



At Work With Common Property

CPR NETWORK DIRECTORY

All network members should receive a copy of the network directory together with this issue of the *Digest*. Our most important goal is to make the network something more than a collection of people who happen to get the same newsletter. We want network members to be aware of other members' work, and to communicate actively and directly with each other. The membership directory should facilitate such communication. We encourage all members to review various disciplinary and geographic lists in the directory to familiarize yourselves with other individuals who share your interests or who work in your region. We urge you to meet or talk to them whenever possible, and share perspectives. Such improved communication is the overarching goal of the network.

As noted in the introduction to the directory, the National Academy of Science has constructed a database of information regarding network members. Information about members' areas of interest both in geographic and resource terms was coded from questionnaires and curriculum vitae submitted by members. We hope that this database will serve as a tremendous resource for individuals and institutions working with common property. We hope to refine this database over time, and will probably develop a revised, standardized questionnaire for periodic updates of information about members. We hope to update the directory itself on at least an every-other-year basis. In the interim, anyone needing information about other individuals who are working in a specific area or with a specific resource can correspond directly with the NAS in Washington DC or with the *Digest* editor here at Minnesota. Addresses for both are listed in the directory.

INTER-UNIVERSITY WORKING GROUP

The National Academy's Panel on Common Property provided a tremendous boost to CPR-related research and policy analysis. However, when that panel fulfilled its original mandate, it was dissolved. (This is a matter of normal practice, National Academy of Science panels are constituted for specific purposes, and do not continue indefinitely) However, a number of panel members felt it important to continue to promote and coordinate CPR-related research met in October of 1986 and April, 1987 to discuss possible ways of accomplishing this. At their April meeting, they decided to constitute themselves as an Inter-University Working Group on Common Property Resource Management. The group includes several individuals who were members of the original panel or who presented papers at the Annapolis conference, including David Feeny, Jere Gilles, Margaret McKean, Ron Oakerson, Elinor Ostrom, and Pauline Peters.

In This Issue

At Work With Common Property	1
Conferences Past and Future	10
Common Property Publications	7
About Books	12
Notes from the Editors Desk	16

The group's most immediate goal is to pursue publication of a book based on the Annapolis conference. Longer-term objectives include possible organization of conferences and workshops, as well as CPR-related sessions within disciplinary conferences. More importantly and more generally, the group seeks to foster more coordinated research in the area of common property. The group may seek administrative affiliation with some university. Any further activities of the group will be reported in future issues of the *Digest*.

INTEGRATED WATERSHED MANAGEMENT

In our first issue, we reported on an initiative by Hans Gregerson at the University of Minnesota and K.G. Tejwani from ICIMOD in Kathmandu to bring questions of integrated watershed management to the fore at the International Union of Forestry Research Officials conference, held in Yugoslavia in 1986. They now report that IUFRO has constituted a group entitled "S.4.07-03: Economics of Integrated Watershed Management". The new group has drafted a statement of Terms of Reference which includes the following points:

- to bring together social scientists/economists involved in research on socio-economic aspects of watershed management..
- to bring together physical/biological scientists with social scientists/economists...
- to make the results of research more available..
- to work toward an international workshop or symposium...
- to demonstrate the results of research and the contributions of social scientists/economists in watershed research projects.

The group's orientation suggests that interesting questions will be addressed. Anyone interested in possible affiliation with this new group should correspond with one of the co-chairs listed below:

K.G. Tejwani
ICIMOD
P.O. Box 3226
Kathmandu Nepal

Hans Gregerson
College of Forestry
University of Minnesota
1530 Cleveland Avenue
St. Paul, Minnesota, 55108, USA

RURAL PROJECTS DATA BASE

The Settlement Study Centre (SSC) located in Rehovot, Israel has implemented a data base dealing with rural development. The SSC had an ongoing Projects Collection with the objective of acting " as a channel of communication for disseminating information accumulated in development agencies and Western academic institutions together with the wealth of reported experiences on rural development that exist in the developing countries." The collection already contains information on over 5000 projects, and new information is added weekly. A companion effort, the International Rural Projects Data Base, is a computerized retrieval system for the collection.

The *Common Property Digest* is published by the Center for Natural Resource Policy and Management of the University of Minnesota. Its purpose is to disseminate information dealing with common property resources, their management, and policies related to their use. It also seeks by various means to foster communication between professionals who work with common property resources as policymakers, administrators, researchers, and educators.

The Board for Science and Technology in International Development of the National Research Council, The International Union for Conservation of Nature and Natural Resources, and Winrock International collaborate in the publication of the *Digest*. Publication is made possible by a grant from the Ford Foundation.

Please submit news items, announcements, suggestions, and questions to:

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Common Property Digest
Dept. of Agricultural and
Applied Economics
332E Classroom-Office Building
1994 Buford Ave
St. Paul, MN 55108, U.S.A.
Telephone (612) 625-7019

Users can search for information along 29 main categories divided into 400 separate components. A brief folder describing the collection and IRPD is available from the centre.

The Settlement Study Centre
P.O. Box 2355
Rehovot 76120, Israel

Telephone: (08)474111
Telex: 31926 DVCEN-IL
Cables: SETCEN, ISRAEL

Barabaig Pastoralists:

Charles R. Lane, a D.Phil candidate at the University of Sussex, is studying the reaction of Barabaig pastoralists in Tanzania to recent changes which allow individuals to register private long leases of land. His description of the situation faced by these people is typical of many similar situations. "The loss of pastureland to pastoralists is being accelerated by this process." "There are two basic problems that constrain Barabaig attempts to stem this appropriation; one, they view land as a communal resource and not in terms of exclusive rights to it; two, they are as yet unaware of the land law and its application to defend their rights to secure grazing from further encroachment."

Charles R. Lane
SLP 6141
Arusha
Tanzania

Tree Crop Production Project:

Deforestation is a common resource problem in many areas of the world, including Central America and Panama (CA/P). One of the results is a shortage of wood throughout the region. The Fuelwood and Alternative Energy Sources Project was an initial attempt to deal with this problem. That project was administered by the Center for Tropical Agricultural Research and Training (CATIE) and funded by USAID. It identified over thirty species of trees with good potential for fuelwood uses and conducted a variety of training and extension activities.

