.                                                                                                                    |
| Lars Ribbe, Fachhochschule Köln, Institut für Tropentechnologie, Köln, Germany                 | River Barada, Syria                                                                           | Water Resources Managment in Arid Regions - A Case Study of Damascus Basin (Diploma)                                    |
| Matthew Rodell, Dept. of Geological Sciences, University of Texas, Austin, USA                 | 71 stations of major rivers of the world                                                      | Computation and analysis of water balances over large river basins of the world                                         |
| Mark W. Rosegrant and Claudia Ringler, International Food Policy Institute, Washington, U.S.A. | Discharge data for Maipo River (Chile)                                                        | Research project: Modelling of water resource allocation, estimation of agricultural production and others              |
| Dr. K. Rubinstein, Hydrometeorological Centre of Russian Federation, Moscow                    | Dataset of 160 stations (flux calculation stations)                                           | Study: Role of large-scale water cycle in global climate system                                                         |
| Dr. B. Rudolf, Global Precipitation Climatology Centre, Offenbach, Germany                     | 55 stations worldwide                                                                         | General research purposes, collaboration GRDC/GPCC                                                                      |
| Cord Ruhe, International Baltex Secretariat, GKSS Forschungszentrum Geesthacht, Deutschland    | 7 river discharge stations from Russia and Finnland                                           | Examination of river runoff processes in the Baltex-area                                                                |
| K. Schulte, University of Colorado, Boulder                                                    | Database catalogue of Albania                                                                 | General information about the availability of discharge data of Albania                                                 |
| Bernd Schwan, IUS GmbH, Heidelberg, Germany                                                    | 3 rivers from Poland                                                                          | Environmental Impact Assessment for the German Waterways and Shipping Administration                                    |
| Bernd Schwan, IUS GmbH, Heidelberg, Germany                                                    | 9 stations from the Oder                                                                      | Environmental Impact Assessment for the German Waterways and Shipping Administration                                    |
| Prof. Igor Shiklomanov, Russia State Hydrological Institute, St. Petersburg, Russia            | 3 stations from Rhein, Weser, Elbe                                                            | Analysis of changes of in river runoff of the Northern Hemisphere in different periods                                  |

| <b>Request made by<br/>(Name, country)</b>                                                                   | <b>Country or river for which data<br/>were requested</b>   | <b>Purpose of data use</b>                                                                                                                            |
|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dr. Laurence C. Smith, University of California, Los Angeles, Dept. of Geography, USA                        | GRDC Report No. 12                                          | General information                                                                                                                                   |
| Alejandro Spitzzy, Institut für Biogeochemie und Meereschemie, Universität Hamburg, Germany                  | Database catalogue extract for Malaysia                     | General information about availability of gauging stations in Malaysia                                                                                |
| Ronald E. Stewart, Climate Processes and Earth Observation Division, Atmospheric Environment Service, Canada | General information about GRDC                              | Presentation of GRDC in meeting of GEWEX Hydrological Panel (GHP)                                                                                     |
| Dr. Kevin Telmer, Geological Survey of Canada                                                                | General information about the availability of GRDC data     | Research projects about the biogeochemistry of rivers                                                                                                 |
| Dr. Dusan Trninic, Meteorological and Hydrological Service, Zagreb, Croatia                                  | 20 stations from the Danube River basin and its tributaries | IHP-UNESCO research project: Relationship between precipitation, air temperature and discharges over the Danube river basin                           |
| Wolfgang Vosseler, Chemnitz, Germany                                                                         | Hydrological data from China (database catalogue)           | Study: Situation of the drinking water provision and waste water managment in China                                                                   |
| Dr. Rolf Weingartner, Geographisches Institut der Universität Bern, Gruppe für Hydrologie, Schweiz           | 52 rivers worldwide                                         | Contribution for Freshwater Conference of the UN Commission for Sustainable Development: "Mountains of the world - Water towers for the 21st Century" |
| Wiley, A.<br>U.S. Army Topographic Engineering Centre<br>Alexandra, VA, U.S.A                                | All rivers of Ecuador                                       | Water resources appraisal                                                                                                                             |
| Yonkang Xue, Center for Ocean-Land-Atmosphere Studies, Calverton, U.S.A.                                     | Database Catalogue of East Asia                             | Database catalogue for a planned research project                                                                                                     |
| W. F. Zimmermann, Consortium for International Earth Science Information Network                             | GRDC catalogue                                              | General information about international shared water resources                                                                                        |
| Dr. Franz Zunic, Lehrstuhl für Wasserbau und Wasserwirtschaft, Technische Universität München, Germany       | 6 stations worldwide with long time series                  | Synthetic generation of discharge time series                                                                                                         |

