AUSTRALIAN RESOURCES AND ENVIRONMENTAL ASSESSMENT (AREA) MODEL

A study by the Department of Science and the Environment in consultation with Commonwealth departments and agencies

INFOTERRA SOURCES RELATING TO ENVIRONMENTAL ASPECTS OF GLOBAL MODELLING

by

K. Phung Tran

and

J.M. Mula

The views expressed in this paper do not necessarily reflect the opinions of the Department of Science and the Environment, nor of the Australian Government.

AREA Project, Department of Science and the Environment
6th Floor, Lombard House, Allara Street, Canberra City, ACT 2601, Australia
SARUM is a world econometric model developed by the System Analysis Research Unit of the UK's Department of the Environment, in which prices do not adjust to equilibrate supply and demand in each period, but rather recognise the many factors that inhibit instantaneous clearing of markets. The world can be regionalised into twelve regions and a number of industrial and agricultural activities.

AREAH is the Australian version of SARUM for the analysis of Australian Resources and Environmental Assessment. The project was formulated in the light of a need to assess the impact of world change on the development of the Australian environment and its natural resources. In order to be able to look at environmental factors, SARUM is extended by the addition of an environment sector and the demographic sector is endogenised.

Paper prepared for the SEVENTH IIASA CONFERENCE ON GLOBAL MODELLING, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria, October 2-5, 1979

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Environmental Studies Paper, AREA-9, Canberra, August, 1979
INTRODUCTION

The purpose of this paper is twofold. Firstly it gathers together sources of environmental information for the Australian Resources and Environmental Assessment (AREA) Modelling Project. Secondly, the paper is part of our contribution to the 7th Global Modelling Conference conducted by the International Institute of Applied System Analysis (IIASA) in October 1979 to look at the question of how environmental aspects can be incorporated into global modelling work. The paper aims to bring to the attention of research workers participating in the conference, the potential usefulness and applicability of the International Referral System (INFOTERRA, formerly IRS) in the fields of environmental modelling and studies, by providing a list of names and addresses of organisations with expertise in this field.

The International Referral System for sources of environmental information was initiated by the United Nations Environment Program (UNEP) in response to a recommendation of the Stockholm Conference on the Human Environment (June 1972). The purpose of INFOTERRA is to improve the accessibility of environmental information by providing, in response to specific requests, lists of information sources which have declared themselves to be able and willing to supply information on a particular topic or set of topics.

INFOTERRA now contains over seven thousand information sources in sixty-three countries as well as a number of international and non-governmental organizations. In fact, IIASA is an INFOTERRA focal point and the Institute is registered as ten separate sources, each being responsible for different aspects of environmental and economic information.

The paper is concerned with sources which deal with modelling and simulation, and long-term global trends and forecasting, of environmental problems of international importance. It focusses on modelling and simulation of the impact on the environment of pollutants, food and agricultural production, economic planning and resource management.
The paper consists of a summary table which lists source number followed by the page number at which the full description concerning this source may be found. A brief description of each source grouped by subject category follows the source number. In the full description that follows this table, each is identified by a nine-digit number which consists of:

**DIGITS 1-3** : Focal Point Code  
**DIGITS 4-7** : Parent Organisation Code  
**DIGITS 8-9** : Source Code

The Focal Point Code is a constant number for each focal point. For Australia it is 036, Japan 392, NGO 903, non-government organisation, etc.

The Parent Organisation Code is allocated to each individual/organisation within a focal point in ascending numerical sequence. In Australia, the following categories apply:

- 1000 - 1999 : Australian Government  
- 2000 - 2999 : State Government  
- 3000 - 3999 : Education  
- 4000 - 4999 : Business Organisations  
- 5000 - 5999 : Private Individuals and Private Organisations

The Source Code is used for separating individual information sources within a given parent organisation and in ascending numerical sequence. Therefore if an organisation has various branches which are identifiable by unique in areas of information or expertise and warrant registration as separate information sources then each branch would be allocated a unique source code. For example, IIASA is registered as ten separate sources.

Each source is also described by a number of subject attributes which represent its field of expertise. Each attribute is equivalenced to a unique four-character attribute code which is a convenient method of providing a language-independent notation.