These efforts are being continued in a new six-year Tree Crop Production Project which is designed to

take advantage of past efforts and existing information, ongoing research programs, and trained personnel. The projects stated goal is to "increase the income and improve the social welfare of rural families, and to alleviate environmental degradation in CA/P through a significant increase in the cultivation of tree crops for multiple on-farm uses and for the marketing of wood products."

The project will involve three components: information dissemination, training, and research. CATIE is again the implementing institution together with public sector forestry services in each nation.

Irrigation in India:

A research project entitled Socio-Economic Impact of Lift Irrigation in the Middle Ganga Plain is being carried out under the supervision of Prof. Jagdish Singh of the Department of Geography at Gorakhpur University. Financial support comes from the Ford Foundation in India. An interim report based on the study of five model villages has been submitted. The primary objective of the project is to identify the constraints on access to a reliable source of irrigation for different groups of peasants; marginal (those with less than 1 ha. of land), small (1-2 ha.), and others (over 2 ha.). Of particular interest are the weaker groups who do not possess a tubewell or pumpset of their own.

The study has been carried out by performing a cross comparison of the situation in sample villages having different types of lift irrigation facilities. These include state tubewells, World Bank supported community tubewells, private tubewells or pumpsets selling water, and cooperative tubewells owned and managed by a group of small or marginal farmers. The principal constraints identified so far include: erratic supply of electricity, fragmentation of land holdings, and socio-economic conflict in the community, in that order. There is evidence of subtle exploitation of the weaker groups by those having tubewells of their own and thus having the means to withdraw underground water which is a common property resource. Some new socio-economic relationships are emerging as well, to the advantage of the weaker groups. Further study in other sample villages is also going on which, it is hoped, will ultimately enable the suggestion of feasible alternatives.

Ecosystem Rehabilitation:

The problem of rehabilitating a shared or commonly-held resource is one that the Great Lakes Ecosystem Rehabilitation (GLER) working Group has been addressing for nearly a decade. Interdisciplinary research is proceeding on two levels: regionally with respect to the Great Lakes Basin, and locally with respect to the Toronto Aquatic Ecosystem (TAE).

Of relevance to the Basin ecosystem is the binational review of the 1978 Great Lakes Water Quality Agreement. This review was completed in December, 1985, and co-chaired by O.L. Loucks from Butler University, Indianapolis and H.A. Regier from the University of Toronto. The review was conducted under the auspices of the National Research Council of the United States and the Royal Society of Canada with funding from the US and Canadian branches of the Donner Foundation.

A number of tangible results of GLER's work are evident recently. A special issue of *Alternatives* was published in July, 1986 which dealt with environmental issues in the Great Lakes Basin. A session on the application of the ecosystem approach to Great Lakes Management was organized at the International Association for Great Lakes Research meetings held at the University of Toronto in June 1986.

Locally, research on the rivers, waterfront, wetlands, and nearshore ecosystems of Hamilton and Toronto are being completed. Rehabilitation efforts directed to Black Creek, a tributary of the Humber River, are also underway.

Network members from a number of Canadian universities participate in the project. They include H.A. Regier as convenor, and co-investigators F. Berkes, G.R. Francis, A.P. Grima, S. Lerner, and T.H. Williams.

Bangladesh Fisheries:

A.K.M. Mahfuzuddin Ahmed has been working on a Ph.D research project dealing with inland fisheries in Bangladesh. Entitled "A Model for Evaluating Benefits From the Use of Inland Open-Water Fishery Resources of Bangladesh", the research will be presented to the Universiti Pertanian Malaysia. He reports that "the research will produce both methodological and factual results." The methodology (using an optimization technique) will result in a simulator that can be used

for impact analysis of alternative fisheries management schemes. The factual results will be several:

1. Estimates will be given of the current benefits generated by inland fisheries of Bangladesh under the present systems of management.
2. Estimates will also be provided of the benefits that might accrue to selected alternative management schemes.
3. Measures of the impact of alternative management schemes will be provided in terms of factors such as (a) changes in fisherman's incomes, (b) changes in the earnings of fishing and marketing enterprises, (c) changes in the number of fishermen, number of enterprises in various categories, and (d) changes in product prices.

Asian Fisheries Network:

Southeast Asia is frequently pointed to as an area where regional cooperation between nations works well. Academic efforts are not an exception to this observation, many research projects involve considerable intra-regional collaboration. The Asian Fisheries Social Science Network is still another example of this type of cooperation.

Begun in 1982, the network's general objective is to "build national research capacity to address important socio-economic issues in the management of complex ... fisheries of Southeast Asia and in the development of the region's aquaculture industries." Specific objectives include development of professional training programs in fisheries economics, of programs of social science research on fisheries problems, and of a well-trained group of fisheries social scientists. There are eight separate institutional members from the countries of Malaysia, Thailand, Indonesia, and the Philippines. The International Center for Living Aquatic Resources Management (ICLARM) is the coordinating institution. Funding is provided by Canada's International Development Research Centre, the Ford Foundation's Southeast Asia Regional Office, and ICLARM.

More information on the network's activities can be obtained from:

ICLARM
MC P.O. Box 1501
Makati
Metro Manila, Philippines

CPR in Zimbabwe:

The Centre for Applied Social Sciences at the University of Zimbabwe in Harare is increasing its emphasis on natural resources and common property. In 1986, they had three CPR-related efforts underway.

The first, entitled "Socio-economic Study of the Gill Net Fishing Industry on Lake Kariba" is a "study of the socio-economic dimensions of the fishery, with special reference to the domestic economy and motivational dynamics of the population involved." Begun in 1983, the project involved two staff members.

The second effort, Project Campfire, was briefly noted in the first issue of the *Digest*. A social science research unit on government communal areas management programme for indigenous resources, its purpose is "to investigate the socioeconomic dimensions of the programme, which is designed to give local communities legal proprietorship of resources such as timber, water, grazing, and wildlife, with a view to local management and sustained exploitation." It is being carried out in liaison with the Ministry of Local Government and the Department of National Parks and Wildlife Resources. Begun in 1985, it involves two research fellows and two research assistants.

The final project is a study on communal lands grazing schemes. Begun in 1986, the project involves one research fellow and two assistants.

