



UNITED NATIONS UNIVERSITY

Annual
Report
2003

United Nations University

Background

United Nations University (UNU) is an international community of scholars engaged in research, postgraduate training and dissemination of knowledge in furtherance of the purposes and principles of the Charter of the United Nations. The idea for this type of international organization was originally proposed in 1969 by then United Nations Secretary-General U Thant, who suggested the creation of “a United Nations university, truly international in character and devoted to the Charter’s objectives of peace and progress.”

The University commenced operations in September 1975 as 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).

Objectives and main roles

As the UNU Charter states, the aim of the University is to foster intellectual cooperation among scholars and scientists in an effort to understand and solve “pressing global problems of human survival, development and welfare.” The University has a special mandate to alleviate the intellectual isolation of academics in developing countries by organizing worldwide networks of collaborating scholars and research institutions.

Five main roles are central to UNU’s mission. These are that the University should:

- be an international community of scholars;
- form a bridge between the United Nations and the international academic community;
- serve as a think-tank for the United Nations system;
- contribute to capacity building, particularly in developing countries; and
- serve as a platform for dialogue and new and creative ideas.

Organization

The University consists of UNU Centre in Tokyo, several research and training centres and programmes (RTC/Ps), and a network of associated and cooperating institutions and scholars.

The University Council sets the principles and policies for the University. It has 24 members who are appointed for six-year terms by the Secretary-General of the United Nations and the Director-General of UNESCO. 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 UNU 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 overall programme.

Research and training directions in the 21st century

The University studies the effects of human activities, which are altering the world on an unprecedented scale. Particular importance is given to those that affect developing countries. The University’s academic activities are coordinated and carried out by UNU Centre and the RTC/Ps as well as through a global network of associated and cooperating institutions and scholars. UNU’s work is clustered within two main programme areas: peace and governance, and environment and sustainable development.

UNU Centre, Tokyo, Japan (1975)

UNU Centre assists the Rector in programming, planning and administering the work of the University. UNU Centre comprises three main academic units: The **Environment and Sustainable Development Programme** focuses on the interactions between human activities and the natural environment, and their implications for sustainable human development. The **Peace and Governance Programme** undertakes research, foresight and policy studies, and capacity development to promote peace and good governance. The **Capacity Development Programme** coordinates a variety of short- and long-duration fellowship programmes to train young scientists from developing countries.

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

UNU-WIDER, the University’s first research and training centre, provides original analyses of emerging topics and offers policy advice aimed at the sustainable economic and social development of the poorest nations.

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

UNU-INTECH develops fresh insights into the emergence, spread and impacts of new technologies, especially in developing countries. The Institute specializes in the role of new technologies in the development process. It conducts research, foresight and policy analyses, and capacity development. Its teaching programmes, workshops and joint research projects help people from developing countries to explore and assess the opportunities created by new technologies, and to anticipate the potential consequences for their countries.

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

UNU-INRA focuses on working with African universities and research institutions to generate knowledge and train human capital needed to develop, adapt and disseminate technologies for the conservation and productive use of Africa’s natural resources.

UNU International Institute for Software Technology (UNU-IIST), Macao (1992)

UNU-IIST aims to help developing countries improve their capacity in software engineering, and hence their capacity to be involved in and take advantage of the rapid development of information and communication technologies (ICT).

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RECTOR'S PREFACE



There is increasing recognition that United Nations University (UNU) is making useful and valued contributions to the work of the United Nations system. This Annual Report highlights some of those contributions.

UNU's programme networks are addressing key issues that are of concern to United Nations organizations and programmes, ranging from conflict and security, human rights and ethics, sustainable urbanization, and the management of fragile ecosystems to solutions to international water crises, economic and environmental governance, natural resources management and regional integration, to name just a few. UNU's research and capacity development activities increasingly bring UNU scientists into direct contact with the ongoing work of the UN. This year has been particularly encouraging to us, as we have found that our continuing efforts to strengthen and expand the UNU system, to enhance our cooperation with and contributions to the United Nations system, as well as to expand the outreach of the University worldwide are bearing fruit.

During 2003, we were able to put the finishing touches on a new initiative, the UNU Institute for Environment and Human Security (UNU-EHS) in Bonn. The Institute began its work on 1 December 2003. Also during the year, we made good progress in discussions with the Government of Malaysia to establish a new UNU research and training centre, the UNU Institute of Global Health (UNU-IIGH), to be located in Kuala Lumpur. Late in the year, the Malaysian Cabinet formally approved the proposal for establishing this new Institute.

This year, we saw good progress in the further development of our online learning initiative. Together with partner institutions in Norway and Japan, and in good cooperation with, for instance, UNEP and ITU, we have begun to develop broader regional networks covering Africa and the Asia-Pacific that will help us to ensure that the knowledge gained through our ongoing research projects is made available to those who need it and can benefit most from it in the form of interactive, online, modular courses as well as in forms of dissemination using other media.

We continued to make progress in 2003 in strengthening our ongoing capacity development programmes, including the annual sessions of UNU International Courses that take place in Tokyo in May and June of each year. Many of our research and training centres and programmes also have been able to expand the outreach of their capacity development programmes, such as those of UNU-INWEH in the Middle East and UNU-INRA in Africa. Our Geothermal Training Programme, organized in Iceland, reached its landmark 25th year in 2003, the longest ongoing training programme within the UNU system. We continued to improve the quality and outreach of the annual UNU Global Seminars in Japan, and to initiate the first off-shore global seminar in Seoul, Republic of Korea, in cooperation with the Korean National Commission for UNESCO.

We have been continuing our efforts to improve the effectiveness of the UNU system and to renew and strengthen cooperation among our 12 research and training centres and programmes. A new Joint Activities Fund (JAF), included in the 2004–2005 biennial academic programme and budget and approved by the UNU Council in its December 2003 meeting, is meant to support joint projects that will bring additionality to the work of UNU as a whole involving two or more parts of the UNU system. A similar fund for “innovative capacity building initiatives” has been included in our plans for 2004–2005, also, to promote new training or teaching activities involving cooperation among different parts of the UNU system. A number of topics have been identified around which intra-UNU cooperation will be focused as from 2003, including water resources, a web portal for UN research, social acceptance of biotechnology and management of fragile ecosystems, among others. It is envisaged that the web portal for UNU research will be extended to eventually include all research relating to UN.

During 2003, we have sought to extend and build up our cooperation with different parts of the United Nations system; joint initiatives with UNEP in the area of online learning through GRID-Arendal in Norway and the inter-linkages project are but two examples. We have renewed our contacts with other parts of the UN system in areas of mutual interest, such as with ITU related to the World Summit on the Information Society and with UNAIDS regarding HIV/AIDS and security issues. We co-organized in late October 2003 the fourth annual Geneva Research and Policy Dialogue (GRPD) together with the Director-General of the United Nations Office at Geneva. There are clear indications that the GRPD initiative is itself helping to foster new cooperation among different parts of the UN research community.

We were able to sustain ongoing cooperation with some of our key partners within the UN system, such as FAO, WHO, UNCTAD, UNITAR and UNDP, and to initiate new cooperation with WTO, ITU, UNFPA, UNDESA and UNECA, among others. Our relations with UNESCO are particularly strong, which is illustrated by our productive staff exchange programme. This year, we organized jointly the conference on “Globalization with a Human Face — Benefitting All,” and worked closely together with the science sector, specifically on water-related issues — in preparing for the Third World Water Forum — and with the (higher) education sector on the World Conference on Higher Education Plus Five and in the preparation of the Year and Decade for Education for Sustainable Development. In this context, we have further strengthened our relations with worldwide organizations in the fields of science and technology and education, such as TWAS, ICSU and IAU.

Finally, during the past year we have been focused on expanding the outreach of the UNU system in its various host locations and in terms of our networks of associated and cooperating institutions. We have continued to concentrate on a number of key issues, such as African development through our participation in the Third Tokyo International Conference on African Development (TICAD III). This activity has involved different parts of the UNU system, including UNU-WIDER, UNU-INRA and UNU-CRIS. We have also continued to work with members of the African diplomatic corps in Tokyo to organize an annual African Day symposium. Our continuing work with the EU Delegation in Tokyo, as well as with the member countries of the Organization of the

Islamic Conference, is another indication of our growing involvement with different regional organizations and consortia.

We made a specific University-wide effort to contribute to the outcomes of the Third World Water Forum, held in Kyoto in March as a part of the International Year of Freshwater (2003). I have already mentioned developments regarding online learning involving the Global Virtual University initiative with support from the Government of Norway and UNEP, as well as the Asia Pacific Initiative coordinated with Keio University and CISCO Systems in the UNU Media Studio in Tokyo. Our research and training centres have also made specific efforts to foster stronger links with their local academic communities through annual lectures and joint research initiatives in such locations as Helsinki, Hamilton, Maastricht, Accra, Macao, Bruges and Tokyo.

We were pleased to be able to redefine and implement a new framework for associated institutions of the UNU system as set out in our Charter. Towards this end, the UNU Council designated four new associated institutions at its 50th session in December: Griffith University in Australia, the Federal University of Mato Grosso in Brazil, the Kwangju Institute for Science and Technology in the Republic of Korea and GRID-Arendal in Norway.

While we made good progress during 2003 towards the goals and objectives set for UNU within its Strategic Plan 2002, we will endeavour to continue these efforts and to renew our efforts to mobilize additional financial and other resources for the University’s work. It is against the context of reduced resources and decreasing financial assistance being made available by donor governments that UNU is striving to enhance the quality of its contributions to the United Nations system, its active involvement with the international academic community, and our efforts to broaden the outreach and visibility of UNU’s work worldwide.

I am sure that you will find this year’s annual report to be of interest, in terms of both the substance of our work as well as the many varied events and development. I hope that it will give you a better understanding of the varied and important work being undertaken by UNU as the University of the United Nations.

Hans van Ginkel
Rector

THE YEAR IN REVIEW

Introduction

The overarching goal of United Nations University (UNU) is the advancement of knowledge in areas relevant to addressing global issues of human security and development. As an international community of scholars, UNU strives to be a think tank for the United Nations (UN) system, a bridge between the UN and the international scientific community, a builder of capacities (particularly in developing countries), and a platform for dialogue and new and creative ideas. The special nature of UNU is that it not only combines research, policy studies and teaching, but also brings to this work a global perspective that incorporates both theoretical and practical approaches.

Rather than attempting to provide an exhaustive account of UNU work, this Annual Report focuses on selected key topics and major advances in 2003. Further information about UNU's research, training and dissemination activities can be found on the UNU website.¹

In addition to undertaking its ongoing agenda of research, capacity development and dissemination activities, UNU actively contributed in 2003 to several major international events held in Japan. These included the Third World Water Forum (March), a Wilton Park Conference (September), the Third Tokyo International Conference on African Development (Sept./Oct.), and The World Summit on the Information Society (December).

UNU continues to actively promote the adoption and use of computer-mediated dissemination and learning technologies. The year saw the official launches of the Media Studio at UN House in Tokyo (March) and Global Virtual University in Norway (June), and introduction of a Video Portal offering public access (online and via CD-ROM) to UNU's video archives and regular livecasts. Another key online initiative in 2003 was establishment of the Alumni-Net database as a means of linking up UNU "alumni" (former fellows, Council and Board members, employees and project participants) with new generations of young scholars.

A major role of UNU is to contribute to the work of the United Nations by presenting its research results and introducing new and creative ideas. UNU clusters its

work within two broad programme areas — *Peace and Governance* and *Environment and Sustainable Development* — utilizing innovative techniques and methodologies to undertake cross-cultural and multidisciplinary research and training on a broad range of themes within these areas as well as on issues that cut across themes and programme areas. UNU disseminates the results of its work through a variety of channels, including high-level conferences, panels and workshops as well as books, reports, journal articles, newsletters and the Internet.

UNU Centre, based in Tokyo, is supported by a network of 12 Research and Training Centres and Programmes (RTC/Ps) located throughout the world. Each RTC/P has its own individual programmatic focus that both integrates with and supplements the work of the above programme areas. The activities of UNU Centre and the UNU RTC/Ps are, in turn, supported by global networks of associated and cooperating institutions and scholars.



Women collecting water from a well in Bangladesh
(Photograph: worldviewimages.com)

¹ UNU's website, <http://www.unu.edu/>, provides details of the activities of UNU Centre as well as links to the websites of each of UNU's network of Research and Training Centres and Programmes.

UNU Governing Council

The governing body of UNU, the Council of United Nations University, held its 50th session at UNU Centre in Tokyo from 1–5 December 2003. The main functions of the Council are to formulate the principles and policies that govern the operations of the University, consider and approve the UNU work programme and budget, and make recommendations regarding the effective functioning of the University. This year deliberations focused on the following main topics: (1) the 2004–2005 Academic Programme and Budget; (2) a review of the financial situation of UNU, including the management of the UNU Endowment Fund; (3) the UNU Personnel Policy; (4) a policy paper on new UNU associated institutions; (5) a policy on the role of UNU support groups and associations; (6) a UNU-wide strategy for follow-up of the World Summit on Sustainable Development (WSSD); and (7) a report on UNU's strategy for future activities in and on Africa.

UNU Peace and Governance Programme

The work of the UNU Peace and Governance Programme focuses on the interconnected issues of sustainable peace, security and good governance. The Programme's projects are organized into four main thematic areas: (a) Conflict and Security, (b) Human Rights and Ethics, (c) Policy and Institutional Frameworks, and (d) the International Order and International Justice. The projects in these areas seek to generate policy-relevant research results aimed at deepening our understanding of pressing global problems and, where feasible, presenting policy prescriptions. An inter-related set of new projects and activities for the 2004–5 biennium has been conceptualized and prepared under the broad theme of "Multilateralism under Challenge."

In 2003, the Peace and Governance Programme implemented a wide range of research, policy analysis, capacity development and dissemination activities; the year saw the completion and dissemination of a number of long-term projects and the launching of several new projects. An important aspect of most project activities is partnerships with researchers and research institutions around the world. Such partnerships permit leveraging of



A child in Panama (Photograph: worldviewimages.com)

modest core funds and enable substantial expansion of the networking base of UNU.

The Peace and Governance Programme continued its fruitful collaboration with the European Union Commission Delegation in Japan by co-hosting the third EU-UNU Tokyo Global Forum in January. The theme of this major international conference was "Children in Turmoil: Rights of the Child in the Midst of Human Insecurity." The Programme also co-organized an autumn Wilton Park Conference on "Japan and East Asia in a Globalising World" in Hakone, Japan, marking the first time that a Wilton Park conference had been held outside Europe.

A number of Peace and Governance Programme books were published in 2003 by UNU Press.

UNU Environment and Sustainable Development Programme

In 2003, the UNU Environment and Sustainable Development Programme streamlined its activities into four main thematic areas — (a) Sustainable Urbanization, (b) Management of Fragile Ecosystems, (c) Solutions to Water Crises, and (d) Environmental Governance and Information — and expanded in coverage, especially in issues relating to water and information technology (IT). These changes reflect UNU's response to current major global issues in areas of growing concern, such as difficulties in guaranteeing an adequate supply of water to the global population and the challenges brought about by IT in the management of the environment.



A young girl gets a drink at a newly installed well in Nicaragua
(Photograph: worldviewimages.com)

During UN International Year of Freshwater 2003, UNU played an important role in organizing a number of sessions at the 3rd World Water Forum, held in Japan in March; experts from the Environment and Sustainable Development Programme and UNU-INWEH led or participated in discussions at those and other sessions, and UNU Rector Hans van Ginkel chaired an opening plenary session and delivered a keynote address on emerging water issues. The UNU Environment and Sustainable Development Programme also explored the issue of public participation in water management through international symposiums on “Improving Public Participation and Governance in International Watershed Management,” held in April at the University of Virginia School of Law, and “Public Participation and Governance in Water Resources Management,” held in October in Tokyo.

In July, UNU organized a regional workshop in Bangkok that brought together senior representatives from 15 countries in the Asia-Pacific to discuss the issue of catastrophic floods. In response to a resolution adopted by workshop participants, UNU will launch a regional action programme for flood risk assessment and risk reduction. Impact assessment of anthropogenic and climate changes on the water cycle has already started in the Mekong basin and in Sri Lanka.

IT-related work of the Environment and Sustainable Development Programme included the Information Technology and Environmental Issues project. Findings of the project regarding the high production cost of computer microchips received worldwide media attention in 2003.

Cross-Cutting Issues

Rather than fitting neatly into a specific thematic structure, some issues cut across or complement UNU’s formal programme areas. To counteract the typical narrow, single-issue focus of global agreements and treaties, for example, UNU puts emphasis on exploring the changing nature of multilateral governance frameworks relating to technology, the economy and the environment. In 2003, UNU’s research work involved multidisciplinary and interdisciplinary projects that dealt with such cross-cutting issues as globalization with a “human face,” the effects of the international trade regime, sustainable development finance and governance, and inequality and human well-being.

Other issues, meanwhile, significantly impact ongoing activities in all areas of research, capacity building and dissemination. Such issues such as gender-sensitive development and appropriate adoption of advances in information and communication technologies are embedded across the range of UNU’s work.

Capacity Development

UNU is strongly committed to capacity building, with the particular aim of enhancing individual and institutional capacity in developing countries. UNU focuses its capacity building efforts on advanced training (particularly at the postgraduate level) and sustainability

(“training the trainers,” and helping to ensure that training provided to individuals will bear greater fruit at an institutional level). Training opportunities are implemented worldwide in cooperation with strong partner institutions.

UNU undertakes capacity development for postgraduate scholars and young professionals through specialized *advanced training programmes*; these encompass short- and long-duration courses as well as postgraduate degree-oriented study in fields that span the University’s priority programme areas. In 2003, UNU supported:

- short-duration training courses and workshops in such diverse fields as armed conflict and peace-keeping, environment and sustainable development, human rights, international cooperation and development, environmental and natural resources management, coastal biodiversity, natural disaster risk management, biotechnology and nutrition;
- long-duration programmes in biodiversity, fisheries, geothermal energy, food technology, biotechnology, remote sensing, information technology, and peace and sustainable development; and
- degree-oriented study programmes in human nutrition, applied mathematics and computer science, economics of technological change, development planning, and more.

UNU also provides *project-based development* by giving individuals, groups and institutions opportunities to upgrade their skills and knowledge through involvement in UNU project work, and supports the *networking activities* of developing country academics.

Networking

The concept of networking is integral to UNU’s research and capacity development activities. To complement its own internal network of Research and Training Centres and Programmes, UNU reaches out to wider networks of partners in international academia that share similar objectives.

The adoption of new information and communications technologies has greatly enhanced the effectiveness of UNU’s networking approach. Under the leadership of the UNU Campus Computing Centre in Tokyo, IT capabilities and services were enhanced and expanded throughout the UNU system.

In the realm of policy dialogue, 2003 saw the previ-

ously mentioned EU-UNU Tokyo Global Forum in January and the Wilton Park Conference in September.

Prominent among UNU networking activities in 2003 were the Latin American and African initiatives, Asia task force, multi-country growth reference study and training fellowship programme initiatives undertaken by the Food and Nutrition Programme, in partnership with one or more UN agencies and other regional or global organizations. Other notable networking efforts included UNU-INRA’s African networking initiatives and UNU-BIOLAC’s biotechnology networking activities.

Links within the UN System

To better tap knowledge, analyses and expertise from around the world, each year UNU and the UN Office in Geneva jointly organize the Geneva Research and Policy Dialogue. This Dialogue is meant to provide practical and pertinent inputs for policy development and implementation across programmes and departments. Among the presentations in 2003 were the UNU projects on refugees and human rights in societies in transition.

UNU continues to explore ways and means to strengthen its connection to the UN system of organizations by enhancing existing links and forging new cooperative relationships. UNU works closely with such key UN partners as UNESCO, UNEP, FAO, WHO, UNCTAD, UNITAR and UNDP, and seeks to identify new possibilities for cooperation with these partners as well as with WTO, ITU, UNFPA, UNDESA, UNECA and others.² The types and extent of cooperation vary widely.

In 2003, UNU collaborated with about 40 UN system organizations in implementing its activities. Among new agreements that UNU signed with other UN agencies were a memorandum of understanding between UNU-WIDER and UNDESA regarding a joint development finance project, and a memorandum of understanding between UNU-FTP and the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (UNEP-GPA) regarding consultancy and training.

² See the list at the end of the Links Within the United Nation System section for the full names of these UN organizations.

Dissemination

The work of UNU led to the publication of more than 40 new books in 2003, including 15 new titles published by UNU Press. UNU Press undertook a series of cost-reduction and process enhancement projects, completed its first entirely onscreen publishing project, and re-printed its first title using digital print-on-demand technology. UNU Press actively promoted its publications and the work of UNU at panels and book fairs around the world, including at the Third World Water Forum and the World Summit on the Information Society.

In the print media, UNU staff published more than 160 articles in scholarly and popular journals as well as over 100 discussion and working papers, and contributed to more than 40 books. UNU also made increasing use of electronic means to disseminate information about its activities in 2003. This includes the Web-based *UNU Update* newsletter and electronic versions of the print newsletters *UNUnexions*, *Work in Progress* and *WIDER Angle*. UNU Library launched a pilot version of an online public access catalog of UNU publications.

Information about UNU's work was further disseminated to target audiences through numerous public lectures, conferences, symposiums, workshops and other events. The U Thant Distinguished Lecture Series presented lectures by Prof. Ahmed H. Zewail, 1999 Nobel Prize winner in Chemistry (15 April); the Honorable Jimmy Carter, 39th President of the United States of America and recipient of the 2002 Nobel Peace Prize (5 September); and Australian scientist Dr. Peter Doherty, co-winner of the 1996 Nobel Prize in Medicine (17 October).

The UNU Global Seminar series for university students and young professionals was attended by more than 390 participants in seven sessions held throughout Japan, and the first session held outside of Japan (in Seoul, Republic of Korea). Four sessions of the UNU-IAS Tokyo Roundtable were also convened in 2003.

Organizational and Administrative Developments

- Following the sudden death of UNU-IIST Director Armando Haeberer in February, Senior Research Fellow Chris George was appointed UNU-IIST Director ad interim, effective 1 March.
- During 2003, membership of UNU-INRA's College of Research Associates increased from 22 to 54 (from 37 universities and research institutes in 19 countries).
- UNU-IAS Director A.H. Zakri attended a series of feasibility study team meetings and negotiated, on behalf of UNU, with the Malaysian Government and other academic counterparts regarding the initiative to establish a new UNU-RTC/P on Global Health in Malaysia.
- Responding to a request by the Japanese Government, UNU-IAS took a proactive role in organizing the Global Environmental Action Conference for Sustainable Future, held in Tokyo in October.
- UNU-INWEH received assurance of three years of additional funding from the Canadian International Development Agency.
- Dr. Zafar Adeel of the UNU Centre Environment and Sustainable Development Programme was appointed Assistant Director of UNU-INWEH.
- Dr. Jean-Marc Coicaud of the UNU Centre Peace and Governance Programme was appointed interim head of the UNU Office in New York.
- Peer evaluation of UNU-INTECH was completed.
- UNU played an active role in the 3rd World Water Forum held in March in Kyoto and organized a workshop in July as an input to the 3rd Tokyo International Conference on African Development, which opened in late September.
- Prof. Itaru Yasui was appointed as Vice-Rector, Environment and Sustainable Development, in December.
- Dr. Janos Bogardi was appointed as Director of the new UNU Institute for Environment and Human Security (UNU-EHS) in Bonn, Germany.

PEACE AND GOVERNANCE

The research programmes of the institutions of the University shall include ... coexistence between peoples having different cultures, languages and social systems; peaceful relations between States and the maintenance of peace and security; human rights; ... and universal human values related to the improvement of the quality of life.

— [UNU Charter Article I.3]

The UNU Peace and Governance Programme contributes to the promotion of sustainable peace and good governance by organizing and supporting research that produces policy-oriented recommendations for current problems and identifies long-term trends and patterns that may affect peace, security and governance. The Programme adopts a forward-looking, innovative approach to addressing the complex set of issues and challenges that confront humankind today — an approach that conceptualizes peace, governance and security in the broadest sense.

In 2003, the UNU Peace and Governance Programme focused its research and policy analysis activities in four thematic areas:

- Conflict and Security,
- Human Rights and Ethics,
- Policy and Institutional Frameworks, and
- International Order and International Justice.

The projects implemented in these four areas seek to generate policy-relevant research results aimed at broadening and deepening our understanding of pressing global governance and security problems and, where feasible, generating practical policy prescriptions. To make max-

imum use of resources and information worldwide, projects are typically organized on a network basis, bringing together academics and practitioners from around the world.

This year saw the completion and dissemination of findings of a number of long-term projects as well as the launching of several new projects. This section highlights a broad selection of noteworthy UNU Peace and Governance Programme projects conducted in 2003.

Conflict and Security

The Peace and Governance Programme's work in Conflict and Security Studies directly reflects the complex and challenging nature of war and peace in the post-cold war era. Today, we are faced with new types of conflicts and security threats that must be addressed with improved approaches and structures of conflict prevention/resolution and security management. Work in this thematic area focuses on the roots of human, national, regional and international security threats, and on the roles of civil society and state, regional and international actors in the provision of security. Issues of conflict prevention and peace-building receive particular attention.

Projects in this thematic area aim to provide comparative analyses that translate into lessons that are applicable in specific regions or countries by local actors, or globally by the United Nations. This sub-section highlights seven projects that deal with issues of conflict and human security.

Making States Work

The performance of "the state" has relevance to a range of pressing global challenges. The project Making States Work represents a major policy-relevant research initiative to deepen our understanding of the conditions of successful state formation, the consequences of state failure, and effective national and international strategies for forestalling crises of state capacity or legitimacy.

