Water: The Mainspring of Civilization

In his opening speech to the International Water History Association conference “The Role of Water in History and Development”, where CROP had a session (see below), Professor Fekri A. Hassan stressed the following points:

Water is the mainspring of civilization and civilizations and water management have co-evolved. Water shortages are nothing new, and throughout history various solutions have been implemented to overcome water scarcities and enhance water security. Such solutions were always short lived - a temporary relief - because the social and cultural consequences of each solution led to a gradual, cumulative increase in the demand for water. Human societies have devised ingenious methods to harvest, transport, and store rainwater, spring water, groundwater, and even air moisture. But the cost of procuring water is a function of the combined cost of extraction/harvesting, transportation, treatment, storage, and delivery. There is thus inevitably an economic aspect of water availability.

All solutions have only bought time: every relief mechanism entailed in the long run greater demands for water than what is available. The reasons for this paradox lies in the fact that the historical solutions to water scarcity involved: (1) increasing population size; (2) greater water consumption per person; (3) progressive depletion of utilized water resources; and (4) progressive deterioration in the quality of water. In addition to a progressive increase in demand relative to what is available at prevailing withdrawal cost, the problem, throughout history, also lies in cultural achievements involving locating human activities in areas where water is lacking or those prone to climatic oscillations. This naturally leads to perceptions of water shortage.

Civilizations are constrained directly by the quality and quantity of available safe drinking and subsistence water. They are constrained indirectly by the influence of water on food, energy, transportation, and industry. Human societies have, in the past and at present, come into conflict on account of clashing demands for resources directly or indirectly related to availability of water. Trade items, transport routes, labourers, industrial raw materials, and markets are all ultimately constrained by water. Wars over such resources are in the final analysis wars over water.

The speaker analysed historical events from as far back as the hunter-gatherers situated in subarid drylands during the coldest maximum of the last Ice Age, between 25,000 and 16,000 years ago and until modern time. He argues for example that 5200 years ago the rise of state societies implied greater managerial capabilities for water works, resolving disputes within and between regional groups, and facilitating the transfer of famine relief food when needed. The success of this strategic move buffered societies against periodic agrarian failures, but it created a destabilizing force that worked against the gains from technological and social innovations. This force consisted of a greater de-
mand for food to meet the progressive increase in the number of non-food-producers, from the king and his court to the scribes and carpenters. This force gained more intensity as the demand of each of the non-food-producers soared to fit their elevated social status. With an increasing demand for food, the farmers were forced to work harder, to work longer hours, and to beget more children to increase the size of the labor force. Social and ideological mechanisms were put in place to ensure that farmers remained in the fields, living in misery and destitution in hovels and huts, as the state elite, the supporting caste of priests, scribes, soldiers, and artisans retreated to palaces and town houses on royal estates in capital cities and provincial towns. This was the beginning of one of the major forces in world history: social inequality and poverty. Greater productivity to feed the peasant and the rising number of the non-food producers could only mean that more water was needed, especially when the stretched system of production suffered from lack of rain or poor floods. The answer was for the kings to dig longer canals, bigger dikes, and, on occasions to reform the organizational bureaucracy.

The Persians and the Greeks came to conquer Egypt, and for a while both succeeded in replacing native rulers. This was a time of clashing empires; a stage in world history that began with the rise of the first empires in the Near East, with Egypt joining ca. 1500 BC. Imperial ambitions are not the result of whimsical infatuations with power by cranky leaders. They are primarily a response to acquire more land and control trade routes. It may be said that conflict over water rarely leads to war. But we fool ourselves if we do not consider that water is an indirect cause of many conflicts. Wars for agricultural products are wars for the water resources essential for farming. Wars for cotton, sugar, or rubber are wars for water.

In Europe, two millenniums later, the development of medieval towns linked to trade and crafts in a climate of competition and warfare not only made it necessary to secure water for city dwellers, but also made use of water for defence, mills, tanners and paper-makers. Sewage, sanitation and water pollution became issues of concern, and had a major role in transforming water management methods.

Industrialization, over the last 200 years, often in association with urbanization, has also created great demands for water, competing with the growing demands for water to produce food for the ever-increasing masses of humanity. Industrial water pollution from suspended solids, organic materials, heavy metals, synthetic chemicals, and acidic waste is now compounded with that of pollution by modern farming, such as contamination by nutrients, pesticides, and animal waste.