We will ask the Centre for an update on these activities at some time in the future. More information may be obtained from the Centre Director.

Dr. Marshall W. Murphree
Centre for Applied Social Science
University of Zimbabwe
Box MP 167
Mt. Pleasant
Harare, ZIMBABWE

Brazilian CPR:

The Laboratorio de Etnobiologia at the Federal University of Maranhao in Sao Luis "has several projects in progress regarding the management of natural resources by indigenous and native "caboblo" groups. These include common hunting grounds and agricultural plots, as well as "islands" of natural resources intentionally concentrated along trailsides

and in forest openings. One of the major projects is studying "apete", which are forest patches created by the Kayapo indians in 'campo-cerrado" (savanna) and large communal fields organized by the chiefs (and, in past times by female chiefs) and used as emergency food sources in time of war or by old people too weak to plant individual plots. Communal management of firewood is also under study."

Climate Related Impacts Network:

Networks seem to be the rage in the 1980's. Still another network that may be of interest to at least a few CPR network members is the Climate Related Impacts Network. Published under the auspices of the Environmental and Societal Impacts Group (ESIG) of the National Center for Atmospheric Research (NCAR), the network includes researchers interested in the effects of long-term climate change. For more information, write:

Network Newsletter
c/o Richard Katz
NCAR/ESIG
P.O. Box 3000
Boulder, Colorado, 80307, USA

Beijer Institute:

The Beijer Institute Centre for Resource Assessment and Management (BICRAM) is a unique cooperative effort of the Royal Swedish Academy of Sciences, Stockholm, and the University of York in the United Kingdom. The centre has focused much of its work on the implications of increased coal utilization, both in terms of its implications for the European environment as well as for exploitation of coal resources in developing countries. A major current program involves developing Coordinated Acid Deposition Abatement Strategies for Europe.

BICRAM is just one of three cooperative international research institute operated by the Beijer Institute, a scientific institution linked to the Royal Swedish Academy. The other two are BICEDA (Beijer Institute Centre for Energy and Development in Africa) located in Nairobi and BICEPS (Beijer Institute Centre for Energy Planning Systems in Developing Countries). Information on the Beijer Institute itself can be obtained from:

The Beijer Institute
Box 50005
S-104 04 Stockholm
SWEDEN

For information on BICRAM, contact:

BICRAM
University of York
Heslington
York YO1 5DD
UNITED KINGDOM

CPR at Berkeley:

The Department of Forestry and Resource Management at the University of California, Berkeley has an active program of CPR-related work.

1. Social Forestry in India, Nepal, and Bangladesh involving "research and education regarding the dynamics of people-centered approaches to forest and range management." This project is funded by the Ford Foundation.
2. A study of the Impacts of Rural Development Interventions on village patterns of land use in Northeast Thailand.
3. Shifting cultivation in the Philippines, including (a) household risk and management choices, and (b) the impacts of village structure on rates of deforestation.
4. Customary land law and the adoption of social forestry on Java.
5. Ecology of the Kandhyan garden in Sri Lanka.
6. Effects of forest practices on watershed conditions in northern Thailand.
7. The history of forest institutions in China.
8. An econometric model of forest land allocation in Bangladesh.

For information on any of these efforts, contact:

Dr. Jeff Romm
College of Natural Resources
Department of Forestry and Resource Management
145 Mulford Hall
Berkeley, California, 94720, USA

Rajasthan Grazing Lands:

The Institute of Development Studies in Jaipur, India, is conducting a study on the diminution of or encroachment on common grazing lands in an arid region of Rajasthan. The changing composition of livestock herds over a period of 20 years is being examined. This is another CPR-related project funded by the Ford Foundation. More information on the progress of this investigation can be obtained from the principal investigator:

Rita Brara
Institute of Development Studies
B-118
Mangal Marg
Bapu Nagar
Jaipur-302 015
INDIA

Philippine Forests:

Forester Rogelio T. Trinidad reports that the Philippine Bureau of Forest Development has three CPR-related efforts underway. The first is a social forestry program designed to help the economic plight of upland farmers. The second is a forestation project designed to rehabilitate open or denuded forestlands thus protecting the environment and maintaining the ecological balance. The third, centered around Region 6, Iloilo City, is a wildlife conservation program with an emphasis on endangered species and their habitat.

Rogelio T. Trinidad
Bureau of Forest Development
Ministry of Natural Resources
Region No. 6
Iloilo City
Philippines

Common Property Publications

IFREMER Publications:

The Department of Development & Management Strategies of the Institut Francais de Recherche pour l'Exploitation de la Mer (IFREMER) recently issued a document outlining its activities and listing its publications as of March 1987. The descriptive title is "Activites - Travaux - Publications." The Department has the task of studying economic and social aspects of fisheries systems and management. While only organized in 1983, the Department's extensive bibliography already lists some 88 items including journal articles, working papers, and reports. Most are in the french language, as is the bibliography itself. The Department's mandate is not limited to metropolitan France, and fisheries in former French colonies are the subject of several works. Anyone interested in more information should correspond with the Director, Jacques Weber, at the following address:

IFREMER
S.D.A.
66, avenue d'Iena
75116 Paris
FRANCE

Ozone Layer Depletion:

The World Resources Institute (WRI) has published its Research Report #3, entitled *The Sky Is The Limit: Strategies for Protecting the Ozone Layer*. Written by Alan S. Miller and Irving M. Mintzer, the 38 page report "reviews current understanding of the risks of ozone modification, describes techniques for reducing or eliminating emissions of chloroflourocarbons, and then addresses several key policy issues". WIR's common property resource interests are not limited to global resources such as the ozone layer. Persons who are not familiar with their work may wish to request a copy of their complete publications list which gives a better idea of the diversity of their work.

Miller, Alan S., & Irving M. Mintzer, *The Sky Is The Limit: Strategies for Protecting the Ozone Layer*. Washington D.C., World Resources Institute, 1986. 38 pp., \$7.50, ISBN0-915825-17-1 ISSN 0880-2582

WRI Publications
P.O. Box 620
Holmes, Pennsylvania, 19043-0620, USA

Social Forestry - Uttar Pradesh:

The often negative consequences of inappropriate government development policies are studied in a ODI Social Forestry Network paper. Mukul Sanwal's "The Social Forestry Design Framework: The Hill Areas of Uttar Pradesh" focuses on "the victims of development", those who have been actually impoverished as a result of development policies. The specific case studied is that of the Hill people in the central Himalayas in India. Sanwal argues that human rather than resource-oriented approaches are necessary, and that social mobilization is more important than technical aspects of resource management. Mr. Sanwal is Director of the Administrative Training Institute in Naini Tal.