The project — a joint effort by UNU, the International Peace Academy (USA) and Harvard University's Carr Center — focuses on situations in which the weakness or collapse of state institutions becomes a matter of



A Cambodian woman (Photograph: worldviewimages.com)

international concern. Work is geared toward advancing research and policy debate on the changing nature of states by providing comprehensive analyses and feasible policy recommendations. The project also considers how political power (as defined through territorial boundaries) is changing, and what this means for international security.

Project participants held a number of meetings during 2003 and began preparation of a major book. The project has produced numerous innovative results, many of which touch upon the role of international actors. The findings show that successfully maintaining the viability and legitimacy of a state requires enlightened local leadership, coherent institutional coordination, and appropriate international assistance for consolidating a national agenda. For international actors, the humbling conclusion is that while their assistance is often necessary, states cannot be “made to work” from the outside. Local actors must seize the opportunity that the (often brief) window of international interest provides to take responsibility (“ownership”) and foster discussion among the country’s population about what sort of state they wish to live in.

Conflict Prevention

Development practitioners, foreign policy makers and non-governmental organizations (NGOs) — who come to the conflict prevention debate from different directions but with common objectives — need to be able to talk to each other and find ways to cooperate. Today, the challenge of communication and cooperation is growing as a widening range of actors with very different mandates and divergent objectives and interests (including corporate sector entities and regional or multilateral economic and political organizations) are being called upon to assist in conflict prevention.

The aim of the project *Conflict Prevention: From Rhetoric to Policy* is to understand the diverse mandates, leadership, funding, operational activities and “entry points” that are relevant in the context of conflict prevention. Three books based on the project findings are planned.

From Conflict to Reconstruction

Why have some societies been able to build and maintain robust institutions that enable the peaceful expression and resolution of conflict, while others have seen the breakdown of their institutions and a resort to violence as a common means for settling differences? There are many possible answers to this question, ranging from weak and predatory institutions inherited from colonialism and further degraded and exploited by political elites for their own ends (sub-Saharan Africa) to sudden political and economic transitions (the former Soviet Union and Eastern Europe) to conflicts over natural resource wealth (Sierra Leone and Democratic Republic of Congo). Violent conflict often has important economic dimensions, but what really matters seems to be whether the country has been able to build institutions to manage its wealth wisely and channel it into development.

The UN system, established to deal with a very different (post-World War II) global system, has struggled to cope, while the effectiveness of such institutions as the International Monetary Fund and World Bank has been increasingly undermined by war and political turmoil. Transnational terrorism, driven by deeply embedded grievances, is now thriving, largely undeterred by the threat of armed force. Overall, the new wave in the internationalization of conflicts poses a grave threat to the prospects of the world’s poorest countries; if unchecked, it could push millions back into the deepest poverty.

UNU-WIDER examined post-conflict reconstruction in five African countries ravaged by war: Angola, Eritrea, Ethiopia, Guinea-Bissau and Mozambique. The experience of post-conflict reconstruction shows that while peace may save the lives of the poor, it often does little to improve their livelihoods. By undermining the livelihoods of the poor and destroying essential services, wars reduce the ability of poor communities to share in national recovery when peace is restored. Moreover, those who control the post-war state may be unable or unwilling to ensure that reconstruction benefits the majority; often, a narrow elite reaps most of the gain, thereby setting the stage for conflict to return (as events in Liberia have all too tragically shown).

To achieve broad-based recovery, the focus should be on the needs of the poor and their communities, and particularly on the needs of women and children. This means

using public funds to get basic services and infrastructure out to the remotest rural regions and into the poorest urban neighbourhoods. When backed by foreign aid and debt relief, this strategy can get the poor back on their feet, but to work, this strategy needs a vigorous private sector and effective (democratic) state institutions.

Yet even broad-based recovery will not necessarily ensure peace; those who could profit may be willing to return to war if political and economic reforms threaten their interests. A focus on broad-based recovery therefore must be accompanied by resolute efforts to restrain those who might profit from war; this, in turn, necessitates international action, especially in regard to money laundering and the arms trade.

Spoilers in Peace Processes

The project Spoilers and Devious Objectives in Peace Processes explores factors that can obstruct conflict settlement processes. “Spoilers” and “spoiling” are defined, respectively, as groups and tactics that actively seek to hinder or undermine conflict settlement through various means and for a variety of motives.

Two project meetings were held in 2003. A planning workshop held in May in Colombo, and attended by project participants and several Sri Lanka-based experts, played a vital role in refining and developing the project’s research questions and methodology. Taking the project to Sri Lanka at the outset injected some fresh ideas and enabled learning from the ongoing conflict resolution process in that country (which is of high relevance to the whole project, and will form an important case study).

A full project meeting, held in December in Bruges, emphasized the important issue areas. It was decided that researchers will identify the comparative dynamics of “spoilers” and “spoiling” across a wide variety of cases to demonstrate patterns in tactics, motivations and funding, and also seek to identify the differences between “spoiling” and “politics” (in this case, rational objections to terms or conditions perceived to be unfair or unduly detrimental to one’s cause): What is acceptable or unacceptable within a peace process? How much “spoiling” (including violence) can a peace process absorb? Project participants will also seek to identify patterns in environmental variables (such as the role of external actors, including diaspora groups, the political economy, and the

presence or absence of disputes over natural resources) that give spoilers an opportunity to exert leverage.

Regional Cooperation in the Transcaucasus

The project Regional Cooperation and Conflict Prevention in the Transcaucasus examined one of the least stable regions of the former USSR. Three major civil conflicts (two in Georgia, one in Azerbaijan) have had dramatic effects on the social structure of the region and constituted a significant impediment to liberal and democratic economic and political transitions.

Few systematic efforts have been made to engage specialists from the region in the effort to develop a community of perspectives on regional cooperation. This collaborative project with three southern Caucasian partners aimed to fill this gap. Rooted primarily in academic analysis, the project has developed concrete suggestions for cooperative initiatives, focusing on options that are feasible without prior political settlement and that will contribute to building an atmosphere of enhanced trust and confidence (which, in turn, will contribute to the process of conflict settlement and prevention). The project’s final workshop was held in Geneva in July, and the project results are being prepared for publication.

Mass Crime and Post-Conflict Peace

The project Mass Crime and Post-Conflict Peacebuilding focuses on the impact of crime on the rebuilding of social, political and economic relations in post-conflict situations. It draws on both historical and recent cases, including East Timor, Cambodia, Bosnia-Herzegovina, Kosovo, Algeria, Rwanda, Sierra Leone and Guatemala.

The research examines the impact on individuals, on society at large, and on the organizations involved in providing assistance in the post-conflict phase. By bringing together political scientists, sociologists, historians, philosophers, anthropologists, lawyers and psychiatrists, the project seeks to offer an interdisciplinary examination of how mass crime is (and should be) addressed in post-conflict peace- and society-building. A project workshop, jointly organized by UNU and the International Peace Academy, was held in June in New York.

Refugees and Forced Displacement

In summer 2003, the Peace and Governance Programme launched a major book entitled *Refugees and Forced Displacement: International Security, Human Vulnerability, and the State*. This book (which was featured in the Secretary-General's annual report on the work of the UN) was the culmination of a research project that explored the insights and policy implications gained by approaching issues of forced displacement and asylum from a security discourse perspective.

Two broad models of security were applied to this inquiry: (a) a traditional security approach, focusing on territorial integrity and state sovereignty, and (b) a "human security" perspective, focusing upon the individual as the referent object of security analysis and policy. The orthodox definition of international security puts human displacement and refugees at the periphery. This project, in contrast, sought to demonstrate that human displacement can be both a cause and a consequence of conflict within and among societies, and that the management of refugee movements and protection of displaced people should therefore be an integral part of security policy and conflict management.

The project explored the tension between "human security" (with a focus on individuals and communities) and conventional models of "national security" (tied to the sovereign state and military defence of territory) with respect to a number of pressing problems related to refugees and forced displacement — including international law, asylum, internally displaced persons, gender and displacement, resettlement and repatriation — and sought to demonstrate how many of these challenges have been exacerbated by the new "war on terror." An overarching research question for the project was: Can a broader approach to security analysis (including human security) have a positive impact on victims of forced displacement and upon policy analysis? In seeking to address the nexus between security concerns and migratory flows, the book that resulted from this project argues for a reappraisal of the legal, political, normative, institutional and conceptual frameworks through which the international community addresses refugees and displacement.

Human Rights and Ethics

In envisioning projects on Human Rights and Ethics, the Peace and Governance Programme works under three assumptions. The first is that these two are not separate areas of study, but must be understood as related and complementary fields. The second assumption is that issues of human rights and ethics are part of a wide conception of human security that is currently emerging — a conception that goes beyond traditional security issues to encompass norms and value judgments. The third assumption is that by making human rights and ethics a core aspect its work, the Peace and Governance Programme can increase our understanding of the creation and evolution of contemporary democratic culture, both within and among nations, and thereby contribute to debate regarding the normative underpinnings of the institutions and values that are used to organize our lives.

This sub-section covers six projects that have significant human rights and ethics dimensions.

Women and Children in Post-Conflict Peacebuilding

Women and children, who are among the most vulnerable populations during times of violent conflict, continue to suffer from the consequences of war even after peace has returned. Women and children have important roles to play in rebuilding war-torn societies, but they seldom receive due attention in organized efforts to address the impact of conflicts and to create the foundations for stable and prosperous post-war communities.

The project Women and Children in Post-Conflict Peacebuilding drew on case studies from around the world to provide a global comparative perspective on the challenges that women and children face in post-conflict peacebuilding environments. It seeks to offer lessons for a more just and effective inclusion of the needs and interests of women and children in rebuilding the economic, political and cultural structures of society. An international group of scholars and practitioners met in July in New York to present and discuss the final drafts of their contributions, and to interact with personnel from other UN agencies working in this area. A policy report and an edited book are being prepared for publication.



A mother and child in Cambodia (Photograph: worldviewimages.com)

Small Arms and Gender

The project Small Arms and Gender has the aim of mainstreaming gender perspectives into the academic and policy discussions of small arms reduction. The project closely follows the call for more research, documentation and analysis into gender dimensions of small arms put forward by the UN Department of Disarmament Affairs, which observed that little research or documentation exists on the gender dimensions of small arms, and suggested that a strengthened understanding could provide an improved basis from which to start development of effective small arms control and disarmament initiatives.

The project aims to assess local problems related to weapons and violence by deepening our understanding of how small arms differently impact on the security of men and women. Case studies focus on the situation in the Great Lakes region and the Horn of Africa, the Balkans, Central Asia, Central America and Southeast Asia. An expert meeting was held in July in New York.

Combating Human Trafficking

“Trafficking in humans” refers to the recruitment and transportation of persons by deception, and their subsequent exploitation and coercion. Persons are typically trafficked for the purpose of prostitution or other sexual exploitation, or for forced labour. The project Structural Approaches to Understanding and Combating Human Trafficking was launched in 2003 with the aim of deep-

ening our understanding of the social, economic, gender and political contexts of human trafficking.

A significant (although still insufficient) amount of knowledge exists about the activities of human traffickers, and a range of policy options is available at the national and international levels to tackle this problem. This project, however, makes a departure in its approach to trafficking by beginning with the assumption that it is important to understand human trafficking in its broad social, economic and political contexts. Only by doing so can we understand the distinctions and interaction between the structural variables (such as economic deprivation and attitudes to gender) and proximate variables (lax legal regimes, poor law enforcement, organized criminal entrepreneurship, corruption and weak education campaigns) that combine to enable individuals and organizations to traffic in vulnerable persons through the use of deception, coercion or exploitation. The project will consider whether a better understanding of these structural factors can inform policy discussion and other strategic interventions regarding the fight against trafficking.

Human Flows in Northeast Asia

Cross-border human flows in Northeast Asia take many forms, both legal and illegal, and encompass skilled and unskilled labour migration. They can also involve drugs and arms trade as well as trafficking in humans.

In October, the Human Flows Across Border in Northeast Asia project — a collaboration between UNU and Monterrey Institute of International Studies — held a public conference in Tokyo on the theme of “Globalization, Migration, and Human Security: Challenges in Northeast Asia.” At a research workshop following the conference, project participants explored a number of themes: What policies are guiding the response of national governments in the region to the growing presence of foreign migrants within their borders? How are provincial and local authorities dealing with the problems and opportunities presented by the increasing foreign presence within their areas of jurisdiction? What are the reactions of local populations, and what is the experience of the foreign migrants and visitors vis-à-vis their host communities?

The objectives of the project are to (a) develop

analytical insights that may have universal applications based on collaborative and comparative studies of the phenomenon in Northeast Asia and (b) offer recommendations for building the capacity of national and sub-national authorities and local communities to harness the promises of cross-border human contacts while ameliorating their negative consequences.

Poverty, International Migration and Asylum

In recent years, substantial numbers of people have migrated from regions afflicted by poverty and insecurity to more prosperous and stable parts of the world. According to United Nations estimates, in 2002 some 180 million persons — or roughly 3 percent of the world's population — resided in a country other than that in which they were born. These population movements have been a cause for growing concern in the industrialized states, which, while ready to acknowledge the positive value of international migration when it meets the needs of their labour markets and takes place in a controlled and predictable manner, react with alarm when it involves the irregular and “spontaneous” arrival of migrants from other parts of the world who appear to possess little financial or social capital.

The Refugees, International Migration and Poverty project of UNU-WIDER comprised two related sub-projects: one that examined the economic consequences of immigration, and another that considered issues associated with asylum migration. Given the global nature of large-scale population flows, the project expanded the focus of its studies on the economic consequences of legal and illegal immigration to a variety of host countries and source countries, and attempted to place the economic study of immigration in a global context. A particular focus was on migratory movements that are undertaken for the purpose, or with the consequence, of seeking asylum in another nation. In particular, the project looked at: Where do asylum migrants come from? Where do they go to, and what routes do they take to get there? What are the typical demographic and socio-economic profiles of asylum migrants? And, what does this data tell us about the causes of and motivation for asylum migration?

UNU-WIDER research on this topic has generated

numerous discussion papers; a policy brief and book are forthcoming in 2004.

Ethical Dilemmas

The aim of the project Ethics in Action: The Ethical Dilemmas of Transnational Human Rights and Humanitarian NGOs is to enhance our understanding of transnational human rights and humanitarian non-governmental organizations (NGOs). The project analyses the constraints and ethical dilemmas faced by organizations that try to promote an ethical agenda in an imperfect world. It covers both “neutral” practices of humanitarian assistance within local institutional constraints and the more “politicized” transmission of global human rights norms.

More concretely, the project takes the form of systematic dialogues between representatives of NGOs and academics of different backgrounds and disciplines working on the subject of human rights. At the second project workshop, held in October in Hong Kong, academics provided theoretical and normative perspectives on issues raised by the project researchers, while trying to draw out the practical implications for international humanitarian and human rights NGOs. The project will result in an edited book, with the first part presenting the point of view of practitioners and the second part offering theoretical perspectives.

Policy and Institutional Frameworks

“Governance” encompasses formation and stewardship of the formal and informal rules and institutions that regulate the public realm, the arena in which state as well as economic and societal actors interact to make and implement decisions. It describes the modalities, values and institutions that organize human life at all levels, both within and between societies. Global governance refers not to “world government,” but to a mediating layer of international decision-making between governments and international organizations — one that is comprehensive, multisectoral, democratically accountable and inclusive of civil society actors.

This sub-section covers four projects that relate to policy and institutional frameworks.

New Modes of Global Governance

The expansion of the capitalist system (now characterized as “globalization”) has been accompanied by a near-universal widening of the social divide — not least between those profiting from the new modes of production and exchange, and the growing mass of poor who are bearing the brunt of the ongoing structural changes. Moreover, globalization is causing rapid environmental degradation, regionally as well as worldwide, and precipitating humanity towards major ecological disasters. That these problems are a source of great insecurity is attested by the growing number of civil wars, migratory flows and refugee movements.

The project *Contestation of Globalization: In Search for New Modes of Global Governance* — a joint venture of UNU, UNESCO and University of Lausanne — approaches these challenges from the perspective of failures in global governance. The project seeks to contribute to the envisioning of new institutional mechanisms and multilateral procedures for addressing these problems. The researchers met in October in Tokyo to discuss project results.

Unintended Consequences of Corporate Activity

One of the most substantial challenges for the business community in this globalizing world is the question of how to conduct business in a responsible manner in countries where human rights abuses are widespread, where war is being fought, or where the environment is being degraded. Further, how to deal with unintended harmful side effects of corporate activity constitutes a major issue in the current debate on corporate citizenship — particularly insofar as corporate activity may aid or abet human rights violations committed by governments, rebel groups or security forces.

The project *Double Effect in World Business: Dealing with Unintended Consequences of Corporate Activity* — a collaboration between UNU and International Peace Research Institute, Oslo — examined the indirect responsibility of corporate actors; it aimed specifically to delimit the concept of complicity and principle in the UN Global Compact initiative (a global initiative on corporate

citizenship). The project sought to develop a framework for dealing with harmful side effects of corporate activity and to demonstrate how the UN Global Compact may benefit from using the Principle of Double Effect to evaluate corporate conduct.

The applicability of the theoretical framework was evaluated through case studies conducted throughout the world. The final author workshop was held in January in Brazil, and the project’s findings were presented at the annual conference of the Academic Council on the UN System in June.

North-South Cooperation in Latin America

A major thrust of UNU-INTECH’s work on Global Governance of Innovation is collecting comparative data on the impact of donor-initiated North-South collaboration programmes for development in the South. The research approach aims to move beyond traditional case-by-case impact analysis and “checklists” for good collaboration practices by developing a comprehensive, non-linear analytical and methodological framework to study North-South partnerships.

The recently completed review of the Programme of Strategic Research in Bolivia (PIEB) — a long-term, multi-disciplinary research programme funded by The Netherlands Ministry of Development Cooperation — falls under this research theme. The study, which analysed PIEB’s impact on capacity building, found that a number of measures have been taken (both by PIEB and the researchers involved) to increase the use and impact of the research results, and that professional capacities in this “people-centred” research approach had been strengthened (particularly among women, youth and researchers from lower socio-economic backgrounds). The review credits PIEB with paving the way towards sustainability of social science research in Bolivia by supporting documentation centres and information networks, and generating considerable spin-offs in terms of new networks, new organizations and a new vision of the role of knowledge in sustainable development.

These findings corroborate the emerging picture of North-South programmes as generally falling into two broad categories of development cooperation: Mode 1 programmes that focus on building basic and

non-participatory research capacities adapted to conditions in the developing world, and Mode 2 programmes that are concerned with the broader development context and subscribe to an unarticulated mode of knowledge production differing from the traditional academic mode. While Mode 1 programmes respond to demand emanating from local universities and society at large for qualified researchers and teachers, they generally lack efficient mechanisms for consulting with intended research beneficiaries outside academe. Mode 2 programmes are carried out in the context of application to a concrete problem and are organizationally less hierarchical and generally more transient. Being locally driven and constituted, they are more sensitive to local contexts and committed to the involvement of users. The review found that the PIEB falls in the Mode 2 category, as it has developed an institutional environment that enhances local ownership and autonomy in research and thus contributes to sustainable development initiatives.

UNU-INTECH has extended this research approach to study other North-South partnerships in agricultural biotechnology in Africa, Latin America and the Caribbean. The cumulative results of these country studies will enable further comparisons of international development approaches.

National Capabilities and Innovation Activities

Technological capability building involves, inter alia, the build-up of national innovation-stimulating institutions and mechanisms. A comparative UNU-INTECH project examined the impacts of national R&D capabilities and patents on income, foreign direct investment and patenting activities in several Asian countries, as well as the potential impact of some important global governance instruments.

The findings shed light on the important role of governments and institutions in strengthening domestic innovation systems to stimulate learning and innovation in firms. Cross-country analysis established a significant correlation between strong national innovation systems (measured by high-tech infrastructure), innovations (measured by patents) and economic growth (measured by per capita income levels). Detailed studies of Southeast Asian economies helped explain the interaction between industrial policy and high-tech instruments on industrial upgrading, exports and economic growth.

Among the conclusions that can be drawn from these findings are that:

- domestic institutions, rather than global organizations, are central to the level of national participation in patenting activities;



Selling vegetables at the market provides a small income for this Vietnamese woman (Photograph: worldviewimages.com)

- foreign firms tend to dominate patenting activities in Southeast Asia, while local firms are more important in East and South Asia;
- institutional capabilities are strongly driven by the policy environment, which in turn is strongly shaped by the local political economy; and
- global governance instruments reflect old power asymmetries and have little interest in invigorating and attracting innovation capabilities in developing economies.

The study was a collaborative effort, with coordination and support in the research and dissemination stages provided by UNCTAD, ADB and UNDP. Numerous papers based on the project's findings have already been published.

International Order and International Justice

The locus of power, authority, rights and duties in world politics is becoming more diffuse. The international public policy-making stage has become increasingly congested, as a multitude of private and public non-state actors jostle alongside national governments to set and implement the agenda of the new millennium. Driven by (as well as driving) this process, international organizations are becoming central (albeit limited and sometimes problematic) actors in world politics, with the United Nations playing an especially important role. The activities of the Peace and Governance Programme in this thematic area analyse and contribute to the UN's current and future roles and policy options in meeting pressing international challenges in such areas as peace and security, human rights and governance.

This sub-section presents two projects that explore the realm of international order and justice.

Regional Security and Global Governance

The project Regional Security and Global Governance explores the interaction between regional organizations and the United Nations Security Council (UNSC) in the common pursuit of maintaining international peace and

security. During the 1990s, it was recognized that regional organizations have not fully realized their potential role in dealing with existing and potential conflict situations. This UNU-CRIS project analyses the theoretical constitutional provisions of the UN and related regional organizations regarding the handling of conflicts, including their relative areas of co-responsibility, and reviews the historical development in this respect through policy-formulation based on the dialogue between UNSC and regional organizations as well as selected regional case studies.

The project's conclusions and prescriptive recommendations are aimed at highlighting the relationship between global and regional approaches to differing levels of conflict. Drafting of the case studies was completed in October, with final publication (including analyses, conclusions and recommendations for future cooperation) in late December.

Interaction between Levels of Economic Governance

The UNU-CRIS project on Interaction Between Different Levels of Governance in the International Economy is aimed at assessing the role of regional agreements, regimes or rules in such interaction. The project employs horizontal case studies in investment, rules of origin, services and intellectual property rights to address such research questions as: What are the respective approaches to international market regulation/liberalization in regional and other levels of regimes? How are domestic regulatory policy approaches and international trade policy procedures reconciled? What provisions are made for accountability and legitimacy of decision-making? Is some concept of subsidiarity applied, either explicitly or implicitly, in international market regulation? What is the interaction between regional (and bilateral) preferential agreements on multilateral rules? Are the main regulatory models (e.g., the EU and US models) converging or diverging?

The project seeks to offer an assessment of the economic impact of "multi-level" regulation of markets. A roundtable discussion with European Commission officials regarding research objectives was held in September, and a workshop of researchers and specialist practitioners is scheduled for early in 2004.

ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

“The research programmes of the institutions of the University shall include, among other subjects ... economic and social change and development; the environment and the proper use of resources; [and] basic scientific research and the application of the results of science and technology in the interests of development ...”

— [UNU Charter Article I.3]

The focus of the UNU Environment and Sustainable Development Programme is on the interactions between human activities and the natural environment, and the implications for sustainable human management of natural resources. The Environment and Sustainable Development Programme adopts a multidisciplinary approach that combines both natural and social sciences, and makes special efforts to include perspectives from both North and South as well as from countries with economies in transition. Networking and capacity building, particularly in developing countries, are given high priority.

Based on an appraisal of the current core issue challenges, and the targets set forth by the global community in addressing them — such as through the UN Millennium Development Goals and the World Summit on Sustainable Development’s Action Plan — as well as issues elucidated at the 3rd World Water Forum, the Environment and Sustainable Development Programme regrouped its activities in 2003 under four broad themes:

- Sustainable Urbanization,
- Managing Fragile Ecosystems,
- Solutions to Water Crises, and
- Environmental Governance and Information.

A major focus of Environment and Sustainable Development Programme research during the year was related to “water issues” — which is appropriate, considering that 2003 was designated as the UN International Year of Freshwater. A broad range of issues related to water — from quantity to quality, from basins to shared international water bodies, and from risk assessment to water management decision-making — were covered in the Programme’s projects.

Information and society, especially as related to environmental governance, was another major focal area. Projects in this area treated issues ranging from inter-linkages among Multilateral Environmental Agreements (MEAs) to the impact of information technology (IT) and its products on environment. IT for environmental man-

agement has been adopted as a cross-cutting tool, with applications in learning as well as in decision-making, and especially in facilitating broader stakeholder participation in environmental decision-making.

The main activities of two of the Programme’s projects — People, Land Management and Ecosystem Conservation (PLEC) and Natural Disaster Risk Management — were completed in 2003. However, PLEC will continue into a second phase, and elements of the disaster risk management project have been assimilated into the new Multi-Hazard Risk Assessment and Innovative Communities projects.

This section highlights some of the major projects conducted under the Environment and Sustainable Development Programme’s four main themes.

Sustainable Urbanization

Nearly half of the world’s population now lives in urban areas (an increase from slightly more than one-third in 1972), while much of the other half has become increasingly dependent upon cities for economic, social and political development. It is estimated that by 2030 nearly two-thirds of the global population will be living in urban areas. Thus, sustainability of urban areas as well as the process of urbanization is of vital importance to the entire global community.

This subsection focuses on five projects that address issues relevant to sustainable urbanization.

