

The United Nations University
Annual Report 1996



The United Nations University

Background

The United Nations University (UNU) is an international academic organization playing a unique role in world affairs and in promoting the United Nations' aim of peace and progress. It provides and manages a framework for bringing together the world's leading scholars to tackle the "pressing global problems of human survival, development and welfare."

The UNU's approach to advancing knowledge is unlike other institutions of higher learning. It does not have the structure of a conventional university; instead work is carried out through its own worldwide network of research and training centres and programmes, associated and cooperating institutions, and research units. The academic freedom guaranteed by its Charter enables UNU scholars and scientists to collaborate freely.

The idea for this type of international institution was proposed in 1969 by then United Nations Secretary-General U. Thant. He suggested "a United Nations university, truly international in character and devoted to the Charter's objectives of peace and progress," be created.

The UNU is an autonomous organ of the United Nations General Assembly, under the joint sponsorship of the United Nations and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

Organization

The University Council sets the principles and policies for the University. It has 24 members who are appointed jointly by the Secretary-General of the United Nations and the Director-General of UNESCO for six-year terms. Members serve in their individual capacities, not as representatives of their countries. There are three ex officio members: the Secretary-General of the United Nations, the Director-General of UNESCO and the Executive Director of the United Nations Institute for Training and Research (UNITAR). The Rector is also a Council member.

The Rector is the University's chief academic and administrative officer, with responsibility for the direction, organization, and administration of its programmes.

The University's research and training activities are coordinated by the Academic Division at the Tokyo Headquarters and by a growing number of research and training centres and programmes worldwide.

Research and training directions—towards the next century

The University studies the far-reaching effects of human activities, which can and have altered the world on an unprecedented scale. Particular importance is given to those which influence developing countries. The four areas of concentration articulated in the University's Third Medium-Term Perspective are:

Peace and Governance;
Development;
Environment; and
Science and technology.

The University's academic activities are carried out primarily through its network of research and training centres:

UNU World Institute for Development Economics Research (UNU/WIDER), Helsinki, Finland (March 1985)

UNU/WIDER, the University's first research and training centre, studies global economic policies which will help improve human lives. Its studies are conducted by an in-house staff of research fellows, economists, and scholars. Although there are many economic "think-tanks," UNU/WIDER is one of the few focusing on the problems of developing countries. Its ultimate purpose is to help such countries form economic policies that lead to robust, equitable and environmentally sustainable growth.

UNU Institute for New Technologies (UNU/INTECH), Maastricht, the Netherlands (October 1990)

UNU/INTECH conducts integrative policy-oriented research and training on the economic and social implications of new technologies for developing countries. It does this by establishing links to institutions in developing countries pursuing similar research. UNU/INTECH's programmes emphasize research on the economic and social impact of new technologies, policy studies on matters of urgent importance, and the training of Ph.D. fellows.

UNU International Institute for Software Technology (UNU/IIST), Macau (July 1992)

UNU/IIST helps developing countries strengthen capabilities and become self-reliant in three areas:

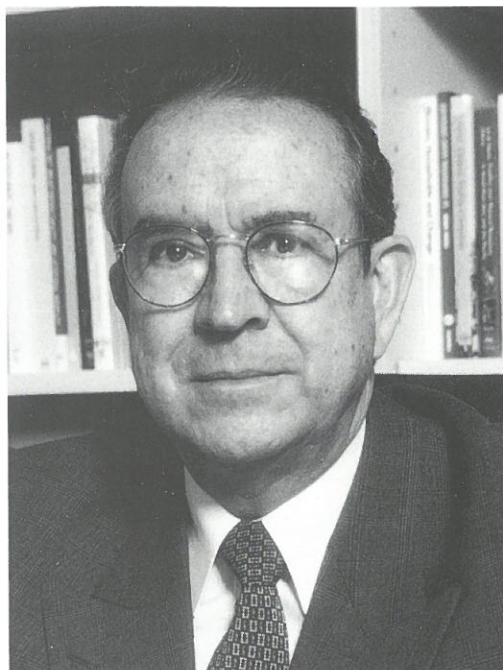
1. the development of software for export and domestic use;
2. university level software curriculum development; and
3. participation in international software research.

(Continued on the inside back cover.)

C O N T E N T S

Introductory message from the Rector of the UNU	iv
The focal point of the United Nations University:	
finding solutions to pressing global problems—An overview	1
The University's work: issues and challenges	2
Peace and governance	2
Peace and security	3
Democracy and human rights	3
Governance, multilateralism and leadership	4
Development	6
Globalization, liberalization, and development	6
Distribution, development and the economics of transition	7
The role of technology policy in industrialization and industrial competitiveness	7
Technological change, and economic and social exclusion	8
Mega-cities and urban development	8
Environment	10
Sustainable resource management	10
Eco-restructuring for sustainable development	12
Natural Resources in Africa	14
Water, environment and health	15
Science and technology	16
National systems of innovation, science and technology institutions	16
Software technology for developing countries	18
Applications of biotechnology for development	19
Microprocessors and informatics	20
Food and nutrition	20
Science and technology	21
Building capacities: UNU postgraduate education	22
Dissemination of research findings	25
Interface with the United Nations system	28
State of the University – 1996	30
Annex 1: UNU academic activities in 1996	37
Annex 2: UNU governing bodies	42
Members of the University Council	42
Members of the boards of UNU research and training centres and advisory committees	43
Annex 3: UNU titles published in 1996	45
Annex 4: UNU depository libraries around the world	49

Introductory message from the Rector of the UNU



I am pleased to introduce the 1996 Annual Report of the United Nations University (UNU). This Annual Report highlights the work of the University during the year and describes many of the significant developments and events of 1996 – our 21st year of academic activity. The report also gives a sense of the direction in which the University is headed at the onset of the Third Medium-Term Perspective (MTP III) and the nature and focus of our activities as we enter the 21st century.

This is the final annual report that I will introduce as Rector; I will be completing my term of office at the end of August 1997. Over the past 10 years, the University has grown and developed during a period of considerable global uncertainty and change. We have during this same period been able to expand our own network of research and training centres and programmes, increasing international support for our worldwide activities and outreach.

I am enormously proud of the University, its potential and the achievements made over the past decade. Noteworthy in 1996 was the establishment of two new research and training entities of the UNU system – the UNU Institute of Advanced Studies (UNU/IAS) in Tokyo, and the UNU International Network on Water, Environment and Health (UNU/INWEH) in

Hamilton, Ontario, Canada.

Much remains to be done to strengthen the University and to enhance its outreach and impact both as a part of the United Nations system and as part of international academic world. As I look back on my time at the University, I take pride in what we have done together at the UNU as an international community of scholars. I am grateful to the scholars, administrators, supporters and donors who have helped us during 1996. Rest assured that I will follow with great interest the activities and progress of the UNU in the coming years.

The University's strength stems from many sources: its strategic location in different parts of the world, the networking approach used to organize its work, its talented and dedicated staff, and its committed supporters and donors.

The University is ideally suited and positioned to carry out its global mission at the change of the millennium. I am convinced that its mandate – to help solve pressing global problems – is even more important now than it was when the University was established in the mid-1970s. I hope that during 1997 and in the coming decades you will continue to lend your interest and support in the important work of the University.

Heitor Gurgulino de Souza

The focal point of the United Nations University: finding solutions to pressing global problems— An overview

The year 1996 marked the 21st year of scholarly work for the United Nations University (UNU). For the past two decades, the University has played an important role in stimulating international academic cooperation through innovative research initiatives and capacity-building programmes, and by disseminating the results of this work.

The University's Council, its governing body, held its forty-third session in Santiago, Chile, from 2–6 December 1996. Their deliberations focused primarily on the University's role at the turn of the millennium and the global problems it will address.

The Council continued its review of the Third Medium-Term Perspective (MTP III/1997–2001). They reviewed specific programmes and projects within the UNU's 1996–97 biennium programme and budget. They also approved a panel of names for the fourth Rector of the University to be submitted to the Secretary-General of the United Nations and the Director-General of the United Nations Educational, Scientific and Cultural Organization (UNESCO). Rector Heitor Gurgulino de Souza's term will expire at the end of August 1997.

The Third Medium-Term Perspective provides a five-year academic and institutional framework for the University's work during 1997–2001. It calls for the University to find solutions to pressing global problems within four programme areas:

Peace and governance;
Environment;
Science and technology;
Development.

This report has three objectives. First, it provides a summary of the University's global activities within each of the above programme areas. Second, it

highlights UNU's 1996 efforts in postgraduate training, dissemination of research results and institutional development. Third, it shows how the UNU's work was conducted in cooperation with other United Nations organizations and with scholars and practitioners in a number of countries around the world.

As in the past, this report does not provide an exhaustive account of all the UNU's 1996 academic work. Instead, it highlights the University's main initiatives and work areas. It provides a succinct, consolidated view of work done through a decentralized network of scholars and institutions.

- The UNU now has five of its own research and training centres (RTCs):
- The World Institute for Development Economics Research (UNU/WIDER) in Helsinki, Finland;
- The Institute for New Technologies (UNU/INTECH) in Maastricht, the Netherlands;
- The International Institute for Software Technology (UNU/IIST) in Macau;
- The Institute for Natural Resources in Africa (UNU/INRA) in Accra, Ghana; and,
- The Institute of Advanced Studies (UNU/IAS) in Tokyo, Japan.

In addition to these centres, the University established an International Network on Water, Environment and Health (UNU/INWEH) in Hamilton, Canada. It continued its International Leadership Academy (UNU/ILA) in Amman, Jordan, and its Programme for Biotechnology in Latin America and the Caribbean (UNU/BIOLAC) in Caracas, Venezuela.

Numerous cooperating institutions throughout the world collaborated with the UNU and are cited in the context of their specific roles within the University's programme areas.

The University's work: Issues and challenges

Peace and governance

New conflicts continue to emerge in the post-Cold War era calling into question past concepts of peace and security. Democratization, curbing corruption, enhancing women's participation and securing human rights require a better understanding of the ethical, economic and political underpinnings of global governance.

This UNU programme area explores several issues of international concern. There are three specific programmes:

Peace and security

Traditional concepts of international security require rethinking, as military forces are increasingly unable to deal with new state and societal threats. However, new concepts robust enough to meet modern challenges have not yet been conceived. This programme studies the post-Cold War international system, attempting to define new concepts of security and the United Nations' role within them. Activities are carried out by the Academic Division at UNU Headquarters.

Democracy and human rights

This programme focuses on fundamental changes occurring in the perception of democracy's role, with special attention paid to the correlation between democracy and human rights. The Academic Division is responsible for this programme's activities.

Governance, multilateralism and leadership

Today's geopolitical relations and globalization trends have reached such a degree of complexity that many countries find they lack the capability to fulfil their desired role in the multilateral arena. This programme explores the diplomatic challenges of the 21st century, analysing evolving training and development requirements of international diplomats, managers and civil servants. Activities are being carried out at the UNU/ILA in Jordan, the UNU/IAS in Japan and the UNU's Programme on Governance in Spain.

Peace and security

The UNU's Peace and Security projects study the post-Cold War system, attempting to define new concepts of security and the United Nations' role within them.

The "Foundations of Peace Project" provides policy recommendations and guidelines for future international peace operations. Researchers working on the project examine the impact of development, humanitarian actions and human rights on peace processes in selected UN trouble spots. During 1996, they finished a study of the UN's peace-keeping operation in Haiti. The results describe this UN field operation in detail and draw lessons from how it was conducted. The results were published as *Haiti Held Hostage: International Responses to the Quest for Nationhood 1986–1996*.

The UNU began work on a multi-year project called "The United Nations System in the 21st Century" (UN21 Project). Researchers working on this project analyse the role of international organizations, searching for next century's best UN model. The project is divided into five actor-specific research groups: states, non-governmental organizations, market forces, regional institutions, and international organizations. Each year, research groups focus on a specific theme; in 1996 it was peace and security.

The UNU is also trying to find solutions to economic, political and social causes of humanitarian emergencies which affect security. The increasing number of humanitarian emergencies worldwide cannot be attributed solely to a growing occurrence of natural disasters. Rather, as yet unexplained vulnerability and ethnic-political instability are a more likely cause. The UNU/WIDER-coordinated project "The Wave of Emergencies of the Last Decade: Causes, Extent, Predictability and Response," published three papers in 1996 addressing this problem: *Development, Aid and*



Conflict: the Case of Rwanda; Defining Humanitarian Emergencies: What, When and How Much; and The Economics of Humanitarian Emergencies.

Democracy and human rights

The UNU's Democracy and Human Rights projects study two topics: changes in the perception of democracy and increasingly important roles of NGOs and women. All projects in this programme are coordinated by the Academic Division at UNU Headquarters.

"The Changing Nature of Democracy: Old and New Democracies" project addresses democracy's diversity, re-evaluates processes of democratization and explores

democratic institutional roles in promoting peace, human rights and development. The project consists of an international conference, three regional workshops and a concluding symposium. The international conference was held at the UNU Headquarters in July. Scholars examined several interpretations of democracy to establish a conceptual and analytical framework. Research groups will now evaluate democracy at two locations in Asia and Europe.

The "Emerging Dimensions of Democracy: Globalization and New Leadership" project has two themes: non-governmental organizations and women. The NGO theme is divided into two sub-projects: a "Research Agenda for NGOs" and the "1998 World

Box 1. *Ethnicity and Power in the Contemporary World*

UNU researchers found six approaches which they believe will assist in the management of conflicts rooted in issues of authority and governance. They are:

1. decentralize state power through territorial federalism;
2. encourage multi-ethnic participation at federal levels, as a means of minimizing ethnic conflicts rooted in alienation or rejection of central authority by non-dominant ethnic segments;
3. stimulate inter-ethnic political cooperation with special measures and inducements;
4. reduce inequality and ethno-social disparities;
5. strengthen local self-government and community organizations involved in managing ethnicity issues at grass-roots level;
6. allow peoples to preserve and develop their own culture.

(Ethnicity and Power in the Contemporary World was edited by Kumar Rupesinghe and Valery A. Tishkov, and was published by UNU Press in 1996.)

NGO Conference.” The purpose of these projects is to examine NGOs’ increasingly important role in global civil society and foster new NGO-UN relationships.

At the NGO research agenda meeting held in September, participants exchanged views on the role, function and impact of NGOs for the preparation of a UNU research agenda. At the preparatory meeting for the 1998 World NGO Conference, also held in September, a number of ideas surfaced about how the Conference should be organized. And at the international symposium titled “the United Nations and Civil Society,” participants listened as panellists exchanged views on three main topics: the changing role of NGOs and civil society organizations working with the UN, NGO regional and global approach experiences, and visions of 21st century NGO-UN relationships.

The UNU also held a Public Forum on “Women and Mainstreaming: Towards a Research Agenda” at the UN’s New York Headquarters in March, as part of the project’s theme on women. The purpose of the Forum was to identify gender-mainstreaming research agendas for the University through a discussion by scholars and practitioners. Three research topics were identified: women and political decision-making, women’s contribution to economic growth, and the impact of education on adult women.

As a follow-up to the Forum, an International Symposium on Women and Mainstreaming was held at the UNU’s Headquarters in June. The Symposium had two purposes: one was to have panellists discuss in

depth how social policies affect gender, the other was to facilitate an information exchange between the panellists and the audience.

The Symposium was one of the first of its kind in Japan. Many Japanese politicians, university professors, UN delegates, and media were able to attend and exchange ideas. Symposia such as this are intended to encourage more people to make use of the UNU’s worldwide gender research and dissemination network.

In another UNU project on “Human Rights After the Cold War,” a steering committee selected researchers who will compare the foreign human-rights policies of several countries. It also discussed the project’s structure and study method at its first meeting in October.

Governance, multilateralism and leadership

The UNU is helping Member States find collective problem-solving approaches to major 21st century international diplomacy issues. In April, the UNU/IAS organized a workshop to prepare for future “training activities” within its “Multilateral Diplomacy” project. The workshop was divided into two parts: a lecture series and a two-day environmental simulation exercise. Government officials, diplomats and eminent scholars participated. As a result of the workshop, it was decided that future activities will focus on enhancing developing country multilateral negotiation capacities.

In November, UNU/IAS organized its Multilateral Diplomacy “pilot workshop,” focusing on the concepts and ideas for making open-rule based diplomatic negotiations more effective as problem-solving instruments for transnational issues. Capacity building

for developing country multilateral negotiators was also discussed. A two-day environmental simulation exercise followed the workshop’s lectures and seminars. Participants included young diplomats, government officials and eminent scholars from 20 countries.

Box 2. UN Volunteers and the United Nations system

In 1996, UNU published *Volunteers Against Conflict*, a book which brings together the experiences of individual UN volunteer specialists who served in a wide range of recent UN missions. This “ground’s eye view” of some of the most ambitious and important UN initiatives is a collection of firsthand accounts written by volunteers themselves.

Three problems faced by the United Nations system in the first post-Cold War decade can be found in these first-person accounts. Varying from country to country and conflict to conflict, the problems have three things in common. The first is tension between humanitarian activities and the political-military side of the United Nations. The second is between the grass roots orientation of assistance and the headquarters orientation of the UN bureaucracy. The third is between the UN system that frequently takes the lead in complex emergencies and those outside of it with skills and energy to contribute.

(*Volunteers Against Conflict* was written by United Nations Volunteers and published by UNU Press in 1996.)

Development

Increasing globalization and liberalization—and the countering forces of regionalism and protectionism—have a profound impact on the prospects for economic and social development. UNU research is aimed at shedding new light on these trends as well as the economic, environmental and human aspects of development.

Activities are organized into five programmes:

Globalization, liberalization, and development

Globalization and liberalization are having a significant impact on developing and developed countries. This programme analyses the opportunities, impacts and difficulties of these trends. Activities are being carried out at UNU/WIDER in Helsinki.

Distribution, development and the economics of transition

The academic community and policy-makers of developing and former socialist countries are targeted in this programme. It examines new models for providing public and merit goods in developing economies, and the impacts of land distribution and reform in developing countries. Work in this programme is being carried out by UNU/WIDER.

The role of technology policy in industrialization and industrial competitiveness

This programme explores the importance of technology in industrialization and its effects on a country's economic competitiveness. Activities in this area are conducted at UNU/INTECH in Maastricht.

Technological change, and economic and social exclusion

The implications of technological change on income distribution are being studied in this programme, with a focus on potential areas of economic and social exclusion. Research is being conducted at UNU/INTECH.

Mega-cities and urban development

This programme studies major issues confronting mega-cities, focusing on demographic trends, the sources and consequences of economic development and social transformation, and the kind of management required to enhance the quality of life in urban centres. UNU's work in this area is being carried out at UNU/IAS in Tokyo.

Globalization, liberalization, and development

The UNU's development projects help find solutions to problems caused by globalization and liberalization. Researchers studying the effects of global restructuring on female workers concluded that marketization has been detrimental to the productive and reproductive lives of most working women in transition economies. Their study shows that during the period from 1989–1994 (the first transition phase in most countries examined), market reforms adversely affected working women for two reasons: the neo-liberal policy regime (which places the burden of adjustment on labour and women), and a gender ideology that favours men. The end of central planning, full employment policies, and the privatization of social services have caused women's position to deteriorate in labour markets. This makes it more difficult for them to compete with men. Attention to training programmes, access to credit, enforcement of national legislation, and implementation of international conventions are necessary to properly compensate women's role in production and reproduction.

The project "Alternative Approaches to the Greening of Economics" was completed in August. The project leaders edited the project's final manuscript titled *People's Economy, People's Ecology*, and submitted it to Oxford University Press for review.