Poor countries are facing the dilemma of rapid industrialization and growing population numbers, migration to the cities, and greater demands for the amenities of urban living and middle class lifestyle. In the process they are stressing existing water resources, hastily and rather inefficiently developing new water resources, overlooking degradation and breakdown of urban water and sewerage infrastructure, and failing to minimize or prevent water pollution from modern farming and industrial installations. Dams and more dams are developed at the expense of local ecosystems and indigenous populations as demands for both water and energy soar.

History reveals that the range of our problem is not without precedence, except that: (1) our water demands are rising sharply; (2) our ability to pollute is global; (3) our pollutants are more deadly; (4) our interference with ecosystems is both far-reaching and nefarious; and (5) all societies are closely interlinked so that any regional catastrophe can have global repercussions.

Professor Hassan is an archaeologist located at the Institute of Archaeology, University College of London, UK.

### Water, Poverty and Social Development

CROP organised a session on “Water, Poverty and Social Development” at the International Water History Association (IWHA) conference “The Role of Water in History and Development.” The conference was held at the University of Bergen, Norway, August 10-12.

The session was divided into four parts where the following papers were presented and discussed:

**Political economy of water management**

- Changes in the local availability of water and allocation of groundwater rights in Mexico by Gro Volckmar Dyrrnes, Management of Natural Resources in Developing Countries, Agricultural University of Norway, and Boris Maranon-Pimentel, Mexican Institute of Water Technology (IMTA), Mexico;
- Policy versus praxis: problems and solutions in the water sector, South Africa by Jaqui Goldin, Department of Economics, University of Cape Town, South Africa;
- The role of water resource control in the impoverishment and development of Uganda, Tanzania 1888-1976 by Joseph Mullen, Institute for Development Policy and Management, University of Manchester, UK;
- A sound in the clouds: The political economy of water in South Africa by Francis Wilson, University of Cape Town, South Africa.

**Water in an urban setting**

- Socio-economic implications of water supply in Nigerian urban centres: The case of Ibadan by Ibitun O. Adelekun, Department of Geography, University of Ibadan, Nigeria;
- Going small when the city grows big – New options for water supply and sanitation in rapidly expanding urban areas by Jan-Olof Drangert, Department of Water and Environmental Studies, University of Linköping.

### Social Development

- Water, poverty and social development in Rio de Janeiro by Tania Lustosa, Department of Population and Social Indicators, Rio de Janeiro, Brazil;
- Inequities in urban water supply. A study of municipal towns in Andhra Pradesh, India by C. Ramachandraiah, Centre for Economic and Social Studies (CESS), Hyderabad, India.
- Quality of life and quality of water in Colombia by Esteban Nina Baltazar, National Planning Department, Bogota, Colombia;
- Gender, poverty and water: Inclusion and exclusion in Pakistan by Maliha Khan-Tirmizi, Development Anthropology, Lahore University, Pakistan;
- Water, poverty and social development: Case study of Langat river basin, Malaysia by Chamburi Siwar, Faculty of Economics, University Kebangsaan, Malaysia.
- Case studies in water management
  - Urban poverty and conflicts over water in Mexico by Patricia Avila-Garcia, Rural Studies Centre, El Colegio de Michoacan, Mexico;
  - Inequity and social exclusion in the access to water in Cochabamba, Bolivia by Carmen Ledo, San Simon University, Bolivia and Delft University, The Netherlands;
  - Poor access to water: Evidence from irrigation management transfer programme in India by Rengarajan Parthasarathy, Gujarat Institute of Development Research, Ahmedabad, India.

More than 100 persons attended the session. The abstract of the papers presented can be found at the IWHA webpage at http://www.iwha.net/theme_d.htm
Poverty and Water

Twelve months from now a major gathering assessing the state of the world ten years after the great ‘Earth Summit’, the United Nations conference on Environment and Development held in Rio de Janeiro in June 1992, is due to take place in Johannesburg.

There are many ways of focusing on this issue but we believe that no serious discussion of environmentally sustainable development can take place without placing global poverty at the core. From its earliest days CROP has seen the need to consider poverty and environmental disruption and vulnerability together as essentially two sides of the same coin. Thus in 1995 one of CROP’s earliest workshops, focusing on ‘Poverty and the Environment’, was held in Malaysia and the main papers subsequently published in a book (edited by Arild Angelsen and Matti Vainio) which argued that not only were poverty and environmental disruption closely correlated but that they needed to be analysed as the joint consequence of a number of different common factors.