Multi-Hazard Risk Assessment

Multi-hazard risk assessment is a new initiative launched in 2003; the focus is on human security as a priority area for the process of sustainable urbanization. The project comprises the following two components:

Multi-Hazard Urban Risk Assessment with Dynamic Spatial Information — This component focuses on assessing and reducing human vulnerability to disasters by examining the dynamic behavioural patterns of urban communities to understand the vulnerabilities related to urban infrastructures. The aim is to develop methodologies for utilizing high-resolution, dynamic spatial information to monitor urban infrastructures, and to

incorporate those methodologies into multi-hazard urban risk assessment to facilitate implementation of appropriate mitigation measures. UNU launched activities in partnership with University of Tokyo, and held an inaugural workshop in December. A parallel study will model city flooding (including underground spaces) using high-resolution spatial data.

A public forum related to one form of urban risk — earthquake damage — was organized in Tokyo in October by UNU and other partners. Participants in “Living with Risk — Are We Prepared for the Next Big One?” discussed earthquake preparation issues from engineering, social, economic and administrative perspectives.

Catastrophic Flood Risk Assessment in the Asia-Pacific Region — Many major urban areas face a dilemma: it has become extremely difficult to increase design standards against flood hazards, due to land-use and drainage capacity limitations, yet an event exceeding current design levels would bring huge losses. Possible increases in rainfall intensities and magnitudes brought about by climatic change could amplify the problems.

This project component involves a comparative study of the nature of catastrophic floods in different Asia Pacific countries, with the aim of promoting information and experience exchange at the provincial or city level. Five areas related to catastrophic flood risk reduction (extreme rainfall, inundation modeling, risk assessment, community participation and capacity building) will be considered, with the goal of identifying and implementing strategies for “safe-fail” mechanisms that can avoid catastrophic losses where it is not possible to implement a “fail-safe” infrastructure. An international workshop, organized in collaboration with United Nations Centre for Regional Development and Asian Institute of Technology (Thailand), was held in July in Bangkok to deliberate on the issues involved and identify basic needs and research areas. The participants adopted a resolution calling for a regional programme on catastrophic flood risk reduction.

Natural Disaster Risk Management

The Natural Disaster Risk Management project, which since 2000 has focused on the social aspects of disaster vulnerability, concluded in 2003. A main aspect of the project was a six-city case study on vulnerability.

Research activity focused on studying the vulnerabilities of large cities and defining policy approaches towards social aspects of disaster management. The ultimate goal of the project was to quantify social vulnerability for input into decision-making.

Dissemination videos targeting policy makers on the social aspects of disaster vulnerability have been finalized, and will be made available through the Internet. A framework for social vulnerability quantification has also been finished, and a project report is being prepared. Related to the project, the first stages of converting “Quake Busters,” an earthquake awareness-building simulation programme, for Internet use were completed; a working prototype was posted on the UNU website in early 2003.

Zero Emissions Forum

The concept of “zero emissions,” born at UNU in 1994, is becoming a major leading principle towards achievement of a sustainable society alternative to the current mass consumptive society. UNU takes a facilitating role in fostering zero emissions-related activities through the UNU Zero Emissions Forum (UNU-ZEF), and continues to collaborate actively with local communities and regional governments in Japan to disseminate zero emissions concepts.

In 2003, UNU-ZEF put special emphasis on international networking and, jointly with the Japan Bank for International Cooperation, published the *Zero Emissions Manual*. This manual, which focuses on the processes and procedures leading to establishment of a zero emissions society, is intended for use by local governments and communities. Other publications include a booklet series on various zero emissions approaches.

The annual symposium of the Zero Emissions Forum was held in May in Tokyo. Symposium participants discussed various experimental attempts at regional levels to contribute to establishment of a zero emissions society. Other UNU-ZEF activities in 2003 included special seminars on sustainable economy and a number of onsite seminars throughout Japan.

The UNU-ZEF focal point in Europe has been actively working to develop partnerships between UNU-ZEF and University of Thessaloniki, UNDP Indonesia and The Natural Step International. These collaborations will

implement joint symposiums and regional cooperative research projects on the application of zero emission concepts.

Innovative Communities

The Innovative Communities initiative, a joint project launched in 2001 by UNU-GEIC and the United Nations Environment Programme's International Environmental Technology Centre (UNEP-IETC), examines the concept of "innovativeness" as applied to a community and explores its implications in managing the local environment. The objectives of the project are to develop an innovative framework that can be applied by communities in the Asia-Pacific region in their environmental management efforts and by local stakeholders who work with those communities.

UNU-GEIC and UNEP-IETC have conducted a great deal of preliminary research to explore the concept of innovative communities. This has included preparation of a concept paper and the launch of a series of expert workshops, with case studies being carried out in Japan and the Philippines. The final manuscript of a book introducing the concept of innovative communities was submitted to UNU Press at the end of 2003.

A Community Building and Environmental Education workshop was held in May, in collaboration with the Ministry of the Environment (Japan). The aim of the workshop was to enhance the capacity of local government officials with regards to environmental education.

Urban Ecosystem Management

The UNU-IAS Urban Ecosystem Management programme was active in both research and capacity building in 2003. In April, the programme held two complementary events in Tokyo: a workshop on "Preliminary Ecosystem Principles for Urban Management Scoping" and a seminar on "ASEAN City Manager Capacity Development." Participants engaged in training and collaborative activities on such themes as human ecosystem modelling, ecological footprint analysis and adaptive management of urban ecosystems.

The UNU-IAS urban team published two preliminary reports in 2003. In conjunction with University of Tokyo,

UNU-IAS secured a grant from the Japan Foundation Centre for Global Partnership to help support its research agenda, culminating in an edited volume under the banner of the US-Japan Urban Ecosystems Initiative. The first scoping meeting and research discussion for this volume took place in November.

The above-mentioned seminar set the stage for further collaborative activities and capacity building through the ASEAN secretariat. In September, UNU-IAS and several partners submitted a proposal to the Asia Pacific Network to undertake a series of workshops in ASEAN cities to develop applications of the Human Ecosystem Model, which provides a useful theoretical framework from which to analyze urban environmental problems from a social perspective. The model has already been applied in Baltimore (Maryland), Phoenix (Arizona) and elsewhere.

Work also continued on the UNU-IAS project *Scaling the Urban Future: From the Local to the Global and Back*. This project has examined a number of environmental issues within cities of different levels of affluence to explore the relationships between urban environmental conditions and development. The project's final volume will be published in 2004.

Management of Fragile Ecosystems

A number of targets and timetables have been agreed upon worldwide in various forums for an ecological approach to natural resource management that would ensure productive, healthy ecosystems by blending social, economic, physical and biological needs and values.

This subsection describes four projects that are conducting research for policy formulation that could lead to the integration of sustainability into management of endangered, fragile ecosystems.

Sustainable Land Management in Drylands

In January, UNU, UNESCO and the International Centre for Agricultural Research in the Dry Areas (ICARDA) drafted a joint programme on Integrated Land Management in Drylands. Pilot projects from China, Egypt, Iran, Jordan, Pakistan, Syria, Tunisia and Uzbekistan were

Terracing helps prevent soil erosion, enabling agriculture to be done on the steep hills and mountain slopes of Nepal
(Photograph: worldviewimages.com)



discussed at a meeting convened in late November in Shiraz, Iran.

This project is a unique collaboration between UNESCO, which pioneered arid land studies in 1956; ICARDA, an organization that emphasizes dry land agriculture; and UNU, which conducted desertification research from 1976–1984. The project will seek to facilitate the transfer of experiences from one country or region to other similar environments.

Among other activities in 2003 focusing on drylands agriculture were:

- the Traditional Technologies programme, started in 2000 to help young researchers pursuing a Ph.D. degree, which in 2003 supported five promising young researchers;
- a documentary film, “Le Japonais de In Belbel,” portraying the activities of a UNU senior adviser promoting the importance of field research in an extremely isolated oasis of the Sahara;
- a European Commission Research Programme on Qanat,³ begun with strong support from UNU, and establishment of the International Qanat Center (Yazd), supported by UNESCO and the Iranian Government, with UNU as a member of the international advisory committee.

During 2003, UNU-INWEH developed a strong partnership with the Environment and Sustainable Development Programme to assist developing countries in

Northern Africa and Asia in sustainable management and conservation of marginal drylands. An international workshop held in Tashkent in August brought together a multidisciplinary group of experts and various institutional partners, including ICARDA and the Millennium Ecosystem Assessment programme. This meeting highlighted the urgency of needs in developing countries for capacity building and cohesive strategies for integrated resource management in drylands.

The Tashkent workshop was significant in that it provided a synthesis of five previous workshops on management of drylands resources, particularly water, and laid the groundwork for a new multi-partner project with UNESCO and ICARDA to identify management approaches that promote economic sustainability and resource (soil and water) conservation using community-based approaches. Preliminary country-level assessment studies and project planning meetings were completed in 2003.

Sustainable Mountain and Forest Development

The goal of the Mountains and Forests programme is to promote sustainable development of mountain systems worldwide and contribute to an improved understanding of the growing problems of mountain communities and environments. A public forum on “The Future of Mountains” was held in Tokyo as the final event in Japan in observance of the International Year of Mountains 2002

³ Qanat is a traditional water delivery structure common in the Middle East.

(IYM2002), co-organized by UNU and the IYM2002 Japanese National Committee.

The “World Forests, Society and Environment (WFSE) Forum” was held in September during the XII World Forestry Congress in Canada. The forum, co-organized by UNU, Finnish Forest Research Institute, European Forest Institute (EFI) and International Union of Forest Research Organizations, presented research results and launched an executive summary of three books produced by the WFSE project.

An international symposium and workshop on “Challenges in Strengthening of Capacities for Forest Policy Development in Countries with Economies in Transition” was held in Belgrade, Serbia and Montenegro, in November. This event was organized by UNU in partnership with EFI, Silva-Network/University of Joensuu and Universität für Bodenkultur (Vienna) under local host organizers Belgrade University and the State Enterprise for Forest Management, Serbia Forest. The symposium followed up on deliberations held at a previous international symposium (“Role of Research and Higher Education in Developing National Forest Programmes in Countries with Economies in Transition”) held in Lithuania in July 2002.

A Global Environment Facility Block-B grant request on Sustainable Management of Natural Resources in the High Pamir and Pamir-Alai Mountains was developed by UNU in cooperation with UNEP and University of Bern (Switzerland). In November, the Rector was informed that GEF funding of US\$650,000 had been approved for UNU’s work in the project as the UN executing agency. The project will focus on the mountain ranges whose northern chains form the border between Tajikistan and Kyrgyzstan.

Managing Agrobiodiversity

The final evaluation report of the GEF-funded People, Land Management and Ecosystem Conservation programme, which was completed at the end of 2002, was released in February. The evaluation concluded that PLEC, as a whole, successfully achieved all four of its original objectives and demonstrated that biodiversity can be maintained in agricultural systems in ways that also improve farmers’ livelihoods and reduce their risks.

PLEC also demonstrated that farmers and scientists

can collaborate successfully and developed replicable methods for extending the project approach to new sites and for documenting and evaluating the techniques used. Development of follow-up projects is making progress, and a global proposal for mainstreaming and upscaling PLEC results through establishment of regional training programmes (in Brazil, Ghana and Thailand) was revised with UNDP.

In 2003, PLEC members in Brazil, China and Papua New Guinea obtained support (from the US-based Overbrook Foundation, GTZ China and UNDP-GEF, respectively), and proposals from PLEC teams in Brazil, Ghana, Peru and Tanzania have received encouragement. Many farmers’ groups working with PLEC continued to organize demonstration activities on sustainable agriculture during the year; some of them are even expanding. Partnerships with international and national collaborators are also being strengthened and built up. Dissemination of PLEC outputs and lessons was achieved through publication of several books, an online information service (“PLEC News and Views” and “PLECserve”), a database of relevant published materials and conference presentations.

Sustainable Agriculture Production in Zambia

While Zambia’s population has grown steadily over the past three decades, its per capita food production continuously declined. As a result, a country that once provided adequate sustenance for its people today depends on food imports and foreign handouts to avoid widespread starvation.

To a large extent, this situation is the result of reduced production from degraded land in a country that is drought prone and where the soils are inherently infertile. Phosphorus is one major nutrient that is limiting in most Zambian soils, but many farmers cannot afford the relatively high cost of commercial phosphate fertilizers, and locally available phosphate rocks cannot supply enough plant-available phosphorus within the short growing season.

To address this problem, the Mineral Resources Unit (MRU) of UNU-INRA initiated a project to convert local phosphate rocks into more readily soluble forms through acidulation with mineral acids; the resulting product is

known as partially acidulated phosphate rock (PAPR). In collaboration with scientists in the School of Agricultural Sciences of University of Zambia, PAPR produced by MRU from Chilembwe phosphate rock has been field tested on crops. Results show that, when applied to maize, sunflowers, soya beans and groundnuts, PAPR is as effective as imported mono-ammonium phosphate as well as being more suitable for long-term improvement of the phosphorus capital of the soils because it acts as a slow release fertilizer with longer lasting residual effects. In combination with low-cost, locally produced agricultural lime, PAPR is very effective on the highly acidic soils of northwestern Zambia.

Response has been overwhelming; thousands of farmers (both small-scale and commercial farmers) have appealed to the Government of Zambia to make PAPR available to them. MRU has received a request for 30 metric tonnes of PAPR for next season from one of Zambia's large commercial farms, and a similar request from a group of export-oriented farmers. PAPR produced from the small MRU pilot plant has been supplied to the Riverside Farming Institute near Lusaka, where small-scale

farmers are being trained in various techniques to improve income generation capability and food security. An indigenous mining company with exclusive rights to the mining of Chilembwe phosphate deposits has approached MRU for a feasibility study on the viability of large-scale production of PAPR.

Solutions to Water Crises

Water-related problems affect almost all countries of the world, albeit in different degrees of magnitude and importance. UNU Environment and Sustainable Development Programme research projects on "Solutions to Water Crises" seek solutions to sustainable environmental and political management of critical water resources so as to ensure adequate quality and quantities of water for all. The projects are in line with Action Area 3 of the Water and sanitation, Energy, Health, Agriculture and Biodiversity (WEHAB) initiative proposed by UN Secretary-General Kofi Annan, which calls for developing integrated

Gains From Public/Private Sector Partnerships: The Plant Tissue Culture Story in Ghana

The agricultural sector employs about 60 per cent of Ghana's total labour force, and accounts for 37 per cent of its gross domestic product. A recent government drive to diversify this important sector has found expression in the production and export of non-traditional crops, especially pineapples, mainly to European markets. Pineapples now account for nearly 20 per cent of Ghana's total agricultural export earnings.

Pineapple growers, however, face the problem of accessing the right planting materials. In the past, some growers met the shortfall in local supply with imports from neighbouring Côte d'Ivoire, but recent political developments there have made the supply lines very unreliable. Other growers use the crowns of matured fruits as planting materials, but these take a much longer time to grow and mature.

The UNU-INRA/University of Ghana plant tissue culture programme seeks to ensure the supply of healthy, high-quality planting materials through the application of plant tissue culture techniques. One indigenous private grower of pineapples, Bomarts Farms Limited, turned to the University of Ghana's Department of Botany for information on plant tissue culture technology, and then sought technical advice for construction of a private tissue culture lab-

oratory — the first of its kind in Ghana. To ensure a steady supply of planting materials pending construction of its own laboratory, Bomarts Farms concluded an agreement early in 2003 with UNU-INRA/University of Ghana's Department of Botany Plant Tissue Culture Laboratory to purchase additional equipment for the laboratory in return for use of the enhanced facilities of the laboratory to provide short-term training for a scientist and eight technicians of the company. The aim is to produce and nurture 1 million disease-free pineapple plantlets; on completion of the task, all equipment and unused consumables procured with the grant will revert to UNU-INRA/University of Ghana Department of Botany plant tissue culture laboratory. Test-production of planting materials has started.

This deal can be seen as a first step in reaching out to the private sector, and commercializing some aspects of research and training activities to raise funds to support the plant tissue culture laboratory.

Blue Skies, an indigenous company that processes pineapples into juice and fruit salad before export, also stands to benefit from the collaboration. Using the right cultivars is essential to ensure uniformity in taste, a requirement that can be handily accomplished through the application of plant tissue culture technology.

water resources management frameworks, and preparing and implementing water management action plans at the country level.

This subsection focuses on three projects related to issues of water use.

Environmental Monitoring and Governance in the Coastal Hydrosphere

Environmental Monitoring and Governance in the Coastal Hydrosphere is an umbrella project encompassing three initiatives on pollution monitoring and conservation of the coastal environment in Asia and the Pacific: coastal and inland water pollution monitoring (persistent organic pollutants: POPs), mangrove ecosystem management, and a regional researcher network on marine ecology. The aim of the project is to help increase the capacity for



During the dry season in Jordan, water must be purchased. Costs can be as much as 50 per cent of a family's income (Photograph: worldviewimages.com)

coastal management in Asia and the Pacific by strengthening environmental monitoring and research activities.

The project focuses on regional assessments of pollution and biodiversity in coastal areas; international meetings are organized to discuss and showcase project results. The creation of policy-relevant information is a key goal in order to improve the sustainable management of coastal zones. Project activities contribute to the Stockholm Convention on POPs and the Global Programme of Action for protection of the marine environment from land-based activities. Project activities for 2003 included:

- a POPs monitoring programme in nine East Asian countries, conducted with continuing support from Japan-based Shimadzu Corporation;
- operation of the Asia-Pacific Coastal Ecology Network through a series of international workshops, conducted jointly with University of Tokyo; and
- development of a revised "Global Atlas of Mangroves," in cooperation with UNESCO, UNEP, FAO, International Society for Mangrove Ecosystems (ISME) and International Tropical Timber Organization (ITTO).

International River and Lake Basins Management

Lack of accessibility to freshwater resources is often due to poor resource management or improper governance. People frequently have very limited (or no) opportunity to participate in decision-making regarding management of the water resources they depend on.

The international symposium on "Improving Public Participation and Governance in International Watershed Management," held in April at the University of Virginia School of Law, was one component of the International River and Lake Basins Management initiative. The symposium was organized by UNU in conjunction with UNEP and several US-based partners. More than 100 participants from five continents discussed how to ensure public involvement in management of watersheds that cross national boundaries. The principal focus of the symposium was an examination of mechanisms for making watershed information available to the public, ensuring public participation in decisions, and offering avenues for independent public redress. It was noted that,

increasingly, the Internet presents opportunities both for disseminating relevant information and for soliciting public input.

A workshop on “Role and Governance Implications of the ‘Virtual Water Trade’” was UNU’s contribution to World Water Week in Stockholm in August. “Virtual water trade” is the transfer of commodities whose production requires the use of substantial amounts of water (including agricultural products, such as wheat). Increasingly, “virtual water” is seen as an essential policy element — one that provides a low-stress way to balance regional water gaps with the global water surplus — and is accepted as a novel way of interpreting the impact and strategies of worldwide trade in agricultural products. The concept of “virtual water” has major implications in discussions on water scarcity, management of international water systems and other natural resources, food security, conflict prevention and international trade policy. The aim of the UNU workshop was to stimulate further analysis and illustrate the potential of “virtual water trade” through actual cases from various parts of the world.

In October, UNU and Tokyo University of Agriculture and Technology organized an international public symposium in Tokyo on “Public Participation and Governance in Water Resources Management.” Participants discussed successful mechanisms, approaches and practices for promoting public involvement in water resources management, based on past and current experiences. Conditions that can facilitate or hinder public involvement were also examined, as well as contextual factors that may limit transference of successful experiences from one watershed to another.

Managing the Basin Water Cycle

Population growth and per capita water consumption growth are both contributing to over-exploitation of finite freshwater resources. If components of the natural water cycle are disturbed without consideration to their interactions and the fragile balance that has been achieved over the long term, it can bring unexpected consequences in the form of land subsidence, water-quality deterioration, etc. Thus, as espoused by Action Plan 23 of the World Summit on Sustainable Development, understanding the basin water cycle is of utmost importance in sustainable

water resources development and integrated water management.

Understanding the water cycle means clarifying its present status as well as being able to predict its future state as adjusted by human intervention such as land use change and urbanization. The Managing Basin Water Cycle for Sustainable Water Resources Development project consists of three phases: (a) setting up distributed hydrological models in selected catchments, (b) implementing reservoir operations and other water management options, and (c) coupling to short- and long-term climatic forecasts to develop appropriate policy scenarios. Capacity building and public dissemination of information are also important project components.

Implementation has started in four Asian countries with educational and governmental partner institutions, building on past work and existing networks, and supported by various partners. Selected targets basins are the Mekong Basin, Kothmale Basin (Sri Lanka), Chao Phraya Basin (Thailand) and Agno River Basin (Philippines).

A distributed hydrological model developed by UNU and University of Tokyo for the lower Mekong Basin has been set up. Comparison of elevation data from five different global data sets has led to preparation of an improved elevation data set using an inverse solution approach to correct existing data, and a report on water usage and demand for the basin has been prepared in collaboration with the Asian Institute of Technology.

At an experimental basin in Kothmale (set up in collaboration with several Sri Lankan educational institutes), a number of high-resolution hydro-meteorological data gathering instruments have been installed. Rainfall trend analysis, based on more than 60 years of data collected by various organizations, shows a clear declining trend of March-April inter-monsoon convective rain. This has been interpreted as a signal of Asia Brown Cloud (ABC) impacts, which has broad regional implications, and so has given rise to collaboration between the UNEP programme on ABC that is developing a coupled climatic-hydrological modelling study. Another component of the project has led to development of remote rainfall data gathering equipment in collaboration with University of Moratuwa. An international symposium to disseminate and discuss project findings as well as to draw attention to water management issues in monsoon Asia is planned for 2004.

Environmental Governance and Information

Environmental governance is related to the rules, processes and behaviour that affect the way in which powers are exercised at global or local levels in the field of environmental policies — particularly as regards openness, participation, accountability, effectiveness and coherence. The main components of projects grouped under this theme focus on improving environmental governance, utilizing information technology advances to achieve better environmental management, building local capacity for environmental compliance and enforcement, constructing and reinforcing networks, enhancing public involvement, developing improved knowledge and bolstering global commitments. Projects address the regulatory framework for environment management, relations between environment and development processes, the impact of technology on environment and dissemination of environmental information.

This subsection discusses five projects and initiatives related to environmental governance and information dissemination.

Inter-linkages Initiative

The UNU Inter-linkages Initiative seeks to build upon 2002 World Summit on Sustainable Development (WSSD) outcomes to develop cohesive responses to linked environmental problems. The initiative progressed in 2003 through a series of targeted activities in the areas of capacity development, information and knowledge management, and national/regional support mechanisms.

In March, the initiative co-organized an ASEAN regional workshop in Kuala Lumpur with the ASEAN Secretariat and other regional partners. The workshop, which focused on integrated capacity development in South-East Asia, produced a set of recommendations that were adopted at the subsequent ASEAN Working Group on Multilateral Environmental Agreements.

A one-day training course was organized in May at the 11th session of the United Nations Commission on Sustainable Development in New York. The focus was on how inter-linkages can contribute to implementation of the WSSD Plan of Action. The course presented both

challenges and good practices through practical examples of integrated management and capacity development from Asia and the Pacific.

At the invitation of the Bhutanese government, in July UNU undertook its 15th national inter-linkages case study on Management of Multilateral Environmental Agreements (MEAs). Bhutan is the first South Asian country studied by the initiative, which has covered the 10 ASEAN member countries and four nations in the Pacific.

In August, UNU discussed the results of its case study in Papua New Guinea (PNG) with stakeholders in a national workshop. The national PNG case study report was released in October, and UNU is now assisting PNG to undertake the Global Environment Facility's National Capacity Self Assessment (NCSA).

At the Governing Council of the South Pacific Regional Environment Programme in September, UNU (together with the four case study countries of the region and other international organizations) organized a side event to discuss and promote joint regional approaches for environmental management. UNU and UNEP organized two regional training workshops on MEA compliance and enforcement — in September in Sri Lanka, and in November in Jamaica. Also in November, the Initiative organized a briefing for the UN General Assembly Second Committee on "Improving the Role of the United Nations in Environmental Governance — National and Regional Approaches."

The Bhutan national case study report and a policy brief on key linkages between the Rio Conventions, focusing on national and regional implementations, were released in December. National case studies for Sri Lanka, Maldives and India, and a regional case study for South Asia, are being prepared.

Information Technology and Environmental Issues

The emerging information society both creates new environmental challenges and presents new opportunities to solve them. The Information Technology and Environmental Issues project addresses several aspects of the relationship between our ever-expanding information society and the environment, including (a) assessment and management of environmental impacts associated



Students participating in an online learning initiative in Nicaragua
(Photograph: worldviewimages.com)

with production, use and disposal of IT hardware, (b) effects of the information society on sustainable consumption, and (c) application of IT for water and air quality management in industrializing nations. The aim is to generate original results for publication and develop web-based tools to inform policy planning through an iterative multi-stakeholder process.

The main achievements of the project in 2003 were in the form of events, publication of research, and recognition by the scientific and popular media. The major event organized during the year was “Information Society and the Environment,” held in February in Geneva as a side event of the Preparatory Committee II for the World Summit on the Information Society. This event resulted in the establishment of useful linkages with other relevant programmes. Published research results in 2003 included an edited volume, articles in refereed journals and several conference papers.

Education for Sustainable Development

The overarching objective of the UNU-IAS Education for Sustainable Development programme is to strengthen capacity for sustainable development through integration of the latest scientific/technical knowledge on sustainability into education and capacity building activities. In 2003, UNU-IAS worked closely with the UNU Rector on measures to follow up on the Ubuntu Declaration on Education for Sustainable Development, which was launched at the World Summit on Sustainable Development in 2002. Meetings of the 11 participating organizations were

convened in April (in Tokyo) and in Paris (in June) to work out an Action Plan.

UNU-IAS provided input regarding education for sustainable development to the 11th session of the Commission on Sustainable Development in April/May (in New York), the World Conference on Higher Education Plus 5 in June (in Paris) and the Global Environmental Action Conference in October (in Tokyo). Comments were also provided to UNESCO’s draft framework of the International Implementation Scheme for the Decade of Education for Sustainable Development.