### Database Requests 1998

| Request made by (Name, Country)                                                                              | Country or river for which data were requested                                                   | Purpose of data use                                                                             |
|--------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| Dr. Heike Bach, Vista GmbH, Wessling, Germany                                                                | GRDC Reports No. 5 and 10                                                                        | General interest                                                                                |
| Gijs van Banning, Alkyon Hydraulic Consultancy & Research, Emmeloord, The Netherlands                        | General information about discharges (average and maximum) for some Rivers in Myanmar            | Report for the projection of the Yadana pipeline project (no data transferred)                  |
| Jörg Bareiss, Dep. of Geography / Climatology, University of Trier, Germany                                  | ACSYS data set                                                                                   | PhD thesis: „Climate and sea-ice variability in the Arctic Ocean and adjacent seas“             |
| Mathew Barlow, Dept. of Meteorology, Univ. of Maryland                                                       | General information about the availability of GRDC data                                          |                                                                                                 |
| Roy Barnes, Data Support Section, National Center for Atmospheric Research, USA                              | Update of the initial UNESCO data set „Runoff of selected rivers of the world“ (Request pending) | Not specified                                                                                   |
| Jörg Belz, Bundesanstalt für Gewässerkunde, Koblenz, Germany                                                 | Danube Basin, 21 stations                                                                        | Update of a monograph for the Danube river                                                      |
| Ronald G. Blohm, Jet Propulsion Lab., California Institute of Technology, USA                                | Water level data for the Lake Nasser, Egypt (not available)                                      | Not specified                                                                                   |
| Jonathan Booth, UNEP DEIA GRID, Geneva                                                                       | 32 Nile stations                                                                                 | Potential international environmental conflicts linked with freshwater - the Nile river basin   |
| A. Bronstert/A. Güntner, Potsdam Institute for Climate Impact Research, Germany                              | 39 stations from Brazil                                                                          | „WAVES“, Water Availability, Vulnerability of Ecosystems and Society in the Northeast of Brazil |
| Menno Bouma, Head of the Data Centre of the London School of Hygiene and Tropical Medicine, London, UK       | Water level data for the Ganges at Brahmaputra from 1880 to 1940 (not available)                 | Possible connection between water level and diseases                                            |
| Julie Bournot, Hydrosult Inc. (contract with United Nations Development Programme), Montreal, Canada         | Database catalogue information for the Nile basin                                                | Establishment of a website with information about Nile data                                     |
| Laura Bowling, University of Washington, Dep. of Civil Engineering, USA                                      | Basin outlines for the rivers of the GRDC database                                               | Not specified                                                                                   |
| G. Robert Brakenridge, Dartmouth Flood Observatory, Department of Geography, Dartmouth College, Hanover, USA | 26 stations in Somalia and China                                                                 | Assessment of river floods by satellite data - checking of the satellite flood imaging results  |