How then can we, as members of CROP, best respond to the Rio+10 process? In order to make any impact on so huge an event covering so wide a range of controversial issues we believe it wise for us to set limits and to focus our efforts in such a way as may hopefully enable us to say something new and meaningful. Given CROP’s participation in the highly successful conference held in Bergen to launch the International Water History Association in August we have decided to hold a workshop, focusing on ‘Poverty and Water’, with particular reference to Africa south of the equator. To this end CROP is issuing a call for papers which we hope will enable us to contribute with some relevance and effectiveness in the preparations for the global Rio+10 conference later in the year.

Enclosed in this Newsletter is the official call for papers. We urge members of CROP around the world to consider writing a major paper on this topic. In order to move beyond generalities we have chosen to focus on a specific area of the world but in selecting the best papers submitted we shall not, of course, exclude those which although drawing on evidence and experience from elsewhere nevertheless provide important complementary insights to the Africa papers.

Francis Wilson, Chair of CROP
(E-mail: f wilson@hiddingh.uct.ac.za)

CALL FOR PAPERS

ISSUES IN PRO-POOR POLICY IN NON-OECD COUNTRIES

Joint session between CROP and the International Sociological Association (ISA) Research Committee on Sociology of Poverty, Social Welfare and Social Policy at the XVth ISA World Congress of Sociology, Brisbane, Australia July 7-13, 2002

Social policies, welfare provisions and national pro-poor plans in non-OECD countries present a very heterogeneous picture and so far too little is known about the history and development of such policies and the values embedded in the priorities of the different policies.

The aim of this workshop is to bring out pro-policies in non-OECD countries to discuss and compare their histories, targets, organisation and priorities. So far research along these lines is found mainly within OECD-countries. However, it seems that much of the discussions in the early days of the OECD pro-poor policies on how to finance and organise welfare measures and who were to be rightful recipients of material and non-material transfers, are now repeated in non-OECD countries. Other issues of importance in the construction of pro-poor policies are tied to cultural and national understandings of what poverty is and what claim the citizens have on the state. Still other issues are brought in by donors that set the terms and contents of pro-poor policies.

On this background the framework of the workshop will be fairly open. The focus will be on national policies and it is expected that the papers be research based.

All participants will be expected to take part in the proceedings by presenting and discussing papers. If you wish to present a paper, please send an abstract (in English) to the CROP Secretariat.

THE DEADLINE IS OCTOBER 31st, 2001

The abstract should include: the title of the proposed paper and a summary of the main theme or argument. The summary should indicate theory, methods and findings of your proposed paper, and should not exceed ONE PAGE (A4). IMPORTANT: The abstract should be accompanied by a brief CV along with a list of your most recent publications. Please state clearly your name, title, nationality, full postal and e-mail address, telephone and fax numbers.

If your presentation is approved you must then submit an abstract of your paper to the ISA Congress Secretariat in Australia by February 28th, 2002. The deadline for submission of the paper will be May 1st, 2002.

All enquiries about the session should be addressed to:
CROP Executive Officer Inge Erling Tesdal, CROP Secretariat, Fosswinckelsgt 7, N-5007 Bergen, Norway, Tel: +47 55 58 97 44, Fax: +47 55 58 97 45, e-mail: crop@uib.no

For further information on the XVth ISA World Congress on Sociology, including funding, see the ISA webpage at http://www.ucm.es/info/isa/congress2002/rc/rc19.htm

NEW CROP PUBLICATIONS

The following two books have recently been published by Zed Books in the CROP International Studies in Poverty Research Series:


- Poverty Reduction: What Role for the State in Today’s Globalized Economy?, edited by Francis Wilson, Nazneen Kanji and Einar Braathen

Those interested in ordering the publications should contact: Sales, Zed Books, 7 Cynthia Street, London N1 9JF, UK, Ph: +44-20-7837-4014/8466, Fax: +44-20-7833-3960, E-mail: sales@zedbooks.demon.co.uk
STATEMENT ON POVERTY BY UN COMMITTEE