UNU/WIDER and UNESCO sponsored a conference on international development in Helsinki. The papers presented are available as an unofficial UNESCO monograph and will be used for further consideration in setting-up a Chair in Global Economics and an international network of academic institutions teaching global economics.

The University of Indonesia's Professor Anwar Nasution completed his term as UNU/WIDER Sasakawa Chair in Development Policy. He wrote reports describing and evaluating Indonesia's economic adjustment process towards a more market-based economic management system. His study "the Banking System and Monetary Aggregates Following the Financial Sector Reforms: Lessons from Indonesia," was published as part of UNU/WIDER's Research for Action series. And his paper on "Managing Capital Inflows into Indonesia, 1980–1993" will be published within a larger, forthcoming UNU/WIDER publication.

Distribution, development and the economics of transition

The UNU's projects in this programme aim to provide solutions to pressing development problems by building on research completed by the UNU/WIDER in previous biennia.

UNU/WIDER researchers analysing OECD foreign aid concluded that not all development assistance in the past was as effective as it could have been. Without supporting macro-economic stabilization and sector policies, foreign aid either enhanced market distortions or contributed to unequal wealth distribution (often leading to corruption, social unrest and environmental degradation). Well-intended projects often become white elephants, benefiting donor countries and international experts more than the recipient country.

Two important policy recommendations emerged from this research. First, aid programmes must be integrated with trade and investment expansion or through economic and social infrastructure development. Second, a flexible approach must be adopted which will meet a country's needs.

Transition countries started reforms under different initial conditions and reform strategies. UNU/WIDER's research found that reform results and consequences have also been uneven. The faster and more radical reformers have been able to stabilize their economies and social problems more successfully than those pursuing gradual reform measures. The social, cultural, psychological and demographic transition in most of the Central European and in Baltic countries has passed

more smoothly than in others. However, the Institute found that the successful conversion of all transition countries depends on several common internal and external factors.

The role of technology policy in industrialization and industrial competitiveness

UNU/INTECH's development projects formulate technology policy options which help developing areas industrialize, expand manufacturing and augment R&D with external resources.

The "Foreign Direct Investment, Technology Transfer and Export-orientation in Developing Countries: Empirical Studies of Their Determinants" project is conducting a detailed analysis of factors which improve a country's attractiveness as a recipient of export-oriented investment from American and Japanese multinational corporations. The study is expanding an earlier UNU/INTECH work which was published in the *Journal of International Business Studies*. A preliminary examination of data (which has already been reported in a discussion paper) suggests that determinants of affiliate exports to home countries and those to third countries are different.

A subsection of this project analysed overseas American multinational investment in research and development to understand factors contributing to a company's decision on where to invest. The analysis suggests multinationals prefer to locate their R&D activities in countries able to offer them large markets, technological resources and sufficient infrastructure.

Box 3. *In Pursuit of Science and Technology in Sub-Saharan Africa — The impacts of structural adjustment programmes*

The objective of this UNU undertaking was to determine the effects of IMF/World Bank Structural Adjustment Programmes on science and technology in Sub-Saharan African countries. Five conclusions are identified in the book:

Under Structural Adjustment Programmes, domestic expenditures on advancing science and technology fluctuate from year to year, with a slight upward trend;

Total expenditures, both local and foreign, are likely to rise at a considerably higher rate;

Within the total, different areas of endeavour have considerably varying fortunes;

Which areas prosper, and which do not, are increasingly determined by foreigners; and

The choice of areas pursued is currently based upon the benefits of such a choice for developed countries, to the detriment of developing countries.

(In Pursuit of Science and Technology in Sub-Saharan Africa — The impacts of structural adjustment programmes was written by J.L. Enos and published by Routledge at the end of 1995.)

The strength of a country's intellectual property regime did not appear to be a significant selection criteria, especially in developing countries. This analysis was published in April's issue of *World Development*.

Another subsection of the project created the Global Technology and Economic Development (GLAB-TED) database. GLAB-TED contains data on several indicators of technological and economic development for more than 70 countries. It includes data on foreign direct investment, stocks, and the economic activities of the World Bank, International Monetary Fund (IMF), (United Nations Conference on Trade and Development (UNCTAD), the US Department of Commerce, and Japan's Ministry of International Trade and Industry.

The "Foreign Direct Investments, Technology Transfer and Competitiveness of Asian Developing Countries" project is analysing US, Japanese and Korean foreign direct investment in Asia. They are also assessing other methods of technology acquisition, which build local technological and export capabilities in developing countries. The Asian Development Bank has agreed, in principle, to support the project.

Two tasks were accomplished in 1996: countries were selected and collaborating institutions within these countries were identified. Actual country studies will begin once funding is received.

And the "Philippines Vocational Training Study" project is preparing an evaluation of vocational training in the Philippines, with recommendations on how to improve efficiency. The report will be given to the Philippine Government, UNIDO and the World Bank.

Technological change, and economic and social exclusion

UNU/INTECH's research examines opportunities and problems technology creates for developing countries. The "Technological Change and Economic and Social Exclusion" project held a workshop on why certain groups are excluded from the benefits of technological change. Representatives from UNCTAD, UNIDO, and UNCSTD attended the October event which took place at a location near Maastricht. The main themes addressed were:

1. the determinants of access and effective use of information technology;
2. technology and exclusion—the gender dimension;
3. threats of exclusion and opportunities for development—a set of country studies;
4. technology as an instrument of inclusion.

The "Monitoring the Impact of New Technologies on Women's Industrial Work in Asia" project organized a country workshop in January to teach negotiation skills to NGOs from participating countries. Then in March, it held a workshop in Bangkok which brought NGOs and governmental representatives together to formulate a gender-focused human resource development plan. Researchers are trying to find political, economic and cultural factors which affect technology's impact on women. The project covers eight Asian countries: Bangladesh, China, India, Indonesia, Republic of Korea, Malaysia, Sri Lanka and Viet Nam.

The "Teleworking: Implications for Employment and Trade in Developing Countries: Malaysia and India" project is exploring how poorer countries (or disadvantaged groups within a country) can benefit from the so-called telematic revolution. The project is highlighting factors that could, in the absence of policy interventions, exclude countries from the potential benefits of telematic-related trade. A workshop with India's telecommunication sector was held in Bombay in June. The workshop explored ways of collecting data and defined areas for investigation. The National Centre of Software Technology in Bombay assisted UNU in establishing links with leading organizations in India and Malaysia that are dealing with telematic-related trade and employment.

Mega-cities and urban development

The UNU/IAS coordinated Mega-cities and Urban Development programme searches for solutions to pressing urban problems. Its project on "Sustainable Cities" has three urban environment objectives: document innovative policy approaches, highlight important indicators, and explore ways to increase eco-infrastructure. In June, researchers organized a panel discussion titled "Globalization and the Urban Future" as part of its contribution to the Habitat II conference in Istanbul, Turkey. The event was divided into four parts: opening remarks given by Rector Heitor Gurgulino de Souza, a new publications launch, the panel discussion, and a question and answer session. Two UNU publications were launched during the discussion, *Mega-cities Growth and the Future* and *Emerging World Cities in Pacific Asia*. These two volumes represent the culmination of six years of research by the programme.

The project on "the Comparative Study of World Cities" tries to solve pressing urban problems by

defining the concept and criteria for a world city; documenting the current trend towards new world cities; and examining the correlation between information technology, urban development and economic change.

UNU/IAS' "Panel on the World Economic Outlook" project and Project LINK (an applied economics initiative coordinated by Prof. Lawrence R. Klein of the University of Pennsylvania) organized a teleconference

meeting to discuss APEC and the World Economy in November. Panellists discussed the 1994 Bogor Declaration and the effects of trade liberalization in four areas: expanding Asian trade, South Asian integration, intellectual property, and closer economic integration. LINK and UNU/IAS also prepared a list of recommendations for APEC's Summit meeting.

Box 4. *The Mega-city in Latin America*

Several conclusions were obtained from UNU's study of mega-cities in Latin America. First, the largest cities in the region differ greatly in their future prospects: it is far easier to be optimistic in Buenos Aires than in Lima. Second, whether urban problems improve or deteriorate has little to do with size city size and a lot to do with larger economic and social trends. Increasingly, these trends are determined not just by local decisions but by decisions made outside the region. Third, Latin America's mega-cities are not going to grow to unmanageable portions because their growth rates have generally slowed. Fourth, management is a critical issue for the future but it is difficult to know whether the quality of management will improve or deteriorate through time.

(The Mega-city in Latin America was edited by Alan Gilbert and published by UNU Press in 1996.)

Environment

Moving towards sustainable development requires a more comprehensive understanding of global environmental change and its associated driving forces such as population and urbanization, consumption and technological development. UNU's environment programme studies these driving forces, focusing on integrations between human activities and the natural environment.

Activities fall under four programmes:

Sustainable resource management

This programme studies sustainable uses of land and water resources, assessing the vulnerability of ecosystems to human-induced and natural environmental changes.

Eco-restructuring for sustainable development

Sustainable development requires a major transformation of global consumption patterns. This programme is generating new knowledge on the environment, technology, engineering, economics and energy use, all of which are essential for managing such a transformation. Activities are based at the UNU's Headquarters and are implemented in close cooperation with UNU/WIDER in Finland and UNU/IAS in Japan.

Natural resources in Africa

The UNU's Institute for Natural Resources in Africa (UNU/INRA) addresses the continent's urgent needs for human resource development and institutional capacity building, with the goal of achieving sustainable use of natural resources. UNU/INRA's headquarters is on the University of Ghana's Legon campus in Accra, Ghana, with a Mineral Resources Unit (MRU) at the University of Zambia's School of Mines in Lusaka, Zambia.

Water, environment and health

The UNU's International Network on Water, Environment and Health (UNU/INWEH) integrates international expertise into a programme of education, training, research and technology transfer on major issues that relate to water, environment and human health.

Sustainable resource management

During the year, researchers working on Sustainable Resource Management projects produced substantial amounts of literature on topics geared to reducing ecosystem vulnerability to human induced and natural

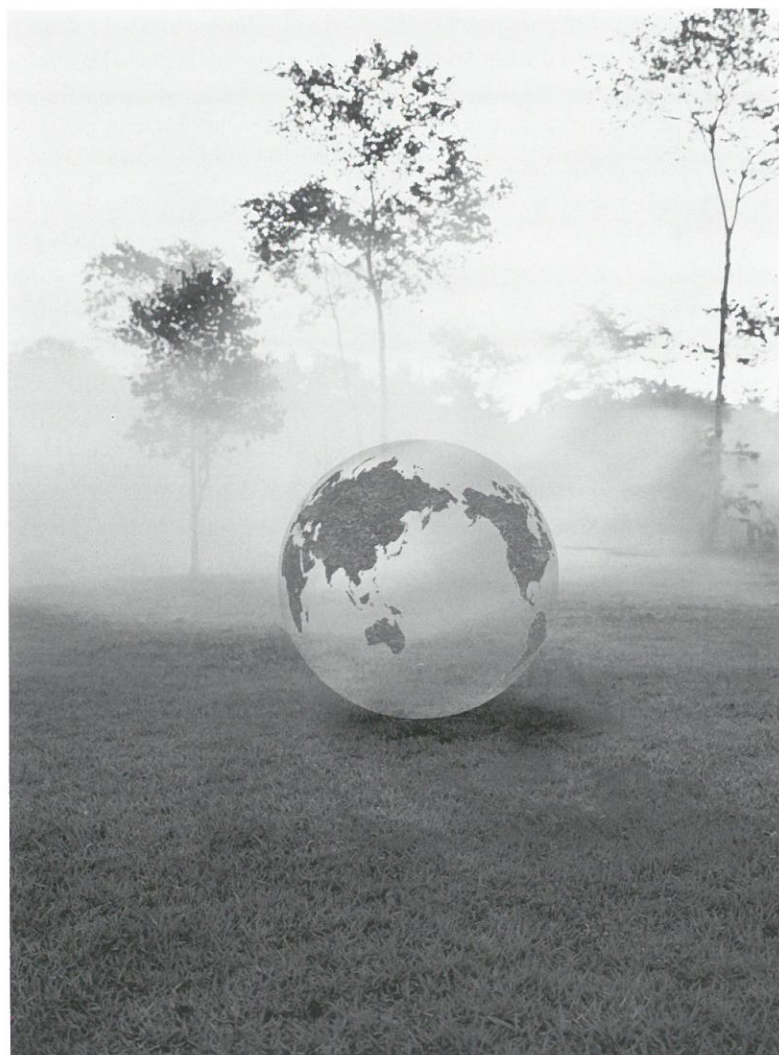
environmental changes. All of these projects are coordinated by the Academic Division at the UNU Headquarters.

The "Natural Disaster Risk Management" project is the UNU's response to the UN's International Decade for Natural Disaster Reduction. It helps solve global problems of human survival by improving disaster relief and control. There were several accomplishments this year. Researchers published *Geography of Vulnerability in Mega-cities*; organized three workshops: Disaster Vulnerability in Mega-cities, Urban Earthquake Risk Management Strategies for the Central Asian Republics, and Natural Hazards and Small Islands; and conducted training courses on Seismic and Cyclone Hazard Mitigation and Analysis of Geological Risks. They also continued to develop GLO-DISNET, an Internet-based site with information on hazardous risk management strategies. This site was moved from Stanford University to the UNU's Headquarters for the opening of the Global Environment Information Centre.

Work continued on the "Environmental Monitoring and Analysis in the East Asian Region: Technology Transfer and Environmental Governance" project. Researchers are trying to accomplish three goals: generate regional data, adopt a "level up" capacity-building approach in participating laboratories, and conduct compliance research on the region's environmental accords. This project also had several major accomplishments during the year. They intensively trained 20 scientists, created a hazardous chemical database, developed a UNU project manual for analytical methodologies, and produced videotapes and CD-ROMs on UNU project training. Scientists from China, Indonesia, Japan, Republic of Korea, Malaysia, Singapore, Thailand and Viet Nam are participating.

Researchers continued work on the "Hydropolitics and Eco-political Decision-making" project. They are trying to find solutions to water conflicts in the Middle East, Asia, and Central Eurasia. They published *Caspian, Aral and Dead Seas: Central Eurasian Water Crisis* and began formulating models for governance and conflict resolution around international water basins.

The UNU's long-standing "Mountain Ecology and Sustainable Development" project continued studying sustainable development issues in the world's mountain



and highland areas. During the year, researchers completed a research manuscript titled "Floods in Bangladesh: Processes and Impacts," produced four issues of the leading journal *Mountain Research and Development*, and continued work on a forthcoming publication titled the *Impact of Development on Socio-Economic Conditions and Environment in Minority Areas of North-West Yunnan, China*. Researchers working on this project also participated in a Food and Agriculture Organization of the United Nations (FAO) coordinated mountain development group.

The "People, Land Management and Environmental Change" (PLEC) project, which started in 1992, continued horticultural research at five of its field research clusters. These clusters work around a common theme: preserving agricultural diversity by implementing indigenous practices. Clusters are located

in West Africa, East Africa, Montane Mainland South-East Asia, Papua New Guinea, and Amazonia. A sixth cluster in Meso-America will be added in 1997.

During the year, two issues of the newsletter *PLEC News and Views* were produced, and two reports were published: *Population, Land Management and Environmental Change*, and *Environment, Biodiversity, and Agricultural Change in West Africa*. The project's long-term goal is to create local biodiversity awareness capacity in managed ecosystems. The project is implemented in close cooperation with the United Nations Environment Programme (UNEP).

The "South-South Cooperation Programme on Environmentally Sound Socio-economic Development in the Humid Tropics" project continued to strengthen the Latin American, African, and Asian Biosphere Reserves Network—for the benefit of local and

indigenous populations. Researchers had three major accomplishments in 1996: they organized a South-South Cooperation meeting in Brazil; issued the *South-South Perspectives* newsletter; and published four working papers on biosphere reserves in Comoros, India, and Malaysia. The project is implemented jointly with UNESCO.

The “Freshwater Resources in Arid Lands” project prepared a draft report based on the UNU’s fifth Global Environmental Forum titled “Freshwater Resources in Arid Lands” held at UNU Headquarters in June.

Eco-restructuring for sustainable development

The UNU’s Eco-restructuring for Sustainable Development projects are helping solve pressing environmental problems by generating alternate growth options. The UNU/IAS is carrying out five of these projects and the UNU/INTECH three.

The UNU/IAS-coordinated “Trade, Industrialization and Environment” project explores linkages between industrial development and environmental protection. During the year, researchers completed data collection on a survey of environmental/economic trends in industrialized countries (with special emphasis on natural consumption patterns). They released a status report in August. The report contains a comprehensive set of input-output tables recording the flow of industrial goods between surveyed countries over the last 20 years.

Specific linkages between trade, industrialization and environmental degradation are now being analysed. A research team from the International University of Japan and the Japan Centre for Economic Research assisted the survey.

The “Environmental Resource Accounting” project tries to find solutions to flaws in our economic accounting system that do not record the environment as an asset. To help, researchers launched the “Network of UNU/IAS for the Development of Environmental Accounting Studies” (NUIDEAS). NUIDEAS will incorporate country-level experiences into a green economic accounting system.

The UNU/IAS, Keio University and Japan’s Economic Planning Agency organized the “International Symposium on Integrated Environmental and Economic Accounting in Theory and Practice” in March. The symposium explored the theoretical and practical aspects of environmental accounting and the need to integrate environmental concerns in both national and global economic decision-making.

The “Sustainable Global Future: Scenario Building for the 21st Century” project’s continuing objective is to develop strategies and policy alternatives for restructuring economic theory towards sustainable concepts. To do this, researchers helped organize two conferences. The first was the “Global Modelling Forum for Sustainable Development” in the Netherlands, a joint UNU/IAS, UNEP, and UN

Box 5. Population, Land Management, and Environmental Change

Current development policy initiatives are often based on the assumption that women’s relationship with the environment is special and, therefore, women are particularly interested in and capable of protecting it. UNU’s research has determined, however, that there is no evidence that men farmers are any less aware of environmental problems than women. Gender studies of environmental perception in Thailand, Barbados, and China show that (when variations in age and education are held constant) problems such as soil erosion and deforestation are perceived in similar ways by men and women. Expecting women farmers to be the main managers of the environment not only overloads women with the responsibility of environmental protection, but it also belittles the role of men. At the same time conflating women and the environment provides an excuse for aid agencies to reduce separate funding. There needs to be a better understanding of the flexibility and complexity of gender, of spatial variations in both environment and gender roles and of the time, labour, and financial pressures on poor households—predominantly female-headed households—which force farmers to ignore conservation requirements.

(*Population Land Management, and Environmental Change* was edited by Juha I. Uitto and Akiko Ono, and published by UNU Press in 1996.)



Namibia's President, Dr. Sam Nujoma, speaking at a seminar on "Breakthroughs in Scientific Applications: The Impact for African Development – The Case of Namibia," during his visit to the UNU Headquarters on 29 October.

Department for Policy Coordination and Sustainable Development initiative held in May. This was the first in a series of global environmental modelling activities related to the 1997 Special General Assembly Session on the Five-Year Review of UNCED. The second conference was the "IIASA Days in Japan Symposium: Asia Towards the 21st Century." Global interdependence between energy, environment, technological innovation, and sustainable growth was discussed.

The Zero Emissions Research Initiative (UNU/ZERI) held its second World Congress on Zero Emissions in Tennessee, United States. The Congress was co-sponsored by the UNU and Oak Ridge National Laboratories. Funding for the event was provided by the US Department of Energy, along with the support of several Japanese Government ministries and the European Commission.