| <b>Request made by (Name, Country)</b>                                                 | <b>Country or river for which data were requested</b>                                   | <b>Purpose of data use</b>                                                                    |
|----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|
| Bundesamt für Seeschifffahrt und Hydrographie, Hamburg, Germany                        | Extreme values and means from 32 rivers draining into the North Sea and the Baltic Sea  | Use of freshwater flux data in the operational circulation model for the North and Baltic Sea |
| Dr. Minkang Cheng, University of Texas at Austin, Center for Space Research            | General information about the availability of GRDC data                                 | Not specified                                                                                 |
| Monica Cheng, Harza Engineering Company (USAID contract), Chicago, USA                 | Database catalogue information for the Naryn-Syr-Darya River                            | Not specified                                                                                 |
| Michael T. Coe, Center for Climatic Research, Univ. of Wisconsin-Madison, USA          | 84 stations worldwide                                                                   | Evaluation of a global-scale hydrology model (HYDRA) and a biosphere model (IBIS)             |
| Robert Dill, Deutsches Geodätisches Forschungsinstitut, München, Germany               | Global gridded runoff data set (not available)                                          | Study on mass displacements (groundwater storage) and their influence on the Earth rotation   |
| Petra Döll, Wissenschaftl. Zentrum für Ökosystemforschung, Universität Kassel, Germany | 160 stations worldwide                                                                  | Global modelling of consumption, availability of water and prognosis                          |
| John R. Dvorsky, USGS EROS Data Center, Sioux Falls, USA                               | 9 stations in Africa                                                                    | Flood risk for the Greater Horn region of East Africa for the Famine Early Warning System     |
| Rudi Febriamansyah, University of Melbourne, Australia                                 | General information about GRDC                                                          | Not specified                                                                                 |
| Gene Griffin, Cold Regions Research and Engineering Lab., Hanover, USA                 | 2 Rivers from Turkey                                                                    | Study of snowmelt hydrology in various regions of the world                                   |
| Valdemar Santos Guimares, Chy Associate Experts on Water Quantity Data, Brazil         | Approx.260 stations worldwide                                                           | Case studies on water quantity measurements in boundary or transboundary rivers               |
| Kirk Haselton, Institut für Geowissenschaften, Universität Potsdam, Germany            | GRDC catalogue                                                                          | Not specified                                                                                 |
| Astrid Hillers, United Nations Development Programme, New York, USA                    | Database catalogue for the Nile basin                                                   | Preparation of a workshop of the Nile riparian countries with presentation of available data  |
| Dr. Katie Hirschboeck, Laboratory of tree-ring research, Univ. of Arizona, Tucson, USA | Information about the GRDC/WMO hydrological station numbering scheme GRDC Report No. 16 | Working on a paleoflood database                                                              |
| Kelly Hodgson, GEMS/Water Collaborating Center, Canada                                 | 20 stations worldwide                                                                   | Joint product with GRDC: Calculation of TSS fluxes into the world oceans                      |

| <b>Request made by (Name, Country)</b>                                                                         | <b>Country or river for which data were requested</b>       | <b>Purpose of data use</b>                                                                        |
|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Karl Hofius, IHP-Secretary, Federal Institute of Hydrology, Koblenz, Germany                                   | 36 rivers worldwide                                         | Contribution to an encyclopedia of geographical sciences                                          |
| Kazutoshi Horiuchi, Earth Science & Technology Organization, Tokyo, JAPAN                                      | 138 time series                                             | Prediction of changes in the hydrological cycle of the Asian Monsoon Region                       |
| A. W. Jayawardena, Dept. of Civil & Structural Engineering, Univ. of Hong Kong                                 | Brahmaputra basin, 32 stations                              | Use of GCM's to forecast river discharges in basin scales                                         |
| Ed Josberger, U.S. Geological Survey c/o Univ. of Puget Sound, Tacoma, USA                                     | GRDC-Report No. 12                                          | General scientific interest                                                                       |
| Dr. Chris Kilsby, Research Coordinator of Wrinkle, University of Newcastle, England                            | 50 Rivers in Europe                                         | Development of rainfall-runoff and snowmelt models in the WRINCLE-Project                         |
| Paul H. Kirshen, Civil Engineering Dept. Tufts University, Medford, USA                                        | China, 21 stations                                          | A hydro-economic approach to representing water resources impacts in integrated assessment models |
| Frank Koormann, Institut für Umweltsystemforschung, Universität Osnabrück, Germany                             | GRDC reports No. 13, 16                                     | General interest                                                                                  |
| Jurate M. Landwehr, USGS, National Center - MS431, Reston, USA                                                 | GRDC catalogue<br>4 stations in Iraq                        | Preparation of a proposal: surface/groundwater interactions                                       |
| Shawn M. Lehman, SUNY Stony Brook, Stony Brook, USA                                                            | 5 rivers in Guyana                                          | Role of rivers in the distribution and diversity of primates                                      |
| Winchee Lin, School of Oceanography, University of Washington, USA                                             | 3 Rivers from Papua-New Guinea                              | Validation of a model for the biogeochemistry of rivers                                           |
| Sandra van der Linden, Department of Physical Geography, University of Utrecht, The Netherlands                | River discharge data for the Usa River in the Pechora Basin | Development of a water balance model for the Usa River                                            |
| Dr. Kon-Kee Liu, Visiting Scientist, Horn Point Lab, Univ. of Maryland, Center for Environmental Sciences, USA | 6 Stations in China, Laos, Thailand                         | Development of a biogeochemical model (carbon cycle) for the South China Sea                      |
| Dr. Ing. Karl Ludwig, Karlsruhe, Germany                                                                       | GRDC Report No. 2                                           | General interest                                                                                  |
| Ralf Ludwig, Universität München, Institut für Geographie, Germany                                             | GRDC Reports No. 2, 5, 16                                   | General interest                                                                                  |