GLEAM Forum

Integrated assessment — incorporating the environment as a natural system, human development activities, and interactions between the two — is gaining greater importance as basic assessment methodologies are improved. The Forum for Globally-Integrated Environmental Assessment Modeling (GLEAM Forum) is an exchange platform for discussions and brainstorming on the issue of globally-integrated environmental assessment (notably, model-supported assessment jointly administered by UNU and the Netherlands National Institute of Public Health and the Environment (RIVM)). The GLEAM Forum provides a framework to bring together modelers, policy makers and end users to interact through workshops and Internet-based dissemination. A formal inaugural international symposium was held by UNU and RIVM in January in Tokyo.

The second GLEAM Forum international workshop, held in Katmandu, addressed the “Environmental Dimension of Poverty.” Poverty reduction initiatives seldom address the linkage between poor health services, inadequate supporting infrastructure, lack of education, over-exploitation of natural resources, and lack of access to freshwater and sanitation in an integrated manner. The topics addressed by the workshop were (a) concepts and applications that describe the links between poverty reduction and environmental conservation, (b) policy and institutional issues in the context of the poverty reduction and environmental conservation nexus, and (c) research and policy needs for explicitly including poverty-environment linkages in global environmental assessment. Workshop participants recommended active modeling of case studies selected from ongoing development assistance

programmes in parallel with development of a conceptual framework. Integration of existing knowledge and models through such attempts will clarify modeling research needs and point to new challenges.

Global Environment Information Centre

The Global Environment Information Centre (GEIC) was established in 1996 as a joint initiative of UNU and the Japan Ministry of Environment. GEIC focuses on providing information to civil groups and individuals; its activities include working on global projects (such as the Innovative Communities and Environmental Leadership projects), undertaking networking activities (to promote cooperation and information exchange among different social sectors) and offering public information services. In 2003, GEIC provided several NGOs with space for meetings and exhibitions, sales of publications, dissemination of NGO activity information, facilitation of volunteer activities and information exchange. GEIC also provides information to the public on environmental issues. The GEIC Library houses materials on the activities of corporations, NGOs and local governments: information on the environmental protection activities of about 1,100 organizations, some 3,500 books and reports, and about 400 environmental videos.

GEIC provides counselling sessions related to environmental issues, and has established a database of these sessions in order to share the experiences with similar organizations. GEIC disseminates environmental information to environmental information centres all over Japan through the newsletter *TUNA-CAN*. Information specific to GEIC's activities and initiatives, and information related to partnerships and environmental events, is disseminated through the GEIC website and a mail magazine, while information dissemination by NGOs, enterprises and administrative organizations is supported through the Kankyo-Rashinban website (which has over 520 organizations registered as users).

In 2003, GEIC welcomed some 34,600 visitors at its facilities, including 65 groups (school field trips and local government delegations).

Third World Water Forum

The 3rd World Water Forum (WWF3), held in March in Kyoto, Shiga and Osaka, Japan, provided a venue to present and discuss global water issues while also facilitating dialogue for planning new initiatives. UNU played an important role at WWF3 and was involved in organizing a number of sessions. Experts from the UNU Environment and Sustainable Development Programme and from UNU-INWEH led or participated in the discussions at those and other sessions.

UNU Rector Han van Ginkel delivered the opening remarks at the first UNU-organized session on the "Technological and Policy Dimensions of Arsenic Contamination in the Asia Region" held on the opening day of the forum, chaired the opening plenary session of the "Day of Asia and Pacific," and gave the keynote lecture in a session devoted to "Emerging Water Issues at the Beginning of the Third Millennium." UNU-INWEH Director Ralph Daley gave a keynote address on integrated, demand-responsive capacity development during a major session on "Water, Education and Capacity Building." With the help of numerous case studies from around the world, this session demonstrated that meeting the capacity needs of developing countries is essential if the UN Millennium Development Goals (MDGs) are to be met. UNU-INWEH's interest in water management in dryland ecosystems was presented in a special session on drylands jointly organized by UNU and ICARDA.

UNU Centre and UNU-INWEH cooperated to create a CD-ROM containing E-learning modules on water management and water-related risks and a "UN Delegates Guide" describing the global water scene following the 2002 World Summit on Sustainable Development; the importance of the UN Secretary-General's proposed Water and sanitation, Energy, Health, Agriculture and Biodiversity (WEHAB) initiative and the MDGs; creation of the "UN-Water" coordination committee; key findings of the first *UN World Water Development Report*; and priority UN water concerns. This CD-ROM was distributed to Forum delegates.

In a major initiative taken in response to requests by WWF3 participants, UNU-INWEH has teamed with UNICEF, WHO and UN-ESCAP to organize a global conference on the arsenic crisis that is impacting millions of people in developing countries who are dependent on arsenic-contaminated water supplies. This conference will raise awareness of the problems and challenges related to arsenic contamination and catalyse the development of policy initiatives and efforts to effectively address the crisis.

MAJOR CROSS-CUTTING ISSUES

“The University shall devote its work to research into the pressing global problems of human survival, development and welfare that are the concern of the United Nations and its agencies.”

— [UNU Charter Article I.2]

While some research projects focus on specific, well-defined issues or fields of study, much of the work of UNU is multidisciplinary and cross-sectoral in nature. Projects and activities often cut across and complement the various thematic areas described in previous sections, or may incorporate and integrate divergent elements that would once have been considered quite unrelated. Yet in today’s world — where new developments in science and technology can transform or even obliterate traditional social and economic foundations, and political or social ideologies can have far-reaching global repercussions — a cross-cutting perspective that brings together different approaches and disparate perspectives is often essential.

Some of the thematic areas described in the Peace and Governance section and the Environment and Sustainable Development section — viz., Human Rights and Ethics, Solutions to Water Crises, or Environmental Governance — incorporate obvious cross-cutting components. Some issues, however — such as globalization, world trade regimes, sustainable development governance and development financing, or inequality and poverty — so inextricably intertwine the core areas of Peace and Governance as well as Environment and Sustainable Development that they are best discussed here. Still other issues — such as gender, or information and communication technology — cannot be properly addressed in isolation, since they are vital components of many (if not most) of UNU’s research and capacity development activities.

Globalization with a Human Face

In July, more than 30 experts and 400 members of the public met in Tokyo to discuss ways in which globalization can be made to benefit all of humankind rather than just a fortunate elite. The conference on “Globalization with a Human Face — Benefitting All” was co-organized by UNU and UNESCO.

Conference participants reviewed our current understanding of the multiple interlinkages between the economic and political driving forces of globalization and



A participant at the UNU/UNESCO International Conference on “Globalization with a Human Face — Benefitting All”

socio-cultural development. Their goal was to evaluate the effectiveness of the political action taken so far to balance the negative with the positive effects of globalization, and to identify areas and means for improving policy responses to the challenges of globalization at all levels (international, regional, national and local) and by all actors (governmental, nongovernmental and civil society).

Participants concurred that globalization is permanent rather than a temporary phenomenon, and one that cannot be reversed, so it therefore is incumbent on policy makers and economic and social actors worldwide to manage and re-fashion the globalization process in ways that can better serve humanity as a whole. Examples of policies to offset the negative side effects of globalization were discussed in four working groups focusing on cultural policy, education policy, environmental policy, and the role of media and communication.

Trade-led Growth and Developing Countries

During successive rounds of the General Agreement on Tariffs and Trade (GATT) and, since 1995, the World Trade Organization (WTO) regime, the world community

has been trying to move towards freer trade. The sometimes-turbulent public protests and the concerns voiced by developing countries notwithstanding, the potential role of international trade in helping poor nations to embark on a path of positive economic growth is well grounded in economic theory. The broad objective of the UNU-WIDER project *The Impact of the WTO Regime on Developing Countries* was to evaluate the prospects and the challenges of such trade-led growth.

Unilateral preferential trade arrangements — One aspect of the project was to assess the extent to which the actual flow of trade is affected by such trade-related policies as the most favoured nation principle and preferential trading arrangements (PTAs). While the recent proliferation of PTAs is often cited as an indication that WTO is a failing process, a differing interpretation suggests, rather, that WTO has been an important catalyst in triggering PTAs and enhancing trade flows between countries. Examination of a number of preferential trading arrangements initiated by the US and Japan reveals significant incremental exports resulting from these initiatives for several developing and least developed countries (LDCs). At the same time, projections suggest that in 2000 LDC exports could have been almost US\$7 billion (148 per cent) higher had the US levied no import tariffs, while removal of existing barriers in Japan could have increased imports from LDCs by about 69 per cent. Thus, there is still considerable scope for unilateral trade liberalization.

Liberalization of agriculture — The role of OECD domestic support measures is crucial in the debate about liberalization of trade in agriculture. Indexes calculated over the past three decades for selected crops (grains and oilseeds that receive a large share of domestic support in OECD countries) show, with few exceptions, substantial declines. Analysis suggests that an across-the-board 50 per cent cut in domestic support for OECD agriculture would lead to welfare losses for most developing regions and for developing countries overall. Such action is unlikely, however, since it would also result in significant declines in farm incomes, particularly in Europe. An alternative approach would be to focus on a broad-based shift from market price support to land-based payment, which modelling results indicate could generate a “win-win” outcome that would maintain farm incomes while reducing world price distortions.

Tariff escalation — Although average tariff rates have declined in almost every country, an average tariff for a

particular sector conceals important information about specific products and, thus, is not a reliable indicator of the degree of that sector’s “openness.” Close examination often reveals continuing tariff escalation, which is likely to benefit skilled labour and capital owners in developed countries by preserving differential rates of protection between stages of production. The project’s theoretical model predicts that if skilled labour groups are an equally influential lobby in developing countries, liberalization of the service sector in those countries will be slow and difficult. An important implication is that removal of tariff escalation is a “win-win” strategy which could promote processed exports from developing countries, benefit unskilled workers in the North and generate support for liberalization of the service sector in the South.

Sustainable Development Governance

A number of activities were undertaken in 2003 under the UNU-IAS Sustainable Development Governance programme. At a UNU-IAS roundtable in May on “Post-WSSD Development in Sustainable Development Governance,” participants from various sectors discussed how business organizations, civil society organizations and government agencies can engage one another in boundary-spanning dialogues and develop mutually beneficial working partnerships. Two roundtables convened in June brought together American and Japanese scholars to further develop an analytical framework for investigating the disenfranchisement of civil society actors and delegates from developing countries. The framework and areas of investigation will be explained in a preliminary policy report to be issued early in 2004.

In June, UNU-IAS collaborated with the WTO Institute for Training and Technical Co-operation and National University of Malaysia to hold the first University Professor Training Programme on the WTO and Sustainable Development. The objective is to promote capacity development in Asian countries by establishing long-term training to increase understanding and knowledge of WTO rules and their implications for sustainable development. The June programme gave university deans from Southeast and Central Asian countries a perspective of the necessity to begin thinking of how to fit WTO rules and sustainable development into their respective university curriculums. Intensive regional courses for

university professors were held in October in Kuala Lumpur (with a focus on Southeast and Central Asian countries) and in November in Macao (focusing on East Asian countries). Two edited volumes will be published in 2004.

Sustainable External Development Finance

For a number of reasons (including the end of the cold war), the volume of net official flows has been decreasing while net private flows have been volatile and geographically lopsided in favour of just a few countries. The central question addressed by the UNU-WIDER project Sustainability of External Development Finance is how the dwindling of net official financial flows can be arrested or reversed, and the lopsided pattern of private flows rectified. The project focuses on the totality of external financing rather than on official flows alone. Accordingly, it covers the supply and allocation of bilateral official finance, donors' financing of multilateral aid agencies, and official as well as private foreign financing of private sector development.

Bilateral official development finance — The fall in the volume of financial assistance to developing countries appears more pronounced for bilateral than for multilateral aid. Also, there seems to be more scope for improving on allocation and terms of bilateral aid to promote the welfare of recipients. One of the project's studies seeks to empirically identify the factors accounting for the observed pattern of aid allocation, while another attempts to prescribe normative criteria for aid allocation. The relevant political and economic factors are being empirically identified, and theoretical insights are provided about the economics and politics underlying aid processes in donor countries.

Multilateral issues and perspectives — A multilateral framework is generally regarded as a more humane approach for channelling external development funds to developing countries because there are likely to be economies of scale (and, perhaps, of scope). Furthermore, through a multilateral approach, the self-interests of donor countries are less likely to influence decisions regarding which recipient country gets what, and when. The project identifies problems inherent in the current aid delivery systems, reviews the roles and division of

responsibilities among UN agencies, Bretton Woods Institutions, regional development banks, etc., and offers suggestions for change. The research also identifies and assesses potential innovative sources of development financing. The project seeks to clarify the concept of global public goods (GPG) and addresses the issue of institutional arrangements for ensuring that external GPG financing does not crowd out conventional aid. It also tries to shed light on recent controversies about whether resource transfers to developing countries should be in the form of pure grants or loans and, if loans, the extent of concessionality.

Private sector development — The philosophy of foreign development finance and assistance has been changing. No longer is such assistance channelled more or less exclusively to the recipient countries' public sectors; increasing attention is being focused on the private sector, with a portion of aid resources being earmarked for private sector development. An important segment of the project seeks to answer such questions as: What is the

World Summit on the Information Society

UNU was extensively involved in preparations for the World Summit on the Information Society (WSIS), organized by the International Telecommunications Union. The first phase of the summit was held in December in Geneva; the second phase will convene in 2005 in Tunis. UNU Rector Hans van Ginkel serves as a member of the WSIS High-Level Summit Organizing Committee.

In January 2003, UNU worked with the Japan Ministry of Public Management, Home Affairs, Posts and Telecommunications, the Japan Ministry of Foreign Affairs, and UNDP to co-organize side events for the WSIS Asia Regional Conference in Tokyo. UNU and its Media Studio partners demonstrated Internet Protocol (IP) broadcasting and video-on-demand applications. UNU representatives also participated in the 2nd and 3rd WSIS Preparatory Committees (in February and September) and organized side events related to the Global Virtual University (GVU), Asia-Pacific Initiative, and Information Technology and Environment Initiative. At the December phase of the WSIS in Geneva, UNU promoted the theme of software for development, focusing on the work of UNU-IIST, UNU-INWEH's Water Virtual Learning Centre and other e-learning projects. UNU-GVU also co-organized a side event on the "Future of E-learning."

current state of things? How effectively have stated goals been achieved? To what extent can official bilateral and multilateral finance leverage and catalyse private capital flows? Why is the distribution of private flows so lopsided? And, what is the way forward?

Inequality, Poverty and Well-Being

More than a billion people live on less than one dollar per day, and gaps in living conditions are growing within and between countries. Although we know more about the core issues of inequality, poverty and human well-being than ever before, the quality of analysis still leaves much to be desired — particularly with respect to the world's poorest countries, where the need for action is most urgent.

A conference on “Inequality, Poverty and Human Well-being” was organized by UNU-WIDER in Helsinki in May. Conference participants examined such themes as measuring human well-being, global trends in inequality and poverty, spatial inequality, and micro-simulation of policy reforms. More than 150 representatives from the policy and research communities attended the conference, including most of the world's leading researchers on the above themes. Most of the approximately 100 papers

presented at the conference by specialists from more than 30 countries are available online.⁴

Gender

Gender-related activities have long represented a regular component of research and capacity development agendas throughout the UNU system. In the new millennium, UNU has expressed a strategic commitment to better “mainstreaming gender,” reflecting the recognition that gender is not a topic to be addressed only in isolation; rather, gender perspectives are an essential consideration in the planning, monitoring and evaluation of all UNU activities.

Some projects, however, do focus specifically on the gender-related aspects of vital issues. These include the Small Arms and Gender project and the Women and Children in Post-Conflict Peacebuilding project (which are discussed under the Human Rights and Ethics heading in the Peace and Governance section).

UNU-INRA has been active in undertaking studies that emphasize the critical role played by African women in the conservation and management of natural resources, as well as highlighting policies and interventions to minimize gender inequalities. In 2003, two research projects



Women gathering water at a community pump in Malawi
(Photograph: worldviewimages.com)

⁴ See <http://www.wider.unu.edu/conference/conference-2003-2/conference2003-2.htm>.

focusing on the role of African women in natural resources management were completed at UNU-INRA.

The project Credit Availability to African Women in Natural Resources Enterprises documented the success stories of 35 women natural resources entrepreneurs from seven African countries. The project studies revealed that, of the problems that confront women entrepreneurs, lack of access to credit is pervasive. Lack of access to credit translates into low start-up funds as well as few or no opportunities for expansion. The project suggests that a gender-sensitive credit delivery policy framework is needed to guide governments in the empowerment of women involved in natural resource management enterprises. As African countries prepare for the 5th World Conference on Women and Environment, the findings of this project will attempt to identify such a policy framework that can guide gender-sensitive credit delivery systems to empower women.

Another UNU-INRA study examined the validity of “women-specific” development projects. It found that while women-specific projects have visibly reduced the poverty level among women on a national scale, at the household level they also have enabled women to improve their standards of living and made women more socially visible and more conscious of their abilities and capabilities. The results of this study have been published under the title *The Impact of Women-specific Projects Involving Natural Resources Management: Experiences from Ghana*.

Information and Communication Technology

Advances in information and communication technology (ICT) impact all activities of UNU: not only research projects, but administration, capacity building, and networking and dissemination efforts. In recognition of the importance of advanced technology for competitiveness and growth, UNU’s ICT agenda focuses on four core areas: infrastructural improvements, UN system integration, research, and mainstreaming of ICT into all spheres of UNU information activities.

The UNU Campus Computing Centre (UNU-C3) is committed to supporting and furthering the goals of UNU and enabling the University to attain a sustainable competitive edge in addressing pressing global issues. Efforts

to modernize the UNU Centre network culminated in 2003 in a blueprint for development of a converged storage and multimedia gigabit network. Internet connectivity will also be improved in the process by linking UNU to the Science Information Network (SINET), the biggest academic network in Japan. It is envisaged that this state-of-the-art infrastructure will be a catalyst for ICT-led innovations that will further improve the way UNU communicates and collaborates, both internally and with its networks of partners. UNU has also become more closely connected with the rest of the UN system through ongoing participation in inter-agency ICT initiatives. UNU was among the first UN agencies connected to the pilot UN System Extranet using virtual private network (VPN) connectivity over the Internet.

The scope of UNU-C3’s responsibilities and involvement broadened in 2003 to serve a growing number of users and meet increasingly complex requirements. In this connection, UNU-C3 assisted in the development of media and telecommunication facilities, and local- and wide-area network connectivity of the new Media Studio, and provided support to Online Learning, the UNU Financial Assistance Programme, UNU-IAS, UNU-BIOLAC, UNU-INRA and a number of the UN agencies in UN House in Tokyo.

UNU research and development in computer-mediated communications and learning technologies resulted in a number of academic publications and presentations in 2003. UNU has achieved considerable progress of mainstreaming ICT into the operations within and across its boundaries.

CAPACITY DEVELOPMENT

“In its postgraduate training the University shall assist scholars, especially young scholars ... to increase their capability to contribute to the extension, application and diffusion of knowledge.”

— [UNU Charter Article I.7]

All parts of the UNU system have a strong commitment to capacity development activities. These activities are aimed, in particular, at strengthening academic institutions in developing countries by enhancing individual, group and institutional capabilities for self-sustained learning as well as generating appropriate technological capacity. Many of UNU's capacity development programmes are organized in cooperation with partner institutions throughout the world; these institutions are selected on the basis of excellence in their respective fields of specialization and a proven track record in advanced training.

Recognizing that training needs are vast while resources are limited, UNU seeks to achieve a multiplier effect by focusing its capacity development efforts on training the trainers, research leaders and policy/decision makers. UNU attempts to implement new and innovative approaches (involving short courses, curriculum development and fellowship faculty exchanges) and to make the best use of new information and communication technologies. UNU emphasizes the concept of “integrated capacity development” by contextualizing its activities along three trajectories: (a) as an integral part of the research and policy studies undertaken by UNU, (b) as a reflection of the inter-disciplinary approach stressed in all UNU academic activities, and (c) as an integral part of the policy-making, development and advocacy processes to which UNU's activities contribute.

The two main types of capacity development activities⁵ undertaken by UNU are:

- *Specialized advanced training programmes* for postgraduate scholars and young professionals, particularly those from developing countries; these include short- and long-duration training programmes as well as degree-oriented education programmes covering a wide variety of subject fields within UNU priority programme areas;

- *Project-based capacity development*, whereby UNU helps individuals, groups or institutions to upgrade their skills and knowledge through involvement in UNU project work.

UNU also supports networking activities of developing country academics, with the aim of promoting their integration into regional and global academic, professional and policy-making communities.

Specialized Advanced Training Programmes

Short-duration Training Programmes

UNU's short-duration training programmes are courses and workshops, mainly for postgraduate academics and professionals, of up to two-months' duration.

UNU International Courses

UNU Centre organizes an annual six-week training programme in Tokyo focusing on various issues of global concern. The aim of this programme is to provide postgraduate students and young professionals who are seeking to pursue an international career in public service or private organizations with the knowledge and skills to analyse these issues from a truly global perspective, both theoretically and empirically.

The fourth regular session of UNU International Courses (UNU-IC) was held in Tokyo from 17 May to 27 June. UNU-IC brought together a diverse group of students and lecturers, in terms of both cultural background and professional experience. Fifty-three students from 32 countries (selected from a total of 350 applicants) attended — among them, 33 women and 33 students from developing countries (of whom 21 received UNU fellowships covering the cost of their participation). The teaching faculty included UNU academic staff and more than 20 external experts from academia, the UN system and governmental and non-governmental institutions. Courses offered in 2003 were focused on the themes of “Armed Conflict and Peacekeeping,” “Environment and Sustainable Development,” “Human Rights: Concepts and Issues” and “International Cooperation and Development.”

⁵ Key features of UNU's Capacity Development Programme and descriptions of individual capacity development programmes are available online at <http://www.unu.edu/capacitybuilding/index.htm>.

Strategy and Defence

In October, UNU launched a new programme of post-graduate courses in cooperation with Australian National University (ANU). The inaugural session of the UNU/ANU programme, held in Tokyo, offered four one- and two-week courses on “Strategic Concepts,” “North-east Asian Security,” “Terrorism and Counter-Terrorism,” and “Intelligence and Security.”

Conflict Resolution

The annual INCORE International Summer School provides a structured learning opportunity in which to analyse the dynamic and constantly changing field of conflict resolution and peace-building. In June 2003, 75 students from countries worldwide attended one-week sessions on “The Management of Peace Processes,” “Second-Track Diplomacy and Conflict Transformation,” and “Evaluation and Impact Assessment of Peace-building Programmes.” A wide range of representatives from NGOs, research institutes and universities, and UN system agencies also participated.

Biotechnology

UNU-BIOLAC promotes the production and use of biotechnology in the Latin American and Caribbean region by focusing its capacity building activities on “training the trainers” in order to multiply dissemination of the acquired knowledge and skills. In 2003, UNU-BIOLAC implemented six one-week training courses on such topics as bioinformatics, quality control in biotech-

nology, genetically modified organisms in the food chain, immunology, haematology and cell cycle control.

Food Composition Data in Nutrition

The long-standing cooperation between UNU and FAO in the field of nutrition data management was continued in 2003 with a three-week training course on “Production and Use of Food Composition Data in Nutrition” held in Wageningen (The Netherlands) in October. The course provided comprehensive training in the production of analytical data for nutrients in foods, and the compilation of these data into food composition tables and nutritional databases. UNU provided fellowships to seven participants. UNU also plans to support five or six participants in a course for French-speaking participants to be organized in Dakar, Senegal (rescheduled from November 2003 to March 2004).

Coastal Biodiversity

The third joint UNU/UNESCO international training course on “Biodiversity in Mangrove Ecosystems” was held at the Centre of Advanced Studies in Marine Biology, Annamalai University (India) for two weeks in March. The course provided young professionals holding a postgraduate degree in marine sciences or a closely related field with training in the methodology for assessing, monitoring and conserving biodiversity in mangrove ecosystems. UNU provided fellowships to nine of the 15 participants (three of them women), all of whom came from developing countries.



Special Adviser to the Rector, Yozo Yokota, presents a UNU-IC student with a certificate of completion

Environmental Management

In collaboration with the Japan International Cooperation Agency, UNU-IAS co-organized one-day courses on “Environment Management in Cuba” (5 February) and “Management of Heavy Metal and Other Substance Pollution Control” (25 July), and a two-day course on “Environmental Policy and Environmental Management Systems” (12–13 June).

Environment and Sustainable Development

K-JIST held its first postgraduate training workshop on “Environment and Sustainable Development” in Gwangju, Republic of Korea, in late October. The workshop, attended by 17 participants from 9 Asian countries, focused on environmental monitoring and pollution reduction issues.

Land Degradation

In 2003, UNU, in cooperation with the Overseas Development Group at the University of East Anglia in Norwich, UK, and Consejo Superior de Investigaciones Cientificas (CSIC) of the Spanish Ministry of Science and Technology, co-organized a two-week training course on “Land Degradation and Sustainable Rural Livelihoods.” UNU supported participants from four developing countries in this course, which was held at University of East Anglia and at the CSIC’s Centre for Soils and Applied Biology of the Segura Region.

Computer Applications to Natural Resource Management

In July, UNU-INRA held its 4th international training course on “Application of Computer Technology to Natural Resource Management.” The month-long course, attended by 15 university lecturers and national research scientists from Francophone African countries, was held at University of Yaounde I. The emphasis of the course, conducted by computer scientists and geographers from Cameroon, was on practical skills in the use of relevant software and related equipment.

Natural Disaster Risk Management

UNU cooperates with the University of Geneva (Switzerland) and the Swiss Federal Institute of Technology in a two-month training course on “Analysis and Management of Geological Risks.” This course is aimed at training advisers for the public and private sectors in preventive

measures to reduce the impact of natural disasters. The sixteenth session of this training course began on 28 April in Geneva.