Four substantial zero-emissions commitments were obtained at the Congress. First, Dr. Sam Nujoma, President of Namibia, pledged one million Namibian

dollars (US\$250,000) to implement zero-emissions projects adjacent to a brewery in Tsumeb. Second, Abdul Rahman bin Ramli, President of Malaysia's Golden Hope, the largest palm oil plantation in the world, will send his biologists to Latvia's world-renowned Wood Chemistry Research Institute for zero-emissions training. Upon their return to Malaysia, they will help design a zero-emissions palm oil processing facility which will be constructed near Kuala Lumpur. Third, UNDP will establish 10 ZERI chairs at 10 leading zero-emissions universities worldwide. Fourth, Japan's academic institutions and the UNU will jointly survey Japanese companies to determine their interest in zero-emissions concepts.

The UNU/ZERI project also organized a series of 20-hour courses, introducing UNU/ZERI re-engineering industrial manufacturing concepts and methodologies to participants in Brazil, China, Columbia, Indonesia and Japan.

Zero-emissions initiatives aim to invent waste-free manufacturing processes. Also, when industries are

clustered, the waste from one can become the input for another.

Another UNU project, "Post-Market Approaches to Ecological Economic Development," studies households to find solutions to pressing ecological problems. Households make decisions about fertility and consumption—the key to structural changes affecting population growth and lifestyle. To help, researchers created a conceptual and analytical household framework and tested it in Indonesia. A manuscript of the results was completed, creating a new method for analysing different categories of households in different countries. Economies are divided into three categories: rich, industrializing and "deep south." Case studies will be prepared for each country, tracing households through a typical life cycle. For example, researchers will study consumption, education, work practices, accumulation of wealth and inheritance practices.

Work on the UNU/INTECH-coordinated "Transfer of Environmentally Sound Technology in Industrial Transformation in Eastern Europe, A Case Study: Poland" project continued. Researchers are finding solutions to technological learning barriers in post-communist countries. During the year, work progressed on a book titled *Green Post-Communism? Poland's Assimilation of Environmental Aid*, evaluating Poland's ability to assimilate environmentally sound technology transfers from Western aid projects.

Researchers also prepared three discussion papers and one journal article: "Environmentally Sound Technology: Is Poland Overcoming Soviet-Type Learning Barriers?," "Environmentally Sound Technologies from the West—Asymmetry, Regimes and Polish Policy Implementation," and "National Systems of Innovation: Karl W. Deutsch and Political Science Approaches to Nation-Level Learning (The Case of Post-Soviet Type System)." And "Is Poland Overcoming Barriers to Environmentally Sound Technological Learning?" was submitted to the journal

Research Policy for publication.

Researchers finished their study on "Environmental Degradation in Zaire: The Potential Role of TEST (Transfer of Environmentally Sound Technology) in the Amelioration of the Situation," and are also writing their results into a book. The first two chapters of this yet untitled publication were completed in August. They examine the state of Zaire's threatened environmental sites and review relevant institutional actors involved in the system of land-use and territory development. Their main conclusion is that the socio-economic and environmental crisis in Zaire reflects a malfunctioning of the country's technological capability building process, which from colonization to now, is being implemented through transfer models with objectives in conflict to the real needs of Zaire's people.

Work continued on Phase I of the "Environmental Regulation, Globalization of Production and Technological Change" project. This phase involves conducting an analysis of Europe's pollution intensive industries. The objective is to provide an overview of the competitive position of these industries over the past two decades and present any effects environmental regulation may have had. UNU/INTECH and the University of East Anglia's School of Development Studies are working together on the project.

Natural resources in Africa

UNU's Natural Resources in Africa programme tries to achieve sustainable use of the continent's natural resources. During the year, work progressed on several project proposals, including the completion of a feasibility study for developing a Reference Pedological Facility, Soil, Plant and Water Analysis Laboratory, one of three key research and training facilities needed for the Institute's activities. Limited progress was made towards completing the other two.

Work continued on finalizing 43 field surveys commissioned in 1992. Nineteen were completed and



UNU project on Hydropolitics and Eco-political Decision-making focuses on international rivers, where competition for water for urban uses, energy production, irrigation and navigation may lead to conflict.

Photo by J. I. Uitto, UNU

18 more are being evaluated. Most completed surveys are either being edited or printed. Some surveys were extended in June to cover four additional countries.

Progress was also made in developing a long-term work programme for UNU/INRA's Mineral Resources Unit located at the University of Zambia. A team of experts will review and evaluate the implementation plan in 1997.

Water, environment and health

The UNU/INWEH integrates international expertise into a programme solving pressing water-related problems. It focused on four priorities since its October

establishment: setting up a functioning headquarters (including financial and administrative procedures and core staff); developing the Network's long-term strategic plan; setting up UNU/INWEH units in developing countries; and implementing projects.

Several initial project opportunities were identified and are now being assessed for their suitability to UNU/INWEH goals. Possible projects include: the sustainable management of Lakes Malawi and Victoria in Africa; freshwater and near-shore marine resource management in Indonesia; and upgrading water-supply, sewage-treatment and water-management capacities in Mexico.

Science and technology

The development of science and technology is vital in order to sustain the increasing number of people and human activities on the globe. Science and technology hold answers to questions of how to make human activities more efficient, friendlier to the environment, and more conducive to happiness. The UNU's activities in this area have two facets: the study of the diffusion of scientific and technological innovations, and basic and applied scientific research.

Activities fall under six programmes:

National systems of innovation, science and technology institutions

This programme focuses on the institutional framework of science and technology in developing countries, and in particular, its relationship to innovation in production and service sectors. The programme's activity is centred at the UNU/INTECH in Maastricht.

Software technology for developing countries

This programme concentrates on strengthening developing countries' knowledge of advanced software technology, by providing postgraduate software engineering and computer science education. Work is being carried out by UNU/IIST in Macau, the first international science institute devoted to the software technology needs of developing countries.

Applications of biotechnology for development

A regionally focused set of activities aimed at building capacities in developing countries which harness the potential of biotechnology for human and animal vaccine development, plant genetic engineering, and industrial micro-organisms. Activities under this programme are carried out by the UNU Programme for Biotechnology in Latin America and the Caribbean (UNU/BIOLAC).

Microprocessors and informatics

Rapidly changing technology threatens to "lock out" the developing world from the benefits of the micro-electronics revolution. The focus of this programme is on informatics—the way in which information is produced, processed and utilized. Postgraduate training in microprocessor technology is provided through regional training workshops around the world. These training efforts are largely coordinated at the International Centre for Theoretical Physics in Trieste, Italy.

Food and nutrition

The persistence of hunger casts an appalling moral shadow on our age. Work on this programme comprises a long-standing commitment by UNU to address major nutrition concerns in developing countries and to confront national food, nutrition and health problems. Programmes are being undertaken in collaboration with WHO (World Health Organization), UNICEF (United Nations Children's Fund) and FAO.

Science and technology

Science and technology policy is not, and can not be, the subject of a value-free inquiry. This programme focuses on the effects of science and technology on society, exploring applications which serve human needs.

National systems of innovation, science and technology institutions

The UNU's projects in this programme area provide information on how countries can improve their production and service sectors, helping reduce North-South technological inequality problems. All projects are being coordinated by UNU/INTECH.

Researchers began work on "the Political Basis for Industrial Technological Policy in Open Developing Economies" project. The project surveys developing country industrial technological policies. Their first step was learning how to operate EndNote2 software. Next they defined the project's search strategy and tested categories for storing the material they are collecting. They began their search with Brazil and India, and have already prepared two papers: a summary of India's economic liberalization process and changes in Brazil's trade policy.

In April, UNU/INTECH received confirmation that the Inter-American Development Bank will finance its "MERCOSUR Countries Industrial Innovation System in a Rapidly Changing Global Context" project for up to US\$150,000. The project will analyse MERCOSUR, trying to identify future directions for its industrial technology policies.

The "Evolution of High Technology Research Institutes and New Enterprise Organizations in China" project continued examining the transformation of

Chinese state-sponsored industrial technology research institutions, using the machinery sector as a sample industry. Researchers accomplished three major tasks during the year. First, they completed an empirical investigation of the project. Second, they finished a survey of literature contained in the Ministry of Machinery Industry's data bank on research and development institute statistics. Third, they analysed case materials and statistical data for the preparation of a research paper titled *The Development of the Machinery Industry in China Prior to Market Reforms*. This project continues previous UNU/INTECH research done on the "Politics of Technology Policy Institutions in China."

Researchers working on "the Transformation of National Innovation Systems in Relation to Economic Reform: A Comparative Analysis of India and China" project completed a conceptual framework, surveyed both national systems, and began fund-raising. They are trying to identify problems developing countries like China and India face when undergoing economic transitions toward market liberalization. A UNU/

INTECH Discussion Paper resulted from this work. India's National Council of Applied Economic Research is assisting on the project.

UNU/INTECH held its second Conference on Productivity, Technical Change and National Innovation Systems in Latin America in August in Marbella, Chile. The conference was organized jointly with the Economic Commission for Latin America and the Caribbean (ECLAC). Papers were presented by members of UNU/INTECH and ECLAC staff to more than 70 participants. Topics included the impact of micro and macro interactions on industrial development, the diffusion of flexible automation, the technological performance of the Latin American region, and the role and politics of technology transfer. The papers are being prepared for publication in English and Spanish.

The project has two major objectives: to analyse and explore conditions and processes that lead to successful technological change and industrialization, and to compare current research on these issues.

Box 6. *Politics of Technology in Latin America*

The main conclusion from this UNU study is that governments in Latin American countries have shown strong capacity in support of innovation only through a few of their various agencies and in very specific industries. Beyond these sectoral experiences, the situation is not positive. Most of what has been achieved in technology innovation is modest and was brought in by industrialization policies. This contrasts with the grand objectives of technology policy which were only partially attained. Two interconnected aspects of state-society relations help explain this result. One is the deficient or even conflictive relationship between state agencies, industrialists and engineers/researchers. The other is the political regime. In Latin America, authoritarianism has not been an asset but a liability for the implementation of realistic technology policies. Restoration of constitutional order, increased accountability and transparency create a more conducive environment for such policies. Focusing on the state apparatus itself, administrative capacity and corporate culture were found to influence effectiveness in technology policy. Institutional weakness of technology policy agencies was tackled with centralization, but launched in a period of restrictions in public spending. It is not clear if this was an efficient solution. Technology self-reliance, a central focus of the technology bureaucracy's corporate culture, became the main goal of policies, such as those aiming at the development of local production capabilities in electronics and informatics. Their internal inconsistencies, the technology agencies' inability to respond quickly to changes in technology and society, and eroding domestic support, explain their eventual abandonment.

The present Latin American experience suggests that when there is no serious intervention in favour of technological change, the economy tends to get stuck in traditional short-run patterns of comparative advantage.

(*Politics of Technology in Latin America* was edited by Maria Inês Bastos and Charles Cooper, and published by Routledge at the end of 1995.)

Software technology for developing countries

UNU's software technology programme strengthens developing countries' knowledge of advanced software, reducing their dependency on innovations from industrial countries. UNU/IIST is carrying out all the projects.

The "Design Techniques for Real-time, Reactive, and Hybrid Systems" project studies formal design of safety critical real-time, reactive and hybrid systems. It also develops and applies Duration Calculus (DC), a field in which UNU/IIST has become an acknowledged leader. During 1996, studies on DC-based techniques achieved the following:

1. an adequate first order interval logic, which can express unbound liveness, fairness and notions of mathematical analysis;
2. semantics and verification of phase transition systems;
3. techniques to digitize real-time systems;
4. a formal notation to describe components and combinations of hybrid systems;
5. formal specification of hybrid system stability;
6. techniques to derive control programmes/automata from requirements;
7. real-time semantics of programming languages;
8. specification and verification techniques for real-time schedulers and programmes;
9. extensions of existing model checking and decision algorithms of DC; and
10. a proof assistant tool for interval logic.

The "Design Calculi and Research for Telecommunication Systems" (DESCARTES) project develops and teaches courses on telecommunications software. During the year, researchers conducted several six-hour courses in Romania, Turkey, Ukraine and the Philippines on formal software development techniques.

Work continued on the "Digital Multiplexed Radio Telephone System" project with the cooperation of the Philippine Government's Advanced Science and Technology Institute. Together, these institutions are writing software for a telephone system appropriate for developing countries with a small population dispersed across uneven terrain. During 1996, they developed specification protocols, architecture and a proof strategy. They also continued to work on documentation for the underlying network system.

The "Aviation Business and Air Traffic" project had two successful achievements in 1996. Researchers working on ATC'2000, a software system for training future air traffic controllers under virtual conditions, documented the system's mathematical descriptions and presented them at several international events and universities. They also presented a domain analysis paper at the 1996 Asia-Pacific Software Engineering Conference held in Seoul, Republic of Korea, in December.

Researchers working on ABC'2000, a software architecture for airline financial and decision support, developed narrative and formal models. Both of these achievements are important because Asian countries are experiencing a boom in air traffic and require an understanding of aviation software technology.

The "Railway Computing Systems" project completed its distributed train dispatch domain analysis for the Chinese Government, which will soon be implemented at 28 train dispatch centres along the Zhengzhou-Wuhan train line. UNU/IIST faculty also trained several fellows from China's Ministry of Railways in advanced software technology and normative software architecture. The project demonstrates that developing country railway software does not always have to come from developed countries.

The "Road Management System" project reverse-engineered the functions and behaviour of a toll way booth system for Indonesia's Toll Way System Company and are refining it to fit the electro-mechanics of Mitsubishi Electric Corporation's toll way system equipment. They also documented their reactive system analysis as part of their contribution to Asian mega-city traffic congestion problems.

The "Library Monitoring and Command Systems" project continued teaching and supervising University of Macau Master of Science students in advanced software technology, multi-media, and library communication issues.

The "Manufacturing Infrastructure" project investigates how information technology can be best applied to support manufacturing enterprises in developing countries, making them able to respond quickly and efficiently to changing market demands. During 1996, researchers studied the applicability of the new Open Distributed Processing Reference Mode as a computational structure for agile manufacturing. Four

UNU/IIST Research Reports were published on the project:

- "An Informal Domain Analysis for Manufacturing Enterprises;"
- "Towards the Formal Model for Manufacturing;"
- "Manufacturing Enterprise Simulation: A Business Game" and
- "Virtual Enterprise: On Refinement Towards an ODP Architecture."

The "Citizen and Visitor Information, Routing and Reservation" project continued investigating software technology appropriate for a multi-media information, computing and communications system that will allow people to find geographic, demographic, tourist, shopping, and travel information in the Macau area.

The "Multi-lingual Script System" project continued designing an interface for documents written in several different language scripts. Particular emphasis is being placed on preserving the natural reading and writing direction of each of the languages in the document. For example, in a document containing English and Mongolian text, the English text would appear the same as you are reading now, whereas the Mongolian text would be written vertically in left to right columns. The project's objective is to provide an interface that will allow libraries, universities, and government offices to input or browse through documentation in different language scripts at the same time.

In 1996, researchers created a font for traditional Mongolian script characters as part of their work on the Unicode/ISO standard. A draft proposal for standard encoding is being prepared for submission to the next International Unicode/ISO working group in Singapore in 1997.

The UNU/IIST's "Ministry of Finance Information Technology" project, together with Viet Nam's Ministry of Finance, produced seven documents on national financial information systems. They are:

- *Domain Analysis for a Budgetary System;*
- *External Debt Management;*
- *A Financial Information System: Domain Analysis, Narrative and Specification;*
- *Testing the Taxpayer;*
- *Tax System Security;*
- *Tax Policy;* and
- *Optimizing the Tax System Prototype.*

Applications of biotechnology for development

The UNU's biotechnology programme addresses pressing human, animal and plant health problems. Projects are coordinated by the Academic Division at UNU Headquarters through UNU/BIOLAC in Caracas.

The "Brucellosis Research Network" project has two objectives: developing a vaccine against brucellosis (a debilitating and potentially fatal disease) and promoting exchange and training for Latin American scientists studying it. Its research employs a multi-centred coordination approach, where research results are exchanged freely among network members. Workshops are held annually at rotating locations for additional information exchange.

This year's was held at Canada's Animal Disease Research Institute in Ottawa. The workshop served as a forum for exchanging scientific information among the Network's members who participated in research projects supported by a Canadian Government grant to the UNU. This grant enabled 24 participants from 10 Latin American countries to interact with their Canadian counterparts. A book on the workshop's proceedings is being published.

Tuberculosis was once thought conquered, but has returned worldwide with a vengeance. To help solve this pressing global problem, UNU's "Tuberculosis Research Network" develops better diagnostic methods and more effective vaccines. Researchers organize a yearly research result and information exchange workshop for network participants. This year's was held in Asuncion, Paraguay. Twenty-three participants from 11 countries exchanged information on two collaborative projects for which they are seeking support: a study on the molecular epidemiology of tuberculosis and the development of new mycobacterium bovis diagnostic methods.

Researchers also coordinated the "Application of Molecular Biology Methods to Mycobacterium Tuberculosis" training course in Argentina from September to October. Fifteen Latin American participants received lectures and conducted laboratory experiments on the latest genetic-engineering techniques.

Microprocessors and informatics

This programme project strengthens micro-informatics capacities in African institutions. It has three objectives: promote the University of Yaoundé as the region's micro-informatics centre of excellence, build research exchange networks, and train scholars in micro-informatics.

The "Research and Advanced Teaching in Informatics" project is publishing the proceedings from the Third African Conference on Research in Computer Science (CARI). Three hundred African computer scientists attended this French Ministry of Cooperation-funded conference in April. The "Joint UNU/ICTP (International Centre for Theoretical Physics) Project in Microelectronics and Related Areas" conducted several workshops and training courses during the year.

Food and nutrition

UNU's Food and Nutrition programme has several projects solving human nutrition problems. During the year, the "International Network of Food Data Systems" (INFOODS) project came close to achieving its self-set goal of involving every country in the world in its network of regional food composition databases. The project is developing standards and guidelines for generating, reporting and complying with food composition data. When the project's goal is achieved, every country will have access to the best information available on food's nutritional content. The FAO is a partner on the project.

Researchers working on the "Overcoming Critical Micro-nutrient Deficiencies" project determined that a weekly dose of iron supplement was adequate in preventing iron deficiency anemia. This recognition came from a worldwide UNU organized study comparing daily and weekly dosages. Previously, a daily dosage had been recommended. UNU, UNICEF and WHO are working together to solve iron deficiency and vitamin A problems through sustained preventative measures that include dietary changes and food fortification.

The UNU helped organize a regional workshop on "National Nutrition Policies for Kazakhstan in the Context of Primary Health Care" in Almaty, Kazakhstan. Five Central Asian countries' Health Ministry representatives agreed to cereal flour iron fortification, iodizing salt and weekly iron supplementation for vulnerable groups.

Researchers working on the "International Dietary

Energy Consulting Group" (IDECG) project are determining how much lysine (an important amino acid) adult humans require daily. Preliminary results suggest the daily requirement is double the amount recommended in the 1985 FAO/WHO/UNU amino acid reference pattern. This research is particularly important for assessing the predominately cereal-based diets found in many developing countries. The project is being studied with St. John's Medical College in Bangalore, India, and the Massachusetts Institute of Technology in Cambridge, United States. It is financed by the Global Cereal Fortification Initiative in Tokyo, Japan.

The "Identifying, Evaluating and Preventing the Continuing Global Problem of Energy and Protein Malnutrition" project published a report on under-nutrition and behavioral development in children. The project's Advisory Committee organized the "Causes and Consequences of Intra-uterine Growth Retardation" workshop in Louisiana, United States. Participants discussed: fetal growth, environmentally induced causes of Intra-uterine Growth Retardation (IUGR), and IUGR and adult health. The proceedings will appear in the *European Journal of Clinical Nutrition*.