| <b>Request made by (Name, Country)</b>                                                                          | <b>Country or river for which data were requested</b>                                          | <b>Purpose of data use</b>                                                                                |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Wolfgang Ludwig, Université de Perpignan, France                                                                | Rivers discharging into the Mediterranean Sea                                                  | Fluxes of C, N, P and TSS into the Mediterranean Sea                                                      |
| R.E. Manley, Consultant in Engineering Hydrology, Cambridge, England                                            | Russian rivers and waterways (20 stations)                                                     | EU-Project (related with TACIS) about Russian waterways                                                   |
| Dr. Jose A. Marengo, Centro de Previsao do Tempo e Estudos Climaticos, Sao Paulo, Brazil                        | GRDC Reports No. 5 and 10                                                                      | Not specified                                                                                             |
| Prof. Jose Luis Mata, Instituto de Mecanica de Fluidos, Universidad Central, Caracas, Venezuela                 | GRDC Reports No. 5, 10, 19 and 21, information about some rivers in Venezuela                  | Translation of global warming into hydrological change in the Caroni River basin                          |
| Hiroshi Matsuyama, Centro de Previsao de Tempo e Estudos Climaticos, (CPTEC/INPE), Brazil                       | 3 stations in the Amazon Basin                                                                 | Study on the interannual variability of the hydrological cycle and water budget in the Amazon River Basin |
| Sönke Maus, Havforskningssinstitutt, Bergen, Norway                                                             | Discharge data of Rivers draining into the Arctic Ocean - 12 stations<br>Report No. 12         | ACSYS-Project: Water transformation and the variability of climate change in the Barents Sea region       |
| Thomas A. McClimans, SINTEF Civil and Environmental Engineering, Trondheim, Norway                              | Data for the Ob and Yenisei River                                                              | Study of transport processes in the Kara Sea                                                              |
| Prof. T.A. McMahon, Dep. of Civil and Environmental Engineering, University of Melbourne, Australia             | Re-use of data delivered by GRDC some years ago                                                | Master's project on the topic of storage-yield analysis                                                   |
| Jeremy Meigh, Institute of Hydrology, Wallingford, UK                                                           | 62 stations in the river Nile basin                                                            | UNDP: Nile River Basin Cooperative Framework                                                              |
| Eduardo Mario Mendiondo, Instituto des Pesquisas Hidraulicas, Universidade Federal do Rio Grande do Sul, Brazil | GRDC Reports No. 5 and 10                                                                      | General scientific interest                                                                               |
| Chris Milly, USGS                                                                                               | 23 stations in Brazil (Update of earlier requested data)                                       | Observed and modeled variations of annual discharge from large river basins                               |
| Todd Mitchell, Joint Institute for the Study of the Atmosphere and Ocean, Univ. of Washington                   | Arctic stations (ACSYS data set) Report 8, 10, 12                                              | Relation between variations of the North Atlantic Oscillation and runoff of arctic rivers                 |
| Mr. Achite Mohamed, Ecole Nationale Supérieure de l'Hydraulique, Algerie                                        | Publication about reservoir managment and solid matters in Algeria (not available)             | Msc thesis                                                                                                |
| Juan Ignacio de Leiva Moreno, Fisheries Resources Division, FAO, Rome, Italy                                    | Information about the availability of discharge data of rivers flowing into the world's oceans | Different purposes, e.g. effect of riverine inputs on coastal ecosystems and fisheries resources          |