In order to look up a fuller description of the source relating to the subject of your interest, first locate the page number from the summary table along side the source number and then turn to that page number in the paper. For example, if your subject of interest is Agricultural Production and its Environmental Impact, ie the first subject heading in the table, the only source that is shown, is 903 (NGO) - 0040-36, p.59; thus a full description of this source can be found on page 59.
Source Number: 036-1006-01
Name and Address
for Referral: J.W. Mulia, - AREA Project Leader
Department of Science and the Environment
PO Box 449, Woden
Canberra, ACT 2606 Australia
Telephone: (062) 452135, Telex: AA62484

Source Description:
Development of an Australian Resource and Environmental Assessment (AREA) model to assess the impact of World Change on the development of the Australian environment and its natural resources. Emphasis is on the Asian-Pacific Region and migration and trade in food, energy, minerals, industrial goods and aid.

Most Relevant Subjects

1010 Natural Resources
1030 Long-Term Global Trends
1040 Resources Management
1070 Population
1072 Human Migration
1300 Manpower and Employment
1390 International Trade
2620 Agriculture
4100 General Manufacturing
4560 Environmental Assessment
4580 Forecasting and Long-Term Trends
4760 Pollutant Effect Beyond National Boundaries
5282 Modelling and Simulation
6950 Industrialised Countries
6955 Less Industrialised Countries
7070 Computer Methods

Associated Subjects

1015 Renewable Resources
1020 Non-Renewable Resources
1021 Mineral Resources
1055 Economic Planning
1261 Demography
2030 Land Use
2625 Agricultural Land
2661 Agricultural Economics
2820 Water Resources
2910 Irrigation
3489 Consumer Goods
3720 Energy Sources and Fuels
3902 Basic Food Requirements
4620 Polluter Pays Principle
4700 Pollutant Disposal
4750 Pollutant Effect on Man and Society
4930 Land Pollution
4940 Air Pollution
4980 Pollution Indices

Associated Subjects (continued)

5201 Atmospheric Monitoring
5340 Oils and Petrols
6120 Fertilisers
6132 Application of Pesticides
6271 Agricultural Wastes
6300 Industrial Effluents
6472 Thermal Pollution
6800 Alternative Technologies
6840 Technological Development
6981 Environmental Data
6982 Environmental Statistics
6995 Assessment and Analysis
7021 Environmental Policy
Source Number: 036-3001-26
Name and Address: The Professor of Agriculture
For Referrals: Department of Agriculture
University of Queensland
ST LUCIA. QLD 4067 AUSTRALIA
Telephone (07) 3700111 Telex: UNIVQDLA440315
Source Description: Crop and Pasture Production, Soil Science, Agricultural Economics and Extension, Biometrics, Land Use, Plant Breeding and Animal Nutrition

Most Relevant Subjects
1040 Resource Management
1050 Economics
1072 Human Migration
1110 Community Structure and Behaviour
1120 Social Surveys
1130 Traditional Cultures
1150 Social and Cultural Indicators
1160 Spiritual and Social Values
2620 Agriculture
2660 Agricultural Production
2661 Agricultural Economics
5280 Data-Analysis Techniques
5282 Modelling and Simulation
7011 Administrative and Managerial Information
7030 Organisation and Methods
7060 Mathematics and Statistics
7080 Cost Benefit Analysis

Associated Subjects
1011 Resource Development
1013 Resource Exploitation
1050 Economic Planning
1370 Finance, Taxation and Currency
1390 International Trade
1550 Community Services
1570 Public Participation
2180 New Communities
2670 Amenity Farming
4140 Advertising and Promotion
4580 Forecasting and Long-Term Trends
5211 Sampling Techniques
5212 Sampling Devices
6910 Specialist Assistance
6960 Economic and Technical Advancement
6982 Environmental Statistics
6995 Assessment and Analysis
7040 Environmental R&D Programmes and Policy

Source Number: 036-3004-02
Name and Address: Professor H.S. Green,
For Referrals: Department of Mathematical Physics,
University of Adelaide,
ADELAIDE SA 5066 AUSTRALIA
Telephone: (08) 2243333 Telex
Source Description: Environmental Investigations related to Diffusion in Fluid Media: Quantitative Assessment of Pollution and Environmental Changes.