The UNU and the International Union of Nutritional Sciences organized the workshop titled "Capacity Building for Research and Training in the Area of Food and Nutrition in Developing Countries," in Manila, the Philippines. A consensus emerged among participants on two issues: future assistance should be directed at university food and nutrition departments; and priority must go to African institutions. The workshop's proceedings are being published in a special issue of *Food and Nutrition Bulletin*.

The UNU Rector and the Associate Programme Director of the UNU's Food and Nutrition Programme, Dr. Cutberto Garza, represented the UNU at the November World Food Summit held in Rome. Rector de Souza presented an overview of UNU's Food and Nutrition programme to delegates and gave highlights of recent research results.

Science and technology

UNU investigates scientific and technological applications that serve human needs.

A UNU/IAS coordinated project titled the "Universal Networking Language" (UNL) showed its preliminary results at a symposium in November. Fifty eminent scholars, novelists and users from 12 different languages attended.

**Box 7. "Vitamin A and Nutritional Anemia"—an excerpt from
UNU's Food and Nutrition Bulletin**

A cross-sectional study of the prevalence of iron and vitamin A deficiencies in 318 pregnant women revealed that 50.7 per cent had iron deficiency and 21.3 per cent had marginally deficient or deficient vitamin A status. Based on these results, the influence of vitamin A and iron supplementation was studied in 305 anemic pregnant women in west Java, in a randomized field trial. The women with a hemoglobin between 80 and 109 g/L were randomly allocated to four groups: vitamin A and placebo iron tablets, iron and placebo vitamin A, vitamin A and iron, and both placebos, all daily for eight weeks. After supplementation, the proportion of women who became non-anemic was 35 per cent in the vitamin A-supplemented group, 68 per cent in the iron-supplemented group, 97 per cent in the group supplemented with both, and 16 per cent in the placebo group. Researchers concluded that improvement in vitamin A status may contribute to the control of anemia in pregnant women.

(This excerpt was taken from volume 17-1 of the *Food and Nutrition Bulletin*.)

UNL is an Internet plug-in that will facilitate communication between people with different languages. Along with its companion enconverter and deconverter software, it will allow anyone with Internet access to "enconvert" text from a UN Member State language into UNL, or "deconvert" text from UNL into another language.

The project will take 10 years to complete. The first three years are being devoted to creating conversion modules for Arabic, Chinese, English, French, German, Hindi, Indonesian, Italian, Japanese, Portuguese, Russian and Spanish. The remaining Member State language modules will be developed in the following seven years. The UNU/IAS is creating the prototype software, while international research institutes and industry partners will develop individual modules for their native languages.

PlasmaNet established

The project on "Cooperation in Plasma Science and Technology" is situated on the cutting edges of modern science. Plasma is a fourth state of matter, after solids, liquids and gas. Research on plasma physics has been under way for about 60 years. The application of plasma physics was initially on telecommunications using the ionosphere. Beginning about the mid-1950s, interest came to focus on the role of plasmas in controlled nuclear fusion, a potentially limitless source of energy for the world. This was explored by the earlier UNU project on plasma and laser technology at the University of Malaya.

In recent years, however, the range of applications has broadened, with particular attention to the use of plasmas in modifying a solid surface. Plasma offers the potential, for instance, to make surfaces corrosion-free and friction-free, and thus offers enormous technological promise. Plasma technology is now one of the world's fastest growing fields.

Since it is relatively new, plasma technology is a logical candidate for technology transfer, before its benefits become locked into wealthy country laboratories, as has happened so often in the past. As a response to this, UNU has organized an international electronic mail network, known as "PlasmaNet," which circulates news of note in the field to interested scientists around the world, and particularly in the developing countries.

PlasmaNet was established following a September 1996 International Symposium on cooperation in plasma science and technologies, co-organized by the UNU/IAS and the Institute of Physics of Tsukuba University of Japan. There was great interest expressed by Japanese industry. Sponsors included the Federation of Electric Power Companies, Toyo Corporation, Ltd., and related electric and electronic industries in Japan (all through the Electronic Industries Association of Japan), the Japan Electrical Manufacturers' Association, the Communications Industry Association of Japan, and the Nihon Keizai Shimbun. A publication of the printed version of PlasmaNet is coming out soon and work is under way on developing a training course in plasma science and technology.

Building capacities: UNU postgraduate education



Five 1995 UNU-Kirin Fellows who completed their one-year training at the Japan's National Food Research Institute (NFRI) were awarded certificates at the ceremony held at the UNU Headquarters on 8 May. (From left) Mr. Liu Aimin (China), Ms. Zhang Zhenzhong (China), Mr. Rangaswamy Subramanian (India), Ms. Nguyen Thi Huong Thuy (Viet Nam), and Dr. Mandyam Chakravarthy Varadaraj (India).

The UNU's postgraduate education programme has three purposes. It strengthens developing country academic institutions, enabling them to conduct high quality research and train future scholars. It helps alleviate the intellectual isolation developing country academics often face. And it strengthens the UNU's global outreach.

Over 1,450 fellows have completed UNU training and fellowship programmes since they began in 1976. In 1996, 98 UNU fellows finished their studies, while another 96 began training.

The UNU-Kirin Fellowship Programme in Food Science and Technology held an award ceremony for its five UNU-Kirin fellows. The five fellows presented their research results and received UNU Certificates from the Rector and small gifts from Kirin's President.

The UNU/INFOODS project gave 10 fellowships to

scientists from eight countries to attend the Third International Postgraduate Course on the Production and Use of Food Composition Data and Nutrition, held in the Netherlands. A staff member of the University of Zimbabwe was awarded a training fellowship to study food composition data systems at New Zealand's Institute for Crop and Food Research.

The UNU and the International Union of Nutritional Science organized "the Workshop on Capacity Building for Research and Training in the Area of Food and Nutrition in Developing Countries" in the Philippines in August. Twenty-seven participants discussed the disciplinary and interdisciplinary breadth required to deal with food and nutrition issues, training approaches for building capacities at national and regional levels, and an agenda of nutritional research for which training is required. Specific recommendations were adopted



Their Imperial Highnesses the Emperor and Empress of Japan observe the '96 Global Seminar Shonan Session discussions.

and will be presented at the International Congress of Nutrition to be held in Montreal, Canada, in July 1997.

UNU/BIOLAC's "Tuberculosis Research Network" project organized a training course titled "Application of Molecular Biology Methods to Mycobacterium Tuberculosis" in Argentina. Fifteen participants selected from different Latin American institutions received lectures and laboratory demonstrations on the latest genetic engineering techniques.

UNU/BIOLAC also taught four two-week training courses during the year:

- 10 participants attended the July "Immunology and Molecular Genetics of Human and Animal Retroviruses" course in Venezuela;
- 20 participants attended the August "Anaerobic Digestion of Industrial Wastewater" course in Guatemala and Mexico;
- 31 young scientists attended the October "Food and Environmental Biotechnology" course in Mexico; and
- 20 young scientists attended the November "Polymerase Chain Reaction Differential Gene

Expression and DNA Application in Diagnosis" course in Venezuela.

The UNU held its annual Global Seminar series at two locations in Japan this year: Kanagawa Prefecture's Shonan Village and Kobe. These seminars are designed to enhance international awareness among Japanese students through active interaction with UNU's global network of experts. Approximately 150 Japanese and foreign students participated in the sessions.

The UNU and the North Atlantic Treaty Organization (NATO) organized an advanced research workshop for geophysics experts on earthquakes in Kazakhstan, to assess earthquake hazards in Central Asia's major cities and devise ways of reducing them. The October course was organized because half of the Central Asian Republics' six million people live, work and go to school in buildings that are vulnerable to collapse during earthquakes. Researchers believe the tragedies of Armenia and Sakhalin will be repeated in Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and

Uzbekistan unless buildings in these nations are strengthened.

The UNU conducted short one- to six-week training courses and has five ongoing in different parts of the world. Five hundred participants were trained this year at the following short training courses:

- a six-week course in natural hazard reduction in Switzerland;
- five two-week biotechnology training workshops in Argentina, Guatemala, Mexico and Venezuela;
- eight two-week postgraduate computer science courses at the University of Yaoundé;
- two four-week Very Large Scale Integration design techniques courses in Cuba and Italy; and
- a four-week microprocessor-based real time control course in physics in Italy.

The UNU's five ongoing courses train between 3-13 research fellows each year in the following:

- the "Geothermal Training Programme" trains scientists in geothermal-related studies at Iceland's National Energy Authority;
- the "Renewable Energy Systems" course teaches environmental economics at the Indian Institute of Technology;
- the "Solar Energy Utilization" course trains technical personnel in designing solar energy systems at India's Anna University;
- the "Remote Sensing Technology" course teaches remote sensing and satellite-related technology at Brazil's Instituto Nacional de Pesquisas Espaciais (INPE); and
- the "Science and Technology Policy" course at Brazil's Universidade Estadual de Campinas teaches Master's degree students science and technology-related policy issues.

The UNU/WIDER course on "Development Economics Towards the 21st Century" continued at the University of Tampere, Finland. The course provided an introduction to current issues and main theories in economic development. Lectures were given by resident research fellows and visiting scholars on a variety of current issues studied within the UNU/WIDER's programme areas.

The UNU/WIDER also initiated an internship programme for young undergraduates studying economics. Interns write their thesis on one of its research projects, help research fellows and contribute

brief research reports to the Institute's work.

The UNU/IIST hosted several Curriculum Development fellows. These fellows study and enhance UNU/IIST's Formal Software Development course material, and implement it at their home institutions when they return. The Institute taught many other software courses during the year:

- courses on formal software development methods in Argentina, Brazil, India, Macau, Mongolia, and Viet Nam;
- courses titled "Beyond SDL" in the Philippines and Ukraine;
- seminars on infrastructure software support in Russia; and
- courses on RAISE in Argentina and Gabon.

The UNU/IAS' first six Ph.D. fellows successfully completed their academic programme in September and have returned home. They will remain an important part of the Institute's network as electronically-connected alumni. Upon completion of their studies, each fellow wrote a paper based on his or her dissertation. The second and third groups have begun their studies.

The UNU/IAS and Japan's National Laboratory for High Energy Physics (KEK) organized the "UNU-KEK Postgraduate Course on Synchrotron Radiation" in March. Thirty young scientists received training in theoretical aspects of synchrotron radiation for two weeks. The course was advertised internationally by poster and direct communication to developing country laboratory heads.

The UNU/IAS also organized six sustainable development training courses during the year. University professors, mid-career government and non-government officials and policy makers were targeted.

The UNU/INTECH taught three candidates under its Ph.D. internship scheme during the year. Interns study subjects related to UNU/INTECH's research and work at the Institute for a period of time under the supervision and guidance of academic staff.

Dissemination of research findings

The University continued its dissemination activities. These activities reach out to academics and policy makers with UNU research results. They also increase the UNU's international visibility and showcase its work. Efforts included publicizing conferences, promoting new publications, and disseminating information electronically.

The UNU's homepage went on-line in March at website: <http://www.unu.edu>, linking together all UNU Research and Training Centre/Programmes' websites. It is updated regularly with information on the UNU's structure, work, academic activities and publications.

During the year, 13 edited or single-author books were published independently under the UNU Press imprint. Another eight titles were issued through cooperation-publication arrangements or as translations by other publishers. The UNU Press also published four issues of the UNU's *Food and Nutrition Bulletin*, and was involved in the production of several lectures and reports issued by the Academic Division. Some 10,400 books were sold in 1996, resulting in net sales revenues of approximately US\$175,000. Another 1,000 books were given to depository libraries located primarily in developing countries.

UNU Press publications covered a broad thematic range in 1996. Noteworthy titles include two new volumes in the UNU's series on mega-cities and urban growth: *Emerging World Cities in Pacific Asia*, and *The Mega-city in Latin America*. Complementing another series, *Ethnicity and Power in the Contemporary World* constitutes part of a UNU study on governance and conflict resolution. *Sustaining the Future: Economic, Social and Environmental Change in Sub-Saharan Africa* focuses on the conditions for achieving sustainable environmental and resource management development. Similar questions are addressed in *Population, Land Management and Environmental Change and Environment, Biodiversity, and Agricultural Change in West Africa*. *The Long Road to Recovery: Community Responses to Industrial Disasters* investigates such accidents as the poison gas cloud in Bhopal, the nuclear reactor fire at Chernobyl, and the Exxon Valdez oil spill in Alaska. Institution-building



Publications
Includes titles up to 1996



**United Nations
University Press**

schemes, national unification and non-proliferation are some of the major themes discussed in *North-East Asian Regional Security: the Role of International Institutions*.

One title that has attracted more than the usual scholarly interest in UNU Press publications is *Volunteers Against Conflict*, written by United Nations Volunteers to commemorate 25 years of peace-keeping and humanitarian services under the overall umbrella of UNDP. The book was presented to the public in a public launch at the UNV Public Policy Forum, with Ambassador Hisashi Owada, Permanent Representative of Japan to the United Nations, and Mr. Takehito Nakata, UNV Honorary Ambassador, as participants. Endorsed by, among others, South African President Nelson Mandela, former US President Jimmy Carter,



At the press briefing on 19 February held at the UNU Headquarters on the occasion of the release in Japan of the volume, *Volunteers Against Conflict*, (from left) Dr. Brenda Gael McSweeney, Executive Coordinator of UNV; Ambassador Hisashi Owada, Permanent Representative of Japan to the UN; UNU Rector; and Mr. Takehito Nakata, UNV Honorary Ambassador.

and Mary Robinson, the President of Ireland, it is currently being translated into French, German, Japanese, and Spanish.

Japanese editions of two UNU Press books were also published: *Kaihatsu kiki: Jiritsu suru shiso, jiritsu suru sekai* (*Maldevelopment: Anatomy of a Global Failure*) and *Zero emissjon: Jizuko kano na sangyo sisutemu e no chosen* (*Steering Business Toward Sustainability*). And a Spanish edition of *The Uncertain Quest: Science, Technology, and Development* was published under the title *Una búsqueda incierta: Ciencia, tecnología y desarrollo*.

UNU Press also produced its first electronic publication – a CD-ROM – titled *Food Habits in Later Life: A Cross Cultural Study*, and is distributing the *People, Land Management and Environmental Change* video.

The UNU Press' complete catalogue, as well as announcements of recent and forthcoming publications, are featured in the "Publications" section of the UNU's

homepage. Publication catalogues were also produced this year by UNU/WIDER and UNU/INTECH.

The University held various conferences, workshops and seminars in different parts of the world in 1996. The conference facilities at the UNU Headquarters in Tokyo were in constant use by either the University or outside organizations. More than 4,500 people attended academic events held at the UNU Headquarters during the year. In total, more than 170 academic events were held at the UNU Headquarters and the Research and Training Centres, or at other locations under their auspices.

Several of these events attracted extensive media attention, especially UNU's second World Congress on Zero Emissions in Tennessee, United States, and UNU's panel discussion titled "Globalization and the Urban Future" at the United Nations Conference on Human Settlements (Habitat II) in Istanbul, Turkey.

The UNU/IAS launched a Working Paper Series which presents the Institute's preliminary research

results. The first set of working papers was compiled from papers presented at scientific meetings. Contributions also came from research associates, adjunct and visiting professors, and network scholars.

The UNU/IAS' electronic conferencing and networking activities enhanced the Institute's information dissemination activities by facilitating communication with collaborators, project participants and other interested parties worldwide. During the year, the following events were distributed electronically:

- the Public Forum on Integrated Biosystems;
- the Forum on Zero Emissions by Beer Breweries;
- the Electronic Forum on Industrial Organic Carbon Sinks;
- the First Electronic Conference on Zero Emissions by Beer Breweries;
- the Second Annual World Congress on Zero Emissions;
- the ICEE'96 Internet Conference; and
- the Network on Cooperation on Plasma Science and Technology.

The UNU's North America office intensified efforts at spreading the University's knowledge and activities

among Permanent UN Missions, UN officials, NGOs and academic institutions across the continent. This year's highlights include:

- a special televised interview of the Rector at the City University of New York;
- a presentation on the UNU's "Multilateralism and the United Nations System" programme;
- a presentation on the UNU's Haitian peace-keeping study at Washington's Centre for Strategic and International Studies;
- a public forum dealing with women and mainstreaming;
- a seminar titled "the United Nations and Preventive Diplomacy" for the UN Secretariat and academics;
- a discussion panel on the UN in the 21st Century; and
- a series of lectures by prominent academics and practitioners on such topics as climate change, external debt and international development cooperation for the General Assembly's Second Committee (these lectures were co-sponsored by the Government of the Netherlands).

The UNU's European office also held its first public forum at UNESCO in Paris on the UNU's work on international drug trafficking in October.

Interface with the United Nations system

The University continued to strengthen interaction with other United Nations organizations during the year. The following summary provides highlights from this collaboration.

Food and Agriculture Organization of the United Nations (FAO)

- Researchers working on the “Mountain Ecology and Sustainable Development” project are in charge of research for FAO’s mountain development group.
- UNU and FAO have formed a partnership to work on improving the availability of food composition and dietary intake data in developing countries.

United Nations Centre on Human Settlements (Habitat)

- UNU/IAS organized a panel discussion titled “Globalization and the Urban Future” as part of its contribution to the Habitat II conference in Istanbul, Turkey. The event was divided into four parts: opening remarks given by Rector de Souza, a new publications launch, the panel discussion, and a question and answer session.

United Nations Children’s Fund (UNICEF)

- UNU/WIDER contributed to the Finnish National Committee for UNICEF’s initiative on “Transition’s Morality Crisis and the Provision of Public Goods.”

United Nations Commission on Science and Technology for Development (UNCSTD)

- UNU/INTECH collaborated in preparing the UN Commission on Science and Technology for Development’s 1997 presentation to the General Assembly on Information Technology and Development.

United Nations Conference on Trade and Development (UNCTAD)

- UNU/WIDER and UNCTAD worked together on the role of non-traditional exports in sub-Saharan Africa.
- UNU/IIST and UNCTAD are planning two events on information technology for development in Africa.

United Nations Department for Development Support and Management Services (DDSMS)

- UNU/IIST’s Director was a resource person at the DDSMS’ International Symposium in June.

United Nations Department of Humanitarian Affairs (DHA)

- UNU/WIDER contributed to the “Humanitarian Emergencies” project with the UN Department for Humanitarian Affairs.

United Nations Department of Peace-keeping Operations (DPKO)

- The UNU cooperated with the UN Department of Peace-keeping Operations on the Project on the Foundations of Peace from which a report on Peace-keeping in Haiti was published.

United Nations Development Programme (UNDP)

- UNDP has indicated that it is willing to establish 10 UNU/ZERI chairs at 10 leading universities worldwide.

United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)

- UNU/INTECH’s 1996 regional conference was held in cooperation with ESCAP in Bangkok.

United Nations Educational, Scientific and Cultural Organization (UNESCO)

- The Academic Division at the UNU Headquarters and UNESCO have implemented jointly the project on the “South-South Cooperation Programme on Environmentally Sound Socio-economic Development in the Humid Tropics.” In 1996 they organized a South-South Cooperation meeting in Brazil, issued the *South-South Perspectives* newsletter, and published four working papers on biosphere reserves in Comoros, India, and Malaysia.
- The UNU/IAS and UNESCO’s Management of Social Transformations (MOST) Programme are preparing a series of regional training seminars on mega-city issues for urban specialists and practitioners. The first regional seminar on Asian mega-cities and was held in Hong Kong. Its purpose was to analyse globalization’s impact on structural and functional changes occurring in Asian’s metropolises. Similar courses are being planned for Latin America and Africa.
- The UNU and ICTP, now under the auspices of UNESCO, are working on a joint micro-electronics

and related areas project.