Long-duration Training Programmes

UNU supports a variety of long-duration training programmes, lasting for 3 and 12 months.

Biological Diversity

UNU awarded 10 fellowships (to candidates from eight developing countries) for the six-month UNU Training Programme in Biological Diversity, which began at the University of Ghent (Belgium) in October. This programme offers professionals in the fields of monitoring, conservation and management of biological diversity with in-depth training to broaden their theoretical knowledge and practical capabilities. As the initial agreement of cooperation between UNU, the Government of the Flemish Community and the University of Ghent to jointly organize and fund this training programme expired in 2003, the cooperating parties have agreed to undertake an external review and evaluation to assess the programme’s future viability; the evaluation report is expected by March 2004.

Food Technology

With funding from Kirin Brewery Company (Japan), UNU organizes an annual year-long training programme in food science and technology at the National Food Research Institute in Tsukuba (Japan). The programme assists scientists from universities or research institutes in developing countries, with a particular emphasis on the Asia-Pacific region. In 2003, five UNU-Kirin Fellows (two of them women) joined the programme, while five others completed their training in Japan and received grants to return to their home countries for follow-up research projects.

In 2003, UNU also awarded a fellowship to one student from Sudan for a ten-month course of training at the Central Food Technological Research Institute (CFTRI) in Mysore, India.

Information Technology

UNU-IIST provides young software engineers from developing countries with advanced training in software development methods, techniques and tools that are

widely used in industries. Courses cover project management, object-oriented and component-based software development, and software testing. In 2003, UNU-IIST organized or sponsored courses at three training schools (in Argentina, China and Tunisia). Some 160 participants from 30 countries attended the training courses, which were taught by experts from universities and industries as well as UNU-IIST staff.

Biotechnology

In 2003, UNU-BIOLAC awarded fellowships, for up to four months of individualized training at research centres in Latin America and the Caribbean, to 17 biotechnology trainees from seven countries.

Fisheries

The six-month UNU Fisheries Training Programme (UNU-FTP) in Iceland provides advanced training in various fisheries-related areas to specialists from the public, private and academic sectors. Provincial fisheries administrators, fisheries scientists and operational managers, economists, planners and technical personnel receive in-depth, individualized training in fisheries policy and planning; marine and inland waters resources assessment and monitoring; quality management of fish handling and processing; management of fisheries companies and marketing; fishing technology; fleet operations; aquaculture; or environmental protection assessment and monitoring. UNU awarded 16 fellowships to candidates from 14 developing countries for participation in the 2003 session of the programme, which started in August.

Geothermal Energy

The main goal of the UNU Geothermal Training Programme (UNU-GTP), operated at the National Energy Authority of Iceland, is to develop capacity in the sustainable use of geothermal energy resources. The programme's aim is to assist developing and transition countries with significant geothermal potential in building up groups of specialists in geothermal exploration and development. The annual six-month training course includes specializations in geothermal utilization, environmental studies, chemistry of thermal fluids, geological exploration, borehole geology and geophysical exploration. Fellowships for the 2003 course, which started in April, were awarded to 20 candidates from 12 countries.

Remote Sensing

UNU supports an annual eight-month course at the Instituto Nacional de Pesquisas Espaciales (INPE) in Brazil for postgraduate professionals working in the field of remote sensing technology. The course familiarizes participants with the physical principles of remote sensing, spectral behaviour of natural targets, sensor systems and satellites, radar, visual analysis of remote sensing data, digital image processing, scientific research methodology and the ERS-1 programme. In 2003, UNU awarded fellowships to nine participants.

Akino Memorial Research Fellowships and Internships

With a portion of a donation from the Government of Japan in memory of Dr. Yutaka Akino, who was killed in 1998 while on mission for the UN in Tajikistan, UNU funds annual research fellowships to support Japanese Ph.D. candidates and postdoctoral fellows for field research activities within the general theme of "Peace and Environment in Central Asia." In 2003, six young Japanese scholars (among them, three women) were awarded Akino Memorial Research Fellowships for field studies in Central Asia.

Nine grants were also awarded in 2003 to young Japanese university graduates who have made arrangements for internships at UN system organizations outside of Japan. Since the start of this Akino Memorial Internship programme in 2001, a total of 19 such grants have been awarded.

Economics of Development

The UNU-WIDER Undergraduate Teaching Programme provides a useful link to the Finnish academic community and helps build interest in development economics in the Institute's host country. In autumn 2003, 30 participants took a course on "The Economics of Development" offered at the Helsinki School of Economics and Business Administration.

Online Learning

In September, UNU Online Learning launched a four-month course, in collaboration with Keio University, on "Sustainable Development in the Asia Pacific." Some sixty Japanese professionals and students participated in the course, which included videoconference lectures. UNU provided the students with access to course

materials via the University's online learning management system.

September also saw the launch of an online course as part of the Global Virtual University. Some 20 students took a course on "The UNEP Global Environmental Outlook Reports," taught by instructors from UNU, Agder University College and Agricultural University, Makerere University, Griffith University and University of Pretoria.

Degree-oriented Programmes

UNU assists young researchers, particularly those from developing countries, to upgrade their academic qualifications with fellowships for M.Sc. and Ph.D. programmes and postdoctoral training.

Master's and Ph.D. Internships

UNU provides candidates who have been accepted into master's and Ph.D. programmes, particularly at universities in developing countries, with the opportunity to conduct part of the research for their dissertation at one of UNU's Research and Training Centres, where as interns they have access to the latest scientific information, receive expert advice from the institute's academic staff and can link with the local academic community.

- UNU-IAS accepts master's degree candidates of the FASID-GRIPS Joint Graduate Programme in International Development Studies as six-month interns. Two students who had finished their course requirements joined UNU-IAS as interns in October.
- UNU-INTECH provides opportunities to Ph.D. students specializing in the broad area of the economics of technological change. Primarily targeted at students from developing countries, the UNU-INTECH Ph.D. Internship Programme funded two interns in 2003.
- Ph.D. students can work with UNU-WIDER faculty and conduct research for dissertations on topics related to development and transition economics. In 2003, seven Ph.D. interns joined UNU-WIDER as research associates for periods of up to six months.
- UNU-CRIS has launched a Ph.D. Internship Programme in collaboration with Flemish universities. Three Ph.D. interns worked at UNU-CRIS in 2003.
- In 2003, UNU-IAS hosted five Fellows through its Ph.D. Fellowship programme.

Degree Programmes

In 2003, UNU provided support to postgraduate students from developing countries through the following programmes:

- One UNU Fellow (from Somalia) was admitted to the two-year Master's Programme in Applied Human Nutrition offered by the University of Nairobi.
- Two M.Sc. Fellowships and one Ph.D. Fellowship were granted to candidates from African academic institutions for tenure at universities in Africa under the UNU/African Network of Scientific and Technological Institutions (ANSTI) Postgraduate Fellowship Programme.
- Two UNU Fellows from Peru joined the Master's Course on Development Planning for the Humid Tropics, organized by the Universidad Federal do Para in Brazil.
- Four new students joined the Ph.D. programme on the economic and policy dimensions of technical change offered by UNU-INTECH and the Maastricht Economic Research Institute on Innovation and Technology (MERIT; a division of the University of Maastricht).
- Four former UNU-GTP Fellows from Asia and Africa have undertaken M.Sc. studies in Geothermal Science and Engineering under a cooperation agreement with the University of Iceland.

Plans are underway to establish a joint graduate programme by UNU and various public and private universities in Japan in the field of international relations.

Postdoctoral Fellowships

- In 2003, UNU awarded one African Conference on Research on Computer Science (CARI) Postdoctoral Fellowship in Applied Mathematics and Computer Science to a scientist from Tunisia.
- UNU-IAS offers Postdoctoral Fellowships in a variety of areas. In 2003, the Institute hosted four UNU-IAS Postdoctoral Fellows as well as several Japan Society for the Promotion of Science (JSPS)-UNU Fellows.

25th Anniversary of UNU Geothermal Training Programme

The 25th anniversary of the United Nations University Geothermal Training Programme (UNU-GTP) was celebrated in 2003. The agreement on its establishment was made between UNU and the Government of Iceland in 1978, and the first two UNU Fellows came (from the Philippines) to Iceland for specialized training in 1979. Since then, 6-month specialized courses on geothermal energy have been held every year. During 1979–2003, 300 scientists and engineers from 39 countries have completed the 6-month courses, and over 70 have received shorter training (2 weeks to 4 months). To that can be added 7 participants in the new M.Sc. programme, 3 of whom that have already graduated.

The programme gives university graduates engaged in geothermal work very intensive on-the-job training in their chosen fields of specialization. The trainees work side-by-side with geothermal professionals in Iceland. The training is tailored for the individual and the needs of his or her institution/country. The aim is to assist developing countries with significant geothermal potential to build up groups of specialists that cover most aspects of geothermal exploration and development. Priority is given to candidates from institutions where geothermal work is already underway.

In many countries in Africa, Asia, Central America and Central and Eastern Europe, UNU-GTP graduates are among the leading specialists in geothermal research and development. They have contributed significantly to energy development in their parts of the world. The total installed geothermal electric capacity in the world was about 2,800 MWe when UNU-GTP was established; today, the installed capacity is about 8,000 MWe. A part of this growth is in countries where former UNU-GTP students are key geothermal specialists (e.g., the Philippines, El Salvador, Costa Rica, Kenya and Indonesia). Many former students are also key specialists in the direct use of geothermal energy for heating houses. In this respect, particular mention can be made of China and countries in Central and Eastern Europe (e.g., Poland and Turkey), where great progress is being made in replacing the use of coal for house heating with environmentally clean geothermal energy.

Participants are selected by private interviews during site visits to countries where representatives of UNU-GTP visit geothermal fields, research institutions and energy utilities, and commonly give lecture series or participate in local or regional geothermal energy conferences/seminars. These site visits have played a very significant part in the work and in the success of UNU-GTP. Since 1979, an average of 5–6 site visits have been conducted annually to countries requesting training, or a total of 138 visits. The highest numbers of visits have been to China (15), Kenya (10), the Philippines (9), El Salvador (8), Costa Rica (8) and Ethiopia (6). The visits have been made by the permanent staff of

UNU-GTP (66%), members of the Studies Board (22%), and other geothermal specialists (12%).

The site visits are extremely valuable for the quality of the training, and the private interviews with candidates aim to ensure the quality of the selected Fellows. During the 25 years, only 7 UNU Fellows have been unable to complete their six months of training, mostly for medical reasons. The visits to institutions and geothermal fields aim to tailor the training to the needs of the country and the institutions from which the candidates come. The site visits have, without doubt, contributed very significantly to the successful transfer of technology from Iceland to the recipient countries, and have contributed significantly to make UNU-GTP an international centre and network of learning.

To celebrate the 25th anniversary, the Foreign Minister of Iceland, Mr. Halldor Asgrimsson, and UNU Rector Hans van Ginkel attended the Opening Ceremony of the 25th annual session and addressed the Fellows. The Conference of Directors of the institutions of UNU was also held in Reykjavik during the opening week, and the directors and the senior staff of UNU met with the UNU Fellows at a seminar held at UNU-GTP premises at Orkustofnun.

The main celebrations were held in connection with the International Geothermal Conference, IGC2003, organized by the Geothermal Association of Iceland in Reykjavik in September 2003. The title of the conference was "Multiple Integrated Uses of Geothermal Resources." Amongst 200 participants from 32 countries were 24 UNU Fellows studying in Iceland at the time and 20 former UNU Fellows who came to Iceland from all continents to participate in the conference and the anniversary celebrations. Of the 80 papers presented, over 30 per cent were authored by former UNU Fellows.

The conference was opened by addresses from the President of Iceland, Dr. Olafur Ragnar Grimsson, and the Permanent Secretary of the Foreign Ministry, Mr. Gunnar Snorri Gunnarsson. Special presentations were given by UNU Rector van Ginkel and the Director of UNU-GTP, Dr. Ingvar B. Fridleifsson. One of the conference sessions consisted of five papers on the contribution of UNU-GTP to geothermal development in Africa, Asia (apart from China), China, Central America, and Central and Eastern Europe. The closing session was addressed by the Minister of Industry and Commerce, Mrs. Valgerdur Sverrisdottir, and a presentation was given by the President of the International Geothermal Association, Dr. Guido Cappetti. The conference was preceded by a three-day international course on the Sustainable Use and Operating Policy for Geothermal Resources. Links to the conference proceedings and the short course book are on the UNU-GTP website (<http://www.os.is/unugtp/>), and papers in the Proceedings related to UNU-GTP have been published separately on a CD-ROM by UNU-GTP.

Project-based Capacity Development

Apart from programmes specifically designed for advanced training, capacity development activities are another integral component of the research projects developed and managed within the two programme areas at UNU Centre and by the UNU RTC/Ps. By providing opportunities for involvement in UNU project work, such activities contribute to enhancing the skills and knowledge of individuals and/or the capacity of academic or other institutions.

Project-based capacity development also includes (a) the numerous non-regular training seminars and workshops that are conducted by UNU in direct connection with ongoing research and policy study projects for UN or national/local government officials and civil society actors, and (b) community-based, multi-stakeholder participation in the design, implementation and evaluation of UNU projects. To mention just a few of the many examples of project-based capacity development implemented in 2003:

- The Inter-linkages Initiative conducted workshops on Multilateral Environmental Agreements in Colombo, Kingston (Jamaica) and Kuala Lumpur.
- The UNU Centre project Environmental Monitoring and Governance in the East Asian Coastal Hydrosphere has been assisting eight research and educational institutions in the East Asian region in building their technological capacity to undertake environmental monitoring. The project held a five-day training workshop in Tokyo.
- The UNU-WIDER Building African Capacity for Policy Simulation project held week-long training workshops in Finland, South Africa and Uganda.
- The UNU-INTECH Innovation Policy and Technological Capability Building project held week-long joint training workshops with partner institutions in Lesotho, Nigeria, Senegal and Zimbabwe.
- The UNU-IAS Biodiplomacy Initiative conducted a four-day workshop on Biosecurity for representatives from government, academia and civil society organizations in Kyrgyzstan, and a one-day Central Asian Network Meeting in Montreal.
- The UNU-INWEH Far'a & Jerash Integrated Watershed Management project conducted month-long field training in Jordan and Palestine.

- UNU-CRIS held a three-day Regional Integration and Conflict workshop in Zambia.

The UNU-WIDER Short-Visits Programme encourages key researchers in related topics to come to Helsinki for visits of up to four weeks, where they collaborate with resident staff on projects and give presentations of their work in the form of public lectures or in-house seminars. Five such visits took place during the year. A Short-Term Sabbatical Programme, which offers a monthly stipend to cover living expenses, gives researchers and scholars an opportunity to spend up to five months at UNU-WIDER and to interact with the resident research staff. Each participant is expected to contribute one publishable research report related to the Institute's research programme. In 2003, eight scholars participated in this sabbatical programme.

Capacity Development through Networking

Scientific exchange is a vital component of individual as well as institutional academic development. Scholars and professionals from developing countries, however, often lack the financial means to travel to international conferences where the latest research results are discussed and much academic exchange is initiated. To help alleviate the isolation of researchers and scholars in developing countries and raise their capacity for research and teaching, UNU endeavours to facilitate their integration into relevant international academic communities by providing travel grants to important events or support for the organization of workshops and conferences in developing countries. UNU-WIDER, for example, provides travel grants for developing country academics to attend its Development Conferences.

In 2003, UNU inaugurated a new programme of support for former UNU Fellows who have been invited to deliver a paper or poster presentation in an international academic conference. The intent of this programme is to enhance the sustainable effect of UNU-supported training efforts by enabling former UNU Fellows to maintain their contacts with the international academic and scientific communities. Five such grants have been awarded to former participants in various UNU training programmes.

UNU also collaborates with the African Network of Scientific and Technological Institutions (ANSTI) to

facilitate staff-exchange fellowships that enable academic staff of African universities to teach at universities in other parts of Africa. These staff exchanges help to offset shortages of academic personnel at the host universities, while at the same time providing fellowship recipients with an opportunity to gain teaching experience at institutions other than their home universities. Four such fellowships were awarded in 2003.

Through the project Development of Computer Science Departments in Developing Countries, UNU-IAS arranges for computer science lecturers or professors

from universities in developing countries to learn about new courses at partner universities in industrialized countries. Eleven institutions in industrialized countries have participated in this project, and so far 19 institutions in developing countries have benefited. In 2003, lecturers from six universities in four developing countries were trained under the project.

UNU-IIST offers computer science curriculum fellowships of up to four months to help academics in developing countries enhance the work of the computer science departments in their home institutions.

UN Virtual Learning Centre for Water

In 2003, the initial phase for the United Nations Water Virtual Learning Centre (WVLC) was completed. The WVLC is a UNU-INWEH project to create a combined CD-ROM and online-based adult education programme in Integrated Water Resources Management (IWRM). The curriculum, specifically directed to water practitioners in developing countries, will offer broad coverage of the principles and practices of IWRM. It will consist of 10 courses (about 250 hours in total) leading to a Diploma in IWRM from UNU.

The eight-course core of the curriculum is now complete; the introduction, overview and final practicum (course 10) will be completed through the regional centres to ensure customization to local conditions. Collaboration on curriculum development has involved over 60 academics and professionals worldwide. During 2003, a comprehensive evaluation of the curriculum materials (by 28 foreign graduate students studying in Canada) was completed to confirm that the information content is understandable and balanced, and that the software is problem-free.

In its second phase, the WVLC programme will be delivered by designated regional centres that will manage the educational process and provide regional "customization." Planning was initiated for establishment of the first three delivery centres at University of Ghana, University of the South Pacific in Fiji and Asian Institute for Technology in Thailand. Agreements with the regional host institutions are expected in early 2004, to be followed by a week-long "partners workshop" in March in Canada (University of Waterloo). Through a partnership with UNDP Cap-Net, tentative agreement has been reached with the University of Costa Rica to begin translation of the WVLC curriculum into Spanish.

NETWORKING ACTIVITIES

“The University shall have as a central objective of its research and training centres and programmes the continuing growth of vigorous academic and scientific communities everywhere and particularly in the developing countries...”

— [UNU Charter Article I.6]

Given the increasingly international nature of research agendas, driven by rapid advances in information and communications technologies (ICT), networking by practitioners and researchers is critical to effective knowledge generation, education and outreach. UNU in 2003 continued to strengthen its network outreach efforts by enhancing the implementation of advanced ICT to enable the development of broad partnerships that bring together the UNU system with other UN organizations, academic entities, professional associations, private sector bodies and other elements of civil society.

UNU might well be described as a “network of networks.” UNU’s internal, global network of UNU Research and Training Centres and Programmes (RTC/Ps) complements and supports UNU Centre, thereby expanding the depth and breadth of UNU activities. Each RTC/P focuses on a specific set of issues and forges links with universities, national research centres, and other organizations specializing in the relevant subject areas, as well as with appropriate professionals and policy makers.

UNU has been active in building and supporting networks that share knowledge, and continually strives to invigorate its networking activities by starting new initiatives and reaching out to prominent institutions, research groups, international organizations and business groups, and by participating in external formal networks that have objectives similar to its own research agenda. (Annex 2 lists major new agreements signed by UNU in 2003.)

UNU particularly aims at strengthening its connections within and contributions to the United Nations system (discussed separately in the next section, “Links with the United Nations System”), as well as its links with research and other relevant institutions, particularly those in developing countries. (See Annex 3 for a list of UNU’s major non-UN partners in 2003.)

The first subsection below briefly introduces the UNU internal network of RTC/Ps, and described the current thematic focuses of each. The next subsection then outlines a small sample of the thematic areas in which UNU

is leading or participating in major external networking activities.

UNU Research and Training Centres and Programmes

Since establishment of the UNU Geothermal Training Programme in 1978, the network of UNU RTC/Ps has grown to encompass 12 institutions, with additions in the planning stage or under discussion. This network of RTC/Ps extends the outreach of UNU in a unique, decentralized way, bringing the benefits of a truly global perspective, improved interaction with academic communities worldwide, and a wider ability to tap global human and financial resources in furtherance of UNU’s objectives.

UNU Research and Training Centres

The mission of the Tokyo-based **UNU Institute of Advanced Studies** (UNU-IAS) is to advance the frontiers of knowledge and promote learning for policy-making so as to meet the challenges of sustainable development. In 2003, UNU-IAS sharpened its focus by re-clustering research activities into six thematic areas: (a) biodiplomacy initiative, (b) science and technology policy options for developing countries, (c) urban ecosystems, (d) sustainable development governance, (e) education for sustainable development, and (f) the Ishikawa International Cooperation Research Centre (IICRC).

Website: <http://www.ias.unu.edu/>

Many developing countries face a lack of software professionals for industrial growth as well as a chronic shortage of software educators and trainers. And although local software development is essential, most developing countries have few software companies with experience in industrial software development. The mission of **UNU International Institute for Software Technology** (UNU-IIST), located in Macao, China, is to help developing countries strengthen their indigenous capabilities in three key areas: (a) development of their own and exportable software, (b) development of university education curriculum and (c) participation in international research.

Website: <http://www.iist.unu.edu/>

The activities of **UNU Institute for Natural Resources in Africa** (UNU-INRA), in Accra, Ghana, with a Mineral Resources Unit in Lusaka, Zambia, are anchored in the following five planks: (a) strengthening partnerships with African scientists and institutions, (b) developing/strengthening relevant postgraduate programmes in African universities, (c) focusing studies on the role of African women in natural resources management, (d) making relevant information available to African policy makers in a timely manner and (e) engaging the African Diaspora in UNU-INRA's activities. UNU-INRA's two main programme themes are (a) restoration and maintenance of the fertility of soils and (b) conservation of biodiversity, genetic improvement and increased utilization of Africa's indigenous food crops and useful plants.

Website: <http://www.inra.unu.edu/>

Strengthening of research capabilities to inform evidence-based policy-making, as well as educating policy makers, is an urgent and vital task for developing countries. **UNU Institute for New Technologies** (UNU-INTECH) in Maastricht, The Netherlands, contributes to this process by analysing global trends and their implications for developing countries, and helping to build capacity among policy makers and researchers in these countries. Current research at UNU-INTECH is focused around three major themes: (a) global governance of innovation, (b) designing the knowledge economy and (c) innovation for development.

Website: <http://www.intech.unu.edu/>

UNU World Institute for Development Economics Research (UNU-WIDER) in Helsinki, Finland, focuses on multidisciplinary research and policy analysis of structural changes that affect the living conditions of the world's poor, with the aim of actualizing policies that can achieve robust, equitable and environmentally sustainable growth. The UNU-WIDER research programme follows three broad themes: (a) inequality and poverty (microeconomic and distributional issues), (b) globalization, finance and growth (macroeconomic trade and finance topics), and (c) new directions in development economics.

Website: <http://www.wider.unu.edu/>

The newest Research and Training Centre, **UNU Institute for Environment and Human Security** (UNU-

EHS), commenced activities on 1 December 2003 with the appointment of its founding director. The institute, located in Bonn, Germany, will focus its research on the consequences of societal and cultural vulnerability to such "creeping" environmental hazards as global environmental change/degradation, water quality/quantity deterioration, population displacement and degradation of the social environment.

UNU Research and Training Programmes and Associated Programmes

In line with recent advances in the world of biotechnology, **UNU Programme for Biotechnology in Latin America and the Caribbean** (UNU-BIOLAC), based in Caracas, Venezuela, has been analysing and redefining its vision and strategies on biotechnology for development. This analysis focuses on a search for new opportunities and use of the comparative advantages of Latin American and Caribbean countries to benefit from biotechnology to promote development in harmony with their social needs. The main areas of work of UNU-BIOLAC are (a) bio-safety, (b) bio-informatics, (c) bio-ethics, (d) genomics and (e) molecular epidemiology.

Website: <http://www.biolac.unu.edu/>

UNU Programme on Comparative Regional Integration Studies (UNU-CRIS), in Bruges, Belgium, seeks to advance understanding of the complex and multifaceted processes and impacts of intra- and inter-regional integration. The aim is to build policy-relevant knowledge and contribute to capacity building on issues of integration and cooperation, particularly in developing countries. During its second full year of operation in 2003, UNU-CRIS focused efforts on further developing its internal expertise and external network. Research work was grouped into four major thematic areas of regional integration: (a) peace and security, (b) economic development and trade, (c) governance in the regional/global context and (d) identity.

Website: <http://www.cris.unu.edu/>

The mission of **UNU Food and Nutrition Programme for Human and Social Development** (UNU-FNP), coordinated from Cornell University, is threefold: (a) to assist

developing regions to enhance individual, organizational and institutional capacity in the area of food and nutrition, (b) to undertake research efforts that require global effort and (c) to serve as the academic arm of the UN system in areas of food and nutrition that are best addressed in a non-regulatory, non-normative environment.

Website: <http://www.unu.edu/capacitybuilding/foodnutrition/cornell.html>

UNU Fisheries Training Programme (UNU-FTP), based in Iceland, offers postgraduate research- and work-oriented training for specialists in various disciplines of fisheries. The emphasis of training is on the practical application of knowledge for assessment, development and research.

Website: <http://www.hafro.is/unuftp/>

UNU Geothermal Training Programme (UNU-GTP), also based in Iceland, offers specialized training to geothermal specialists from developing and transition countries, with the goal of assisting those countries with significant geothermal potential to build up or strengthen groups of specialists capable of undertaking most aspects of geothermal exploration and development. UNU-GTP celebrated its 25th anniversary in 2003.

Website: <http://www.os.is/id/472>

With hostilities in neighbouring Iraq forcing the evacuation of senior staff during part of 2003, and continuing to impact organization of activities involving visitors from outside of Jordan, **UNU International Leadership Academy (UNU-ILA)** in Amman, Jordan, focused its efforts on development of a research programme to underpin a revamped global course programme, to be relaunched in 2004. The Academy has established a network of researchers in nine countries who will conduct research and develop case studies on leadership for incorporation into future global courses.