Most Relevant Subjects
1030 Long-Term Global Trends
3090 Hydrology
4650 Pollutant Source
4660 Pollutant Assessment
4690 Pollutant Distribution
4710 Pollution Control
4940 Air Pollution
4950 Upper Atmosphere Pollution
4970 Marine Pollution
4990 Pollution Criteria
5282 Modelling and Simulation
5442 Liquid Wastes
6990 Scientific and Technical Information

Associated Subjects
1010 Natural Resources
1020 Non-Renewable Resources
1060 Environmental Impact
1760 Climatology and Meteorology
2010 Rural Environment
2154 Urban Micro-Climate Effects
2451 Arid Lands
2840 River Basins
2841 Rivers and Streams
2900 Run-off and Seepage
3082 Ocean Currents
3720 Energy Sources and Fuels
3751 Electricity Utilisation
4560 Environmental Assessment
4580 Forecasting and Long-Term Trends
4740 Pollutant Effects on Climates
4760 Pollutant Effects Beyond National Boundaries
4930 Land Pollution
5280 Data-Analysis Techniques
5310 Physics
5363 Industrial Liquid Wastes
6040 Atmospheric Particulates
6060 Deposited Particulate Matter
6300 Industrial Effluents
6440 Radioactive Wastes
6470 Waste Heat
6980 Environmental Information
Source Number: 152-2012-00
Name and Address: Sr Ministro Director - Roberto Kelly Vas
For Referrals: Oficina De Planificacion Nacional (ODEPLAN)
HUERFANOS 863-2 PISO
SANTIAGO CHILE
Telephone 722033 Telex

Source Description: Proposes blanket and sectorial economic development policy. Engages with planning, medium and long term national and regional development strategy. Assesses results of plans and periodic diagnoses of the country's economics and social situation. Assists president with development policy.

Most Relevant Subjects
1030 Long-Term Global Trends
1050 Economic Planning
1970 Planning and Development
2080 Planning Blight
4580 Forecasting and Long-Term Trends
5282 Modelling and Simulation
6995 Assessment and Analysis
7090 Programme Analysis and Review

Associated Subjects
1580 Health and Well-Being
2390 National Parks and Protected Areas
2670 Amenity Farming
3010 Fisheries
3330 Housing Programmes
3672 Mining
3755 Energy Distribution Systems
4130 Industry
4291 Transport Planning
7001 Radio and Telecommunications

Source Number: 250-4033-01
Name and Address: Poquet (Monsieur Guy)
For Referrals: Association Internationale Futuribles
10 RUE CERNEH
PARIS SEINE 75017 FRANCE
Telephone: (1)924 54 79

Source Description: Centre of information, documentation and research for studies on future and research on facts, ideas and options on which the future of our society depends. Specialised library 300000, documentation service 40000 cards. Relay system with other centres. 150 Specialised Documents.

Most Relevant Subjects
1050 Economic Planning
1610 Epidemiology
1611 Virology
1970 Planning and Development
2770 Microbiology
4580 Environmental Assessment
4580 Forecasting and Long-Term Trends
5282 Modelling and Simulation
5301 Biochemistry
6140 Biodegradation
7090 Programme Analysis and Review

Associated Subjects
1030 Long-Term Global Trends
1150 Social and Cultural Indicators
1360 Productivity and Growth Rates
1490 International Monetary System
6995 Assessment and Analysis
Source Number: 278-0002-01
Name and Address: Director, Institute of Water Management
Ministry for Environment Protection and Water Management
Schnellerstrasse 140 Berlin 119
German Democratic Republic
Telephone 6 33 28 21 Telex: 112 368 IFW DD

Source Description: Library and Information Analysis Centre for Research Activities concerning connections between biosphere and anthropogenic processes in view of keeping and preserving man's best environment circumstances especially problems on the structure of territory ecological and hydrological problems

Most Relevant Subjects:
1000 Quality of Life
1050 Economic Planning
1060 Environmental Impact
1701 Ecological Balance
1850 Geography
1860 Mapping and Photographic Surveys
2000 Terrestrial Ecology
2210 Industrial Areas
3090 Hydrology
4560 Environmental Assessment
4580 Forecasting and Long-Term Trends
5232 Modelling and Simulation