United Nations Environment Programme (UNEP)

- UNU/IAS, UNEP and UN Department for Policy Coordination and Sustainable Development organized the "Global Modelling Forum for Sustainable Development" in the Netherlands.
- The UNU Headquarters Academic Division and UNEP are working closely to preserve agricultural diversity by implementing indigenous practices at field research clusters worldwide.
- The "PLEC" project is implemented in close cooperation with UNEP, which is sponsoring its acceptance into the Global Environment Facility.
- UNEP participated in UNU's Global Environmental Forum held in Tokyo.

United Nations Industrial Development Organization (UNIDO)

- UNU/INTECH prepared several papers on technology related issues for UNIDO's World Forum on Industrialization.

United Nations International Computing Centre

- UNU/IIST and the UN International Computing Centre are organizing a one-week information technology policy planning event for public and private sector computer managers.

United Nations Volunteers (UNV)

- The UNU published *Volunteers Against Conflict*, a book which brings together the experiences of individual UN volunteer specialists who served in a wide range of recent UN missions. The book was launched in February as a front line look at some of the UN's most ambitious and important initiatives, written by volunteers themselves.

World Bank

- UNU/WIDER and the World Bank worked on a capital flows project.
- UNU/IAS has worked with the World Bank on a zero emissions research project.
- The World Bank, WHO and UNICEF provide financial and activity support for the "Overcoming Critical Micro-nutrient Deficiencies" project.

World Health Organization (WHO)

- WHO and UNICEF are working together on UNU's "Overcoming Critical Micro-nutrients Deficiencies" project to solve iron deficiency and vitamin A problems through food fortification.
- WHO and FAO are working on UNU's "International Dietary Energy Consulting Group" project to determine how much lysine adult humans require daily.

State of the University—1996



At the inaugural ceremony of UNU/IAS held on 3 April, (from left) UNU/IAS Acting Director Tarcisio Della Senta, UN Secretary-General Boutros Boutros-Ghali, UNU Executive Officer Rabinder Malik, UNU Rector, and Japan's Foreign Minister Yukihiro Ikeda unveiling the plaque of UNU/IAS.

A new perspective

The year 1996 was a period of transition between the University's Second Medium-Term Perspective (MTP II) (1990-1995), and the Third Medium-Term Perspective (MTP III) (1997-2001) adopted by the Council of the University at its forty-third session in December 1996. The MTP III document sets out the perspectives and approaches which will guide the University's work into the 21st century. It combines problems to be addressed by the UNU into four programme areas: peace and governance, development, environment, and science and technology.

New additions to the UNU

In April, the Institute of Advanced Studies (UNU/IAS) opened in Tokyo. The opening of UNU/IAS represents an important step in fulfilling the University's

function as a UN think-tank and a reservoir of ideas, primarily for UN constituencies. UNU/IAS comprises a vigorous academic community of scholars with a specific mission: to develop original, forward-looking solutions to problems at the interface of societal and natural systems.

To accomplish this mission, UNU/IAS has both a research and a postgraduate education programme, assisted by scholars and scientists from Japan's academic community and from several other countries. The research programme has three subprogrammes, each investigating one of three interlinked themes of environmentally sustainable development: eco-restructuring for sustainable development, mega-cities and urban development, and multilateralism and governance.



At the inauguration of UNU/INWEH on 20 September, (from left) UNU Rector; Dr. Peter George, President of McMaster University; Ms. Sheila Copps, Canada's Deputy Prime Minister and Minister of Canadian Heritage; Dr. Ralph J. Daley, newly appointed Director of UNU/INWEH; and Dr. Lucien Michaud, UNU Council Chairman.

The postgraduate education programme offers Ph.D. fellowships and short training courses in one of the above three themes. Fellows carry out their research in Tokyo under the supervision of a UNU/IAS faculty member or an affiliated UNU/IAS network scholar. Fellows are distributed into teams of six to eight members, with each team including several fellows, an adjunct Japanese professor, a visiting scholar, and a UNU faculty member. Upon completion of their research, fellows write a paper based on their dissertation, one which will make a distinctive contribution to the Institute.

The academic community is made up of a core faculty, adjunct Japanese professors, and UNU's global network of scholars. The core faculty directs the Institutes' research programmes, while the adjunct professors participate in the Institute's research programmes, act as research advisers, and link Ph.D. fellows to Japanese universities.

The idea of establishing a UNU research and training centre in Tokyo dates back to the Government

of Japan's 1972 offer to the United Nations General Assembly to host the UNU in Japan. The UNU/IAS was formally established by the UNU Governing Council at its 42nd Session in December 1995.

In October, the UNU International Network on Water, Environment and Health (UNU/INWEH) was established at McMaster University in Hamilton, Canada. The Network integrates international expertise into a programme of education, training, research and technology transfer on major water, environment and human health issues. Its work is project-based, with researchers proactively responding to global problems with innovative solutions. The programme has several water-related themes: protection and management, wastewater treatment, environmental assessment, ecotoxicology, and human health impacts.

Dr. Ralph J. Daley, former Executive Director of Canada's National Water Research Institute, has been appointed Director. He has focused on four priorities since taking office: establishing a functioning headquarters (including financial and administrative



Toasting at a reception after the GEIC inauguration ceremony, (from left) Dr. Michio Nagai, Honorary Senior Adviser to the UNU Rector; UNU Rector; Mr. Shunichi Suzuki, former Governor of the Tokyo Metropolitan Government; and Mr. Sukio Iwatare, Director-General of the Environment Agency of Japan.

procedures and core staff), developing the Network's long-term strategic plan, setting up UNU/INWEH Units in developing countries, and implementing projects.

Several initial project opportunities have been identified and are being assessed for their suitability to UNU/INWEH goals. Possible projects include the sustainable management of Lakes Malawi and Victoria in Africa; freshwater and near-shore marine resource management in Indonesia; and the upgrading of water-supply, sewage-treatment and water-management capacities in Mexico.

Work began at the UNU/ILA in Jordan. Dr. Adel Safty was appointed as Director in October and is now planning the Academy's programmes for easy integration into the UNU's three main activities: research, training and dissemination. The first "forum" of the Academy is planned for June 1997.

The international team of experts appointed by the Rector to study the feasibility of establishing a UNU Fisheries Training Programme in Iceland, recommend a

six-month training programme of fisheries policy and planning, marine and inland waters resource assessment and monitoring, quality management of fish handling and processing, management of fish companies and marketing, fishing technology and operations, and aquaculture and environmental protection. The Government of Iceland agreed to support the US\$600,000 a year programme. Preparations are under way to start the course in 1998 at Reykjavík's Marine Research Institute.

Discussions continued between the UNU and the Republic of Korea for establishing a UNU environmental research and training centre at the Kwangju Institute of Science and Technology (K-JIST) in Kwangju. A four-member international feasibility study team met in Kwangju to examine the technical and economic viability of such a centre. They completed their work at a final meeting in Maastricht in September.

In October, the UNU opened its new Global Environment Information Centre (GEIC)—a joint UNU/Environment Agency of Japan (EAJ) initiative. The

GEIC is founded on the UN's Agenda 21 and will be a centre for global projects, networking and information on environmental issues. Its work will promote new levels of cooperation and understanding among nations, key sectors and people, to achieve environmentally sustainable development. The UNU and EAJ will use each other's strengths in designing and implementing the three-part GEIC programme.

The first programme part is global projects. The GEIC's global projects will fulfil a unique role: creating mechanisms to link NGOs with international policy-making processes. Its first project, called "Global Governance and the Role of NGOs," will find ways the UN system and international policy processes can better achieve Agenda 21's Chapter 27 objectives. During 1996-97, the project's focus is climate change—linking the Centre to the upcoming 1997 Conference of the UN Convention on Climate Change in Japan.

The second programme part is networking. The GEIC will implement several sustainable development networking and information exchange activities, including homepage and database development.

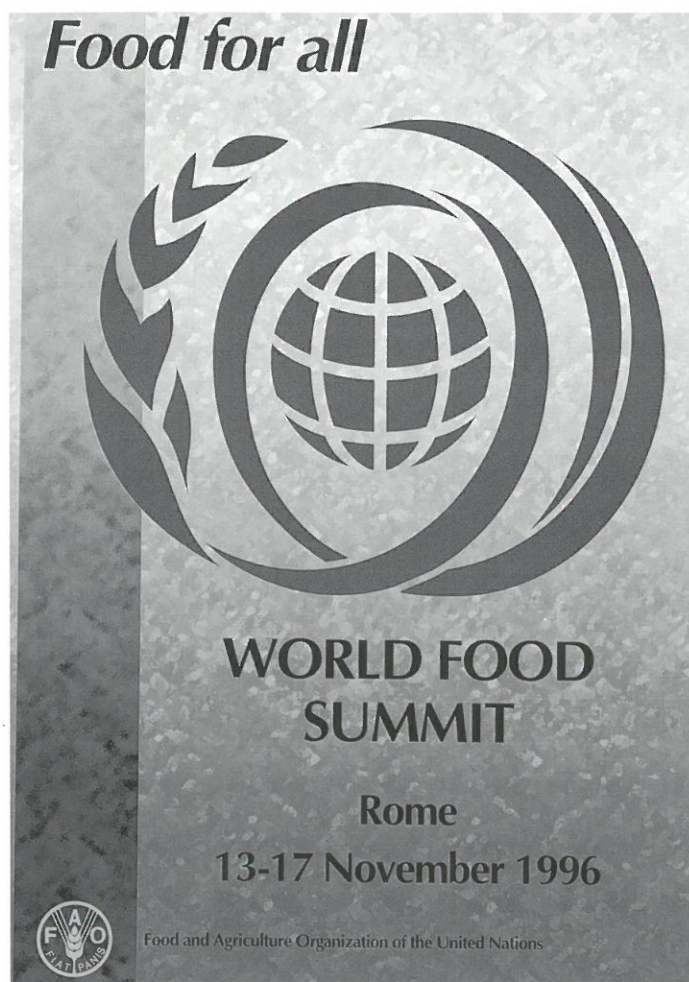
The third programme part is public information. The GEIC will introduce the public to environmental issues through exhibitions, educational events, audiovisual presentations, news bulletins and networking information. The first exhibition will have the theme "Networking for the Future."

The GEIC is located on the ground floor of the UNU Headquarters building. Computer terminals and staff are available to assist with information access and networking.

Evaluation and assessment

An evaluation of UNU/INTECH's first five years was undertaken during 1996. A report prepared by an international evaluation team discusses the Institute's progress in fulfilling its mandate and makes suggestions on future research, teaching and dissemination. The evaluation committee referred to the UNU/INTECH's mandate as being even more important now than it was five years ago.

The University also undertook an assessment of its training and fellowship activities. A strategy to ensure their coherent implementation and geographic balance was developed.



Participation in world conferences

The UNU held a panel discussion titled "Globalization and the Urban Future" as part of its contribution to the United Nations Conference on Human Settlements (Habitat II) in Turkey. The three-hour event was divided into four parts: opening remarks given by the UNU Rector, a new UNU publications launch, the panel discussion, and a question and answer session.

Two UNU publications, *Mega-city Growth and the Future* and *Emerging World Cities in Pacific Asia*, were launched. These two volumes represent the culmination of six years of research by UNU's Mega-cities and Urban Development Programme.

The panel discussion featured scholars affiliated with UNU's research network. For five years, these researchers have been systematically studying mega-cities, searching to identify, isolate and diminish characteristics which appear threatening. Their

contribution to Habitat II helped clarify some of these issues.

The UNU Rector and the Associate Programme Director of the UNU's Food and Nutrition Programme, Dr. Cutberto Garza, represented the UNU at the November World Food Summit held in Rome. In his speech to summit delegates, the Rector discussed the UNU's long-standing food and nutrition projects, stressing UNU's leadership in focusing scientists worldwide on human protein, energy and iron requirements. He also pointed out how FAO, WHO and UNICEF are better able to design and implement intervention programmes because of the UNU's research.

Forty-third session of the governing Council

The University's Council held its forty-third session in Santiago, Chile, from 2–6 December 1996. Deliberations focused on the new Medium Term-

Perspective (MTP III/1997–2001), programme and institutional development issues, reinvestment of income in the University's Endowment Fund, the 1996 Annual Report and the approval of a list of candidates for the position of University Rector.

The Council adopted the MTP III, which will guide the development and focus of the University's academic programme over the period 1997–2001. The members suggested that global employment issues should be more adequately addressed within programmes taken up during the MTP III period.

During the session, the Rector gave an overview of the major programme and institutional developments since the last session of the Council in December 1995. He described the inauguration of UNU/IAS, the establishment of UNU/INWEH, and the appointments of Directors for UNU/IAS, UNU/ILA, UNU/INRA and UNU/INWEH. The Rector also informed the Council about the opening of the new GEIC facility at the UNU Headquarters.

Other items taken up by the Council included a possible relocation of the UNU Press from Japan to a less expensive location; UNU/INTECH's five-year review and evaluation report; and the establishment of a small working group of the Council, called the Internal Assessment Group II, to study the evolving role of the UNU Headquarters Academic Division within the decentralized UNU system.

The Council decided to defer the reinvestment of interest income earned on the Endowment Fund for the 1996–97 biennium owing to a shortfall in expected income. The Council indicated that the decision applied only to the 1996–97 biennium.

The Council approved a panel of names of candidates for the position of Rector of the UNU and sent it to the United Nations Secretary-General and the UNESCO Director-General. The Secretary-General, after consultation with the Director-General, and with his concurrence, will appoint one of the candidates as Rector.

Reports to the United Nations and UNESCO

The Rector presented the University's annual reports for 1994–95 to UNESCO's Executive Board and the 1995 annual report to the Second Committee of the General Assembly. After presenting the reports, UNESCO's Executive Board members paid tribute to Rector de Souza for the excellent work he accomplished in extending UNU's influence in academic and scientific circles during his term as Rector.

Appointments

In October, the Rector appointed, Dr. Ralph James Daley, Prof. Tarcisio G. Della Senta, Dr. Augustine Uzo Mokwunye and Dr. Adel Safty as the new Directors for UNU/INWEH, UNU/IAS, UNU/INRA and UNU/ILA, respectively.

During the year, six new UNU Research and Training Centre Board members were appointed. Mr. Harris Mutio Mule of Kenya and Professor Jukka Pekkarinen of Finland were appointed to UNU/WIDER's board. Dr. George Vassiliou of Cyprus was reappointed for a second term. Mr. Ji Fusheng of China, Professor Zhou Li-Gao of Macau and Dr. Jose Soromenho-Ramos of Portugal were reappointed to UNU/IIST's board.

The search for a new Rector began in 1996. The position was advertised in several international publications, including *The Economist*, *Chronicle of Higher Education*, and *Le Monde Diplomatique* and Member States and regional organizations and associations were asked for suggestions on possible candidates for the post. The UNU Rector Nominating Committee submitted a panel of names of candidates to the UNU's Council at its forty-third session

Finance

As of 31 December 1996, pledges to the Endowment Fund, operating and specific programme contributions made by 54 governments and 115 other benefactors totalled US\$318.6 million, of which US\$292.8 million has been received. Table 1 below summarizes contributions of magnitude \$100,000 and greater received during 1996.

Table 1.
Financial contributions received during 1996 (over US\$100,000)

Source	Purpose	Amount (US\$)
Governments:		
Austria	Endowment Fund	142,006
Canada	Contribution from Environment Canada, earmarked for UNU/INWEH	271,746
China	Endowment Fund, earmarked for UNU/IIST	500,000
Macau	Endowment Fund, earmarked for UNU/IIST	3,374,065
Netherlands	1996 operational costs of UNU/INTECH	669,949
	UNU/INTECH International Workshop on Technological Change and Exclusion	239,000
	UNU/INTECH Programme on Institutional Coordination	<u>183,333</u>
Subtotal:		5,380,099
Non-governmental agencies and the private sector:		
ASCII Corporation (Japan)	UNU/IAS project on Universal Networking Language	556,912
	UNU/IAS First Symposium on Universal Networking Language	222,091
Finnish National Fund for Research and Development (SITRA)	UNU/IAS, METLA, and EFI joint project on World Forest, Society and Environment	150,919
Generalitat de Catalunya (Spain)	Project on Governance	167,917
IDRC (Canada)	UNU/INWEH	117,002
Kirin Brewery Co. (Japan)	UNU-Kirin Fellowship Training Programme and follow-up activities, 1996-97	572,647
Shimadzu Corporation (Japan)	Project on Environmental Monitoring and Analysis in the East Asian Region: Technology Transfer and Environmental Governance	<u>243,125</u>
Subtotal:		2,030,613
Total:		7,410,712