| <b>Request made by (Name, Country)</b>                                                       | <b>Country or river for which data were requested</b>            | <b>Purpose of data use</b>                                                                                   |
|----------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Dr. Dieter Müller, Federal Institute of Hydrology, Koblenz, Germany                          | Average discharge values of the Dnjepr River                     | General scientific interest (water quality of the Dnjepr River)                                              |
| Dirk Müller-Wohlfeil, Nationales Forschungsinstitut des Dänischen Umweltministeriums         | Catchments sizes of the River Meuse in Belgium                   | Not specified                                                                                                |
| Dr. Mark Mulligan, Department of Geography, King's College, Strand, London                   | GRDC Report No. 5                                                | Not specified                                                                                                |
| Tamon Murofushi, Tokyo Metropolitan University, Japan                                        | Malaysia                                                         | Not specified                                                                                                |
| Ai Nakagawa, Yasuoka Lab., Institute of Industrial Science, Univ. of Tokyo, Japan            | 18 stations worldwide                                            | Validation of a hydrological water balance model                                                             |
| Kazurou Nakane, National Research Institute for Earth Science and Disaster Prevention, Japan | 11 rivers in Thailand, Vietnam and Laos                          | Regional water balance model for the assessment of hydrological variations due to the Asian Monsoon Activity |
| Shiro Ochi, Yasouka Lab., Institute of Industrial Science, Unvi. of Tokyo, Japan             | North and South America: 13 stations                             | Validation of a hydrological water balance model                                                             |
| Nick Olejniczak, Univ. of Wisconsin, USA                                                     | 2500 rivers worldwide (request could not be entertained by GRDC) | Global river discharge project                                                                               |
| Chris Perry, International Water Management Institute, Izmir, Turkey                         | Gediz River in Turkey<br>Lerma River in Mexiko                   | Not specified                                                                                                |
| Prof. Oleg Pokrovsky, Main Geophysical Laboratory, St. Petersburg, Russia                    | GRDC Reports No. 5, 10, 11, 12                                   | General scientific interest                                                                                  |
| Matthias Prange, Alfred-Wegener-Institut für Polar- und Meeresforschung, Hamburg, Germany    | Reports No. 14, 15 and 16, 23 Arctic Stations                    | Ocean/Sea-ice model: influence of freshwater fluxes on the circulation of the Arctic Ocean                   |
| Claudia Ringler, International Food Policy Research Institute, Washington, USA               | Mekong Basin, 51 stations                                        | Dissertation: Optimal Allocation and Use of Water Resources in the River Basin - An Intersectoral Focus      |
| Greg Riley, Amoco Production Company, Houston, USA                                           | GRDC Reports No. 5 & 10                                          | PhD thesis about stratigraphy in the Azeri portion of the South Caspian Basin                                |
| Mirco Scharfe, Karlsruhe, Germany                                                            | General information about GRDC                                   |                                                                                                              |