Sanwal, Mukul, "The Social Forestry Design Framework: The Hill Areas of Uttar Pradesh". Social Forestry Network Paper 2d, May 1986.

Social Forestry Network
Overseas Development Institute
Regent's College
Inner Circle
Regent's Park
London, NW1 4NS, United Kingdom

Toucans:

Mexico's colorful toucans are an endangered species. A brief, non-technical document describing these birds and the Government of Mexico's program for their protection has been issued by SEDUE, Mexico's environmental protection agency.

SEDUE, "The Toucans of Mexico". Mexico D.F., Secretariat of Urban Development & Ecology, 1986, 18 pp., not priced.

Contact:

Lic. Marcelo Ebrard
Asesor del C. Secretario
SEDUE
Av. Constituyentes No. 947
Edif. "B" Planta Baja
Col, Belen de las Flores
01110, Mexico D.F., MEXICO

Inuit Hunting Rights:

Hunting and other resource rights for aboriginal peoples are sensitive issues in many countries, Canada certainly being no exception. Protecting the rights of the Inuit and other native peoples from the encroachment of modern, technological society has been a thorny problem, particularly when energy or mineral exploration occurs in areas traditionally used by these peoples. A recent report prepared for the Inuit Committee on National Issues (ICNI) proposes unbundling the traditional collection of property rights assumed in fee-simple ownership, and recognizing Inuit hunting and fishing rights separately from their ownership of land. The report is divided into two sections, "Ethnographic, Political and Economics Perspectives" written by Peter J. Usher, and "A Legal Argument" written by N.D. Bankes. Copies are available from ICNI at no charge.

Usher, Peter J. & N.D. Bankes, *Property, the Basis of Inuit Hunting Rights -A New Approach*. Ottawa, Inuit Committee on National Issues, 1986. 77 pp., no charge, ISBN 0-9692749-4

ICNI
176 Gloucester
Ottawa, Ontario
CANADA K2P 0A6

Barbados & Jamaica Fisheries:

As noted frequently in the *Digest*, one of the key problems we face is that the term "common property" means wildly different things to different people. Fikret Berkes deals with this ambiguity in a recent journal article, "The Common Property Resource Problem and the Fisheries of Barbados and Jamaica." Dr. Berkes explores different definitions of common property and the implications of each for resource management. He argues that offshore fisheries in Barbados lend themselves to private property, but that the inshore fisheries of Jamaica are best managed with a common property regime. Based on these case studies, "four principles of CPR use are proposed: (a) the solution of the CPR problem starts with control of access to the resource, (b) increasing production from a CPR depends on conservation of the resource base, (c) the sustainable utilization of a CPR is closely connected to the use of technology appropriate for the harvest, and (d) local-level management improves prospects for the sustainable use of a CPR."

Individuals who do not have access to this journal may contact the author, as listed below.

Berkes, Fikret, "The Common Property Resource Problem and the Fisheries of Barbados and Jamaica" in *Environmental Management*, Vol 11, No. 2, pp. 225-235. New York, Springer-Verlag, 1987.

Dr. Fikret Berkes
Institute of Urban and Environmental Studies
Brock University
St. Catharines, Ontario L2S 3A1
CANADA

Common Property in India

Two recent reports by network member B.K. Roy Burman deal with the persistence of community land and land-based resource systems. Dr. Burman finds that when these systems are ignored by development projects or efforts, these projects are ineffective at best, and may be neo-feudalistic. He further argues that land reform policies applicable to areas where small individual proprietors predominate are not applicable to areas where community-based systems prevail. As he writes, "In the latter areas also there are individual possessions, but such possessions are historically rooted in the membership of the concerned individuals in their respective communities. The land reforms in predominantly privatised land-holding areas correctly aim at removing exploitive intermediaries. But in the areas where Community is the condition for access to land, . . . removal of the community as the intermediary removes the *raison d'etre* for the individuals to hold the land, and they become vulnerable to the whims of the bureaucracy." Other issues treated include ways in which financial institutions can adjust their operations to communal systems which are only partly monetized.

Burman, B.K. Roy, "Community Land and Institutional Finance With Reference to Tribal Areas of Manipur and Tripura" New Delhi, Council for Social Development.

Burman, B.K. Roy, "Historical Ecology of Land Survey and Settlement in Tribal Areas and Challenges of Development" New Delhi, Council for Social Development.

Council for Social Development
53 Lodi Estate
New Delhi 110003
INDIA

NAS-NRC NewsReport

Though the National Academy of Science panel on common property is now history, the Academy continues to place great emphasis on the importance of CPR. This was evident in the March 1987 issue of *NewsReport*, the monthly publication of the National Academy of Science - National Research Council. Written by David Jarmul and entitled "Common Property Resources in the Developing World", the article is an excellent survey of the variety and importance of CPR to developing countries. The article itself is followed by a brief vignette entitled "Common Property in Brazil". Though brief, these articles provide an excellent introduction and overview for non-specialists who are not familiar with CPR issues. If the NAS is not able to supply copies, write the Digest editor and request a photocopy.

NewsReport

National Research Council
2101 Constitution Avenue N.W.
Washington, D.C. 20418, USA

Farming Systems and Fish:

Farming Systems Research (FSR) is one of the more innovative approaches to agricultural development efforts at the farm level. FSR stresses involvement of smallholders in the research/extension cycle and study of farms as integrated systems rather than using the crop or discipline-specific approaches which have been all too common. An interesting paper published two years ago applies some FSR approaches to inshore fisheries and aquaculture. In "Farming Systems Research (FSR) Applied to Fish Production, Capture and Culture", the authors note that many efforts to improve the income of artisanal fishermen have been technological in approach, and have had very limited effectiveness. They then review the basic characteristics of FSR, discuss different types of fish production and appropriate units of analysis. They also suggest that New Farming Systems Development, an attempt to extend FSR to newly settled agricultural areas, may be applicable to newly settled coastal areas. They conclude that multi-disciplinary efforts similar to FSR may be indicated, but that constituting and leading such teams is a difficult task. Also noted is the fact that appropriate national pricing policies are needed for any development approach to succeed. If you do not have access to the IARD Journal, contact the author listed below.