Website: <http://www.la.unu.edu/>

The mission of **UNU International Network on Water, Environment and Health (UNU-INWEH)**, located in Hamilton, Ontario, Canada, is to contribute to efforts to resolve pressing global water problems through capacity development and directed research. UNU-INWEH's programme portfolio is directed to five issue areas: (a) UNU-

INWEH centres of excellence, (b) drylands water management, (c) integrated coastal zone management, (d) training and distance education in water, environment and health, and (e) groundwater and water quality management.

Website: <http://www.inweh.unu.edu/inweh/>

UNU Pilot Programme on Science and Technology for Sustainability (UNU-ISTS), in the Republic of Korea, focuses on three key aspects of sustainability technology: (a) environmental monitoring and assessment, (b) clean-technology development and (c) remedial technology development. Activities in 2003 focused on organization of the UNU-ISTS centre, development of research and education programmes, and preparation of a long-term plan.

INCORE, the **Institute for Conflict Research**, is a joint initiative set up by UNU and University of Ulster to undertake research and policy work that is useful to the resolution of ethnic, political and religious conflicts. INCORE's research focus is (a) post-conflict issues, (b) issues of governance and diversity, and (c) research methodology in violent societies.

Website: <http://www.incore.ulst.ac.uk/>

External Networking Activities

Policy Dialogue

In January, UNU Peace and Governance Programme co-hosted the third EU-UNU Tokyo Global Forum with a major international conference on the theme "Children in Turmoil: Rights of the Child in the Midst of Human Insecurity." This event, held at UN House in Tokyo, represented the continuation of a fruitful collaboration between UNU and the European Union Commission Delegation in Japan; UNICEF and the Japan Committee for UNICEF also cooperated in organizing the forum, which examined the topic across a range of issues, nationally, regionally and globally. A forum report was published to disseminate the findings to a wider audience.

Wilton Park is an academically independent agency of the British Foreign and Commonwealth Office that organizes high-level policy-focused conferences on key international issues to bring together a multi-national and

multi-professional group of senior policy practitioners, experts and other opinion formers. UNU Peace and Governance Programme co-organized a Wilton Park Conference on “Japan and East Asia in a Globalizing World” in September in Hakone, Japan — the first Wilton Park Conference to be held outside of Europe. Discussions and presentations covered a number of subject areas — traditional security issues (including weapons of mass destruction), non-traditional and human security challenges (including the environment, disease, human trafficking, transnational organized crime and terrorism), and trade, investment and finance — in the context of East Asia’s economic and security outlook in an era of globalization. The results of the conference were written up in a report produced by UNU.

Food and Nutrition Network

Hunger remains a global problem of great significance, with nearly 30 per cent of the world’s population suffering from some form of malnutrition. UNU’s Food and Nutrition Programme (FNP) has long worked with leading international organizations, such as FAO, WFP, WHO and UNICEF, to improve food security and nutrition worldwide. UNU-FNP assists developing regions to enhance individual, organizational and institutional capacity for dealing with food and nutrition issues, undertakes coordinated global research activities, and

serves as the academic arm for the United Nations system in areas of food and nutrition that are best addressed in a non-regulatory, non-normative environment. Current UNU-FNP activities of particular significance include the following:

Latin American Initiative — In the Latin American region, UNU-FNP focuses on leadership training and leveraging of funds to strengthen local and regional capacity for action in health/nutrition promotion, micronutrient fortification, and prevention of nutrition-related chronic disease and other forms of malnutrition (such as through research funded by The Global Forum for Health Research). INSP (Mexico) and INTA (Chile) are leading the effort regionally and coordinating applied research and training activities in partnership with IUNS, IAEA and PAHO/WHO.

African Initiative — UNU-FNP’s ten-year action plans for strengthening capacity in Africa in the area of food and nutrition have completed their initial two-year implementation phase. An assessment of lessons learned and the updating of those plans is underway. Capacity has been strengthened in the areas of HIV and nutrition and the enhancement of advocacy skills.

Task Force for Capacity Strengthening in Nutrition in Asia (CASNA) — At the 2003 meeting of the UN system’s Standing Committee on Nutrition, CASNA presented its ten-year plan to strengthen capacity in Asia.

A young Dominican Republic boy learns agricultural skills
(Photograph: worldviewimages.com)



Since the official launch of this effort, the group has surveyed institutions throughout Asia and identified those with capacity in the alleviation of malnutrition. Implementation of the plan has included seeking support from external agencies; the Tokyo-based National Institute of Health and Nutrition is the first official partner.

Ellison Medical Foundation/International Nutrition Foundation Fellowship Programme — A five-year grant of US\$ 1 million per year from the Ellison Medical Foundation will support a fellowship programme coordinated with UNU's capacity development efforts. The programme, to be administered by the International Nutrition Foundation, has obligated the funds fully for the first two years. The programme will be limited to about 16 developing country institutions recognized as leaders in their respective regions; the fellowships will be used to help develop or maintain a critical mass of well-trained personnel.

Multi-Country Growth Reference Study (MGRS) — The MGRS has completed its data collection phase, with studies in six countries involving a total of some 8,000 children. Construction of the world's first truly international growth standards has begun, and planning is underway for training and dissemination of the new standards.

African Networking Initiatives

Through collaboration with the International Foundation for Science (IFS), 60 young scientists from 19 African countries are being supported with small grants to conduct research on the two priority programme areas of UNU-INRA. IFS and the Committee on Science and Technology for Developing Countries (COSTED) also collaborate with UNU-INRA to facilitate a network of natural products scientists in West and Central Africa (WANNPRES) for the purpose of enhancing the exchange of information and ensuring the mobility of scientists within the various laboratories in West and Central Africa.

UNU-INRA's African Millennium Initiative for Science and Technology (AMIST) is a networking mechanism that helps to bridge the knowledge gap between African scientists, technologists and academicians in the diaspora and their home-based counterparts. Through this initiative, UNU-INRA is providing opportunities for African scientists and technologists in the diaspora to (a) establish linkages between African universities and reputable centres of learning in the developed world, and (b)

procure resources that can be used to strengthen the "cells of excellence" that have been identified by UNU-INRA as its operating units.

Networking in Biotechnology

UNU-BIOLAC works with other biotechnology-related institutes to leverage its capacity development expertise. In November, UNU-BIOLAC reached agreement with the International Center for Genetic Engineering and Biotechnology (ICGEB) to launch joint activities for 2004, including local courses taught by ICGEB professors and cosponsoring of fellowships. The coordinator of the Bioinformatics Network for Latin America and the Caribbean (LacBioNet) has been actively interacting with similar programmes launched by ICGEB and the European Molecular Biology Laboratories (EMBL). UNU-BIOLAC DNA-typing activities are being developed in collaboration with the Iberoamerican Network in Forensic Genetics, sponsored by CYTED, and the Iberoamerican chapter of the International Society of Hematogenetics. The UNU-BIOLAC Coordinator was also invited to join the new online SciDev portal, launched as a consortium of *Science* and *Nature* magazines, to address the situation of less developed countries.

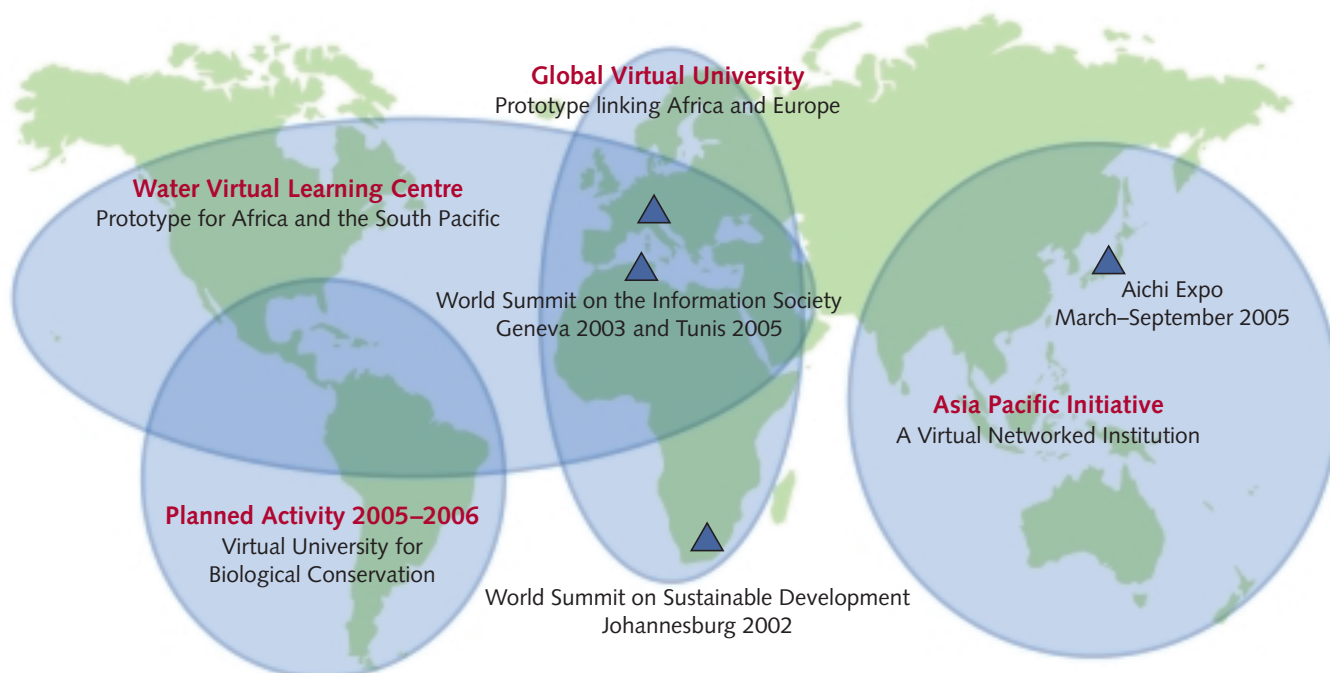
Regional Integration

UNU-CRIS cooperates with a number of partner institutions in implementing its work on regional integration. Participants in the Linking Peace, Security and Regional Integration project, for example, include the Africa Centre for Peace and Conflict Studies, African Union, UNDP, UNECA, UPEACE, regional economic communities in Africa and the Arab Maghreb Union. Participants in the Regional Integration Indicators project include scholars from 16 universities and institutions.

Freshwater Resources

UNU-INWEH undertook extensive networking activities during 2003. These included participation in the UN Inter-Agency Committee on Freshwater (UN-WATER), the central, UN system-wide coordination and planning group for follow-up implementation on the water-related commitments in the WSSD Plan of Implementation. Through UN-WATER, UNU-INWEH pursued a wide variety of bilateral and multi-agency linkages to advance its own programmes and to contribute to outreach, dissemination, advocacy and educational capacity building.

Major Online Learning Initiatives at the UNU and Key Related Events



UNU-INWEH also continued its participation in the informal UN “Water-Education-Training Support Group” (W-E-T), together with UNESCO, IHE Delft, UNDP Cap-Net and the World Bank Institute. UNU-INWEH has taken the lead in advocating a role for W-E-T as a global advocate for greater investment in capacity building and as a practical consortium for assessing and documenting global human resources requirements, compiling best practices and defining a global training “roadmap.” At a meeting in July, the W-E-T group agreed to continue in an advocacy role, but to focus on practical actions and projects. Its first initiative, the Global Capacity Development Assessment, will be led by UNU-INWEH.

Millennium Ecosystem Assessment

Millennium Ecosystem Assessment (MA) continues to be an important UNU partner. In January, UNU-IAS cooperated with MA to hold a user forum with officials, business, NGOs and academia in Malaysia. One component of the UNU-IAS Education for Sustainable Development programme aims at facilitating exchange between this global initiative and other similar projects, including the Asia-Pacific Environmental Innovation Strategy Project

(APEIS) of the Japan Ministry of the Environment. With this objective in mind, UNU-IAS organized the MA User Forum in October, attended by more than 40 potential users of MA in Japan.

Online Learning

UNU Online Learning, established in 2002, was extensively involved in 2003 in two key projects: Global Virtual University (GVU) and Asia Pacific Initiative (API).

Global Virtual University⁶ is a collaborative effort by UNU, UNEP, UNEP GRID Arendal and Agder University College, in conjunction with a network of universities around the world, with funding provided by the Norwegian Government to cover GVV development for an initial four-year period. GVV officially became operational on 17 June. The main partner universities met in June to work on overall design for a Masters Degree in Global Environment and Development Studies (GEDS). The project partners submitted proposals for individual course modules in September, with UNU and Kwame Nkrumah

⁶ <http://www.gvu.unu.edu/>

University of Science and Technology (Ghana) collaborating on a course on Sustainable Development Planning. Beginning in September, about 20 students participated in a four-month GUV online course on “The UNEP Global Environmental Outlook Reports.”

Asia Pacific Initiative⁷ is an open-content initiative designed as a platform to promote online communication, collaborative research and e-learning on environmental sustainability. API was launched in September 2002 as a Type-II partnership implemented by UNU, Keio University and Leadership for Environment And Development (LEAD) Japan. CISCO Systems (Japan), which joined the initiative in December 2002, has contributed its technology to the associated Media Studio (located at UN House in Tokyo), and universities in Australia, Thailand and the USA have also joined.

The basic approach of API is to implement field experiments and capacity building programmes, and convert the outcomes into online content. Three UNU/LEAD Japan e-case studies (focusing on the Ayuquila River, Mexico, on urban environmental management in Bangkok, and on environmental issues in the Mekong River Basin) are under development with collaborating institutions. Also as part of API, UNU collaborated with LEAD Japan and the Institute of Sustainable Energy Policies to organize a November training course in Iwate Prefecture in November on the theme of “Local Sustainable Energy Communities.”

On 31 March, the Media Studio was officially launched. The Media Studio will play a key role in development of content for UNU and its partners, and for key projects such as GUV and API. The UNU Online Learning website⁸ was also developed, with online forums designed to attract return visits and create a community of practice around the work of UNU.

Other Networking Activities

In 2003, UNU Peace and Governance Programme collaborated with a number of external partners in undertaking its projects, including:

- International Peace Academy and Harvard University's Carr Center on the project Making States Work;
- Monterrey Institute of International Studies on the Human Flows project;

- UNESCO and the University of Lausanne (Switzerland) on the project New Modes of Global Governance; and
- International Peace Research Institute, Oslo, on the project Double Effect in World Business: Dealing with Unintended Consequences of Corporate Activity.

In support of its PLEC project, in 2003 UNU Environment and Sustainable Development Programme:

- collaborated with the FAO Programme on Globally-important Ingenious Agricultural Heritage Systems (GIAHS) in China, Guinea and Mexico;
- partnered with IPGRI in preparation of the book *Managing Biodiversity in Agricultural Ecosystems*;
- developed a proposal of strategies for building a PLEC/Center for International Forestry Research (CIFOR) global initiative for capacity development in smallholder forestry;
- co-organized, with Kyoto University and Japan International Research Center for Agricultural Sciences, an international symposium in October in Tokyo on “Alternative Approaches to Enhancing Small-Scale Livelihoods and Natural Resource Management in Marginal Areas — Experience in Monsoon Asia”; and
- assisted in building up of the Cadena Latinoamericana de Agrodiversidad (Latin American Agrodiversity Network) with Instituto Interamericano de Cooperación Agrícola (Interamerican Agricultural Cooperation Agency) and governmental agencies in Peru and Brazil.

⁷ <http://www.unu.edu/api/>

⁸ <http://www.onlinelearning.unu.edu/>

LINKS WITHIN THE UNITED NATIONS SYSTEM

“The University Centre shall ... maintain close co-ordination between the activities of the University and those of the organs and programmes of the United Nations ... and of United Nations agencies”
— [UNU Charter Article IV.f]

A continuing major priority of UNU has been enhancing connections with the rest of the United Nations system. Through the Rector, UNU provides inputs to meetings of the UN Chief Executive Board for Coordination (CEB). These meetings are useful in alerting UNU to pressing UN policy issues that require new thinking.

In its project activities in 2003, the University worked with about 40 agencies in the UN system.

Geneva Research and Policy Dialogue

In the context of the Secretary-General's call for better utilization of available policy research knowledge, analyses and expertise from around the world to help improve policy planning, UNU and the Secretary-General of the UN Office at Geneva jointly organize an annual Geneva Research and Policy Dialogue. The fourth annual session of the Geneva Research and Policy Dialogue was held in November.

The Geneva Research and Policy Dialogue brings together three constituencies — the policy community within the UN system, the research communities of the UN system and the external research community — to promote synergies by instituting a dialogue and increasing mutual awareness of each community's respective work and needs. From this perspective, the Dialogue aims to bring together three aspects of the work of the UN: sound research, effective policies and creative partnership. The dialogue between the research and policy sides is especially valuable in this connection. Among the UNU projects presented at the 2003 Geneva Research and Policy Dialogue were the Peace and Governance Programme projects on refugees and human rights in societies in transition.

Project and Activity Partnerships

UNU works closely with other agencies in the UN system on a wide range of issues relevant to the University's priority programme areas. The following are examples of such partnerships for 2003.

UNU Centre Peace and Governance Programme collaborated with a number of UN system agencies, including:

- UNDPA and UNDPKO on applied policy activities in conflict prevention, peacebuilding, peacekeeping;
- UNDPA and UNIDIR on projects related to disarmament and arms transfers;
- UNICRI on the project Coalition Against Trafficking in Human Beings in the Philippines;
- UN High Commission on Human Rights through the project on human trafficking; and
- the UN Secretary-General's Office through the consultations of the Programme's Senior Vice Rector.

UNU Centre Environment and Sustainable Development Programme participated in several cooperative ventures with UNDP, UNEP and other UN system agencies, including:

- initiating a partnership on integrated capacity building in the Asia Pacific with key regional organizations and UN agencies, such as UNDP, UNEP and UNITAR;
- organizing an international workshop in Bangkok in collaboration with UNCRD;
- conducting an ongoing joint project with UNEP-IETC;
- drafting a joint programme on integrated land management in drylands with UNESCO and ICARDA;
- holding an international symposium with UNCCD, UNEP and other international agencies;
- collaborating with UNIC on a photo exhibition;
- developing a grant request on sustainable management of natural resources in Central Asia in cooperation with UNEP;
- developing a revised global atlas of mangroves in cooperation with UNESCO, UNEP, FAO and others; and
- organizing a training course at the 11th session of UNCSD.

UNU has become more closely connected to the rest of the UN system through ongoing participation in

inter-agency ICT initiatives. An important milestone in 2003 was establishment of a secure connection to the UN-wide Extranet and the UN Secretariat's Intranet.

UNU Online Learning has been incorporated into the training services section of the UN Online Network in Public Administration and Finance.

UNU Centre Library is a member of the Steering Committee for the Modernization and Integrated Management of United Nations Libraries, established in January 2003, and cooperates in its mission as a designated UN member library.

Links to the UN, Nordic institutions and Bretton Woods Institutions play an important role in UNU-WIDER's network and in the dissemination of its research. Among new programmes launched by UNU-WIDER in 2003 was one on Innovative Sources for Development Finance, co-sponsored by UN-DESA. Some other examples of new and continuing cooperation with agencies of the UN system by UNU-WIDER include:

- cooperation with UNDP in updating and dissemination of the World Income Inequality Database;
- presentations by UNU-WIDER staff in meetings organized by the World Bank in Russia, Switzerland and the USA;
- cooperation with UNHCR in the UNU-WIDER project Poverty, International Migration and Asylum;
- cooperation with the ILO in editing two volumes resulting from papers presented at the Development Conference on Growth and Poverty;
- participation in the UNU/TICAD III Expert Group;
- participation by the Director of UNU-WIDER in the Sessions of the Board of UNRISD in Geneva; and
- maintaining links with UNICEF, UNICT Task Force, IADB, IMF, OECD, UNCTAD and ECLAC.

UNU-IAS maintains a number of links to the UN community. Examples of cooperative efforts in 2003 include:

- a joint briefing with UNCTAD on Genetically Modified Organisms and Trade to diplomats at the Palais des Nations in Geneva;
- a joint Professor Training Programme with the World Trade Organization on WTO and Sustainable Development;
- participation in the meeting of the Multi-year Programme of Work of the Conference of the Parties of the Convention on Biological Diversity (CBD) and the Subsidiary Body on Scientific, Technical and Technological Advice of CBD (SBSTTA/9), in Montreal;

- collaboration with UNESCO and ICSU in organizing a side event during the 11th Session of the Commission on Sustainable Development;
- organizing a session for UNEP's Biosafety Unit at UNU-IAS Biosecurity II for Central Asia and Mongolia; and
- launching with UNEP of a joint programme on capacity building related to access to genetic resources and benefit-sharing.

UNU-INRA actively participates in all UN activities in Ghana:

- In September, UNU-INRA hosted the meeting of the UN Heads of Agencies in Ghana;
- UNU-INRA supplied key personnel to the UN Country Team (UNCT) for production of the Common Country Assessment and implementation of the second phase of the UN Development Assistance Framework;
- UNU-INRA and the regional office of FAO have concluded plans to sponsor two training activities on soil fertility management during the 2004–2005 biennium; and
- UNU-INRA cooperated in its project activities with the regional offices of several UN agencies, including UNDP and UNEP.

UNU-BIOLAC collaborated with WIPO to organize the international seminar on "Intellectual Property and Technological Transfer: Key Tools for Sustainable Development" in Chile in November. In addition, UNU-BIOLAC:

- maintains continuous exchanges with the UNESCO Regional Office for Social Studies to coordinate regional efforts in bioethics;
- actively interacts through its LacBioNet network on health initiatives with a similar programme launched by WHO;
- works through its RnBio network in close cooperation with FAO's REDBIO agriculture network and the regional office of UNEP; and
- has opened discussions with the UNESCO regional office in Mexico and other regional agencies to explore possibilities for joint activities and to coordinate regional efforts in bio-ethics.

UNU-INWEH expanded its collaboration with other UN system agencies in 2003 through participation in UN-WATER (the UN Inter-Agency Committee on Freshwater).

UNU Food and Nutrition Programme works with a number of UN system agencies in implementing its projects, including FAO, UNICEF, UNDP, UNESCO, the Asian Development Bank, WFP and WHO.

In 2003, UNU-CRIS prepared an overall framework for capacity-building activities in collaboration with UNDESA. UNU-CRIS has also developed linkages with UNECE, UNDP, ECLAC and the University of Peace.

In 2003, UNU-INTECH worked with such agencies as UNCTAD, UNESCO, UNECA and UNIDO.

Partners in the UN System

- Asian Development Bank
- Economic Commission for Latin America and the Caribbean (ECLAC)
- Food and Agriculture Organization of the United Nations (FAO)
- Global Environment Facility (GEF)
- Inter-American Development Bank (IADB)
- International Fund for Agricultural Development (IFAD)
- International Labour Organization (ILO)
- International Monetary Fund (IMF)
- Joint United Nations Programme on HIV/AIDS (UNAIDS)
- United Nations Centre for Regional Development (UNCRD)
- United Nations Children's Fund (UNICEF)
- United Nations Commission on Science and Technology for Development (UNCSTD)
- United Nations Conference on Trade and Development (UNCTAD)
- United Nations Convention to Combat Desertification (UNCCD)
- United Nations Department of Economic and Social Affairs (UN/DESA)
- United Nations Department of Peace-keeping Operations (UNDPKO)
- United Nations Department of Political Affairs (UNDPA)
- United Nations Development Fund for Women (UNIFEM)
- United Nations Development Programme (UNDP)
- United Nations Economic Commission for Africa (UNECA)
- United Nations Economic Commission for Europe (UNECE)
- United Nations Educational, Scientific and Cultural Organization (UNESCO)
- United Nations Environment Programme (UNEP)
- United Nations Forum on Forests
- United Nations High Commissioner for Refugees, Office of the (UNHCR)
- United Nations High Commission on Human Rights
- United Nations Industrial Development Organization (UNIDO)
- United Nations Information and Communication Technologies (UNICT) Task Force
- United Nations Institute for Disarmament Research (UNIDIR)
- United Nations Institute for Training and Research (UNITAR)
- United Nations Inter-Agency Committee on Freshwater (UN-Water)
- United Nations Interregional Crime and Justice Research Institute (UNICRI)
- United Nations Office for the Coordination of Humanitarian Affairs (UNOCHA)
- United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA)
- United Nations Research Institute for Social Development (UNRISD)
- United Nations Staff College
- United Nations World Food Programme (WFP)
- University for Peace (UPEACE) Africa Programme
- World Bank
- World Health Organization (WHO)
- World Intellectual Property Organization (WIPO)
- World Trade Organization (WTO)

DISSEMINATION

“The University shall disseminate the knowledge gained in its activities to the United Nations and its agencies, to scholars and to the public, in order to increase dynamic interaction in the world-wide community of learning and research.”

— [UNU Charter Article I.4]

To ensure that pertinent information is put to optimal use in solving pressing global problems, UNU seeks to improve and increase communication among academics, scientists, research workers, practitioners, policy makers and the public. The basic goal of UNU’s dissemination activities is to get the “right” knowledge to the people that need it most, in a timely manner and in a form that is most useful. UNU aims, in particular, to promote the dissemination of current scientific information and best practice to the developing world.