The UN Committee on Economic, Social and Cultural Rights adopted a statement on poverty at its 25th session which was held in Geneva in May. The statement points out that poverty constitutes a denial of human rights, and that the human rights dimension of poverty eradication policies rarely receive the attention they deserve. This neglect is regrettable, because a human rights approach to poverty can reinforce anti-poverty strategies and make them more effective. More information can be found at the webpage of the UN Office of the High Commissioner of Human Rights (http://www.unhchr.ch) or one can contact Dr. Paul Hunt, Human Rights Centre, University of Essex, UK, Email: phmhunt@essex.ac.uk

BOOK SERIES ON POVERTY RESEARCH

The Studies in Poverty, Inequality and Social Exclusions series is published by Policy Press. Among their new publications is Breadline Europe – The measurement of poverty, edited by David Gordon and Peter Townsend and Poverty, inequality and health in Britain: 1800-2000, edited by George Davey Smith, Daniel Dorling and Mary Shaw. For more information visit Policy Press on Internet at http://www.policypress.org.uk or contact Dr. David Gordon, Townsend Centre for International Poverty Research, University of Bristol, 8 Priority Road, Bristol BS8 1TZ, UK, E-mail: dave.gordon@bristol.ac.uk

HUMAN DEVELOPMENT REPORT 2001

The UNDP Human Development Report 2001: Making new technologies work for human development can be read by visiting http://www.undp.org/hdr2001 on Internet or one can contact UNDP directly for ordering information.

JOURNAL OF INTERNATIONAL DEVELOPMENT


LIST OF CROP EVENTS 2001 - 2002

November 2001
4-7: "Indigenous Populations and Poverty: Multi-Disciplinary Approaches", a joint CROP/CLACSO/FLACSO workshop, Guatemala.

April 2002
"Poverty and water, with particular reference to Africa south of the equator". Academic session in co-operation with the University of Natal and in conjunction with the International Social Science Council Executive Committee meeting, Durban, South Africa.

July 2002
7-13: "Issues in pro-poor policies in non-OECD countries", Joint session with RC19 at the ISA XV World Congress of Sociology, Brisbane, Australia.

November 2002
CROP symposium at the ISSC 50th Anniversary

NEW BOOK ON CHILD POVERTY

Cambridge University Press has published The Dynamics of Child Poverty in Industrialised Countries, edited by Bruce Bradbury, Stephen Jenkins and John Micklewright. For more information visit Cambridge University Press on Internet at http://uk.cambridge.org/sociology/catalogue/0521803101 or make contact at: The Edinburgh Building, Shaftesbury Road, Cambridge CB22RU, UK. Ph: +44-1223-312393 Fax: +44-1223-315052

ENVIRONMENT AND URBANIZATION BRIEFS

The International Institute for Environment and Development (IIED) is making briefs of their journal Environment and Urbanization. The briefs contain five page summaries of each issue of the journal and a list of the papers on which it draws with details as to how copies of individual papers can be obtained from Internet. Those interested can contact David Satterthwaite, IIED, 3 Endsleigh Street, London WC1H 0DD, UK, ph: +44-20-7388-2117, fax: +44-20-7388-2826, E-mail: david@iied.org

CROP IN BRIEF

CROP is a world-wide network of researchers and experts on poverty. The aim of CROP is to establish an arena for interdisciplinary and comparative research on poverty in developed and developing countries. CROP organises regional workshops, symposia and international conferences, promotes joint research projects and publications, links poverty researchers and disseminates information about poverty research, on a non-profit basis. CROP has developed a database on poverty researchers, and documentation of ongoing research.

If you wish to have your name listed in CROPnet, you are welcome to write to the Secretariat and request a copy of the CROP Database Survey form. For further information please contact the CROP Secretariat.

WEBPAGE FOR CROP

Those who have an Internet connection and a WWW browser programme installed on the computer, find the CROP webpage at http://www.crop.org The pages hold general information about CROP, news about past and ongoing activities, as well as the latest CROP newsletter.

Please note: We cannot answer the increased demand for copies of single papers presented at CROP conferences and workshops. However, if you have the patience, most of the papers become available through the publications that follow the conferences and will be duly announced. We still supply the authors addresses, phone & fax numbers.

At the CROP Secretariat you will meet:

Else Øyen, Scientific Director of CROP
Kirsti Thesen Sælen, Co-ordinator
Inge Erling Tesdal, Executive Officer
Einar Braathen, Programme Officer
Asuncion St. Clair, Research Fellow

THE QUOTE

«The real test of any civilization lies in its treatment of the poor”

Lord Maynard Keynes