Annex 1: UNU academic activities in 1996

- UNU/IIST Advanced Training Course on RAISE (Rigorous Approach to Industrial Software Engineering), 9–23 January, Hanoi, Viet Nam.
- WHO/UNU/IUNS (International Union of Nutrition Sciences) Planning Meeting for the Compliance of the International Code on Marketing of Breast Milk Substitutes, 11–12 January, Wageningen, Netherlands.
- UNU Public Forum on Peace in Ex-Yugoslavia – Austria's Views and Contributions by Dr. Benita Ferrero-Waldner, State Secretary, Ministry for Foreign Affairs of Austria, 17 January, UNU Headquarters, Tokyo, Japan.
- UNU/BIOLAC Training Course on Polymerase Chain Reaction (PCR), Differential Gene Expression and DNA Applications in Diagnosis, 21 January–1 February, Caracas, Venezuela.
- UNU/IAS Seminar on the Political Economy of Forest Protection and Sustainable Development: The Case of Cameroon, 22 January, Tokyo.
- Inaugural Meeting for Research Organizers of the UN21 Project, 22–23 January, New York, USA.
- UNU/IAS Seminar on the MERCOSUR and the Liberalization of Trade: An Analysis of the Issues on Patent Protection, 23 January, Tokyo.
- UNU/IAS Seminar on International Trade, FDI (Foreign Direct Investment) and Urban and Regional Development in Developing Countries, 24 January, Tokyo.
- UNU/IAS Seminar on a Study on Global Land Degradation Using Remote Sensing and GIS (Geographical Information Systems), 24 January, Tokyo.
- UNU/IAS Seminar on the Determinants of FDI as an Adjustment Strategy: Industrial Restructuring and Outward Investment in Japan, 25 January, Tokyo.
- UNU/IAS Seminar on the United Nations University, 30 January, Tokyo.
- UNU/IAS Seminar on Energy, Environment and Sustainable Development: Some Explorations with Indian Data, 31 January, Tokyo.
- International Symposium on Environmental Governance and Analytical Technologies: Food Pollution and Industrial Waste, 1–2 February, UNU Headquarters.
- UNU/WIDER Planning Meeting of the Project on Economic Shocks, Social Stress and the Demographic Impact of Sudden Impoverishment, 2–3 February, Helsinki, Finland.
- Planning Workshop on the UNU Project on Environmental Monitoring and Analysis in the East Asian Region: Technology Transfer and Environmental Governance, 3 February, UNU Headquarters.
- Training Workshop on the UNU Project on Environmental Monitoring and Analysis in the East Asian Region: Technology Transfer and Environmental Governance, 5–8 February, Tsukuba and Hadano, Japan.
- Regional Course on Advanced VLSI (Very Large Scale Integration) Design, 5 February–1 March, Havana, Cuba.
- Introduction to the UNU/WIDER University Lecture Series in Development Economics, at the University of Tampere, 6 February, Tampere, Finland.
- UNU/IAS Seminar on Global Structure Change and the Asia-Pacific Economies, 8 February, Tokyo.
- UNU/IAS Seminar on Traditional Resource Rights: A New Concept, 9 February, Tokyo.
- UNU/IAS Seminar on Peace, Development and Democracy in Pacific Asia, 1975–1995: Ideas in Action, 13 February, Tokyo.
- UNU/UNV (United Nations Volunteers) Policy Forum and the Release of Volunteers Against Conflict, 19 February, UNU Headquarters.
- UNU/WIDER Public Lecture on the Alcohol and Morality Crisis in Central and Eastern Europe, 19 February, Helsinki.
- UNU/IIST Advanced Course on Formal Software Development Methods, February (1st two weeks), Bangalore, India.
- UNU/WIDER University Lecture on Population and Economic Growth Problems in Development Economics, at the University of Tampere, 20 February, Tampere.
- UNU/WIDER Public Lecture on Land Reform in Africa, at the University of Helsinki's Institute of Development Studies, 21 February, Helsinki.
- UNU Public Seminar on Lessons Learned from the Past – United Nations Peace-keeping, 23 February, UNU Headquarters.
- UNU/IIST International Expert Group Workshop on Decision Support Systems for Sustainable Development, 26 February–8 March, Macau.
- UNU Public Forum on Multilateralism and the United Nations System (MUNS), 27 February, UN Headquarters, New York, USA.
- UNU/IAS Seminar on Global Warming and Programmes for Atmospheric Stabilization, 27 February, Tokyo.
- UNU/WIDER University Lecture on Development Theories and Issues, at the University of Tampere, 27 February, Tampere.
- UNU/IAS Seminar on the Flying-Geese Pattern of Development in East Asia: A General Equilibrium Approach, 4 March, Tokyo.
- UNU/WIDER University Lecture on Poverty and Unemployment: Concepts and Measurements of Distribution, at the University of Tampere, 5 March, Tampere.
- UNU/IAS International Symposium on Integrated Environmental and Economic Accounting Theory and Practice, 5–8 March, Tokyo.
- UNU/WIDER Public Lecture on The Transition's Morality Crisis, Extent, Causes and Implication, 7 March, Helsinki.
- First Meeting of UNU/INTECH Five-year Review Panel, 7–9 March, Maastricht, Netherlands.
- UNU/WIDER Project Planning Meeting for Economics in Transition, Macroeconomic Aspects, 8–9 March, Helsinki.
- UNU/IAS Seminar on a Short Course on the Theory of Imputation, 11 March, Tokyo.
- UNU/IAS-TERI (Tata Energy Research Institute) Training Course on Energy, Environment, Resources and Sustainability, 11–30 March, New Delhi, India.
- Meeting of Key Investigators in the Iron Supplementation Project, 11–15 March, Berkeley, USA.
- UNU/WIDER University Lecture on Development Policy Issues in an Economy in Transition: Plan versus Market, at the University of Tampere, 12 March, Tampere.
- UNU Workshop on Democratization and the United Nations, and the Conference on the Fate of Democracy in the Era of Globalization, 14–17 March, Boston, USA.
- UNU/IAS Seminar on the Rise and Fall of the Technological

- Hegemons: An Anti-Akamatsu/Vernomon Theorem, 15 March, Tokyo.
- UNU/IAS Seminar on Natural Resource Accounting, 18 March, Tokyo.
- International Feasibility Study on a UNU Fisheries Centre in Iceland, 18–22 March, Reykjavík, Iceland.
- UNU/WIDER University Lecture on Macroeconomic Issues, at the University of Tampere, 19 March, Tampere.
- UNU/WIDER Project Planning Meeting to discuss the Wave of Emergencies of the Last Decade: Causes, Extent, Predictability and Response, 21–22 March, Helsinki.
- UNU Public Forum on Women and Mainstreaming: Towards a Research Agenda, 22 March, UN Headquarters, New York.
- UNU/KEK (National Laboratory for High Energy Physics of Japan) Postgraduate Course on Synchrotron Radiation, 25 March–8 April, Tsukuba and Tokyo.
- UNU/WIDER University Lecture on the Informal Economy, Gender, and Development, at the University of Tampere, 26 March, Tampere.
- UNU/INTECH-ESCAP-UNIFEM Regional Conference on Bridging the Gap: Formulating Industrial Policies and Women's Work for the Future, 26–28 March, Bangkok, Thailand.
- UNU/PLEC Regional Symposium on Common Property and Land Tenure, 26–28 March, Kampala, Uganda.
- Expert Meeting on Microprocessor-based Real-time Control of Equipment: Principles and Applications in Physics, 26–28 March, Lisbon, Portugal.
- UNU/IAS Seminar on Global Location Behaviour and Organizational Dynamics of Japanese Electronics Firms and Their Impact on Regional Economies, 27 March, Tokyo.
- UNU/WIDER University Lecture on General Problems of Development Aid: Money, Advice and Conditionality: Finnish Aid Policy, at the University of Tampere, 2 April, Tampere.
- Plenary Session of the Programme Committee for the International Conference on Research in Informatics in Africa (CARI '96), 2–5 April, Paris, France.
- Inauguration Ceremony of the UNU's newly established research and training centre, UNU Institute of Advanced Studies (UNU/IAS), 3 April, Tokyo.
- UNU/IAS Seminar on Neo-Malthusians versus Cornucopians, 5 April, Tokyo.
- UNU/IAS Seminar on Integrated Assessment: Modelling of Global Changes, 5 April, Tokyo.
- UNU/IAS Seminar on Internet Development: Evolutions and Revolutions, 10 April, Tokyo.
- UNU/WIDER Public Lecture on Monetary Aggregates Following the Financial Sector Reforms: Lessons from Indonesia, 11 April, Helsinki.
- UNU/WIDER Project Planning Meeting to discuss the Project on Land Reform, 13 April, Namur, Belgium.
- Eleventh Conference of Directors of UNU research and training centres/programmes (RTC/Ps), 15–17 April, UNU Headquarters.
- UNU/WIDER University Lecture on Development Organizations, Their Role and Employment Opportunities, at the University of Tampere, 16 April, Tampere.
- UNU/IAS Seminar on Global Warming and Programmes for Atmospheric Stability, 16 April, Tokyo.
- UNU/BIOLAC Workshop on Tuberculosis Research Network, 16–19 April, Asuncion, Paraguay.
- UNU/IAS Seminar on Toward Global Planning of Sustainable Use of the Earth, 18 April, Tokyo.
- IIASA (International Institute for Applied Systems Analysis) Days in Japan Symposium: Asia Towards the 21st Century, 22–23 April, UNU Headquarters.
- Regional Workshop of the UNU Programme on People, Land Management and Environmental Change (PLEC) – East African Cluster, 22–28 April, Arusha, Tanzania.
- UNU Public Forum on Reflecting on the Beijing Conference: Agenda for Women in the 21st Century, 23 April, UNU Headquarters.
- UNU Public Forum on Targets and Criteria for Viable Socio-economic Development, 29 April, UN Headquarters, New York.
- UNU Geothermal Training Programme, 29 April–28 October, Reykjavík.
- UNU/IIST Advanced Training Course on RAISE (Rigorous Approach to Industrial Software Engineering), 29 April–10 May, San Luis, Argentina.
- Training Programme on Remote Sensing Technology, April–December 1996, São Jose dos Campos, São Paulo, Brazil.
- Training Programme on Science and Technology Policy, April 1996–March 1997, Campinas, São Paulo.
- UNU-Kirin Fellowships, April 1996–March 1997, Tsukuba, Japan.
- UNU/WIDER Project Meeting to discuss the project Economic Shocks, Social Stress and the Demographic Impact of Sudden Impoverishment, 3–4 May, Helsinki.
- UNU/IAS Seminar on Quantifying APEC Trade Liberalization: A Dynamic Analysis, 7 May, Tokyo.
- UNU/WIDER Public Lecture on Quality of Life and Urban Growth: Challenges for the 21st Century (in relation to Habitat II), 7 May, Helsinki.
- Award Ceremony for UNU-Kirin Fellows, 8 May, UNU Headquarters.
- UNU/IAS Seminar on Problems and Structure of East Asian International Security, 8 May, Tokyo.
- UNU/IAS Seminar on the Impact of Technology to Developing Countries, Part II – Report on EOLSS Activities, 15 May, Tokyo.
- UNU Public Forum on the United Nations System in the 21st Century (UN21), 16 May, UN Headquarters, New York.
- UNU/IAS Seminar on Urban Policies in Tokyo Metropolis, 27 May, Tokyo.
- UNU/BIOLAC Workshop of Brucellosis Research Network, 27 May–1 June, Ottawa, Canada.
- UNU Second World Congress on Zero Emissions, 29–31 May, Chattanooga, Tennessee, USA.
- UNU/WIDER Project Meeting to discuss the project Short-term Capital Movements, 31 May–1 June, Helsinki.
- Second Meeting of UNU/INTECH Five-year Review Panel, 31 May–2 June, Maastricht.
- UNU/WIDER Public Lecture on What Kind of Market Economy is Emerging in Russia? Would Zyuganov Make a Difference?, 10 June, Helsinki.
- UNU/IAS Seminar on Transfer of High Technologies to Developing Countries III: Structure of High Technologies,

- 12 June, Tokyo.
- UNU Fifth Global Environmental Forum on Freshwater Resources and Arid Lands, 13 June, UNU Headquarters.
- Conference on Training and Preparation of Peace-keeping sponsored by INCORE (Initiative on Conflict Resolution and Ethnicity – UNU/University of Ulster Joint International Programme on Conflict Resolution and Ethnicity), 13–15 June, Ulster, Northern Ireland, UK.
- UNU/WIDER Project Meeting to discuss the Project on New Models of Provision of Public Goods, 14–15 June, Helsinki.
- UNU/WIDER Project Meeting to discuss the Project on the Evolving New Market Economies in Europe and Asia: Integration into the World Economy, 14–17 June, Helsinki.
- UNU/INTECH-IDRC Workshop on Teleworking: Implications for Employment and Trade in Developing Countries; India and Malaysia, 16–18 June, Lonavala, India.
- UNU Symposium on Women and Mainstreaming, 19 June, UNU Headquarters.
- UNU/WIDER Project Workshop on Liberalization and Its Impact on Rural Economies of South Asia, at Jawaharlal Nehru University, 22–23 June, New Delhi.
- UNU Workshop Panel on a Socially Viable Development Strategy, in conjunction with the Ninth Annual Meeting of the Academic Council on the United Nations System (ACUNS) (24–26 June 1996), 25 Turin, Italy.
- UNU/IAS Seminar on the Interaction between Technology and Economy: National Strategies for Constrained Economic Environments – The Case of Japan 1955–1993, 28 June, Tokyo.
- UNU/IIST Training Course on Formal Software Development Methods, 1–5 July, Seoul, Republic of Korea.
- UNU/IIST Training Course on Software Support for Infrastructure, 1–5 July, Moscow, Russian Federation.
- UNU/IAS Seminar on the Peace-process and Reconstruction of Cambodia: The Challenge to and Response from ASEAN, 3 July, Tokyo.
- UNU/IIST Training Course on Formal Methods for Manufacturing, Structuring and Probable Fault Tolerance for Reactive Systems, 3–10 July, Harbin and Beijing, China.
- UNU/IAS Seminar on Human Scavenging in Developing Countries: A Case Study on the US-Mexico Border, 4 July, Tokyo.
- UNU/BIOLAC Training Course on Immunology and Molecular Genetics of Human and Animal Retroviruses: Aspects of Viral Diversity and Immunopathology, 8–19 July, Caracas, Venezuela.
- Training Course on Analysis and Management of Geological Risks, 8 July–17 August, Kingston, Jamaica.
- Lecture by Mr. Angel Gurria, Minister of Foreign Affairs of Mexico, 9 July, UNU Headquarters.
- UNU Seminar on Environmental Management of the Mediterranean Region, 15 July, UNU Headquarters.
- Press Briefing on UNU's Zero Emissions Research Initiative (UNU/ZERI), 16 July, UNU Headquarters.
- UNU/IAS Practical Course in Zero Emissions, 18–20 July, Tokyo.
- UNU/IAS Seminar on Multilateral Diplomacy: New Approaches to Diplomacy at the Global and Regional Level, 23 July, Tokyo.
- UNU/IAS Seminar on Impact of Transfer of High Technologies to Developing Countries IV: Issues to be Solved, 24 July, Tokyo.
- UNU/WIDER Joint Meeting of the Projects on Impact of Liberalization on Key Markets in SSA and on Growth, External Sector and Role of Non-traditional Exports in SSA, 24–26 July, Helsinki.
- UNESCO/UNU/JSES (Japan Solar Energy Society) High-level Expert Meeting on Solar Energy in East and South-East Asia, 24–26 July, Ogata-mura, Akita Prefecture, Japan.
- UNU Conference on the Changing Nature of Democracy: Challenges to Old and New Democracies, 24–27 July, Oxford, UK.
- Tokyo Conference for the Worldwide Network of Zero Emissions Starting at the Regional Level, jointly organized by UNU/IAS and Japan Eco-technology Consortium, 25 July, UNU Headquarters.
- UNU/IAS Seminar on Growth and Human Development, 31 July, Tokyo.
- UNU/IAS Electronic Seminar on Poverty and Deforestation, 1–31 August.
- Workshop for organizing an INFOODS Liaison Group for South Asian Countries (SAARCFOODS), 3–6 August, Peshawar, Pakistan.
- Third International Course on Science and Technology Policy Pertaining to the Amazon Region, 5 August 1996–4 February 1997, Belem, Para, Brazil.
- Session on Mega-cities and Disasters: Perspectives from Science, Engineering and Social Science, 8 August, the Hague, Netherlands.
- UNU/BIOLAC Training Course on Anaerobic Digestion of Industrial Wastewater, 13–24 August, Guatemala City, Guatemala; and Mexico City, Mexico.
- UNU/IAS Electronic Seminar on Poverty and Sustainable Development, 15 August–15 September.
- UNU/IAS Seminar on Interdependence and Growth in the Asia-Pacific Region, 16 August, Tokyo.
- UNU/IUNS (International Union of Nutritional Sciences) Workshop on Institution Building for Research and Advanced Training in Food and Nutrition in Developing Countries, 18–23 August, Manila.
- UNU/IAS Seminar on the Role of Renewable Energy Technologies in Sustainable Development: The Developing Countries Case, 21 August, Tokyo.
- UNU/IIST Training Course on Rigorous Approaches to Industrial Software Engineering (RAISE), 23 August–2 September, Ulaanbaatar, Mongolia.
- Seventh Meeting of the UNU/INTECH Board, 26–27 August, Maastricht.
- UNU/IIST Training Course on Design Techniques for Real-time Systems, August, Rio de Janeiro, Brazil.
- UNU/IAS Seminar on Cities in a Global Economy, 2 September, Tokyo.
- UNU Global Seminar '96 Shonan Session on Globalism and Regionalism, 2–6 September, Hayama, Kanagawa Prefecture, Japan.
- UNU/IIST Course on Formal Software Development Methods and the Duration Calculi: From Programmes to Large Scale Systems: Reactive and Hybrid Systems, 2–20 September, Macau.

UNU/IAS Seminars, 4 September, Tokyo, on:

- (1) Regional Disparity in China 1985–1994: Effects of Globalization and Economic Liberalization;
- (2) Industrial Restructuring and Outward Investment: The Japanese Aluminum Smelting Industry.

UNU/IAS Seminars, 5 September, Tokyo, on:

- (1) The Impact of the Refugee Crisis on the Environment: Refugees and Deforestation in Africa;
- (2) An Economy-wide Framework for the Selection of Environmentally Sound Technologies: An Application to the Electric Power Sector of India;
- (3) A Study on the Human Impact on Global Land Degradation with the Application of Remote Sensing and GIS.

UNU/ICTP (International Centre for Theoretical Physics) Second International Workshop on Parallel Processing and Its Applications in Physics, Chemistry and Material Science, 9–27 September, Trieste, Italy.

UNU/IIST Seminars on Specification of Computer Programmes, 11–20 September, Macau.

UNU/IAS Seminars, 13 September, Tokyo, on:

- (1) Political Economy of Petroleum Product Subsidies in Oil-exporting Developing Countries: The Case of Nigeria;
- (2) Fairness Considerations in Self-management of Common Property Resources: The Case of Fisheries.

Seminar on the United Nations and Preventive Diplomacy: Foundations, Instruments and New Actors, 16 September, UN Headquarters, New York.

UNU/IAS Electronic Seminar on Scavengers' Cooperatives and Grassroots Development in Developing Countries, 16 September–15 October.

International Symposium on Cooperation in Plasma Science and Technology, 16–18 September, UNU/IAS, Tokyo.

Workshop for organizing an INFOODS Liaison Group for the countries of North America (NORAMFOODS), 16–18 September, Washington, DC, USA.

UNU Public Forum on Human Rights and NGOs, by Prof. Peter Baehr, Utrecht University, and Prof. Leon Gordenker, Princeton University, 18 September, UNU Headquarters.

A Practical Course in Zero Emissions, 18–20 September, UNU Headquarters and UNU/IAS, Tokyo.

UNU Public Forum on Two Critically Constructive Reflections on Largely North American International Relations Theories, by Prof. Hayward Alker, University of Southern California, and Prof. Thomas Biersteker, Brown University, 19 September, UNU Headquarters.

NGO Research Agenda Setting Meeting, 19 September, UNU Headquarters.

UNU/IIST Seminars on Specification of Computer Programmes, 23–24 September, Jakarta, Indonesia, and 26–27 September, Bangkok, Thailand.

First Preparatory Meeting for the 1998 World NGO Conference, and International Symposium on the United Nations and Civil Society – NGOs Working towards the 21st Century, 23–24 September, UNU Headquarters.

UNU-SSRC (Social Science Research Council) Meeting on SSRC Proposal on US Intervention in Regional Conflicts, 24 September, UNU Headquarters.

UNU Expert Meeting on the Review of Chemical Data on Pesticides and PCBs in East Asia, 27 September, UNU

Headquarters.

UNU/WIDER Public Lecture on Globalization and “Linkage-Intensive” Development, by Dr. Jean Bonvin, President of OECD Development Centre in Paris, 30 September, Helsinki.

UNU/IAS-AIT (Asian Institute of Technology) Training Course on Planning for Environmentally Sustainable Development in the Asia-Pacific Region, 30 September–18 October, Bangkok.

Third International Graduate Course on Production and Use of Food Composition Data in Nutrition, 30 September–18 October, Wageningen, Netherlands.

Programme on Applied Nutrition, October 1996–September 1997, Nairobi, Kenya.

UNU Global Seminar '96 Kobe Session on Our Planet and Human Security, 1–4 October, Kobe, Japan.

Steering Committee Meeting of the UNU Project on Comparative Foreign Policy and Human Rights, 5 October, UN Headquarters, New York.

UNU/WIDER Project Meeting to discuss the Project on the Political Economy of Humanitarian Emergencies: Causes, Extent, Predictability and Response, 6–8 October, Helsinki.

UNU/IIST Tutorial on RAISE for participants in CARI '96 (Third African Conference on Research in Computer Science), 7–8 October, Libreville, Gabon.

UNU/BIOLAC Training Course on Food and Environmental Biotechnology, 7–18 October, Cuernavaca, Mexico.

UNU/ICTP College on Microprocessor-based Real-time Control: Principles and Applications in Physics, 7 October–1 November, Trieste.