Chong, Kee-Chai, Sofyan Ilyas, Faisal Kasryno, & Zulkifli Jangkaru; "Farming Systems Research (FSR) Applied to Fish Production: Capture and Culture". *IARD Journal*, Vol 7 No. 3 & 4. 1985. pp. 35-42.

Kee-Chai Chong
Jalan Pangrango 21
Bogor 16151
INDONESIA

Other Resource Periodicals:

There are a number of other periodicals dealing with natural resource policy and management which may be of interest to network members. *Tropical Coastal Area Management*, featured in the last issue of the *Digest*, continues to be published at regular intervals. The April issue features management of coastal resources in heavily urbanized areas, the case in point being Singapore.

The Forest Study of the Biosphere Project being carried out by the International Institute for Applied Systems Analysis has also begun to publish a typescript newsletter. The first issue describes the Biosphere Project and reports on early activities.

Anyone wishing to receive either of these publications should correspond with the editors at the following addresses:

Tropical Coastal Area Management
MC P.O. Box 1501
Makati
Metro Manila, PHILIPPINES

Peter Duicker
Biosphere Project
IIASA
A-2361
Laxenberg, AUSTRIA

About Conferences

Past Conferences

Marine Pollution and Environmental Damage

The second in a series of Workshops sponsored by the Association of Environmental and Resource Economists was held on June 5-6, 1986 in Narragansett, Rhode Island, USA. The topic of the workshop was marine pollution and environmental damages assessment. The event was co-sponsored by AERE, the U.S. Environmental Protection Agency, and the National Oceanographic and Atmospheric Administration.

The workshop focused on natural resource damage assessment. Particular attention was given to the need for determining liability for natural resource damages which is mandated by recent legislation in the USA. Two papers focused on rules proposed by the U.S. Department of the Interior, two more on ecological/economic modeling, and several examined valuation techniques in specific case studies. Two others dealt with related issues including optimal risk-sharing and regional versus social costs of offshore oil development. There are plans to publish the papers in a special issue of the Journal of Marine Resource Economics. (Contributed by James Opaluch)

Forest & Environmental History

The joint meetings of the Forest History Society and the Association for Environmental History held at Duke University in Durham, North Carolina from April 28 to May 1 were an unqualified success from the point of view of CPR. One panel session was devoted completely to common property and was followed by a more informal workshop in which ongoing work was discussed. More importantly, common property questions were explicitly recognized as such in many other presentations on what were ostensibly very different topics. It was apparent in the discussion in a number of sessions that access to and control of a broad range of resources cannot be dichotomized into strict public/private categories and that a broader range of questions must be addressed. There were some 200 participants from many different institutions. It was unfortunate, as usual, that few participants from developing countries were able to attend and contribute.

Emerging Theory

A small conference/workshop entitled "Emerging Common Property Theory for Resource Management" met at Brock University, St. Catharines, Canada on January 23-25, 1987. It was supported by the Occasional Scholarly Conferences program of the Social Science & Humanities Research Council of Canada.

The conference was organized to review progress and recent CPR activity, study some recent analytical approaches, and bring together themes such as local-level management, co-management, sustainable development, ecosystem approaches, eco-development, communal resource management systems, and user participation in decision making. The meeting facilitated the interaction of several groups of Canadian scholars with distinct but overlapping fields of interest in these areas.

Some insights that emerged are as follows:

- communal management is not normally encouraged by resource management agencies in Canada, except in the case of some native groups whose legally recognized rights allow them to practice CPR management at the communal level.
- resource management by central governments is costly because of the high levels of data required to implement measures such as quotas; it is also costly in terms of enforcement. For some users such as Atlantic coast fishermen, protest and sabotage have become almost an institutionalized mechanism of communication.
- many resource managers and administrators assume that there would necessarily be a resource management disaster if the responsibility of management were left to the users. There is a need to shake loose from the "tragedy of the commons" spectre. Hardin's metaphor is firmly embedded in the conventional wisdom of resource management - minus the qualification that the tragedy may be solved by "mutual coercion, mutually agreed upon."
- equity considerations need to be addressed more seriously. Managers have to be accountable, especially where the allocation of a scarce resource is the issue. Access to the resource is key.
- in the future, the role of information is likely to become even more important in shaping the outcome of CPR use.

- power relationships between users and the state need to be investigated more. In this regard, anthropologists and other social scientists have been more useful to managers than to users.
- central government authorities have to be involved if the resource is migratory, if there are multiple user groups, or if overall demand exceeds supply. Special care should be given to "indirect allocation" of resources to degrading uses which are not usually considered explicitly.
- co-management of resources, analagous to workplace democracy, is likely to become more important in the future. But real, symmetrical power-sharing is required or co-optation becomes a possibility.
- co-management requires proper use of negotiation and mediation skills in joint decision-making. In any resource management situation, negotiation goes on all the time, but the people involved rarely have these skills.
- social scientists cannot afford to ignore the ecological background of CPR issues. Ecological sustainability together with equity considerations provide key criteria for success in CPR use.
- implementation of an ecosystem approach and use of stress-response analysis, as developed especially by Great Lakes area scholars, are particularly promising analytical tools. They can be used to pinpoint external factors (stresses) to be counteracted, and to identify the actors in the ecological system to be rehabilitated.
- rehabilitating degraded systems, such as the Great Lakes, is feasible. New common property institutions can be fostered. Stewardship groups show promise for resource conservation at the local level.
- collective self-interest of resource users can lead to cooperation in CPR management and in the establishment of appropriate CPR institutions. A particularly promising approach is the iterated Prisoner's Dilemma game. Some experimental economics approaches yield similar conclusions.
- to further CPR theory, common definitions are needed (although conference participants could not agree on definitions). Case studies require careful selection and research methodology must be enriched by the use of laboratory and field experiments, retrospective/prospective data collection, and hypothesis testing.
- linked theories of common property, meaningful in specific areas and testable within a parent discipline are likely to be more useful than some amorphous general CPR theory.
- emerging CPR theories are likely to be inter-

disciplinary in scope, often taking a systems view, incorporating historical and cultural factors. (reported by Fikret Berkes)

Oceanic Resource Rights

A conference entitled "Rights to Oceanic Resources: A Symposium" was held at the University of Georgia at Athens on May 1-2, 1987. A more extensive report on this conference has been requested from the organizers.