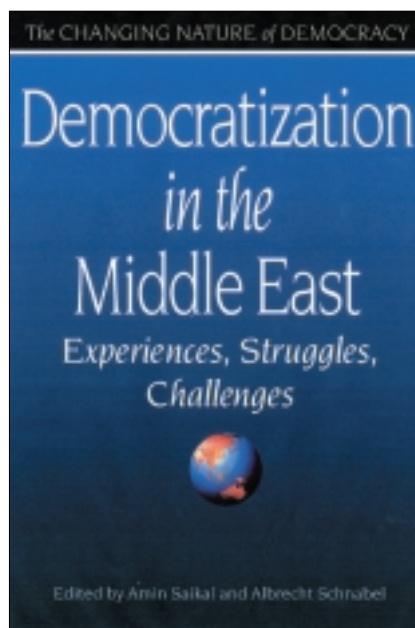
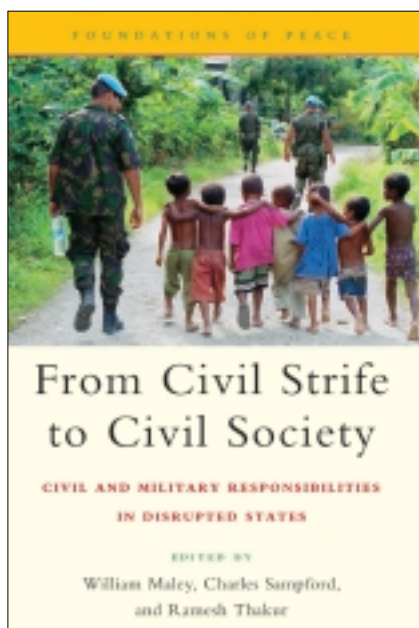
Dissemination also serves to increase UNU’s international visibility and promote its work. UNU employs both traditional modes of dissemination — such as books, articles in journals and in the popular press, policy briefs and working papers (see Annexes 5 and 6) and conferences, workshops and lectures (many of which are listed later in this section) — and innovative channels (such as distribution via CD-ROM, the Internet and video).

UNU Press

UNU Press provides professional services to support the dissemination activities of UNU projects and maintains excellent working relationships with co-publishers, distributors and other partners worldwide, including the UNU network of RTC/Ps. In 2003, UNU Press reviewed its operations with a view to further reducing the time required to produce publications, and undertook a series of projects (including electronic publishing and rationalizing of stock) to modernize its operations and reduce costs. Effort was also made to better correlate publishing activity with the overall profile of UNU.

In 2003, UNU Press published 15 new titles — more than double the output of the previous year — and three reprints under its own imprint. The increased output was due, in part, to a new emphasis on external financial assistance that enabled production of several new books that otherwise might not have had sufficient funding. In addition to these UNU Press publications, in 2003 other publishers produced more than 20 books related to UNU research projects. (See Annex 5 for a list of titles published in 2003.)

In keeping with UNU’s dissemination mandate, UNU Press continues to promote translations of its books and inexpensive local editions in developing countries by



indigenous publishers. In 2003, two new translations were published (in French and Japanese), and agreements with re-publishers in Malaysia and India resulted in the production of low-cost reprints of ten UNU Press titles for sale in developing countries.

UNU Press completed its first entirely onscreen publishing project in 2003, and also re-printed its first title using digital print-on-demand technology. The use of digital reproduction, which enables small print runs at reasonable cost, will help to ensure the continued supply of titles that otherwise might be unavailable to buyers (out of stock) or have to be reprinted in large volume at a significantly higher cost. Many older UNU Press titles are also offered in full on the UNU website and CD-ROM.

UNU Press exhibited widely in 2003. It hosted a co-exhibit for six UN agencies at the 3rd World Water Forum in Kyoto, Japan, and produced the UN Water CD that was distributed together with UNU environmental materials to 20,000 delegates. UNU Press also coordinated a combined UN publications exhibition at the Tokyo International Book Fair, held a co-exhibit with UN Publications at the annual conference of the Academic Council on the UN System in New York, and exhibited at a series of academic meetings as well as the annual Frankfurt International Book Fair.

The UNU Press publication *Beyond Violence: Conflict Resolution in Northern Ireland* received the American Library Association's 2002 Notable Government Documents Award, marking the third year in a row that a UNU Press book has won this prestigious award.

Electronic Dissemination

UNU continues to explore opportunities for enhancing electronic dissemination of its activities and research results. The main UNU website offers abundant, regularly updated information about UNU Centre research, publications, activities, news and events, as well as links to the websites of the individual RTC/Ps and linkages to Japanese-, French- and Spanish-language information about UNU.

In 2003, the UNU Campus Computing Centre (UNU-C3) developed a video portal⁹ that provides one-stop

searchable access to UNU's video archives and regular livecasts, such as the U Thant Distinguished Lecture Series and International Courses lectures. UNU-C3 has also developed a number of software systems to satisfy particular needs of the University, such as Alumni-Net (an alumni database of former participants in the UNU Capacity Development Programme) and PLECserv (a system that facilitates dissemination of the publications and methodologies of the People, Land Management and Ecosystem Conservation project to the worldwide scientific and professional community). Attention was also given in 2003 to redeveloping the UNU Press Sales Support System.

As a means of reaching more individuals at lower cost, UNU-BIOLAC is encouraging the design of online courses and interactive virtual tutorials, to be distributed on CD-ROM and through the UNU-BIOLAC website. A digitalized course on agri-biotechnology was approved in 2003. To facilitate effective online education and information dissemination, UNU-BIOLAC has established an automated platform that includes a dynamic website with important links and frequent updates on worldwide issues, and launched enhanced websites for the Regional Network on Biosafety (RNBio) and the Bioinformatics Network for Latin America and the Caribbean (LacBioNet).

UNU Website: <http://www.unu.edu/>

Public Information

UNU seeks to inform the various stakeholders, the global research and policy-making communities, and the general public in the UNU Centre and UNU RTC/P host countries and throughout the world about its work and activities through a wide range of dissemination modes. These include a variety of newsletters, press releases, brochures, and other print and electronic publications, as well as numerous public events.

The Internet-based newsletter *UNU Update*, published eight times in 2003, highlights items of current interest and provides succinct information on issues being addressed in different parts of the UNU system. Two other UNU Centre newsletters, *UNUnexions* (which provides a "snapshot" of recent UNU activities) and *Work in*

⁹ See <http://c3.unu.edu/unuvideo>.

Progress (a theme-focused review of recent and ongoing research work and findings), are disseminated both through paper copies and the UNU website. *WIDER Angle*, the newsletter of UNU-WIDER, is published twice a year and disseminated both in print and electronic form.

In 2003, UNU Centre Public Affairs distributed an average of 600 copies each (English and Japanese) of more than 40 press releases and announcements. The Public Affairs section began using the Xpedite fax distribution service, which reduced lead-time and cut overall distribution costs by about 75 per cent. This contributed to the work of UNU being mentioned in the Japanese vernacular press over 270 times and more than 35 times in the local English media.

UNU Centre Library

An essential part of dissemination activities is providing researchers and scholars with access to all the reports and publications published by the UNU system. UNU Centre Library collects, catalogues and indexes e-publications and e-reports (currently some 700 items) for the structured organization of collections as well as efficient retrieval. The Library has launched a pilot version of the UNU Online Public Access Catalogue (UNU-OPAC), which provides not only bibliographic information but also links to full-text publications/reports published by the UNU system.

UNU Centre Library also facilitates research and study of a wide range of relevant materials by members of the UNU community and UN House, capacity development programme and conference participants, as well as external researchers and the general public. Following integration of a collection held by UNIC Tokyo in 2002, a collection of UNDP publications and reports held by UNDP Tokyo were integrated into UNU Centre Library collections in 2003.

Global Seminar Series

UNU's outreach programme is designed to foster a better understanding among university students and young professionals of important global issues and the role of the United Nations in addressing them. An important component of this outreach effort is the series of UNU Global

Seminars that are held annually in various locations throughout Japan, the host country of UNU Centre. Each Global Seminar comprises lectures, plenary sessions and group discussions, and presentations by participants; the teaching faculty includes UNU academic staff as well as other experts from academia and policy practice.

Following expansion to the Tohoku region in northern Japan in 2002, UNU Global Seminars are now held annually in seven locations throughout Japan. In 2003, the first UNU Global Seminar session was held outside of Japan — in Seoul, Republic of Korea.

More than 3,000 persons have participated in UNU Global Seminars since inception of the series in 1985. In 2003, 394 young people from Japan and other countries attended the following seven seminars in Japan:

- Tohoku Session (Akita Prefecture, 27–30 July), “Global Environment and Regional Development,” 52 participants;
- Shimane Session (Shimane Prefecture, 3–6 August), “Globalization and Human Development,” 50 participants;
- Hokkaido Session (Hokkaido Prefecture, 27–30 August), “Water, Environment and Economics,” 43 participants;
- Shonan Session (Kanagawa Prefecture, 1–5 September), “Will Human Security Supersede the State?,” 110 participants;
- Kobe-Awaji Session (Hyogo Prefecture, 23–26 September), “Will Science and Technology Save our Global Community?,” 29 participants;
- Kanazawa Session (Ishikawa Prefecture, 22–25 November), “Gender, Development and Peace,” 45 participants; and
- Okinawa Session (Okinawa Prefecture, 18–21 December), “Human Rights: Where Do We Stand Today?,” 65 participants.

The first UNU Global Seminar — Seoul Session was held from 1–5 July in the Republic of Korea. Under the theme of “Community Building in Northeast Asia: Challenges and Opportunities,” over 90 participants from Korea, Japan, China, Mongolia and other countries discussed the benefits and problems associated with regional integration in the areas of peace and security, economics, environment and culture. The 2003 UNU Global Seminar — Seoul Session was co-organized by UNU and the Korean National Commission for UNESCO, who have agreed to continue their cooperation to organize further seminars.

Work is underway on further expansion of this seminar series outside of Japan. The UNU Global Seminar — Hawaii Session is scheduled to be inaugurated in March 2004 for students and young professionals from Hawaii and other Pacific islands.

Global Leadership Film Series

The Global Leadership Interview Series is an ongoing project of UNU-ILA in which men and women in global leadership positions share the opinions, attitudes and ideas that have shaped their approach to leadership practice. Their views are presented in video documentary form with accompanying booklets. In 2003, UNU-ILA produced one additional instalment in this series and conducted interviews with 2 additional UN leaders.

Tokyo Roundtables

The Tokyo Roundtable series was launched in 2002 to raise the visibility of UNU-IAS and contribute to Japanese society at large by providing information on global issues related to the Institute's research areas. Four Tokyo Roundtable events were held in 2003: "Agriculture for Peace — A New Vision for Conflict Prevention in Africa," "The Post-WSSD Perspectives: Business, Society and Sustainable Development Governance," and "Protected Areas and Hotspots: The Role of Hotspots in Priority Setting for Conservation" in May, as well as "Bioethics and the Biotechnology Revolution" which was jointly organized by UNU-IAS in June in cooperation with the embassies of France and Germany and Universities of Tokyo and Kyoto.

Major Public Lectures

Numerous public lectures are presented each year at UNU Centre and the UNU RTC/Ps. These include the U Thant Distinguished Lecture Series co-organized by UNU Centre and UNU-IAS, the Michio Nagai Memorial Lecture at UNU Centre, the UNU-INRA Annual Lectures, the UNU-WIDER Annual Lecture and the Annual UNU-CRIS Lecture.

The U Thant Distinguished Lecture Series is a forum



Former US President Jimmy Carter delivering the 6th U Thant Distinguished Lecture at UNU

that presents eminent thinkers and world leaders speaking on the role of the United Nations in addressing the challenges facing the world's peoples and nations in the twenty-first century. In 2003, three U Thant Distinguished Lectures were presented in Tokyo to audiences of invitees from diplomatic, governmental, political, academic and business circles and the general public:

- At the 5th U Thant Distinguished Lecture, on 15 April, Professor Ahmed H. Zewail, 1999 Nobel Prize winner in Chemistry, discussed his views on "The Future of Our World."
- On 5 September, the Honorable Jimmy Carter, 39th President of the United States of America and recipient of the 2002 Nobel Peace Prize, delivered the 6th U Thant Distinguished Lecture on the topic of "Agriculture, Development and Human Rights in the Future of Africa."
- On 17 October, Australian scientist Dr. Peter Doherty, co-winner of the 1996 Nobel Prize in Medicine, gave the 7th U Thant Distinguished Lecture on "Science, Society and the Challenge of the Future."

Other major public lectures presented in the UNU system in 2003 included:

- "Botswana's Success Story: Overcoming the Challenges of Development" — His Excellency Mr. Festus G. Mogae, President of the Republic of Botswana, 18 March, Tokyo.

- “DNA Structure Jubilee: Celebrating the 50th Anniversary of the Double Helix,” UNU-BIOLAC Public Lectures, 25 April, Caracas, Venezuela.
- “The Role of Infrastructure in the Development and Integration of Africa” — His Excellency Mr. Abdoulaye Wade, President of Senegal, 2003 Africa Day Symposium Keynote Speech, 13 May, Tokyo.
- “Challenges for Peace and Reconciliation in the 21st Century” — His Excellency Kjell Magne Bondevik, Prime Minister of Norway, 2003 Fridtjof Nansen Memorial Lecture, 27 May, Tokyo.
- “NEPAD, TICAD and MDGs: Challenges for German and Japanese Development Policies” — Dr. Uschi Eid, Parliamentary State Secretary to the Federal Minister for Economic Co-operation and Development, Germany, 29 September, Tokyo.
- “Implementation of TICAD III: The Perspective of an African Leader” — His Excellency Mr. John Kufuor, President of Ghana, 1 October, Tokyo.
- “Making Science and Technology Work for the Poor” — Prof. Robert Evenson, Director of the Economic Growth Center, Yale University, UNU-INRA Annual Lecture, 7–10 October, Addis Ababa, Ethiopia.
- “Global Labour Standards versus Freedom of Choice” — Professor Kaushik Basu (Cornell University), UNU-WIDER Annual Lecture, 10 November, Helsinki.
- “Regional Integration: A Public-Goods Perspective” — Dr. Inge Kaul, Director of the Office of Development Studies, UN Development Programme, New York, 2nd Annual UNU-CRIS Lecture, 20 November, Bruges, Belgium.

Other Notable 2003 Events

In addition to the public lectures mentioned above, UNU Centre and the UNU RTC/Ps organize numerous conferences, seminars, workshops and other events each year.¹⁰ Some events of note in 2003 were the following:

- “Children in Turmoil: Rights of the Child in the Midst of Human Insecurity,” EU/UNU Tokyo Global

Forum, co-organized by UNU, Delegation of the European Commission in Japan, UNICEF and Japan Committee for UNICEF, 16 January, Tokyo.

- “Globally-Integrated Environmental Assessment Modeling,” International Symposium and Formal Launch of GLEAM Forum, 17 January, Tokyo.
- “Inter-linkages and Environmental Governance — National and Regional Strategies and Ways Forward in Asia and the Pacific,” Public Forum co-organized by UNU, ASEAN Secretariat, Ministry of the Environment (Japan) et al., 21 January, Tokyo.
- “Regional Environmental Quality in the East Asian Coastal Hydrosphere: Environmental Quality Guidelines and Capacity Development,” International Workshop co-organized by UNU, K-JIST, Shimadzu Corporation (Japan) and UNESCO-MAB, 26–31 January, Kwangju, Republic of Korea, and Hadano, Japan.
- “Fate of Arsenic in the Environment,” BUET/UNU International Symposium, 5–6 February, Dhaka, Bangladesh.
- “UN Peace Operations in the Asia-Pacific Region,” Workshop organized by UNU and Institute of

Special Publications for International Year of Freshwater 2003

To mark the contribution of UNU to the International Year of Freshwater, UNU-INWEH undertook a system-wide effort to compile research papers that highlight the University's input to the freshwater agenda and identify policy-relevant research needs. These papers will be published in a special 2004 issue of the *Journal of Global Environmental Change — Human and Policy Dimensions*. The contributions address two key research themes: management of water resources shared by two or more nations, and new approaches and tools for integrated water resources management.

UNU-INWEH also supported preparation of a special issue on the African Great Lakes in the *Journal of Great Lakes Research*, released in December. The collection highlights the “knowledge imperative” for the African Great Lakes and discusses a wide variety of environmental issues in the three largest lakes, including fishery exploitation, eutrophication and contamination. UNU-INWEH is supporting publication and dissemination of the issue on CD-ROM to ensure that its important scientific results are made widely available to African scientists and managers.

¹⁰ A comprehensive listing of UNU meeting and events in 2003 is accessible on the UNU website at http://www.unu.edu/hq/rector_office/events2003/events-2003.html.



Ms. Seiko Noda, Member of the Japan House of Representatives, at the EU/UNU Tokyo Global Forum on "Children in Turmoil: Rights of the Child in the Midst of Human Insecurity"

Defence and Strategic Studies (Singapore), 12–13 February, Tokyo.

- "World Lake Vision Plenary Meeting," co-organized by UNU, ILEC, UNEP-IETC et al., 24–25 February, Kusatsu, Shiga, Japan.
- "Building (Bio)pharmaceutical Systems in Developing Countries," UNU-INTECH International Workshop, 26–27 February, Maastricht.
- "Women's Empowerment: The Key to Achieving the Millennium Development Goals," 2003 International Women's Day Celebration jointly organized by UN agencies in Japan, 6 March, Tokyo.
- "The New Competitive Advantage: Lessons for Developing Countries," UNU-INTECH Research Seminar, 6 March, Maastricht.
- "Joint UNU-IAS/UNCTAD Policy Dialogue on Biotechnology Applications and Trade," 11 March, Geneva.
- "The 3rd World Water Forum," with two sessions co-organized by UNU-IAS in collaboration with JSWE, MOE/J, and IGES, 16–23 March, Kyoto, Shiga and Osaka, Japan.
- "What is Expected of United Nations Diplomacy Now?: Seeking Peace and Prosperity in the 21st Century," Symposium co-organized by UNU, MOFA and Yomiuri Shimbun, 17 March, Tokyo.
- "Review Meeting of Post-MYPOW (Multi-year Pro-

gramme of Work of the Conference of the Parties to the Convention on Biological Diversity)," UNU-IAS, 21 March, Montreal.

- "ASEAN Regional Workshop on Inter-linkages and Integrated Capacity Development," UNU, 24–26 March, Kuala Lumpur.
- "New Threats and Nonproliferation of Weapons of Mass Destruction," International Symposium jointly organized by UNU and Ministry of Foreign Affairs (Japan), 25 March, Tokyo.
- "Geographical Indications," UNU-INTECH Research Seminar, 26 March, Maastricht.
- "Spatial Inequality in Asia," UNU-WIDER Project Conference, 28–29 March, Tokyo.
- "New Frontiers of Bio-informatics in Latin America," UNU-BIOLAC Workshop, 31 March–4 April, Mérida, Venezuela.
- "Award Ceremony for 2002–2003 UNU-Kirin Fellows," UNU, 4 April, Tokyo.
- "Trade, Business and Investment in a Wider Europe," Meeting jointly organized by UNU-CRIS, UNEC and International University, 7 April, Geneva.
- "Urban Sustainable Capacity Building Exercise," UNU-IAS, 7–10 April, Tokyo.
- "Closing of the International Year of Mountains 2002," Public Forum jointly organized by UNU and the Japanese National Committee of the IYM2002, 8 April, Tokyo.
- "The European Union Fifth Enlargement: 10 New Member Countries," Public Forum jointly organized by UNU and the Presidency of the European Union, 10 April, Tokyo.
- "Impacts of POPs from Urban Areas," International Symposium organized by UNU, 15–16 April, Beijing.
- "Improving Public Participation and Governance in International Watershed Management," International Symposium convened by UNU, University of Virginia School of Law, Environmental Law Institute, et al., 18–19 April, Charlottesville, Virginia.
- "African Capacity for Policy Simulation: Towards Better Poverty Strategies," UNU-WIDER Project Workshop, 19–20 April, Johannesburg.
- "Biotechnology and International Trade in South East Asia," UNU-IAS Conference, 22–28 April, Viet Nam.

- “Biennial Meeting of UNU-INRA College of Research Associates,” 24–25 April, Accra.
- “25th Conference of Directors of UNU Research and Training Centres and Programmes,” 29 April, Reykjavík, Iceland.
- “Spoilers and Devious Objectives in Peace Process,” Project Planning Meeting, 13–14 May, Colombo, Sri Lanka.
- “Making States Work: State Failure and the Crisis of Governance,” Second UNU/IPA Project Meeting, 16–18 May, Colombo.
- “Innovative Sources of Development Finance,” UNU-WIDER Project Meeting, 17–18 May, Helsinki.
- “2nd UNU/RIVM Workshop on Environmental Dimensions of Poverty,” 19–21 May, Katmandu.
- “The Determinants of Governance Patterns in Global Value Chains,” UNU-INTECH Research Seminar, 21 May, Maastricht.
- “Measuring Human Well-being,” UNU-WIDER Project Meeting, 29 May, Helsinki.
- “Spatial Inequality in Development,” UNU-WIDER Project Meeting, 29 May, Helsinki.
- “Inequality, Poverty and Human Well-being,” UNU-WIDER Development Conference, 30–31 May, Helsinki.
- “African Capacity for Policy Simulation: Towards Better Poverty Strategies,” UNU-WIDER Project Workshop, 1–3 June, Helsinki.
- “Tokyo Roundtable on Bioethics and Biotechnology: What is at Stake for Humanity Now?,” jointly organized by UNU-IAS, the Embassy of France, Embassy of Germany, the Japanese-German Center Berlin, 2 June, Tokyo.
- “Linking Peace, Security and Regional Integration in Africa,” Conference co-organized by UNU-CRIS and University of Bradford, 2–3 June, Bruges.
- “The Future of the Venture Capital Industry,” UNU-INTECH Workshop, 5 June, Maastricht.
- “Tokyo Roundtable on Biosecurity,” UNU-IAS, 9 June, Tokyo.
- “The Rise of Modular Model of the Global Electronics Industry,” UNU-INTECH Research Seminar, 11 June, Maastricht.
- “TNCs, Capabilities and Competitiveness: Evidence from Africa, Asia and Latin America,” UNU-INTECH International Workshop, 19–20 June, Maastricht.
- “Long-term Development in the CFA-zone Countries of Sub-Saharan Africa,” UNU-WIDER Project Meeting, 27–28 June, Helsinki.
- “Small Arms and Gender,” Project Expert/Planning Meeting, 12–13 July, New York.
- “Ensuring Flood Security for Sustainable Urbanization in the Asia-Pacific Region,” UNU and UNCRD, 28–30 July, Bangkok.
- “Globalization with a Human Face,” UNU/UNESCO International Conference, 30–31 July, Tokyo.
- “PNG National Consultations and Pre-Regional Workshop on Inter-linkages and Integrated Capacity Development in the Pacific,” UNU, UNDP and Government of Papua New Guinea, 9–16 August, Papua New Guinea.
- “Role and Governance Implications of Virtual Water Trade,” Workshop co-convened by UNU, Stockholm International Water Institute and Japan Science and Technology Agency, 12 August, Stockholm.
- “Capacity Development Training for Monitoring of POPs in the East Asian Hydrosphere,” Workshop co-organized by UNU, the Asia Pacific Network for Global Change Research and Shimadzu Corporation (Japan), 1–2 September, Tokyo.
- “Innovative Sources of Development Finance,” UNU-WIDER Project Meeting, 5 September, Helsinki.
- “Sharing Global Prosperity,” UNU-WIDER Development Meeting, 6–7 September, Helsinki.
- “Formal Aspects of Component Software FACS’03,” UNU-IIST Workshop, 8–9 September, Pisa, Italy.
- Inter-linkages Side Event during the SPREP Governing Council and Brainstorming Session among partners of the capacity development initiative in Asia and Pacific, UNU, 8–12 September, Apia, Samoa.
- Asia Pacific Initiative Side Event at the World Summit on the Information Society, Preparatory Committee 3, co-organized by UNU, LEAD Japan, Keio University and Cisco Systems, 22 September, Geneva.
- “World Forests, Society & Environment Forum,” Special Event during the XII World Forestry Congress, co-organized by UNU, Finnish Forest Research Institute, European Forest Institute, and International Union of Forest Research Organizations, 22 September, Quebec.