| <b>Request made by (Name, Country)</b>                                                                 | <b>Country or river for which data were requested</b>                                            | <b>Purpose of data use</b>                                                                                        |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Dr. Karl Schneider, Universität München, Institut für Geographie, Germany                              | GRDC Reports No. 2, 10, 16                                                                       | General interest                                                                                                  |
| Ismail Mahmoud Seyam, IHE Delft, The Netherlands                                                       | Report No. 5<br>Niger, Nile, Zambesi: 235 stations                                               | Estimation of freshwater availability in the Niger, Nile and Zambesi Region                                       |
| Ma Shuwen, The Chinese Academy of Sciences, Beijing, China                                             | 1 station of the Brahmaputra River                                                               | PhD thesis „Water Resources Assessment of the Yaluzangbujiang River“                                              |
| Frank Siegismund, Institut für Meereskunde der Univ. Hamburg                                           | 17 time series in mid- and North-East-Europe                                                     | Reaction of the NE-European Shelf on climate signals of the North-Atlantic, Hamburg Shelf Ocean Model             |
| Ajay Singh, School of Management, Indian Institute of Technology, India                                | India, 44 stations                                                                               | Study on the impact of climate change on water resources in India                                                 |
| Jeremy Stoll, NASA Goddard Space Flight Center, Greenbelt, USA                                         | Ob basin, 16 stations                                                                            | Calibration of a hydrological model for the river Ob basin                                                        |
| Denis Troufleau, Institute of Geography, University of Copenhagen, Denmark                             | 21 stations from Africa (Sahelian Zone)<br><br>GRDC Reports No. 2, 5, 14                         | Development of satellite algorithms for estimating areal evapotranspiration (calibration with GRDC and GPCC data) |
| Kristine Verdin, EROS Data Center (USGS), Hughes STX Corp., Windsor Ct., USA                           | GRDC catalogue                                                                                   | Quality control of a watershed data set with lat/lon-pairs of the GRDC catalogue                                  |
| Charles Vörösmarty, University of New Hampshire, Durham, N.H., USA                                     | 16 stations near the mouth of large rivers worldwide                                             | Study of the relationship between freshwater river chemistry and coastal river plumes                             |
| Jerry Wegiel, Florida State University, Dep. of Meteorology, Tallahassee, USA                          | Several stations for the Nile for 1995 (not available)                                           | Not specified                                                                                                     |
| P.C. Werner, Potsdam Institut für Klimafolgenforschung                                                 | 6 stations from Germany, Poland, Czech Republic, Switzerland                                     | Extreme hydrological events in Mid-Europe since 1500                                                              |
| Susan Wijffels, CSIRO Division of Marine Research, Hobart, Australia                                   | 160 stations data set used for the calculation of freshwater fluxes (see GRDC Report No. 10)     | Lecture about ocean freshwater transport (meeting WCRP, WOCE)                                                     |
| Dariusz Wrzesinski, Institut für Hydrologie und Wasserwirtschaft, Adam-Mickiewicz-Univ., Poznan, Polen | General information about the availability of GRDC river discharge data for Europe and the World | General scientific interest                                                                                       |
| Yonkang Xue, Dept. of Geography, Univ. of Maryland at College Park, USA                                | 65 stations in East Asia                                                                         | Interactions between land surface characteristics and hydrological systems in East Asia                           |

| <b>Request made by (Name, Country)</b>                                          | <b>Country or river for which data were requested</b>                                                  | <b>Purpose of data use</b>                                                                                         |
|---------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| Daqing Yang, Institute for Global Change Research, Tokyo, Japan                 | Reports 5, 8, 10, 12                                                                                   | General interest                                                                                                   |
| Fumio Yoshino, Faculty of Engineering, Kagawa University, Takamatsu City, Japan | 168 Stations with catchment area larger than 25.000 km <sup>2</sup> and more than 60 observation years | Study on possible global teleconnections in river discharge data                                                   |
| Lin Zhang, Byrd Polar Research Center, Ohio State Univ. at Columbus, Ohio, USA  | Yellow River, Yangtze: 6 stations                                                                      | Role of sea-ice in global climate change; relation between Antarctic Sea ice and precipitation and runoff in China |
| Carsten Zilch & Wolfgang Egner, Freie Universität Berlin, Germany               | General information about the availability of hydrological in China                                    | Hydrologic modelling within a thesis (diploma)                                                                     |

### Database Requests 1999 (January-September)

| Request made by (Name, Country)                                                                      | Country or river for which data were requested             | Purpose of data use                                                                       |
|------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Thomas Beckmann<br>Potsdam-Institut fuer<br>Klimafolgenforschung,<br>Germany                         | Odra River                                                 | Precipitation-Runoff-<br>Model for the Odra Basin                                         |
| H.U. Bender, Kaiserin-<br>Teophanu-Gymnasium Köln,<br>Germany                                        | CD World of Water                                          | Educational purposes                                                                      |
| E.H. Chbab, RIZA, Lelystad,<br>The Netherlands                                                       | 209 time series for stations<br>in North-West-Europe       | Regionalized Frequency<br>Analysis of annual<br>maximum river discharges                  |
| Daniel Cluis, Université de<br>Quebec, Canada                                                        | 127 West and Central<br>African Rivers                     | Climate and Discharge<br>Oscillations in West and<br>Central Africa                       |
| Denis Davis, c/o World<br>Meteorological Organisation                                                | Graphs of discharge of the<br>rivers Rhine and Nile        | Contribution to WMO<br>Book of Climate Change                                             |
| Karen Frey, University of<br>California, USA                                                         | 23 Russian Rivers                                          | Variability of Russian<br>Arctic river discharges,<br>biogeochemistry of Arctic<br>Rivers |
| Dr. Nick van de Giesen<br>Zentrum für<br>Entwicklungsforschung<br>Universität Bonn                   | Volta River and tributaries                                | Calibration of rainfall-<br>runoff-models and routing<br>routines                         |
| Phil Graham, Rossby Centre,<br>Swedish Meteorological and<br>Hydrological Institute                  | 8 stations in Poland                                       | Calibration of large-scale<br>hydrological modelling of<br>runoff into the Baltic Sea     |
| Christopher K.H. Guay,<br>College of Oceanic and<br>Atmospheric Sciences,<br>Oregon State University | 4 Arctic Rivers                                            | Research on geochemical<br>tracers of Arctic River<br>waters                              |
| Uwe Haberlandt, Potsdam<br>Institut für<br>Klimafolgenforschung,<br>Germany                          | Report No. 2                                               | General interest                                                                          |
| Jesse Hammer, Department<br>of Political Science, Emory<br>University, Atlanta, USA                  | Global river dataset for all<br>continents (not available) | Water stress indices and<br>connection with militarical<br>disputes                       |