Associated Subjects
1110 Community Structure and Behaviour
1200 Urban Stresses
1710 Biotopes and Ecosystems
2713 Temperate Forests & Woodlands
2820 Water Resources
4750 Pollution on Man and Society
4770 Pollutant Interaction with Environment
4800 Toxicology
6130 Pesticides and other Biocides
6350 Water Quality
6980 Environmental Information

Source Number: 356-0088-01
Name and Address: Dr Hari Varma, Director
National Geophysical Research Institute
Uppal Road
HYDERABAD ANDHRA PRADESH 500007 INDIA
Telephone 71831 Telex: 015-476

Source Description: Research and Application Geophysical Methods including Deep Seismic Sounding, Induced Polarisation Resistivity, Development, Fabrication Geophysical Instruments Significant Emphasis on Ground Water Development

Most Relevant Subjects:
1010 Natural Resources
1014 Resource Appraisal
1021 Mineral Resources
1040 Resource Management
1880 Geology
1886 Geophysical Changes
1950 Earthquakes
2820 Water Resources
2821 Subterranean Water
2831 Watershed Development
3090 Hydrology
3680 Ore Deposits
5213 Instrumentation
5281 Data Recording, Processing and Storage
5310 Modelling and Simulation
7070 Physics

Associated Subject
1013 Resource Exploitation
1030 Long-Term Global Trends
1240 Disasters
1243 Seismic Sea (TSUNAMI)
1480 Licensing
1780 Droughts
1870 Geomorphology
1884 Subsidence
1980 Geostatistics
2822 Dams and Reservoirs
2823 Water Reticulation Systems
2830 Shared Watersheds
2840 River Basins
2850 Run-Off and Seepage
3744 Sea Floor Exploration and Exploitation
5280 Geothermal Electric Power Generation
6990 Scientific and Technical Information
Source Number: 392-2220-00
Name and Address
for Referral:
Director, Research Section
The Institute for AREA Studies
ICGOKAIYASADOHARA-CHO 3-4
SHINJUKU KU TOKYO 162 JAPAN
Telephone: 03-267-3361 Telex:

Source Description: Research Activities:
(1) Survey for Planning and Implementation of the Regional Development programs
(2) Research and Development of Methods and Technology to be utilised in the above surveys

Most Relevant Subjects
1110 Community Structure and Behaviour
1260 Populace Movement
2030 Land Use
2152 Urban Growth
2155 Urban Development
2200 Location of Offices and Shops
2220 Location of Industry
4130 Industry
4291 Transport Planning
4560 Environmental Assessment
5282 Modelling and Simulation

Associated Subjects
1241 Environmental Emergencies
1300 Manpower and Employment
1550 Community Services
1886 Geophysical Changes
2000 Built Environment
2010 Rural Environment
2015 Rural Areas
2060 Land Values
2095 Zoning
2100 Land Use Classification
2120 Residential Areas
2125 Urban Areas
2180 New Communities
2420 Nature Conservation
2820 Water Resources
2822 Dams and Reservoirs
2860 Drinking Water
4150 Marketing and Distribution
4580 Forecasting and Long-Term Trends
5110 Environmental Quality Standards
5280 Data-Analysis Techniques

Source Number: 392-2229-04
Name and Address
for Referral:
Manager, Research Management Section
Otemachi Administrative Dept. Economic Research Center,
Central Research Institute of Electric Power Industry,
OTEMACHI 1-5-1 CHIYODA-KU, TOKYO 100 JAPAN
Telephone: 03-201-6601 Telex:

Source Description:

Most Relevant Subjects
1060 Environmental Impact
2280 Landscape Design
4560 Environmental Assessment
4570 Environmental Priorities
4580 Forecasting and Long-Term Trends
5282 Modelling and Simulation
6995 Assessment & Analysis
7021 Environmental Policy
Source Number: 528-0329-00
Name and Address: Faculteit Der Economische Wetenschappen
Inst Economisch Onderzoek
Rijksuniversiteit Rotterdam
Burgemeester Oudlaan 50
Rotterdam
Netherlands

Description: Description in English not yet available

Most Relevant Subjects:
1030 Long-Term Global Trends
1055 Economics
1300 Manpower and Employment
1400 Raw Materials
2120 Residential Areas
3751 Electricity Utilisation
4720 Pollutant Recipients
4910 Air Pollution
5282 Modelling and Simulation
5282 Physical/Chemical Processes
6020 Gaseous Air Pollutants
7021 Environmental Policy
7070 Computer Methods