Upcoming Conferences:

Anthropology & Ethnology

The 12th International Congress of Anthropological and Ethnological Sciences, to be held July 24-31, 1988 in Zagreb, Yugoslavia is slated to include a number of papers of possible interest to network members. One presentation, "Emerging Issues of Common Property Resource Use" by H.G. Patel & K.K. Khakhar deals specifically with CPR questions. The entire program is printed in the April, 1987 issue of the *Anthropology Newsletter*. More detail will be provided in the next issue of the *Digest*, if possible.

Rural Sociology

Common property will be the theme of a panel discussion at this year's annual Rural Sociology meetings at the University of Wisconsin in Madison, August 11-15, 1987. Panelists William Burch of Yale University, Jere Gilles of the University of Missouri, and Walt Coward of Cornell University will discuss the Proceedings of the Conference on Common Property Resource Management of the National Academy of Science. Their focus will be the relevance of the proceedings to rural and development-oriented social scientists. For further information, contact Prof. Charles Geisler (panel organizer) at Cornell University. His phone is (607) 255-1691. Mail should be addressed to Prof. Giesler at the Department of Rural Sociology, Warren Hall, Cornell University, Ithaca New York, 14853-7801, USA.

Environmental History

The First International Symposium on Ecological History will be held in Bern, Switzerland in the spring of 1988. Contact Christian Pfister, Historisches Institut, Universitat Bern, CH-3012 Bern, Engehaldenstrasse 4, Switzerland.

Forest Conferences:

"Changing Tropical Forests: Historical Perspectives on Today's Challenges in Asia, Australia, and Oceania" will be held in Canberra Australia, May 16-18, 1988. Contact John Dargavel, Centre for Resource and Environmental Studies, The Australian National University, GPO Box 4, Canberra ACT 2601 Australia.

"History of Social and Economic Problems Confronting Recent Forest Policies," to be held in Zvolen, Czechoslovakia, September 12-17, 1988. Contact Josef Urgela, Podborova 1977, 960 01 Zvolen, Czechoslovakia.

"Forestry, Land Use, and Environmental Change in Arid and Semi-Arid Lands" to be held in Flagstaff, Arizona, USA, June 1-3, 1989. Contact Thomas Cox, Department of History, San Diego State University, San Diego, California, 92182, USA.

Other Resource Conferences:

"Forces Shaping Resource Management". Billings, Montana, USA, August 3-5, 1987. Contact Soil Conservation Society of America, 7515 N.E. Ankeny Road, Ankeny, Iowa, 50021-9764, USA.

"53rd North American Wildlife and Natural Resources Conference" to be held in Louisville, Kentucky, USA on March 18-23, 1988. Contact L.R. Jahn, Wildlife Management Institute, Suite 725, 1101 Fourteenth St. N.W., Washington D.C., 20005, USA. Phone (202) 371-1808.

"6th World Congress on Water Resources" to be held from May 29 to June 3, 1988 in Ottawa, Canada. Contact The Secretariat, University of Ottawa, 631 King Edward Ave. Ottawa, Ontario, K1N 6N5, Canada. Phone (613)564-3902.

About Books

Conference Proceedings

It is out, it is massive, and it is very useful. The volume in question is, of course, the *Proceedings of the Conference on Common Property Management*, published by the National Academy of Science. The conference in question was that organized by the NAS Panel on Common Property Resource Management and held April 21-26, 1985, in Annapolis Maryland. (The roots of the CPR Network and Digest, of course, spring out of this same conference and panel.) The Proceedings volume is already in the hands of some network members, and all who desire it will receive it as soon as a second printing is ready.

The richness and diversity of the papers presented at the conference make a review of the proceedings volume difficult. The volume contains 27 different papers ranging from overarching background pieces to case studies of management of specific resources. The panel organizing the conference wanted it to be more than just a collection of papers dealing in some way with common property, and their efforts in this regard are largely successful. The papers largely share a common commitment to understanding of common property as a tool for development. Many share a common analytical framework. Beyond that,

the substance of the proceedings volume is best expressed by listing the contents.

PART ONE: BACKGROUND

1. The Common Property Challenge - Daniel W. Bromley
2. Conference on Common Property Resource Management: An Introduction - David H. Feeny
3. A Model for the Analysis of Common Property Problems - Ronald J. Oakerson
4. Common Property and Collective Action in Economic Development - C. Ford Runge

PART TWO: CASE STUDIES

Fish and Wildlife Resources

5. Marine Inshore Fishery Management in Turkey - Fikret Berkes
6. Sea Tenure in Bahia, Brazil - John C. Cordell & Margaret A. McKean
7. Overfishing and Conflict in a Traditional Fishery: San Miguel Bay, Philippines - Wilfredo D. Cruz
8. A Social Dilemma in a Less Developed Country: The Massacre of the African Elephant in Zaire - Emizet Kisangani

Water Resources

9. Common Property Management of Water in Botswana - Louise R. Fortman & Emery M. Roe
10. Private Rights and Collective Management of Water in a High Atlas Berber Tribe - Mohamed Mahdi
11. Canal Irrigation in Egypt: Common Property Resource Management by Robert C. Hunt
12. Tank Irrigation in India: An Example of Common Property Resource Management - K. William Easter & K. Palanisami
13. Common Property Resource Management in South Indian Villages - Robert Wade.