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|-------------------------------------------------------------------------------------------------------------|------------------------------------|----------------------------------------------------------------------------------------|
| Michael Hauhs, Universität Bayreuth, Institut für Terrestrische Ökosystemforschung                          | Amazonas at Obidos                 | General research in the field of ecological terrestrial modelling                      |
| Magnus Holmer, SOGREAH Company, Grenoble, France                                                            | Rhein and Mosel                    | Impact of chloride load on the water supply of cities along the Mosel and Rhine Rivers |
| Kazutoshi Horiuchi, Earth Science & Technology Organization, Tokyo JAPAN                                    | Brahmaputra, Irrawady, Salween     | Investigating the freshwater balance of the Bay of Bengal                              |
| Ross James, Hydrology Unit, Bureau of Meteorology, Melbourne, Australia                                     | CD „World of Water“                | General scientific interest                                                            |
| H. René Jensen, Danish Hydraulic Institute                                                                  | Rivers draining into the North Sea | Establishing of a 3D hydrodynamic model for the North and Baltic Sea                   |
| Dr. Michael J. Karcher<br>Alfred-Wegener-Institut fuer Polar- und Meeresforschung<br>Bremerhaven<br>Germany | Reports No. 10, 12                 |                                                                                        |
| Dave Knapp, NASA's Goddard Space Flight Center, Greenbelt, USA                                              | CD „World of Water                 | General overview for river systems of the World                                        |
| Peter Knippertz, University of Köln                                                                         | Rivers from Morocco                | Study on the precipitation variability in Morocco (GLOWA)                              |
| Vladimir Konovalov (and Nan Elias), INSTAAR, University of Colorado at Boulder, USA                         | CD „World of Water“                | General scientific interest                                                            |
| Anne Kremer, Nationales Komitee für Global Change Forschung, Universität Bonn, Germany                      | Cauvery River, India               | Research Project about the Cauvery Water Supply Scheme                                 |
| Dennis Lettenmaier, University of Washington, Civil and Environmental Engineering                           | about 500 rivers worldwide         | Estimation of baseflow parameters of a macroscale hydrological model                   |

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|------------------------------------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| Terry Marsh, Institute of Hydrology, Wallingford, U.K.                                         | 9 rivers in Europe                                       | Assessment of Atlantic and North Sea inflows in LOIS (Land Ocean Interface Study)                                |
| Thomas A. McClimans, SINTEF CEE, Trondheim, Norway                                             | Ob and Yenesei                                           | Simulation of ocean currents in the Kara Sea                                                                     |
| Chris Milly, USGS                                                                              | 23 stations in Brazil (Update of earlier requested data) | Observed and modeled variations of annual discharge from large river basins                                      |
| Jean Cléophas Ondo, INRS-EAU, Quebec City, Canada                                              | Central and East Afrika                                  | Statistical examination (breaks, instationarity) in African river discharge time series                          |
| Patricia Silva, Institut für Geowissenschaften der Universität Kiel, Germany                   | Rivers draining into the North and Baltic Sea            | Development of a mathematical model for coastal morphodynamic changes                                            |
| Dipl.-Ing. Simon, International Comission for the Protection of the River Elbe (Labe), Germany | 20 European Rivers                                       | Basic statistics, extreme values of some European Rivers                                                         |
| Dr. Sergij Suisko, Skevchenko Kiev University, Faculty of Geogragphy, Kiev, Ukraine            | 88 stations of rivers draining into the Black Sea        | Changes in the hydrochemical structure of the Black Sea rivers due to global natural and anthropogenic processes |
| Magnus Svedmark, Landscape Ecology Group/EES, Uminova Science Park, Umea, Sweden               | 189 rivers worldwide                                     | Study on the influence of dams and reservoirs on river systems worldwide                                         |
| Dr.Isabella Velicogna, Department of Physics, University of Colorado, Boulder, USA             | Nile River stations                                      | Variability of Nile River flows and the GRACE gravity sattelite mission                                          |
| Uwe de Vries, Universität Bremen, Fachbereich Geowissenschaften                                | GRDC Report No. 10                                       | General scientific interest                                                                                      |