Source Number: 710-0038-01
Name and Address: Director (Prof. D.C. Midgley)
Hydrological Research Unit, University of the Witwatersrand
1 Jan Smuts Avenue
Johannesburg Transvaal 2001
SOUTH AFRICA
Telephone: 011 7241311 Telex: 814659
Cable: University JOBURG

Description: Hydrological Research Unit of the Witwatersrand University. Undertakes Mathematical Modelling of Hydrologic/ Hydraulic Systems, Watersheds, Rivers, Flood Plains, Lakes, Swamps, Estuaries; Quantification of Man's Influences; Irrigation, Afforestation, Water Resources Appraisal; Simulation; Hydro-Electric

Most Relevant Subjects:
1780 Droughts
1790 Rainfall
1800 Flooding
1840 Evaporation and Transpiration
1812 Sediment Transport
2820 Water Resources
2822 Dams and Reservoirs
2825 Natural Drainage Systems
2840 River Basins
2841 Rivers and Streams
2844 Surface Waters
2850 Limnology
2855 Water
2890 Storm Water
2900 Run-off and Seepage
3090 Hydrology

Associated Subjects:
1010 Natural Resources
1011 Resource Development
1014 Resource Appraisal
1040 Resources Management
1070 Population
1261 Demography
1360 Productivity and Growth Rates
1749 Climate & Weather
1750 Climatology and Meteorology
1785 Flash Floods
1940 Erosion
1943 Sedimentation
2100 Land Use Classification
2101 Land Capabilities
2470 Wetlands and Swamps
2481 Arid Lands
2821 Subterranean Water
2826 Conservation & Collection of Water
2831 Watershed Development
2832 Water Flow
Source Number: 752-0013-01
Name and Address for Referral: Swedish Council of Environmental Information
Jordsbruksdepartementet
PACK
S-103 20 STOCKHOLM SWEDEN
Telephone: (08) 763-10-00 Telex: 11461 LOBODEP S

Source Description: The Department of Forest Survey carries out a National Forest Survey, based on Systematic Sampling and Covering all Land Area of Sweden every year. The organisation is also responsible for Processing, Analysing, Documentation and Publication of collected Information.

West Relevant Subjects

- 1010 Natural Resources
- 1014 Resource Appraisal
- 2030 Land Use
- 2100 Land Use Classification
- 2240 Marginal Lands
- 2430 Biological Resources
- 2440 Biological Parameters
- 2460 Vegetational Types
- 2470 Wetlands and Swamps
- 2710 Forest Cover
- 4560 Environmental Assessment
- 4580 Forecasting and Long-Term Trends
- 5200 Monitoring
- 5211 Sampling Techniques
- 5220 Recording Devices
- 5281 Data Recording Processing and Storage
- 5282 Modelling and Simulation
- 6980 Environmental Information

Associated Subjects

- 1710 Biotopes and Ecosystems
- 1830 Biometeorology
- 1840 Evaporation and Transpiration
- 1860 Mapping and Photographic Surveys
- 1890 Soil Types
- 2350 Recreation
- 2410 Public Rights of Way
- 2450 Wildlife
- 2510 Plant Breeding and Genetics
- 2530 Animal Population Assessment
- 2580 Genetic Resources
- 2600 Taxonomy
- 2720 Nitrogen Fixation
- 2790 Pest Control
- 2791 Insect Control
- 2800 Biological Control
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<td>Swedish Council of Environmental Information</td>
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<td>Source Description</td>
<td>JORDBUKSDEPARTMENTET</td>
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<td>S-103 20 STOCKHOLM SWEDEN</td>
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<td>Telephone: (08) 763-10-00 Telex: 11461 LOENDEP S</td>
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<td>Most Relevant Subjects</td>
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<td>1060</td>
<td>Environmental Impact</td>
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<td>1967</td>
<td>Benthic Ecology</td>
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<td>2774</td>
<td>Aquatic Microbiology</td>
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<td>2850</td>
<td>Limnology</td>
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<td>4560</td>
<td>Environmental Assessment</td>
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<td>4580</td>
<td>Forecasting and Long-Term Trends</td>
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<tr>
<td>4660</td>
<td>Pollutant Assessment</td>
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<td>4670</td>
<td>Concentration/Effects Relationships</td>
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<td>4710</td>
<td>Pollutant Control</td>
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<td>4730</td>
<td>Pollutant Effects</td>
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<tr>
<td>4960</td>
<td>Water Pollution and Contamination</td>
</tr>
<tr>
<td>5281</td>
<td>Data Recording Processing and Storage</td>
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<tr>
<td>5282</td>
<td>Modelling and Simulation</td>
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<tr>
<td>5364</td>
<td>Waste Water Treatment</td>
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<tr>
<td>5441</td>
<td>Solid Waste Disposal Techniques</td>
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<tr>
<td>5481</td>
<td>Waste Conversion Techniques</td>
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<td>6500</td>
<td>Pollution Control Technology</td>
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<td>6980</td>
<td>Environmental Information</td>
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<td>6990</td>
<td>Scientific and Technical Information</td>
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<td>7070</td>
<td>Computer Methods</td>
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**Associated Subjects**