Range and Pastureland Resources

14. Management of Common Grazing Lands: Tamahdite, Morocco - Neal E. Artz, Brien E. Norton, and James T. O'Rourke
15. Oukaimedene, Morocco, A High Mountain Agdal - Jere L. Gilles, Abdellah Hammoudi & Mohamed Mahdi
16. Socioecology of Stress: Why do Common Property Resource Management Projects Fail? - Anil K. Gupta

Agriculture Land Resources

17. Commonfield Agriculture: The Andes and Medieval England Compared - Bruce Campbell and Ricardo A. Godoy
18. Information Problems Involved in Partitioning the Commons for Cultivation in Botswana - Susan G. Wynne

Forest and Bushland Resources

19. Institutional Dynamics: The Evolution and Dissolution of Common Property Resource Management - James T. Thompson, David H. Feeny, & Ronald J. Oakerson
20. Collective Management of Hill Forests in Nepal: The Community Forestry Development Project - J.E.M. Arnold & J. Gabriel Campbell
21. People and Resources in Nepal: Customary Resource Management Systems of the Upper Kali Gandaki - D. A. Messerschmidt
22. The Management and Use of Common Property Resources in Tamil Nadu, India - Piers M. Blakkie, John C. Harriss & Adam N. Pain
23. Minor Forest Products as a Common Property Resources in East Kalimantan, Indonesia - Timothy C. Jessup & Nancy Lee Peluso
24. Management of Traditional Common Lands (Iriachi) in Japan - Margaret A. McKean

PART THREE: CONCLUSIONS

25. Closing Comments at the Conference on Common Property Resource Management - Daniel W. Bromley
26. Issues of Definition and Theory: Some Conclusions and Hypotheses - Elinor Ostrom
27. Concluding Statement - Pauline E. Peters

It should be obvious that the volume contains something for nearly everyone interested in common property including a diverse selection of case studies. More importantly, the background and summary papers by Oakerson, Runge, Ostrom and Peterson may serve to give structure and direction to ongoing research efforts in a variety of disciplines.

The volume is available from BOSTID at the address listed below. Network members who have already mailed the form included with the second issue of the Digest will receive their copy in due time. The possibility of publishing a book containing a selected subset of edited papers is being discussed with Cambridge University Press, and this book volume is likely to be published at some future date.

National Academy of Science, *Proceedings of the Conference on Common Property Resource Management*. Washington D.C., National Academy Press, 1986. xi + 632 pp., No Charge, ISBN 0-309-04258-5

Available from:

Board on Science and Technology
for International Development
National Research Council
2101 Constitution Avenue N.W.
Washington D.C. 20418 USA

Pacific Tuna:

Pacific tuna issues involve economics, biology, and politics. *Tuna Issues and Perspectives in the Pacific Islands Region* deals with these diverse areas for the first time in one volume. President IT. Tabai of the Republic of Kiribati notes in his preface to the book that "It is appropriate to address this subject now because . . . of its implications for economic development and for relations between the South Pacific countries and the distant-water fishing nations." The book contains 17 papers written by a range of public and private sector professionals, all well known

for their research and opinion on Pacific tuna region issues. Written in non-technical language, the papers address fisheries management and development, regional and international conflicts, artisanal, commercial, and distant water fisheries in the region. While each of the papers examines a particular area, the overall conclusion to the book is clear; the questions of how to develop fisheries, who should develop fisheries, and what are to be the roles of the private and public sector, are yet to be resolved. The book's contributors also make clear that politics and ideological perspectives will continue to have a place on the Pacific Island tuna agenda. This book can be ordered from:

Distribution Office
East-West Center
Honolulu Hawaii, 96848 USA

The cost is US \$12.00 per copy. There is no shipping charge for surface mail. Additional charges for airmail to addresses in the USA is \$2.50, to other countries, \$12.50.

Doulman, David J. ed. *Tuna Issues and Perspectives in the Pacific Islands Region*. Honolulu, East-West Center, 1987. 328 pp. \$12.00 ISBN 0-86638-093-0 (Item submitted by Linda Lucas Hudgins)

Cambridge Book Series:

Cambridge University Press is publishing a series entitled *Studies in Environment and History*. Six titles have been issued to date, including treatments of California fisheries, environmental politics, and a history of ecological ideas. Five more volumes are forthcoming. The series editors are Donald Worster from Brandeis University and Alfred W. Crosby from the University of Texas at Austin. The series may be of special interest to network members who are interested in CPR primarily in a historical context. More information can be obtained from:

Frank S. Smith, Editor
Cambridge University Press
32 East 57th Street
New York, New York, 10022, USA

Book Notices:

The following books have been brought to our attention as being of possible interest to network

members, but copies are not on hand. Comments are quoted when applicable.

Marks, Stuart A., *The Imperial Lion: Human Dimensions of Wildlife Management in Central Africa*. Boulder, Westview Press, 1983. 195 pp., US \$18.00, ISBN 0-86531-818-2.

"Dr. Marks argues that the management and conservation of wild animals in Third World countries must include cultural as well as biological dimensions and that changes in human social systems will be necessary to sustain wildlife and environmental processes. He describes indigenous attempts to manage wildlife and suggests new research initiatives

Westview Press
5500 Central Avenue
Boulder, Colorado, 80301, USA

Cruz, Ma. Concepcion J., Luzviminda B. Cornista, & Diogenes C. Dayan; *Legal and Institutional Issues of Irrigation Water Rights in the Philippines*. Laguna, University of the Philippines, 1987. 92 pp. No Charge.

Problems remaining after implementation of the Philippines Water Code are examined in this short book. It "analyses how effectively the Code addresses issues regarding water rights in irrigation, points out certain problem areas, and puts forward policy recommendations." Case studies are included. Publication costs were defrayed by the Ford Foundation, so copies can be requested at no cost from:

Ma. Concepcion J. Cruz
College of Development Economics & Management
University of the Philippines at Los Banos
College, Laguna, Philippines 3720

Basu, N.G., *Forests and Tribals*. Calcutta, Manisha Granthalaya. Rupees 70. (Rs.70=00)

"The book is the result of sustained, participatory research on the management of common property by community endeavour."

Manisha Granthalaya
4/3B Bankim Chatterjee Street
Calcutta-700 073, INDIA

Browman, David L. ed. *Arid Land Use Strategies and Risk Management in the Andes: A Regional Anthropological Perspective*. Boulder Colorado, Westview Press, 1987. 335 pp. price not stated.

"14 papers, roughly evenly divided into two sections, one on animal management strategies, and the second on land and water management strategies."