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|---------------------------------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------|
| Nadji Tellro Wai,<br>IRIM-CHAIRE UNESCO<br>Université de Nice-Sophia<br>Antipolis, France                           | Vina, Mbere, Pendé Rivers | Climate variability and its<br>impacts on the economic<br>development in the Upper<br>Logone River Basin, Chad |
| Dr. Rolf Weingartner,<br>Geographisches Institut der<br>Universität Bern,<br>Bern, Schweiz                          | 50 Rivers worldwide       | Project „Mountains of the<br>World - Water Towers for<br>the 21st Century                                      |
| Dariusz Wrzesinski, Institut<br>für Hydrologie und<br>Wasserwirtschaft, Adam-<br>Mickiewicz-Univ., Poznan,<br>Polen | 150 rivers in Europe      | Study „Runoff regimes of<br>rivers in various climatic<br>regions“ (of Europe)                                 |

- Report No. 1**      Second Workshop on the Global Runoff Data Centre, Koblenz,  
(May 1993)      Germany, 15 - 17 June, 1992.
- Report No. 2**      Dokumentation bestehender Algorithmen zur Übertragung von  
(May 1993)      Abflußwerten auf Gitternetze. (Incl. abstract in English by the  
GRDC: Documentation of existing algorithms for transformation  
of runoff data to grid cells) by G.C. Wollenweber.
- Report No. 3**      GRDC - Status Report 1992.  
(June 1993)
- Report No. 4**      GRDC - Status Report 1993.  
(June 1994)
- Report No. 5**      Hydrological Regimes of the Largest Rivers in the World -  
(November 1994)      A Compilation of the GRDC Database.
- Report No. 6**      Report of the First Meeting of the GRDC Steering Committee,  
(December 1994)      Koblenz, Germany, June 20 - 21, 1994.
- Report No. 7**      GRDC - Status Report 1994.  
(June 1995)
- Report No. 8**      First Interim Report on the Arctic River Database for the  
(July 1995)      Arctic Climate System Study (ACSYS).
- Report No. 9**      Report of the Second Meeting of the GRDC Steering Committee,  
(August 1995)      Koblenz, Germany, June 27 - 28.
- Report No. 10**      Freshwater Fluxes from Continents into the World Oceans based on  
(March 1996)      Data of the Global Runoff Data Base.
- Report No. 11**      GRDC - Status Report 1995.  
(April 1996)
- Report No. 12**      Second Interim Report on the Arctic River Database for the  
(June 1996)      Arctic Climate System Study (ACSYS).
- Report No. 13**      GRDC Status Report 1996  
(Februray 1997)

## Reference of GRDC Reports

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- Report No. 14**      The use of GRDC - information  
(February 1997)      Review of data use 1993/1994. Status: January 1997
- Report No. 15**      Third Interim Report on the Arctic River Data Base (ARDB) for the Arctic  
(June 1997)          Climate System Study (ACSYS): Plausibility Control and Data Corrections  
                                 (Technical Report)
- Report No. 16**      The GRDC Database. Concept and Implementation.  
(August 1997)
- Report No. 17**      Report on the Third Meeting of the GRDC Steering Committee, Koblenz,  
(Sept. 1997)          Germany, June 25-27, 1997
- Report No. 18**      GRDC Status Report 1997  
(July 1998)
- Report No. 19**      Evaluation of Statistical Properties of Discharge Data of Stations  
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- Report No. 23**      Report of the Fourth Meeting of the GRDC Steering Committee, Koblenz,  
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