| 4022 | Wood Preservation |
| 4590 | Quality Characteristics and Parameters |
| 4890 | Biological Indicators |
| 5206 | Remote Sensing |
| 5208 | Monitoring (Regional) |
| 5381 | Controlled Fires |
| 5740 | Sulphur and Sulphur Dioxide |
| 5790 | Nitrates, Nitrites and Nitrosamines. |
| 5800 | Ammoniacal Compounds |
| 6120 | Fertilisers |
| 6130 | Pesticides and other Biocides |
| 6131 | Herbicides and Weed Control Agents |
| 7060 | Mathematics and Statistics |
| 7120 | Birds |
| 7170 | Invertebrates |

**Associated Subjects**

| 1241 | Environmental Emergencies |
| 2771 | Aerobic Processes |
| 3960 | Food Processing Industry |
| 4960 | Paper and Board Manufacture |
| 4720 | Pollutant Recipients |
| 4750 | Pollutant Effect on Man and Society |
| 4800 | Toxicology |
| 4980 | Pollution Indices |
| 5231 | Catalysts and Catalytic Reactions |
| 5363 | Industrial Liquid Wastes |
| 5370 | Toxic Wastes |
| 5471 | Biodegradability |
| 6970 | International Standardisation |
| 6981 | Environmental Data |
Source Number: 826-3651-10
Name and Address for Referral:
Librarian
Monitoring & Assessment Research Centre
The Octagon Building, 459A Fulham Road
London SW10 OQX
UNITED KINGDOM
Telephone: 01-351-3577 Telex: 915407
MARC G Cable: ENVIRMOLE SW10

Source Description:
Objectives are: to increase knowledge about movements and effects of pollutants in the Environment; to predict present and future environmental damage from pollutant releases; to design pollutant monitoring programmes; to review existing monitoring systems in selected countries.

Most Relevant Subjects
4580 Forecasting and Long-Term Trends
4680 Pollutant Surveillance
4730 Pollutant Effects
4750 Pollutant Effect on Man and Society
4770 Pollutant Interaction with Environment
4780 Pollutant Pathways
5200 Monitoring
5222 Modelling and Simulation
6995 Assessment & Analysis

Source Number: 840-5000-78
Name and Address for Referral:
Dr Nicholas L. Clesceri - Director
Rensselaer Polytechnic Institute
Rensselaer Fresh Water Institute at Lake George
TROY NEW YORK 12180
UNITED STATES
Telephone (518) 270 6541 Telex

Source Description
Conducts Basic Ecological Research and Applies Analytic Capabilities to solving Problems within all spheres of the Freshwater Ecosystems in Order to Preserve its potentials as a Natural Resource. Research is conducted in Freshwater Systems in the Northeast.