(Westview address listed above)

Mollett, Nina, ed. *Fishery Access Control Programs Worldwide: Proceedings of the Workshop on Management Options for the North Pacific Longline Fisheries*. Fairbanks Alaska, University of Alaska, 1986. 366 pp. US \$9.00

"Thirty-four fisheries experts from eight US states and eight countries met... to discuss how limited access to various fisheries around the world has affected fishermen and the fish. Presentations discussed such management efforts in Norway, Iceland, Japan, New Zealand, Australia, Canada, the United States, and some developing countries."

This volume can be ordered from the address below. Include \$2.00 per order for shipping.

Communications Department
Alaska Sea Grant College Program
University of Alaska
590 University Avenue. Suite 102
Fairbanks, Alaska, 99709-1046, USA

Prescott-Allen, Christine, and Robert Prescott-Allen, *The First Resource: Wild Species in the North American Economy*. New Haven, Yale University Press, 1987. 529 pp. \$62.00

This volume is an attempt to quantify and value the contribution of wildlife to the U.S. economy. It contains a large amount of data on use of wildlife products. "The authors have provided a systematic framework and an initial set of figures, baseline data against which we can measure future changes in the productivity of industries that use wild species." (Quoted from a provocative review in *Natural History*, June 1987, pp. 64-65)

Yale University Press
New Haven, Connecticut, 06520, USA

Norton, Bryan G. ed., *The Preservation of Species*. Princeton, Princeton University Press, 1987. 344 pp., softcover US \$14.95, ISBN 0-691-10223-6; hardcover US \$26.50, ISBN 0-691-06461-X

"Addresses two related questions: First, why preserve species, and second, what priorities should govern decisions when there are insufficient funds to save all species?" "It illuminates the context in which managers must make policy decisions and provides insights into factors important to all who value biological diversity."

Princeton University Press
41 William Street
Princeton, New Jersey, 08540, USA

Plucknett, Donald L, Nigel J.H. Smith, J.T. Williams, & N. Murthy Anishetty, *Gene Banks and the World's Food*. Princeton, Princeton University Press, 1987. 248 pp., US\$ 35.00, ISBN 0-691-08438-6

Books Received:

Groves, R.H. & J.J. Burton, *Ecology of Biological Invasions*. Sydney, Cambridge University Press, 1986. 166 pp., price not stated, ISBN 0-521-30355-9

Eddington, John M. & A. Ann Eddington, *Ecology, Recreation & Tourism*. London, Cambridge University Press, 1986. 200 pp., price not stated, ISBN 0-521-31409-7

Lamson, Cynthia & Arthur J. Hanson, eds., *Atlantic Fisheries and Coastal Communities*. Halifax, Dalhousie University, 1984. 251 pp., price not stated, ISBN 0-7703-0286-6. (Will be reviewed)

Ruddle, Kenneth & Tomoya Akimichi, *Maritime Institutions in the Western Pacific*. Osaka, National Museum of Ethnology, 1984. 329 pp. ISSN 0387-6004. (Will be reviewed)

Ruddle, Kenneth & R.E. Johannes, *The Traditional Knowledge and Management of Coastal Systems in Asia and the Pacific*. Jakarta, UNESCO, 1985. 313 pp., ISBN 92-3 102-321-7. (Will be reviewed)

Notes From The Editor's Desk

Funding \$:

As noted in previous issues, the CPR Network was funded for its initial year by a grant from the Ford Foundation. Over the past few months we have been very busy in seeking support for continued operation. The Ford Foundation has agreed to extend their grant for three additional years. Their funds are enough to cover "baseline" expenses of network administration and editing the *CPR Digest*, but not all actual production and mailing costs. We do not want to institute a subscription charge, particularly for members in developing countries, so we have sought supplemental funds from other foundations. The General Service Foundation of Boulder, Colorado has agreed to provide one such supplemental grant for the coming year. Responses from other donors are still awaited. While all our anticipated needs are not yet covered, we are quite certain that we will be able to continue with four sixteen-page issues per year. The September 1987 issue will be the first under our new funding, and plans are to run through mid-1990 here at Minnesota. As noted earlier, our long range plans involve eventually moving publication to a new site in some developing country.

Rockefeller Foundation \$:

Some weeks ago, the Rockefeller Foundation announced that it will commit about \$250 to \$300 million over the next five years to improve the use of science and technology in developing countries. This is about double their current program. In their announcement, they state that "a more complete understanding of the development process is needed." Nowhere is that more true than in the area of resource management and use. I encourage network members to approach the Foundation with innovative proposals dealing with the scientific and technical aspects of resource management.

Sustainable Biosphere \$:

In issue no. 2, my review of *Sustainable Development of the Biosphere* conjectured that the very large and handsome volume would be too expensive for many people. I was pleasantly surprised when Robert A. Duis from NASA wrote to inform me that the price is only \$17.50 for a soft-cover edition, and \$29.50 for the

hard-cover. This low price is due in part to support from the Government of Canada and the German Marshall Fund of the United States. I will couple my apologies with a strong recommendation that members examine the book.

Network Directory:

The first directory of the CPR network membership is now ready. Compared to the *Digest*, it is a very large document with substantial printing and postage costs. For that reason, we have to be somewhat more circumspect in its distribution. One copy is being supplied free of charge to all individuals and institutions who are members of the network. Any individual in a developing (non-OECD) country who is not a network member, but who desires a single copy will also be mailed one free of charge while supplies last. The same is true for institutions in these countries. We do ask that individuals or institutions in OECD countries who are not network members send us a check or money order for U.S. \$5.00,, payable to the "University of Minnesota" to defray printing and shipping costs. We have not sent copies of the directory to the many universities, development agencies and diplomatic representatives who may get the *Digest*. If any of these institutions desire a copy, they may request one following the guidelines above.

Breaking Into Government:

A review of the new membership directory quickly shows that while the network has been quite successful at reaching the scientific and academic communities, it has had much more difficulty reaching administrators and policy makers in governmental sectors. I have tried a number of means of improving our membership in this area, and want to appeal for your help. If you know or deal with individuals in the public sector who deal with common property questions, inform them of the existence of the network, show them a copy of the *Digest*, and invite them to become network members. The network is not intended to be just a means by which scholars can gossip, but rather a vehicle for effecting substantive change by communicating useful knowledge to key actors in resource management as well as in policy making and policy implementation.