UNU/IIST Annual Board Meeting, 9–11 October, Macau.

Third African Conference on Research in Computer Science (CARI '96), 9–19 October, Libreville.

UNU/IAS Seminars, 11 October, Tokyo, on:

- (1) Empirical Linkages among MNC Penetration, Democracy, Economic Growth and Development;
- (2) Integrated Biosystems for the Utilization of Agro-industrial Wastes.

UNESCO-UNU/IAS Workshop on Globalization and the Mega-city Development in Pacific Asia, 13–25 October, Hong Kong/Tokyo.

UNU/WIDER Public Lecture on Quality of Life, 14 October, Helsinki.

Twelfth Meeting of the UNU/WIDER Board, 14–16 October, Helsinki.

UNU/BIOLAC Training Course on Application of Molecular Biology Methods to Mycobacterium Tuberculosis, 16–31 October, Moron, Argentina.

Press Briefing on UNU's Universal Networking Language (UNL) Project, 17 October, UNU Headquarters.

International Intervention in Haiti Briefings, 17 October, Washington, D.C., USA.

UNU/INTECH International Workshop on Europe and the Developing World in the Globalized Information Society: Implications for Employment, Education and Trade, 17–19 October, Maastricht.

Workshop on Earthquake Risk Management Strategies for Post-Soviet Central Asian Republics: Avoiding Repetition of the 1988 Armenian and the 1995 Sakhalin Disasters, 22–25

- October, Almaty, Kazakhstan.
- UNU Public Forum on the UNU Project on the Foundation of Peace – Case Study of International Involvement in Haiti, 23 October, UN Headquarters, New York.
- UNU/INTECH International Workshop on the Information Revolution and Economic and Social Exclusion in Developing Countries, 23–25 October, Maastricht.
- UN Day Symposium on Shaping a Sustainable Urban Future: Habitat II and Challenges to Civil Society, 24 October, UNU Headquarters.
- UNU Public Forum on Drugs, 25 October, Paris, France.
- Seminar on Breakthroughs in Scientific Applications: The Impact for African Development – The Case of Namibia, by HE Dr. Sam Nujoma, President of the Republic of Namibia, 29 October, UNU Headquarters.
- Inauguration of Global Environment Information Centre (GEIC) at the UNU Headquarters, 29 October, UNU Headquarters.
- UNU/WIDER Public Lecture on Finland: The Great Depression of the 1990s, by Dr. Pentti Vartia, Director of the Research Institute of the Finnish Economy and Dr. Jaakko Kiander, Research Director of the Labour Institute for Economic Research, 30 October, Helsinki.
- Asian Highway Seminar, organized jointly with the Ministry of Construction of Japan and ESCAP, 5–8 November, UNU Headquarters.
- UNU-Project LINK Panel on the World Economic Outlook: APEC and the World Economy, 7 November, Tokyo/New York/Geneva.
- UNU/IAS Seminar on APEC and the World Economy, 8 November, Tokyo.
- Annual Symposium on the United Nations System in the 21st Century: Peace and Security, 8–9 November, UNU Headquarters.
- UNU/IIST Course on Formal Software Development Methods and Duration Calculi: Large-Scale Systems, Reactive and Hybrid Systems., 11–22 November, San Luis, Argentina.
- UNU/IIST Course on Formal Software Development Methods and Duration Calculi: From Programmes to Large-scale Systems, 11–22 November, San Luis, Argentina, 12–22 November, Curitiba, Parana, Brazil.
- UNU/WIDER Project Meeting on Transition Strategies, Alternatives and Outcomes, 14–16 November, Helsinki.
- UNU/INTECH International Workshop on Foreign Direct Investment, Technology Transfer and Export Orientation in Developing Countries, 15–16 November, Maastricht.
- UNU/ICTP Fourth Course on Basic VLSI Design Techniques, 18 November–13 December, Trieste.
- First UNU/IAS Workshop on Multilateral Diplomacy: Negotiations on Environmental Issues in the East Asian Region, 18–23 November, Tokyo.
- UNU/INTECH Seminar on Development, Technical Change and CO2 Emissions: A Policy Approach for Climate Control, 20 November, Maastricht.
- UNU/WIDER Public Lecture on Financial Liberalization and Economic Crisis – Should Countries Liberalize Short-term Capital Inflows?, 21 November, Helsinki.
- UNU/IAS Symposium on UNL (Universal Networking Language) '96 – An Electronic Language for Communication, Understanding and Collaboration, 21–22 November, UNU Headquarters.
- UNU/IAS Seminar on Population and Development, 26 November, Tokyo.
- Finnish National Committee for UNICEF and UNU/WIDER Joint Seminar on Transition, Family Disintegration and Child Welfare, 26 November, Helsinki.
- UNU/IAS Seminars, 27 November, Tokyo, on:
- (1) Intergovernmental Cooperation in the Post-Cold War Scenario: Case Studies of the Gulf Crisis and Former Yugoslavia;
 - (2) New Entrepreneurship and Entrepreneurs in Post-Soviet Russia.
- UNU/IAS Seminars, 28 November, Tokyo, on:
- (1) Local Agenda 21 and Environmental Management in Japan and the UK: From Fragmentation to Integration;
 - (2) Comparative Study of Environmental Policy Development Processes in East Asian Countries.
- Forty-third Session of the Council of the United Nations University, 2–6 December, Santiago, Chile.
- UNU/IAS Seminar on Beyond the Global 2000, 4 December, Tokyo.
- UNU/IAS Seminar on the Interaction between Technology and Economy – The Perspective of the Metabolic Aspects of Japan's Technological Innovation System., 6 December, Tokyo.
- UNU Training Workshop on Strengthening Environmental Legislation, 9–17 December, Singapore.
- UNU/IAS Seminar on Global Stability and Technology Transfer, 11 December, Tokyo.
- UNU Public Forum on the United Nations System in the 21st Century: Peace and Security, 12 December, UN Headquarters, New York.
- UNU/IAS Seminar on New Economic Geography, 16 December, Tokyo.
- UNU/WIDER Public Lecture on International Cooperation on the Environment – Role of Development Aid, by Mr. Pekka Haavisto, Finland's Minister of Environment, 16 December, Helsinki.
- International Seminar on Culture and Development: Our Creative Diversity, organized jointly with Waseda University, in cooperation with UNESCO, 16–18 December, Waseda University, Tokyo.
- Lecture by Dr. Mate Granic, Croatian Deputy Prime Minister and Minister of Foreign Affairs, on an Overview of Croatian Foreign Policy: Priorities and Perspectives, 17 December, UNU Headquarters.

Annex 2: UNU governing bodies

Members of the University Council

Appointed members

- Dr. Lucien F. MICHAUD, SJ (Canada) (Chairman of the Council)
Professor, University of Sudbury, Canada
- Professor José Joaquín BRUNNER Ried (Chile)
Minister, Ministry of the Secretary-General, Government of Chile
- Professor Paolo COSTA (Italy)
Minister of Public Works, Ministry of Public Works, Government of Italy
- Dr. Donald EKONG (Nigeria)
Scholar-in-Residence, the Ford Foundation, Johannesburg, South Africa
- Dr. Salim EL-HOSS (Lebanon)
American University of Beirut, and former Prime Minister of Lebanon
- Professor J. A. van GINKEL (Netherlands)
Rector Magnificus and Professor of Human Geography, Utrecht University
- Professor Genady Nikolaevich GOLUBEV (Russian Federation)
Head, Department of World Physical Geography and Geoecology, Faculty of Geography, Moscow State University
- Professor Françoise HÉRITIER-AUGÉ (France)
Director, Laboratoire d'anthropologie sociale, Ecole des Hautes Etudes en Sciences Sociales, Collège de France
- Professor Risto IHAMUOTILA (Finland)
The Chancellor, University of Helsinki
- Ambassador Hideo KAGAMI (Japan)
former Permanent Representative of Japan to the United Nations
- Professor Hanaa KHEIR-EL-DIN (Egypt)
Professor of Economics and Chairperson of Economics Department, Faculty of Economics and Political Science, Cairo University
- Professor Sang Soo LEE (Republic of Korea)
Professor Emeritus, Korea Advanced Institute of Science and Technology
- Professor Madina LY-TALL (Mali)
Ambassador Extraordinary and Plenipotentiary of the Republic of Mali to France, Paris, France
- Dr. Edson MACHADO DE SOUSA (Brazil)
Head, Minister of Education's Cabinet, Ministry of Education and Sports, Government of Brazil
- Ms. Graça MACHEL (Mozambique)
President, Foundation for Community Development (FDC), Mozambique
- Ms. Valeria MERINO-DIRANI (Ecuador)
Executive Director, Corporacion Latinoamericana para el Desarrollo (CLD), Ecuador
- Dr. A. P. MITRA (India)
President, National Academy of Sciences; Bhatnagar Fellow (Council of Scientific and Industrial Research); National Physical Laboratory, India
- Professor Ingrid MOSES (Australia)
Deputy Vice-Chancellor (Academic), University of Canberra
- Professor Jacob L. NGU (Cameroon)
Director, Immunology Biotechnology Laboratories, Cameroon
- Dr. Luis Manuel PEÑALVER (Venezuela)
Presidential Commission, Centenario del Natalicio de Andrés Bello, Fundacion La Casa de Bello, Venezuela
- Dr. Victor RABINOWITCH (United States)
Senior Vice-President, MacArthur Foundation, United States
- Professor Frances STEWART (United Kingdom)
Director, Queen Elizabeth House, University of Oxford
- Dr. WANG Shaoqi (China)
Director-General, International Cooperation Department, State Science and Technology Commission (SSTC), China

Rector

- Professor Heitor Gurgulino de Souza (Brazil)

Ex officio members

- Dr. Boutros BOUTROS-GHALI (Egypt)
Secretary-General, United Nations, New York, United States
- Dr. Federico MAYOR (Spain),
Director-General, United Nations Educational, Scientific and Cultural Organization, Paris, France
- Dr. Marcel BOISARD (Switzerland),
Acting Executive Director, United Nations Institute for Training and Research, Geneva, Switzerland

Members of the boards of UNU research and training centres and UNU advisory committees

UNU/WIDER Board

- Dr. Maria de Lourdes PINTASILGO (Portugal) (Chairperson)
 Deputy Chairperson, InterAction Council, United States
- Mr. Harris MUTIO MULE (Kenya)
 TIMS, Ltd., Kenya
- Dr. Sylvia OSTRY (Canada)
 Chairperson, Center for International Studies, University of Toronto, Canada
- Professor Jukka PEKKARINEN (Finland)
 Director, Labour Institute for Economic Research, Finland
- Dr. George VASSILIOU (Cyprus)
 Former President of Cyprus, Cyprus
- Professor Ruben YEVSTIGNEYEV (Russian Federation)
 Deputy Director, Institute of International Economic and Political Studies, Russian Academy of Sciences, Russian Federation
- Dr. Masaru YOSHITOMI (Japan)
 Vice Chairman, Research Institute, Inc. of the Long-Term Credit Bank of Japan, Ltd., Japan

UNU/INTECH Board

- Dr. Nathan ROSENBERG (United States) (Chairman)
 Professor, Department of Economics, Stanford University, United States
- Professor Wil ALBEDA (the Netherlands)
 Chairman, Maastricht Economic Research Institute on Innovation and Technology (MERIT), University of Limburg, the Netherlands
- Ms. Winnie K. BYANYIMA (Uganda)
 Chairperson, Pan African Women Engineers, Technicians and Scientists, International Conference Centre, Uganda
- Dr. Wan-Kyoo CHO (Republic of Korea)
 President, Bioindustry Association of Korea, Republic of Korea
- Dr. Walter HOLZER (Germany)
 Engineer/Industrialist, Germany
- Dr. Hebe Maria Cristina VESSURI (Argentina)
 Instituto Venezolano de Investigaciones Científicas (IVIC), Venezuela

UNU/IIST Board

- Professor Gilles KAHN (France) (Chairman)
 Research Director, Institut national de recherche en informatique et en automatique (INRIA), France
- Professor Ana Regina CAVALCANTI DA ROCHA (Brazil)
 Programa de Engenharia de Sistemas e Computação (COPPE), Universidade Federal do Rio de Janeiro, Brazil
- Mr. Ji Fusheng (China)
 Deputy Director-General, Department of Fundamental Research and High Technology, State Science and Technology Commission, China
- Professor Ivan M. HAVEL (Czech Republic)
 Director, Centre for Theoretical Studies, Charles University, Czech Republic
- Professor Kesav V. NORI (India)
 Tata Research Development and Design Centre, India
- Dr. José SOROMENHO-RAMOS (Portugal)
 Financial Controller, Organisation for Economic Co-operation and Development (OECD), France

- Professor Maurice TCHUENTE (Cameroon)
 Rector, University of Dschang, Cameroon
- Professor ZHOU Li-Gao (China)
 Vice-Rector, University of Macau, Macau

UNU/INRA Board

- Professor W. S. ALHASSAN (Ghana)
 Director-General, Council for Scientific and Industrial Research, Ghana
- Professor Lameck K.H. GOMA (Zambia)
 Former Minister of Higher Education, Science and Technology, Zambia
- Dr. Björn LUNDGREN (Sweden)
 Director, International Foundation for Science, Sweden
- Dr. Thomas ODHIAMBO (Kenya)
 Director, the Research and Development Forum for Science-Led Development in Africa (RANDFORUM), Kenya
- Dr. Guy PAILLOTIN (France)
 President, Institut national de la recherche agronomique (INRA), France
- Dr. S. I. RASOOL (United States)
 International Geosphere-Biosphere Programme - Data and Information System (IGBP-DIS), Université de Paris VI, France

UNU/BIOLOGICAL Scientific Advisory Committee

- Dr. Armando ALBERT MARTINEZ (Spain) (Chairman)
 Secretaría General del Plan Nacional de I & D, Comisión Interministerial de Ciencia y Tecnología, Spain
- Dr. Alvaro H. ALEGRIA (Colombia)
 Departamento de Biología, Universidad del Valle, Colombia
- Dr. Walter BORZANI (Brazil)
 Director, Escola de Engenharia Mauá, Instituto Mauá de Tecnologia, Brazil
- Dr. Rita R. COLWELL (United States)
 President, University of Maryland Biotechnology Institute, University of Maryland System, United States
- Dr. Angel HERNANDEZ GARCIA (Venezuela)
 Consejo Nacional de Investigaciones, Científicas y Tecnológicas (CONICIT), Venezuela
- Dr. Luis HERRERA-ESTRELLA (Mexico)
 Head, Department of Plant Genetic Engineering, Centro de Investigación y de Estudios Avanzados del I.P.N., Unidad Irapuato, Mexico
- Dr. Gerald C. LALOR (Jamaica)
 Pro-Vice-Chancellor, University of the West Indies, Jamaica
- Dr. Barry STEMISHORN (Canada)
 Director, National Animal Health Programs, Food Production and Inspection Branch, Agriculture Canada, Canada
- Dr. Héctor Norberto TORRES (Argentina)
 Director, Instituto de Investigaciones en Ingeniería Genética y Biología Molecular (INGEBI), Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Argentina

UNU/ILA Advisory Committee

HM Queen NOOR of the Hashemite Kingdom of Jordan
(Jordan) (Chairperson)
Jordan

HE Mr. Hisashi OWADA (Japan) (Vice-Chairperson)
Ambassador, Permanent Mission of Japan to the United
Nations

Hon. Mr. Jan EGELAND (Norway)
Secretary of State, Royal Norwegian Ministry of Foreign
Affairs, Norway

Mr. Bartolomé MITRE (Argentina)
Editor, *La Nación*, Argentina

UNU/INWEH International Advisory Committee

Dr. Nii Boi Ayebotele (Ghana)
Former Director, Water Resources Research Institute, Ghana

Dr. James Bruce (Canada)
Chairman, Canadian Climate Program Board, Canada

Dr. Indira Chakravarty (Canada)
Director Professor and Dean, All India Institute of Hygiene
and Public Health, India

Dr. Peter George (Canada)
President and Vice Chancellor, McMaster University,
Canada

Dr. Jose Galizia Tundisi (Brazil)
President, National Council for Scientific and Technological
Development of Brazil (CNPq), Ministry of Science and
Technology, Brazil

Annex 3: UNU titles published in 1996

Books

- Emerging World Cities in Pacific Asia*
Edited by Fu-chen Lo and Yue-man Yeung, UNU Press
- Environment, Biodiversity, and Agricultural Change in West Africa: Perspectives from Ghana*
Edited by Edwin A. Gyasi and Juha I. Uitto, UNU Press
- Ethnicity and Power in the Contemporary World*
Edited by Kumar Rupesinghe and Valery A. Tishkov, UNU Press
- Exporting Africa: Technology, Trade and Industrialization in Sub-Saharan Africa*
edited by Samuel M. Wangwe, Routledge, UK, and UNU Press
- Food Habits in Later Life: A Cross Cultural Study*
By M. L. Wahlqvist, B.H. Hsu-Hage, A. Kouris-Blazos and W. Lukito, UNU Press
- In Pursuit of Science and Technology in Sub-Saharan Africa*
By J.L. Enos, Routledge, UK, and UNU Press
- Nepal: A Himalayan Kingdom in Transition*
By Pradyumna P. Karan and Hiroshi Ishii, UNU Press
- North-East Asian Regional Security: The Role of International Institutions*
Edited by Takashi Inoguchi and Grant B. Stillman, UNU Press
- People, Land Management, and Environmental Change*
Edited by Juha I. Uitto and Akiko Ono, UNU Press
- Politics of Technology in Latin America*
Edited by Maria Ines Bastos and Charles Cooper, Routledge, UK
- Sustaining the Future: Economic, Social, and Environmental Change in Sub-Saharan Africa*
Edited by George Benneh, William B. Morgan, and Juha I. Uitto, UNU Press
- The Burmese Connection: Illegal Drugs and the Making of the Golden Triangle*
By Ronald D. Renard, Lynne Rienner Publishers, USA
- The Long Road to Recovery: Community Responses to Industrial Disaster*
Edited by James K. Mitchell, UNU Press
- The Mega-city in Latin America*
Edited by Alan Gilbert, UNU Press
- Volunteers Against Conflict*
By United Nations Volunteers, UNU Press
- Women Encounter Technology: Changing Patterns of Employment in the Third World*
Edited by Swasti Mitter and Sheila Rowbotham, Routledge, UK, and UNU Press

Other publications

Academic Division

Journals:

- Food and Nutrition Bulletin*, vol. 16, nos. 3-4, vol. 17, nos. 1-2
UNU Press
- Global Environmental Change: Human and Policy Dimensions*, vol. 5, nos. 4-5, vol. 6, nos. 1-3
Butterworth-Heinemann, UK
- Global Governance: A Review of Multilateralism and International Organizations*, vol. 2, nos. 1-3
Lynne Rienner Publishers, Inc., USA
- Journal of Food Composition and Analysis*, vol. 8, no. 4, vol. 9, nos. 1-3
Academic Press, Inc., USA
- Mountain Research and Development*, vol. 15, no. 4, vol. 16, nos. 1-4
University of California Press, USA, for UNU and the International Mountain Society (IMS), USA
- PLEC News and Views*, nos. 6-7 [Newsletter of the People, Land Management and Environmental Change Project]
- South-South Perspectives*, nos. 14-17 [Newsletter of the South-South Cooperation Programme on Environmentally Sound Socio-economic Development in the Humid Tropics]
Edited by UNESCO

Conference and other reports:

- Defining Humanitarian Emergencies: What, When and How Much*
By Raimo Vayrynen

- Development, Aid and Conflict: the Case of Rwanda*
By Peter Uvin
- Early Warning of Communal Conflicts and Genocide: Linking Empirical Research to International Responses* [Monograph Series on Governance and Conflict Resolution]
By Ted Robert Gurr and Barbara Harff, UNU
- Haiti Held Hostage: International Responses to the Quest for Nationhood 1986-1996*
By Robert Maguire, Edwige Balutansky, Jacques Formerand, Larry Minear, William G. O'Neill, Thomas G. Weiss and Sarah Zaidi
- Regional Cooperation and Culture in Asia-Pacific* [Proceedings of the Japan-ASEAN Forum V, concluding Forum in this series]
Edited by Khien Theeravit and Grant B. Stillman, UNU
- The Economics of Humanitarian Emergencies*
By Wayne Nafziger

Lecture Series:

- No. 11 *UN Reform from the Standpoint of the United States*
By Benjamin Rivlin [presentation made on 25 September 1995]
- No. 12 *Man-Induced Desertification?*
By Monique Ainguet, Klaus Mersmann, and Marjolein Visser [presentation made on 7 November 1995]
- No. 13 *Environmental Policy and Trade*
By Heinrich Freiherr von Lersner [presentation made on 16 November 1995]

UNU/WIDER

Research for Action series:

- A Russian Puzzle: What Makes the Russian Economic Transformation a Special Case*
By Vladimir Popov
- Dealing With Capital Inflows: Are There Any Lessons?*
By Carmen Reinhart
- Development, Aid and Conflict: Reflections from the Case of Rwanda*
By Peter Uvin
- Habitat II and the Urban Economy: A Review of Recent Developments and Literature*
By Pii Elina Berghall
- Restructuring of Peripheral Villages in Northwestern Russia*
By Eira Varis
- The Age of Humanitarian Emergencies*
By Raimo Vayrynen
- The Banking System and Monetary Aggregates Following Financial Sector Reforms: Lessons from Indonesia*
By Anwar Nasution
- The Urban Challenge*
By Reino Hjerpe and Pii Elina Berghall
- Welfare Changes in China During the Economic Reforms*
By Lu Aiguo

Working papers:

- WP119 *The Economics of Complex Humanitarian Emergencies: Preliminary Approaches and Findings*
By E. Wayne Nafziger
- WP120 *Health Effects of Market-Based Reforms in Developing Countries* By Germano Mwabu
- WP121 *Country Responses to Massive Capital Flows*
By Manuel F. Montes

World Development Studies:

- Changing Patterns of Employment and Unemployment in Africa: A Comparative Perspective on Four Sub-Saharan Countries*
By Derseh Endale
- Regionalization in Southern Africa*
By Bertil Oden
- The Elusive Miracle: Latin America in the 1990's*
By Hernando Gomez
- The Political Economy of the Peace Process in a Changing Middle East*
By Moustafa Ahmed Moustafa

Books published by commercial publishers:

- Decolonizing Knowledge: From Development to Dialogue*
Edited by Frederique Apffel-Marglin and Stephen A. Marglin, Clarendon Press Oxford
- Democracy and Efficiency in the Economic Enterprise*
Edited by Ugo Pagano and Robert Rowthorn, Routledge
- Macroeconomic Policy After the Conservative Era: Studies in Investment, Saving and Finance*
By Gerald A. Epstein and Herbert M. Gintis, Cambridge University Press

Patriarchy and Development: Women's Positions at the End of the Twentieth Century

Edited by Valentine M. Moghadam, Clarendon Press Oxford

Technological Transformation, Volume V: The Historic Process

By Surendra J. Patel, Avebury

The Role of the State in Economic Change

Edited by Ha-Joon Chang and Robert Rowthorn, Clarendon Press

UNU/INTECH

Discussion papers:

- #9601 "The Relevance of Environmental Legislation for the Transfer of Environmentally Sound Technology: The Tanzanian Experience" by Yvonne Ruijters, January 1996
- #9602 "Multinational Enterprises, New Technologies and Export-Oriented Industrialization in Developing Countries: Trends and Prospects" by Nagesh Kumar, January 1996
- #9603 "Environmentally Sound Technology: Is Poland Overcoming Soviet-Type Learning Barriers" by Mikael Sandberg, April 1996
- #9604 "EST (Environmentally Sound Technologies) from the West—Asymmetry, Regimes and Polish Policy Implementation" by Mikael Sandberg, April 1996
- #9605 "Toward an Analytical Framework for National Innovation" by Shulin Gu, April 1996
- #9606 "Foreign Direct Investments and Technology Transfers in: A Perspective on Recent Literature" by Nagesh Kumar, August 1996

Working papers:

- WP20 "Sustainable Development by Substituting Technology for Energy and Environmental Constraints: Japan's View" by Chihiro Watanabe, August 1996
- WP21 "The Relevance of Environmental Legislation for the Transfer of Environmentally Sound Technology: the Tanzanian Experience" by Yvonne Ruijters, August 1996

UNU/IIST

Reports and notes:

- "A Constraint-Based Interactive Train Rescheduling Tool" by C. K. Chiu, C. M. Chou, J. H. M. Lee, H. F. Leung and Y. W. Leung
- "A Financial Information System: Domain Analysis—Narrative and Specification" (Technical Report MoFIT/2) by Do Tien Dung, Le Linh Chi, Nguyen Le Thu, Phung Phuong Nam and Tran Mai Lien
- "A Formal Description of Hybrid Systems" by Zhou Chaochen, Wang Ji and A. P. Ravn
- "A Formal Specification of Realm—Spatial Data Type" (Research Report 71) by Ngo Quac Tao
- "A Sampling Semantics of Duration Calculus" by Dang Van Hung and Phan Hong Giang
- "A Theory of Distributing Train Rescheduling" (Technical Report 51), by Chris George

- "An Adequate First Order Interval Logic" by Zhou Chaochen and M.R. Hansen
- "An Informal Domain Analysis for Manufacturing Enterprises" (Research Report 62), by Cleta Milagros Acebedo
- "Categories for System Integration—A Proposal" by Tomasz Janowski
- "Checking Linear Duration Invariant by Linear Programming" (Technical Report 70), by Li Xuandong and Dang Van Hung
- "Chopping a Point" by Zhou Chaochen and M. R. Hansen
- "Decision Support Systems for Sustainable Development: Experience and Potential—a Position Paper" (Administrative Report 80) by the Expert Group
- "Derivation of Control Programs: a Heating System" by Xu Qiwen and Yang Zengyu
- "Developing the Tax System Specification" (Technical Report MoFIT/7) by Do Tien Dung
- "Domain Analysis for a Budgetary System" (Technical Note) by Chris W. George, Tomasz Janowski and Richard Moore
- "Domain Analysis for Manufacturing: Formalization of the Market" (Research Report 63), by Tomasz Janowski
- "Duration Calculus Specification of Scheduling for Tasks With Shared Resources" by Philip Chan and Dang Van Hung
- "Dynamic Scheduling in the Presence of Faults: Specification and Verification" by T. Janowski and M. Joseph
- "Elements of Mathematical Analysis in PVS" by B. Dutertre
- "Experiences in Developing a Proof Theory for VDM Specifications" by John Fitzgerald and Richard Moore
- "External Debt Management" (Technical Report) by Chris George
- "Federated GIS+DIS-based Decision Support Systems for Sustainable Development—A Conceptual Architecture" (Research Report 61) by Dines Bjørner and Mohd Rais
- "Formal Development of a Digital Multiplexed Radio-Telephone System" (Research Report 67) by Roderick Durmiendo and Chris George
- "Formal Modeling of Large Domains" (Technical Report 74), by Dao Nam Anh and Richard Moore
- "Formal Specification of Stability in Hybrid Control Systems" by Wang Ji and He Weidong
- "Hierarchical Design of a Chemical Concentration Control System" by Xu Qiwen and He Weidong "Infrastructure Software Systems" (Technical Report 58) by Dines Bjørner
- "Interflow Systems for Manufacturing: Concepts and a Construction" (Technical Report 31), by Jan Goossenaerts and Dines Bjørner
- "LSD: Logical Systems Development" (Lecture Note Compendium 999) by Dines Bjørner et al.
- "Manufacturing Enterprise Simulation: A Business Game" (Research Report 64), by Cleta Milagros Acebedo and Erwin Paguio
- "Models of Enterprise Management: Strategy, Tactics and Operations—Case Study Applied to Airlines and Manufacturing" (Technical Report 60), by Dines Bjørner
- "Multi-directional Multi-lingual Script Processing" (Technical Report 75) by Myatav Erdenechimeg and Richard Moore
- "New Software Development" (Technical Report 59) by Dines Bjørner
- "On Bisimulation, Fault-Monotonicity and Provable Fault-Tolerance" (Technical Report 55) by T. Janowski
- "On Compositionality in Refining Concurrent Systems" by Xu Qiewn
- "Tax Policy" (Technical Report MoFIT/5) by Tran Mail Lien
- "Process Algebra Semantics of SLD" (Research Report 68), by J. A. Bergstra and C.A. Middleburg
- "Scheduling and Rescheduling of Trains" by Dines Bjørner, Chris George and Soren Prehn
- "Semantics and Verification of the Extended Phase Transition Systems in the Duration Calculus" (Technical Report 72), by Xu Qiwen
- "Software Systems Engineering—From Domain Analysis to Requirements Capture" (Technical Report 48) Dines Bjørner
- "Sources on Map Generalization" (Administrative Report 76) by Tomasz Janowski, Ngo Quoc and Dang Van Hung
- "Tax Policy" (Technical Report MoFIT/5) by Tran Mail Lien
- "Tax System Security" (Technical Report MoFIT/4) by Le Linh Chi and Nguyen Le Thu
- "Testing the Taxpayer Specification" (Technical Report MoFIT/3) by Le Linh Chi, Nguyen Le Thu, Phung Phuong Nam and Tran Mai Lien
- "Towards a Proof Assistant for Interval Logics" (Technical Report 77), by Mao Xiaoguang, Xu Quiwen and Wang Ji
- "Truth of Duration Calculus Formulae in Time Frames" (Research Report 82), by C. A. Middleburg
- "Verification of Digitalized Real-Time Systems" (Technical Report 54), by Dang Van Hung and Ko Kwang II
- "Virtual Enterprise: On Refinement Towards an ODP Architecture" (Technical Report 69) by T. Janowski and C. M. Acebedo

UNU/IAS

Working paper series:

- A Study on Human Impact on Global Land Degradation with the Application of Remote Sensing and GIS*
By Krishna Pahari
- An Economy-Wide Framework for the Selection on Environmentally Sound Technologies: An Application to the Electric Power Sector of India*
By Satya Murthy
- Biodiversity-Related Aspects of Intellectual Property Rights*
By Eugenio da Costa e Silva
- Energy and Sustainable Development*
By Nebojasa Nakicenovic
- Globalization and the World Cities*
By Peter Hall
- Globalization and World City Formation in Pacific Asia*
By Yue-man Yeung and Fu-chen Lo
- Green GDP of Japan for 1985 and 1990: Trial Estimates of Integrated Environmental and Economic Accounting*
By Yoichi Nakamura and Katsuki Oda

Industrial Metabolism, the Materials Cycle, and Global Change

By Robert Ayres

Industrial Restructuring and Outward Investment: The Japanese Aluminum Smelting Industry

By Mireya Solis

Islamic Cities in the World System

By Salah El-Shakhs

Land Settlement and Sustainability: The Process of Colonization in South America's Amazon and in Brazil's Savannas

By Charles Mueller

Medium Term Scenarios for the Global Economy

By Warwick McKibbin

Population Growth and Policy Options

By John Bongaarts

Poverty and Deforestation: Towards an Alternative Framework for Analysing the Link Between Poverty and Deforestation

By Francois E. Ekoko

Poverty, Natural Resource Consumption, and Sustainable Development

By Jyoti and Kirit Parikh

Regional Disparity in China 1985-1994: Effects of Globalization and Economic Liberalization

By Dapeng Hu and Masahisa Fujita

Rio de Janeiro as a World City

By Hamilton Tolsoa

The Cost of Inaction: Valuing the Macroeconomic Cost of Environmental Degradation in South Asia

By Carter Brandon

The Multinational Trading System and the Environment

By Kym Anderson

Transport and Telecommunications Among World Cities

By Peter Rimmer

Water Resources in the 21st Century: Increasing Scarcity, Declining Quality, and Implications for Action

By Mark Rosegrant

World Cities as Financial Centres

By David Meyer

Annex 4: UNU depository libraries around the world

Australia:	National Library of Australia, Canberra	Jordan:	The University of Jordan Library, Amman
Bahrain:	Bahrain University Library, Manama	Kenya:	University of Nairobi Library, Nairobi
Bangladesh:	Bangladesh Institute of Development Studies Library, Dhaka Dhaka University Library, Dhaka	Malaysia:	University of Malaya Library, Kuala Lumpur
Belgium:	Bibliothèque Royale Albert 1er, Brussels Commission of the European Communities Library, Brussels	Mexico:	Biblioteca Daniel Cosío Villegas, Mexico City
Botswana:	University of Botswana Library, Gaborone	Nepal:	Royal Nepal Academy of Science & Technology Library, Kathmandu
Canada:	McGill University Libraries, Quebec University of Toronto Library, Toronto	Netherlands:	Universiteitsbibliotheek (University Library), Amsterdam
China:	National Library of China, Beijing	Nigeria:	National Library of Nigeria, Lagos
Colombia:	Biblioteca General, Universidad de los Andes, Bogotá	Peru:	Biblioteca Central de la Pontificia, Universidad Católica del Perú, Lima
Denmark:	Det Kongelige Bibliotek (The Royal Library), Copenhagen Statsbiblioteket (State and University Library), Arhus	Philippines:	University of the Philippines at Los Baños Library, Laguna University of the Philippines Law Complex Library, Quezon City
Ethiopia:	Addis Ababa University Libraries, Addis Ababa	Poland:	Biblioteka Szkoły Głównej Planowania i Statystyki (Library of the Central School of Planning and Statistics), Warsaw
Fiji:	The University of the South Pacific Library, Suva	Saudi Arabia:	Ministry of Planning Library, Riyadh
Finland:	Helsinki University Library, Helsinki	Senegal:	Bibliothèque de l'Université de Dakar, Dakar
France:	Bibliothèque nationale, Paris	Sierra Leone:	Fourah Bay College Library, Freetown
Germany:	Die Deutsche Bibliothek, Leipzig Universitätsbibliothek, Freiburg	Sri Lanka:	Marga Institute Library, Sri Lanka Centre for Development Studies, Colombo
Ghana:	The Balme Library, University of Ghana, Accra	Surinam:	United Nations Depository Library, Anton de Kom Universiteit, Paramaribo
Guatemala:	Biblioteca Central, Universidad de San Carlos de Guatemala, Guatemala City	Sweden:	University Library, Lund University of Uppsala Library, Uppsala
Guyana:	University of Guyana Library, Georgetown	Tanzania:	University of Dar es Salaam Library, Dar es Salaam
Hungary:	Library of the Hungarian Parliament, Budapest	Thailand:	Central Library, Chulalongkorn University, Bangkok
Iceland:	Landsbókasafn Islands (National Library of Iceland), Reykjavík	Trinidad & Tobago:	The Main Library, the University of the West Indies, Trinidad
India:	Bangalore University Library, Bangalore H. T. Parekh Library, Madras Jawaharlal Nehru University Library, New Delhi The National Science Library, New Delhi	Tunisia:	Arab League Educational, Cultural & Scientific Organization Library, Tunis
Indonesia:	National Library of Indonesia, Jakarta	Uganda:	Makerere University Library, Kampala
Israel:	Elias Sourasky Library, Tel-Aviv University, Tel-Aviv	United Kingdom:	The British Library, London
Jamaica:	University of the West Indies Library, Kingston	United States:	Joint Bank-Fund Library, Washington, D.C. The Library of Congress, Washington, D.C.
Japan:	National Diet Library, Tokyo University of Tokyo Library, Tokyo	Zambia:	The University Library, Lusaka
		Zimbabwe:	University of Zimbabwe Library, Harare

(Continued from the inside front cover.)

UNU/IIST also helps bridge gaps between theory and practice, university and industry, consumer and producer, and industrialized countries and developing countries. In its programme activities, UNU/IIST concentrates on advanced joint research and development, and dissemination of public domain software and publications—all involving fellowships at UNU/IIST in Macau and with partners in developing countries.

UNU Institute for Natural Resources in Africa (UNU/INRA), Accra, Ghana, with a Mineral Resources Unit in Lusaka, Zambia (April 1990)

In order to assist in the efforts to enhance management and rehabilitation of Africa's natural resources, the UNU Council approved the establishment of an Institute for Natural Resources in Africa (UNU/INRA) in 1986. UNU/INRA's main objectives are to strengthen national institutions in Africa, mobilize scientists and technologists throughout the continent, and empower them with knowledge so they can formulate self-reliant policy options.

UNU/INRA's activities focus on:

1. soil and water conservation and management;
2. indigenous food crops and other useful plants; and
3. mineral resource development.

UNU Institute of Advanced Studies (UNU/IAS), Tokyo, Japan (April 1996)

UNU/IAS is the University's newest research and training centre. It develops original, forward-looking solutions to problems at the interface of societal and natural systems. Its research programme investigates three interlinked themes of environmentally sustainable development: eco-restructuring for sustainable development, mega-cities and urban development, and multilateralism and governance. It also has a postgraduate education programme offering Ph.D. fellowships and short training courses in one of the above three themes.

The Academic Division at the UNU Headquarters in Tokyo also coordinates programmes and project networks involving institutions worldwide on subjects ranging from democracy and human rights and the United Nations in the 21st Century to mountain ecology and sustainable development.

The University has two specialized programmes: a **Programme for Biotechnology in Latin America and the Caribbean (UNU/BIOLAC)**, located in Caracas, Venezuela (July 1988), which develops and promotes biotechnology in the region; and the **UNU International Network on Water, Environment and Health (UNU/INWEH)**, located in Ontario, Canada (October 1996), which integrates international expertise into a programme of education, training, research and technology transfer on major issues that relate to water, environment and human health. The UNU also has the **International Leadership Academy (UNU/ILA)**, located in Amman, Jordan (April 1995), to serve as a focal point for the exchange of information and experience among young potential and future leaders of the world.

Postgraduate training activities

Between 1976 and 1996, more than 1,450 UNU fellows received postgraduate training in UNU networks. The UNU's postgraduate training programme helps strengthen institutional capacities in developing countries by promoting self-reliant development and providing opportunities for scholars and scientists to be involved in UNU research networks. Fellows are selected on the basis of three criteria: their work must be in an area of concern to the University, they must be recommended by their home institution, and they must be committed to returning to work at their home institution.

Dissemination activities

The University has its own press, producing academic publications and cooperating in the production of six professional journals. *Work in Progress*, *UNU Nexions*, and several brochures issued by UNU's Public Affairs Section, are the main information vehicles used in reporting ongoing research and developments within the University's academic networks.

Financing

The UNU receives no funds from the regular UN budget. The University's activities are supported entirely by voluntary contributions from governments, agencies, international organizations, private companies and foundations. The University's basic annual income for operating expenses comes from investment income derived from its Endowment Fund. The annual budget in 1996 was approximately US\$39 million.

* * *



The United Nations
University

Public Affairs Section
The United Nations University
53-70, Jingumae 5-chome
Shibuya-ku, Tokyo 150
Japan
Telephone: (03)3499-2811
Fax: (03)3499-2828
E-Mail: mbox@hq.unu.edu

Printed on recycled paper.
Printed in Japan.
E40-06-97