Most Relevant Subjects
1040 Resources Management
1727 Freshwater Ecosystems
2870 Process Waters and Effluents
4771 Pollutant Effect on Fish
4960 Water Pollution and Contamination
5202 Freshwater Monitoring
5209 Monitoring (Local)
5282 Modelling and Simulation
5366 Municipal Waste Disposal
6141 Chemical Degradation of Waste
6281 Sewage Systems
6282 Septic Tanks
6290 Organic Effluents
6300 Industrial Effluents
6340 Eutrophication

Associated Subjects
2390 National Parks and Protected Areas
2774 Aquatic Microbiology
4580 Forecasting and Long-Term Trends
4631 Organic Pollutants
4658 Inorganic Pollutants
4660 Pollutant Assessment
4820 Synergistic Effects
4880 Long-Term Effects of Chemicals
4890 Biological Indicators
5208 Monitoring (Regional)
5441 Solid Waste Disposal Techniques
5790 Nitrates, Nitrites and Nitrosamines
6080 Pollutants in Rain
6090 Acidic Deposition
6360 Biological Oxygen Demand
Source Number: 840-6000-75
Name and Address: Vice President
for Referral: Aerovironment Inc
Environmental Programs/145 Vista Avenue
PASADENA CALIFORNIA 91107
UNITED STATES
Telephone: (213) 449 4392 Telex:


Most Relevant Subjects:
1761 Atmospheric Physics
1763 Atmospheric Models
4660 Pollutant Assessment
4690 Pollutant Distribution
4941 Air Quality
5140 Emission Standards
5200 Monitoring
5201 Atmospheric Monitoring
5282 Modelling and Simulation
6981 Environmental Data

Associated Subjects:
1750 Climatology and Meteorology
3746 Wind Electric Power Generation
4560 Environmental Assessment
4580 Forecasting and Long-Term Trends
5204 Radiation Monitoring
5505 Weather and Climate Monitoring
5530 Analytical Apparatus
5580 Data-Analysis Techniques
5281 Data Recording Processing and Storage
6040 Atmospheric Particulates

Source Number: 840-7000-67
Name and Address: Future-Austracts Office/1529 K ST NW-Suite 8129
WASHINGTON DC 20006
UNITED STATES
Telephone: (202) 667 5620 Telex:

Source Description: Consulting firm helps people achieve preferable and desirable futures. Provides speakers, research and writing, runs workshops, consults on Planning and Management. Publishes "FutureAbstracts" (System Accessing Futures Publications) and "Footnotes to the Future" (Monthly Newsletter).

Most Relevant Subjects:
1030 Long-Term Global Trends
4580 Forecasting and Long-Term Trends
6830 Innovation

Associated Subjects:
1000 Quality of Life
1050 Economic Planning
1150 Social and Cultural Indicators
1160 Spiritual and Social Values
1570 Public Participation
1691 Human Psychology
2600 Taxonomy
2610 Nomenclature
4820 Synergistic Effects
5282 Modelling and Simulation
6870 Self Help Programmes
Source Number: 840-7004-99
Name and Address: Oak Ridge National Laboratory
For Referral: Ecosystem Analysis Data Center
810 572 1076 USDOE OR

Source Description: Data base and bibliographic files to document data and locate information. Involved extensively in data analysis and graphic display of environmental data. Numeric data sets collected in international biological program/ eastern deciduous forest biome are maintained and utilized.

Most Relevant Subjects
1060 Environmental Impact
1701 Ecological Balance
2440 Biological Parameters
4560 Environmental Assessment
5280 Data Analysis Techniques
5281 Data Recording, Processing and Storage
5282 Modelling and Simulation
6790 Technology Transfer
6982 Environmental Statistics

Associated Subjects
1030 Long-Term Global Trends
1754 Climate/Weather Modification
1860 Mapping and Photographic Surveys
5207 Monitoring (Baseline)
5211 Sampling Techniques

Source Number: 903-0040-31
Name and Address: Prof O. Vasiliev, Leader of Area.
For Referral: Area of Resources and Environment (IIASA)
IIASA
A-2361 LAXENBURG A-2361 AUSTRIA
Telephone: 02230/7851-0 Telex: 079137

Source Description: The source carries out basic and applied researches in the resources and environment area including regional water management, environmental quality modeling, environmental problems of agriculture, regional environmental policy design and management, global climate, water quality regulations, etc.

Most Relevant Subjects
1011 Resource Development
1020 Non-Renewable Resources
1030 Long-Term Global Trends
1040 Resources Management
1060 Environmental Impact
1749 Climate & Weather
1750 Climatology and Meteorology
1784 Climate/Weather Modification
1763 Atmospheric Models
2861 Agricultural Economics
2880 Water Resources
3681 Coal
4560 Environmental Assessment
4590 Quality Characteristics and Parameters
4710 Pollution Control
5283 Modelling and Simulation
6290 Water Quality
7021 Environmental Policy
7040 Environmental R&D Programmes & Policy
7070 Computer Methods

Associated Subjects
1021 Mineral Resources
1050 Economic Planning
1751 Air-Water Interaction
1753 Climatic Change (Natural)
2620 Agriculture
4941 Air Quality
5110 Environmental Quality Standards
6981 Environmental Data
7080 Programme Analysis and Review
Source Number: 903-0040-32
Name and Address for Referral: Dr J. Kindler, Leader of Task
The Regional Water Management Task, Resources and Environment Area, IIAAS A-2361 LAXENBURG A-2361 AUSTRIA
Telephone: 02236/7521 Ext 480 Telex: 079137

Source Description: The task concentration is the application of systems analysis techniques for planning and real-time management of the integrated regional water resources systems, developing new methods and approaches illustrated by a number of real-world applications, e.g., the food and agriculture program.

Most Relevant Subjects
1011 Resource Development
1030 Long-Term Global Trends
1040 Resources Management
2010 Rural Environment
2820 Water Resources
2855 Water
4560 Environmental Assessment
4580 Forecasting and Long-Term Trends
5282 Modelling and Simulation
6350 Water Quality
6996 Scientific Methods
7030 Organisation and Methods

Associated Subjects
1010 Natural Resources
1970 Planning and Development
2326 Conservation and Collection of Water
2831 Watershed Development
2860 Drinking Water
3970 Staple Foods
6250 Demonstration Projects
7020 Science Policy

Source Number: 903-0040-36
Name and Address for Referral: Prof Ferenc Rubar, Leader of Program, Food and Agriculture Research Program, I.I.A.S.A., A-2361 LAXENBURG A-2361 AUSTRIA
Telephone: 02236/7521-0 Telex: 079137

Source Description: F&A program evaluates the nature and dimensions of the world food situation and identifies the alternative policy actions at the national regional and global level. It includes tasks: Resources: and Technology, water irrigation development, models for agro-industrial development, grain production.

Most Relevant Subjects
1040 Resources Management
1060 Environmental Impact
1910 Soil Capabilities
2030 Land Use
2620 Agriculture
2660 Agricultural Land
2660 Agricultural Production
2661 Agricultural Economics
2820 Water Resources
2855 Water
2890 Irrigation
3982 Basic Food Requirements
4000 Applied Nutrition
4131 Agricultural Industry - Food
4580 Forecasting and Long-Term Trends
4960 Water Pollution and Contamination
5282 Modelling and Simulation
5850 Phosphates
6132 Application of Pesticides
7070 Computer Methods

Associated Subjects
1050 Economic Planning
1860 Mapping and Photographic Surveys
1920 Soil Degradation
1921 Soil Conservation
2161 Land Capabilities
2720 Pest Control
3980 High Protein Foods
3990 Food Science and Technology
4990 Pollution Criteria
5020 Biochemical Pollution Criteria
5810 Organos-Phosphates
6120 Fertilisers
6134 Interaction of Pesticides
6137 Toxicity of Pesticides
6790 Technology Transfer
6800 Alternative Technologies
7021 Environmental Policy
Source Number: 903-0040-39
Name and Address for Referral: Peter De Yanyi, Acting Leader of Area System and Decision Science Area I.I.A.S.A. IIASA A-2361 LAXENBURG AUSTRIA

Source Description: Developing of detailed models of particular sectors, e.g. food, energy, water, the choice of price vs quantity signals in inter-temporal resource allocation; macroeconomic perspective plans for the economy as a whole; carrying out researches in the field of econometric input-output modelling and forecast.

Most Relevant Subjects

1011 Resource Development
1040 Resources Management
1050 Economic Planning
1060 Environmental Impact
2855 Water
3720 Energy Sources and Fuels
3982 Basic Food Requirements
4580 Environmental Assessment
4580 Forecasting and Long-Term Trends
5282 Modelling and Simulation
7021 Environmental Policy
7670 Computer Methods
7020 Cost Benefit Analysis