- “Will Science and Technology Save Our Global Community?,” UNU Global Seminar, Kobe/Awaji Session, 23–26 September, Hyogo Prefecture, Japan.
- “Globalism and Regionalism in Climate Policy,” Conference co-hosted by UNU-CRIS, Italian Centre for International Associations and Region of Tuscany, 25 September, Montecatini, Italy.
- “States, Regions and National Cultural Autonomy,” UNU-CRIS Conference, 27–28 September, Bruges.
- UNU-TICAD III Activities, 29 September–1 October, Tokyo.
- “Commercial Prospects of Access to and Benefit-sharing of Genetic Resources,” Symposium co-organized by UNU Centre, UNU-IAS and the Japan Bioindustry Association, 30 September, Tokyo.
- “Towards the Elimination of the Chemical Weapons — Roles of the OPCW and Japan,” UNU/MOFA Joint Symposium, 1 October, Tokyo.
- “Exploring the Tensions and Synergies between Regional Integration and Global Governance,” Workshop jointly organized by UNU-CRIS and University of Warwick, 2–3 October, Bruges.
- “Our Commitments for the Future — Post-WSSD Symposium,” jointly organized by UNU Centre, UNU-IAS, Ministry of Education, Culture, Sports, Science and Technology (Japan) and Ministry of the Environment (Japan), 3 October, Tokyo.
- “Living with Risk: Are We Prepared for the Next Big One?,” Public Forum, UNU, 4 October, Tokyo.
- “Globalization, Migration, and Human Security: Challenges in Northeast Asia,” International Conference co-sponsored by UNU, Center for East Asian Studies and Monterey Institute of International Studies, 6 October, Tokyo.
- “Human Flows across National Borders in Northeast Asia,” Seminar organized by UNU and Monterey Institute of International Studies, 6–7 October, Tokyo.
- “Improving Public Participation and Governance in Water Resources Management,” International Symposium co-organized by UNU and Tokyo University of Agriculture and Technology, 8 October, Tokyo.
- “Taking a Seat in the Global Marketplace: Opportunities for ‘High Road’ Upgrading in the Indonesian Wood Furniture Sector?,” UNU-INTECH Research Seminar, 9 October, Maastricht.
- “Globalization, Regionalization and the Information Society; A European and South(ern) African Encounter,” UNU-CRIS Conference, 9–10 October.
- “Second International Congress of Immunology,” UNU-BIOLAC, 9–11 October, Lima.
- “Zero Emission Symposium 2003,” UNU-ZEF, 20–21 October, Tokyo.
- “Working for the UN,” 2003 UN Day Symposium jointly organized by 18 UN agencies in Japan, 24 October, Tokyo.
- “Alternative Approaches to Enhancing Small-Scale Livelihoods and Natural Resource Management in Marginal Areas- Experience in Monsoon Asia,” UNU International Symposium, 29–30 October, Tokyo.
- “Biosafety Workshop,” Workshop co-organized by UNU-BIOLAC and Commission for Environment of PARLATINO, 5 November, Mexico DF.
- “Improving the Role of the United Nations in Environmental Governance — National and Regional Approaches,” UNU-GEIC Seminar, 14 November, New York.
- “Insurance Against Poverty,” UNU-WIDER Research Presentation, 18 November, Addis Ababa.
- “Regional Integration, Governance and Global Public Goods,” UNU-CRIS Conference, 20–21 November, Bruges.
- “Challenges in Strengthening of Capacities for Forest Policy Development in Countries in Transition,” International Symposium and Workshop co-organized by UNU, European Forest Institute, Silva-Network/University of Joensuu et al., 21–23 November, Belgrade, Serbia and Montenegro.
- “Health and Development — Economic Aspects of Public Health,” UNU Public Forum, 26 November, Tokyo.
- “The Future of E-learning,” Side Event at the World Summit on the Information Society, co-organized by UNU, Global Virtual University, UNEP GRID Arendal, et al., 11 December, Geneva.
- “Intellectual Property and Technological Transfer, Key Tools for Sustainable Development,” UNU-BIOLAC International Seminar, 12 December Concepción, Chile.

INCOME, EXPENDITURE AND STAFF

“Capital costs and recurrent costs of the University shall be met from voluntary contributions for the University, or from the income derived therefrom....”

— [UNU Charter Article IX.1]

In 2003, UNU received operating and specific programme contributions as well as the investment income

from the Endowment Fund. UNU also benefited during the year from counterpart and other support, including cost-sharing support for fellowships and other activities. The approved budget in the 2002–03 biennium amounted to US\$73.6 million.

Table 1 provides an estimate of actual income as of 31 December 2003.

Table 1. Income for 2003

(Unit: US\$ 000)

UNU Unit	Core Funds				SPC	Total (Net)
	From Endowment	Operating Contributions	Misc. Income ¹	Subtotal		
UNU Centre	8,338	5,664	2,198	16,200	5,012	21,212
UNU-BIOLAC	451	0	0	451	9	460
UNU-CRIS	0	163	0	163	0	163
UNU-IAS	0	3,482	0	3,482	748	4,230
UNU-IIST	2,029	9	0	2,038	76	2,114
UNU-ILA	15	1,019	0	1,034	0	1,034
UNU-INRA ²	682	0	0	682	24	706
UNU-INTECH	1,042	1,100	0	2,142	657	2,799
UNU-INWEH	0	684	0	684	357	1,041
UNU-WIDER	2,461	445	9	2,915	395	3,310
TOTAL	15,018	12,566	2,207	29,791	7,278	37,069

Notes: 1. Includes contributions for UNU HQ building, income from publications and other income.

2. The income of US\$500,000 in the Endowment Fund was transferred from UNU Centre to UNU-INRA as per the recommendation of the UNU Council.

[Note: These figures have not yet been audited.]

Table 2 provides an estimate of actual expenditure in 2003, as of 31 December 2003.

Table 2. Expenditure in 2003

Expenditure in 2003 (includes obligations and unliquidated obligations)

(Unit: US\$ 000)

UNU Unit	Academic Activities			(UNU) Personnel Costs			General Costs ³	Total
	Core Funded	Specific Funded	Subtotal	Prog. Staff ¹	Admin. Staff ²	Subtotal		
UNU Centre	3,543	3,657	7,200	4,989	3,799	8,788	4,762	20,750
UNU-BIOLAC	277	0	277	0	0	0	0	277
UNU-CRIS	0	0	0	142	0	142	27	169
UNU-IAS	897	1,259	2,156	410	663	1,073	1,042	4,271
UNU-IIST	432	37	469	604	309	913	273	1,655
UNU-INRA	126	2	128	376	23	399	137	664
UNU-INTECH	367	435	802	1,372	223	1,595	334	2,731
UNU-INWEH	599	166	765	228	0	228	165	1,158
UNU-ILA	113	0	113	488	76	564	132	809
UNU-WIDER	639	523	1,162	1,212	239	1,451	320	2,933
TOTAL	6,993	6,079	13,072	9,821	5,332	15,153	7,192	35,417

Notes: 1. Total costs of staff working on research and capacity building.

2. Total costs of all other staff.

3. Includes UNU Headquarters Building.

[Note: These figures have not been audited.]

UNU is always striving to become increasingly international in nature. The Centre and the 12 Research and Training Centres and Programmes (RTC/Ps) of UNU are located in countries around the world. UNU has a total

personnel component of 254, of whom 76 are from developing countries.

Table 3 lists the numbers of staff working at UNU Centre in Tokyo and at the RTC/Ps.

Table 3. Personnel
As at 31 December 2003

UNU Unit	Total Staff			Of which, Professionals			Of which, General Services			Of which, Senior Professionals ⁽²⁾		
	Total (1)	Developing Countries	Women	Total	Developing Countries	Women	Total	Developing Countries	Women	Total	Developing Countries	Women
UNU Centre	114	21	55	56	15	13	58	6	42	8	1	0
UNU-BIOLAC	6	6	2	4	4	1	2	2	1	3	3	0
UNU-CRIS	17	0	8	15	5	6	2	0	2	2	0	1
UNU-EHS	1	0	0	1	0	0	0	0	0	0	0	0
UNU-IAS	30	6	16	19	5	7	11	1	9	2	1	0
UNU-IIST	12	9	7	5	2	0	7	7	7	2	1	0
UNU-ILA	11	9	5	5	3	2	6	6	3	1	0	1
UNU-INRA	9	9	2	3	3	0	6	6	2	2	2	0
UNU-INTECH	19	7	11	9	7	4	10	0	7	4	3	2
UNU-INWEH	9	3	4	7	3	2	2	1	2	3	0	0
UNU-WIDER	26	6	13	11	6	1	15	1	12	4	0	0
TOTAL	254	76	123	135	53	36	119	30	87	31	11	4

Definitions: (1) Total = Professional, GS and Internal PSA/SSA.

(2) Senior Professional means higher than P4/L4 (i.e., P5 and above).

ANNEX 1

Statistical Information on UNU Activities

Table 4. UNU Projects in 2003

Functional Unit	Number of Projects	Number of Meetings			Project Expenditure (US\$ 000)		
		Total	Of which in Host	Of which in Developing Countries	Total	Of which in Host	Of which in Developing Countries
UNU Centre ESD	14	22	13	3	1,397	587	275
UNU Centre PG	27	18	5	2	2,770	126	47
UNU-BIOLAC	6	21	8	18	300	105	285
UNU-CRIS	14	16	7	1	469	370	0
UNU-FTP	2	2	1	1	973	938	35
UNU-GTP	2	2	2	0	1,243	1,243	0
UNU-IAS	7	19	13	1	1,870	1,500	150
UNU-IIST	9	6	6	3	346	41	70
UNU-ILA	3	2	2	2	76	4	52
UNU-INRA	13	14	8	14	258	258	258
UNU-INTECH	31	12	12	0	807	417	150
UNU-INWEH	21	12	2	8	1,000	250	750
UNU-WIDER	16	11	8	3	1,090	600	338
TOTAL	165	157	87	56	12,599	6,439	2,410

[Note: ESD = Environment and Sustainable Development Programme; PG = Peace and Governance Programme.]

Table 5. Project Consultants and Meeting Participants in 2003

UNU Unit	Project Directors			Consultants			Meeting Participants	
	Total	Of which from Developing Countries	Of which Women	Total	From Developing Countries	Women	Govt. Officials	UN Staff
UNU Centre ESD	11	2	2	22	12	5	N.A.	N.A.
UNU Centre PG	27	2	5	205	49	64	100	150
UNU-BIOLAC	3	3	0	16	16	2	20	1
UNU-CRIS	8	1	3	N.A.	N.A.	N.A.	N.A.	N.A.
UNU-FTP	1	0	0	0	0	0	0	0
UNU-GTP	1	0	0	0	0	0	0	0
UNU-IAS	8	2	1	27	8	11	57	99
UNU-IIST	5	2	0	4	1	0	0	0
UNU-ILA	2	1	1	15	10	6	0	0
UNU-INRA	13	13	3	30	33	8	83	36
UNU-INTECH	16	12	5	38	26	12	4	62
UNU-INWEH	16	6	3	45	20	6	50	65
UNU-WIDER	16	6	0	186	60	38	67	65
TOTAL	127	50	23	588	235	152	381	478

[Note: ESD = Environment and Sustainable Development Programme; PG = Peace and Governance Programme.]

Table 6. Fellowships and Internships in 2003

Functional Unit	Cost (US\$ 000s)	Recipients		
		Total	From Developing Countries	Women
UNU Capacity Development	721	97	82	43
UNU Centre ESD	20	14	14	8
UNU Centre PG	0	3	0	3
UNU-BIOLAC	230	224	224	132
UNU-CRIS	138	3	1	1
UNU-FTP	294	19	19	9
UNU-GTP	352	24	24	8
UNU-IAS	395	15	10	7
UNU-IIST	118	33	33	9
UNU-ILA	5	1	0	1
UNU-INRA	6	1	0	0
UNU-INTECH	153	19	18	8
UNU-INWEH	0	1	0	0
UNU-WIDER	83	13	9	3
TOTAL	2,515	467	434	232

[Note: ESD = Environment and Sustainable Development Programme; PG = Peace and Governance Programme.]

Table 7. Training Courses in 2003

Unit	Cost (US\$000)	Courses		Participants				
		Total	In Developing Countries	Total	From Developing Countries	Women	Policy Makers	UN Staff
UNU Capacity Development	155	2	1	69	44	37	0	3
UNU Centre ESD	50	2	0	18	10	13	N.A.	0
UNU Centre PG	8	1	0	16	1	5	2	0
UNU-BIOLAC	180	9	9	210	210	122	20	0
UNU-CRIS	N.A.	2	1	65	50	15	30	0
UNU-FTP	973	2	1	31	31	15	0	0
UNU-GTP	1,243	2	0	24	24	8	1	0
UNU-IAS	250	5	2	192	92	47	12	21
UNU-IIST	63	8	8	363	363	56	0	0
UNU-ILA	3	1	1	19	19	12	2	0
UNU-INRA	30	1	1	15	15	2	0	0
UNU-INTECH	7	19	3	620	545	200	260	43
UNU-INWEH	150	3	1	70	50	30	10	5
UNU-WIDER	0	1	0	30	0	15	0	0
TOTAL	3,112	58	28	1,742	1,454	577	337	72

[Note: ESD = Environment and Sustainable Development Programme; PG = Peace and Governance Programme.]

Table 8. Publications in 2003

UNU Unit	Published Books	Books in Production	Articles in Journals	Policy Briefs	Articles in the Press	CDs
UNU Centre ESD	10	3	30	4	20	2
UNU Centre PG	5	5	30*	0	35	0
UNU-BIOLAC	3	2	8	0	2	3
UNU-CRIS	4	3	40	0	3	0
UNU-FTP	0	0	0	2	0	0
UNU-GTP	2	2	2	1	0	1
UNU-IAS	1	1	11	7	8	0
UNU-IIST	1	0	19***	0	9	0
UNU-ILA	1	2	0	0	0	0
UNU-INRA	2	1	3	1	1	0
UNU-INTECH	1	7	33**	2	15	0
UNU-INWEH	3	1	2	0	N.A.	1
UNU-WIDER	8	17	36	4	46	0
TOTAL	41	44	214	21	139	7

[Note: ESD = Environment and Sustainable Development Programme; PG = Peace and Governance Programme;

* = includes book chapters; ** = includes peer-reviewed UNU-INTECH Discussion Papers Series, but not conference proceedings;

*** = includes papers published in conference proceedings.]

Table 9. Publicity Materials in 2003

UNU Unit	Regular Documents and Newsletters			Promotions		Mentions in the Press	Major Public Events	Website "hits" (per month)
	Number	Per Year	Circulation	Number	Distribution			
UNU Centre	4	1–7*	79,000	4	16,000	500	43	2,200,000
UNU-BIOLAC	0	0	0	2	500	10	3	N.A.
UNU-CRIS	16	N.A.	Electronic	0	0	0	0	N.A.
UNU-FTP	1	1	100	1	200	6	0	N.A.
UNU-GTP	2	2	400	0	0	10	3	N.A.
UNU-IAS	2	4	Electronic	2	5,500	16	7	650,000
UNU-IIST	1	12	Website	1	20	9	6	6,500
UNU-ILA	1	1	680	2	400	13	0	N.A.
UNU-INRA	3	2	800	6	2,500	12	5	N.A.
UNU-INTECH	1	6	Website	2	500	15	0	130,000
UNU-INWEH	1	3	2,000	1	10,000	250	2	100,000
UNU-WIDER	2	2	10,000	0	0	46	6	360,000
TOTAL	34	—	—	21	35,620	887	75	—

[* = including Internet newsletters]

ANNEX 2

New UNU Agreements in 2003

- An Agreement between UNU-IAS and the International Foundation for Science (Sweden) on collaboration in fellowships for citizens of an African country in the area of Agriculture for Peace
- An Agreement of Collaboration between UNU-BIOLAC and ICGEB on co-sponsorship and sharing of costs in organizing training courses in the Latin American and Caribbean region and training selected fellows in ICGEB centres in Trieste and Delhi
- A Memorandum of Agreement between UNU-CRIS, COMESA and UPEACE Africa Programme outlining the thematic focus and project components of the triangular partnership
- An Agreement between UNU-IAS and Macquarie University (Australia) on collaboration in an internship programme
- An Agreement with The Call of the Earth Circle to host the indigenous people's initiative on intellectual property policy at UNU-IAS
- An Agreement with the Macao Foundation to cover half the cost of a UNU-wide online repository of research materials at UNU-IIST
- A Memorandum of Understanding between UNU and the International Plant Genetic Resources Institute (IPGRI) to collaborate on a number of research and training activities (UNU-INRA)
- Agreements of Cooperation between UNU-WIDER and four African institutes (in Botswana, Cameroon, Nigeria and Uganda) to collaborate on the project "Building African Capacity for Policy Simulation: Towards better Poverty Strategies"
- A Memorandum of Understanding between UNU-WIDER and UN-DESA for the project "Innovative Sources of Development Finance"
- A Memorandum of Understanding between UNU-FTP and the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (UNEP-GPA) regarding consultancy and training
- A Memorandum of Understanding with the Government of Cameroon to implement a series of research, training and education programmes in cooperation with universities and research institutions in Cameroon
- A Memorandum of Understanding with the Tropical Soil Biology and Fertility Institute of the International Centre for Tropical Agriculture
- A Memorandum of Understanding with the African Academy of Sciences
- An Exchange of Letters concerning information technology services to be provided by UNU to UNICEF Japan
- An Exchange of Letters with the Ministry of Foreign Affairs (Japan) concerning the implementation of the UNU Financial Assistance Programme for Students from Developing Countries Studying in Japan
- A Trust Fund Agreement with the Japan Bank for International Cooperation (JBIC) concerning the UNU Student Assistance Programme for Students from Developing Countries Studying in Japan
- Cooperating University Agreements with the Educational Foundation Bunka Gakuen, Gakko Hojin Inaoki Educational Institution, Gakko Hojin Hokuriku University, Ritsumeikan Asia Pacific University, Ritsumeikan University and Gakko Hojin Okinawa International University in connection with implementation of the UNU Financial Assistance Programme for Students from Developing Countries Studying in Japan
- An Agreement of Cooperation with the International Center for Agricultural Research in the Dry Areas (ICARDA) concerning research and development collaboration focusing on the problems prevailing in the areas subject to desertification
- An Agreed Letter of Intent with the Kanagawa Prefectural Senior High School of Shichirigahama to promote education for international understanding

- A Memorandum of Understanding with GRID-Arendal concerning the initiative for a global virtual university on environment and development
- An Agreement of Cooperation with Universitat Oberta de Catalunya concerning collaboration in the areas of education, research and services
- A Second Agreement with the Asia/Pacific Cultural Centre for UNESCO regarding the implementation of activities focusing on the invitation to Japan of teachers, scholars and professionals in the fields of education, culture, science and technology
- A Memorandum of Understanding with the Government of Côte d'Ivoire concerning the implementation of a series of research, training and education programmes within an operational unit of UNU-INRA in Côte d'Ivoire
- A Second Agreement of Cooperation with the Iwate Prefectural Government and the Ocean Research Institute of the University of Tokyo concerning implementation of a cooperative international research project on "Marine and Coastal Environment"
- An Agreement with Griffith University to engage in research and teaching programmes with the Institute for Ethics Governance and Law, to be established by Griffith University in 2004
- An Agreement with Australian National University (ANU) for the purposes of further developing, promoting and delivering ANU's Graduate Studies in Strategy and Defence Programme
- An Agreement of Cooperation with the University of Bonn to promote cooperation in academic education and research related to the impact on human vulnerability of natural disasters
- A Memorandum of Understanding with the Common Market for Eastern and Southern African (COMESA), the University for Peace, and the Africa Centre for Peace and Conflict Studies concerning cooperation in education, training and capacity building in the fields of peace, security and regional integration
- A Memorandum of Understanding with St. John Ambulance Japan regarding the use of premises in UN House Tokyo
- A Memorandum of Understanding and Letter of Agreement with The Natural Step International to contribute to development of joint research and capacity development activities on strategic ecological and social structuring
- An Agreement with the Arab Gulf Programme for United Nations Development Organization (AGFUND) for a grant concerning a UNU-INWEH Project for Assessment of "Point Sources" Pollution in Wadi, Gaza/Palestine
- A General Agreement of Cooperation with Aoyama Gakuin University to promote cooperation in academic research and educational activities of mutual interest

ANNEX 3

Other Partners (non-UN)

- Academic Council on the United Nations System (ACUNS)
- Acres International of Canada
- Africa Technology Policy Studies Network (ATPS)
- African Economic Research Consortium (AERC)
- African Committee for Research in Computer Science (CARI)
- African Academy of Sciences
- Africare
- African Network of Scientific and Technological Institutions (ANSTI)
- Aga Khan Foundation
- Al Azhar University, Egypt
- American University of Sharjah, UAE
- Anna University, India
- Annamalai University, India
- Arab Gulf Programme for United Nations Development Organizations (AGFUND)
- Asian Institute of Technology (AIT), Thailand
- Asia-Pacific Network for Global Change Research
- Association of African Universities (AAU)
- Association of Southeast Asian Nations (ASEAN)
- Australian National University
- Bangladesh University of Engineering and Technology (BUET)
- Bolivar University, Chile
- Botswana Institute for Development Policy Analysis, Botswana
- Canadian International Development Agency (CIDA)
- Canadian Water Research Network
- Central Food Technological Research Institute (CFTRI), India
- Centre for Agricultural and Rural Cooperation (ACP-EU), The Netherlands
- Centre for Economic and Financial Research (CEFIR), Russia
- Centro de Investigación de Estudios Avanzados del I.P.N. (CINVESTAV), Mexico
- Chinese Academy of Sciences (CAS)
- City University of Hong Kong
- Coastal Zone Management Institute, Belize (CZMI)
- Columbia University, USA
- Copernicus-Campus, Germany
- Council of European Professional Informatics Societies (CEPIS)
- Consultative Group on International Agricultural Research (CGIAR)
- Cornell University, USA
- Council for Scientific and Industrial Research (CSIR)
- Dubai Development and Investment Agency, UAE
- Environmental Research and Training Centre (ERTC), Thailand
- Dutch Network for Innovation Studies
- Dutch Research School on Development (CERES)
- Eindhoven Centre for Innovation Studies (ECIS), The Netherlands
- Eindhoven University of Technology, The Netherlands
- Environmental Education and Training Institute (EETINA), Mexico
- Environmental Impact Control Facility (SARPEDAL), Indonesia
- Environmental Research and Training Centre, Department of Environment Quality Promotion, Thailand
- Erasmus University, The Netherlands
- European Association of Development Research and Training Institutes (EADI)
- European Centre for Development Policy Management (ECDPM), The Netherlands
- European Commission (EC)
- European Forest Institute (EFI)
- European Union
- Foundation for International Environmental Law and Development (FIELD), UK
- Global Change System for Analysis, Research and Training (START)
- Global Development Network (GDN)
- Global Legislators Organization for a Balanced Environment (GLOBE)
- Global Water Partnership
- Government of Malawi
- Harvard University, USA
- Icelandic Fisheries Industries
- Icelandic Fisheries Laboratories
- Indian Institute of Technology, India
- Institut de Pesquisa Ambiental da Amazonia (IPAM), Brazil
- Institut des Régions Arides (IRA), Tunisia
- Institute for Advanced Studies (IDEA), Venezuela
- Institute for Global Environmental Strategies (IGES), Japan
- Institute for Policy Science, Singapore
- Institute of Biology, Mongolian Academy of Sciences
- Institute of Nutrition of Central America and Panama (INCAP), Guatemala

- Institute of Nutrition, University of Chile
- Institute of Public Health, Yugoslavia
- Institute of Social Studies, The Netherlands
- Institute of Systems and Computer Engineering, Macao, China
- Instituto Nacional de Pesquisas Espaciais, Brazil
- International Association of Universities
- International Association of University Presidents (IAUP)
- International Centre for Agricultural Research in the Dry Areas (ICARDA), Syria
- International Center for Genetic Engineering and Biotechnology (ICGEB)
- International Centre for Research in Agro-Forestry (ICRAF)
- International Centre for Trade and Sustainable Development (ICSTD), Switzerland
- International Council for Science (ICSU)
- International Development Research Centre (IDRC), Canada
- International Economic Association
- International Fertilizer Development Center (IFDC)
- International Foundation for Science (IFS)
- International Geographical Union (IGU)
- International Geothermal Association
- International Institute of Tropical Agriculture (IITA)
- International Mountain Society (IMS)
- International Peace Research Association
- International Plant Genetic Resources Institute, Italy
- International Society for Mangrove Ecosystems (ISME)
- International Soil Reference and Information Centre (ISRIC)
- International Union of Nutritional Sciences (IUNS), The Netherlands
- Islamic University of Palestine
- Italian Centre for International Associations (CIAI)
- Japan Association for United Nations Studies
- Japan Bioindustry Association
- Japan International Research Center for Agricultural Sciences (JIRCAS), Japan
- Jordanian General Corporation for Environmental Protection
- Jordanian Water Authority
- Kanazawa University, Japan
- Kawanda Agricultural Research Institute, Uganda
- King Saud University, Saudi Arabia
- Kirin Brewery Company, Limited, Japan
- Kwame Nkrumah University of Science and Technology, Ghana
- Kwangju Institute of Science and Technology, Republic of Korea
- Kyoto University, Japan
- Lake Victoria Fisheries Organization (LVFO), Uganda
- Lake Zone Agricultural Research and Development Institute (LZAREDI), Tanzania
- Maastricht Economic Research Institute on Innovation and Technology, MERIT, The Netherlands
- Mahidol University, Thailand
- Makerere University, Uganda
- Makerere University Economic Policy Research Center, Uganda
- Marine Research Institute, Iceland
- Ministry of Science and Technology of Brazil
- Ministry of the Environment, Japan
- Najah National University, Palestine
- Nanjing Institute of Meteorology, China
- Nanjing University, China
- National Academy of Sciences, Egypt
- National Agricultural Research Organization, Uganda
- National Biotechnology Development Agency (NABDA), Nigeria
- National Centre for Economic Management and Administration (NCEMA), Nigeria
- National Energy Authority, Iceland
- National Food Research Institute (NFRI), Japan
- National Institute for Environmental Studies (NIES), Japan
- National Institute for Public Health and the Environment (RIVM), The Netherlands
- National Institute of Nutrition, Egypt
- National Institute of Nutrition, Italy
- National University of Singapore, Singapore
- National Water Resources Authority, Sri Lanka
- National Water Research Institute (NWRI), Canada
- Nestlé Foundation, Switzerland
- Netherlands Foundation for the Advancement of Tropical Research (WOTRO)
- New Partnership for Africa's Development (NEPAD)
- Norwegian University of Science & Technology (NUST)
- Nutrition Research and Development Centre, Indonesia
- Ocean Research Institute (ORI), University of Tokyo, Japan

- Office of Environmental Response and Coordination, Republic of Palau
- Organization of American States
- Organization of Islamic Conference Standing Committee on Science and Technological Cooperation (COMSTECH)
- Pakistan Council of Research in Water Resources, Pakistan
- Palestinian Higher Council for the Environment (PHCE)
- Pollution Probe, Canada
- Public Administration & Civil Service Bureau, Macao, China
- Royal Society for the Conservation of Nature, The (RSCN), Jordan
- Samarkand University, Uzbekistan
- Science Council of Asia
- Science Council of Japan
- Shimadzu Corporation, Japan
- SILVA Network
- Sino-Japan Friendship Center for Environmental Protection, China
- Southern African Development Community (SADC)
- South Pacific Regional Environment Programme (SPREP)
- SPRU/IDS at University of Sussex, UK
- State Forestry Service of Kyrgyz Republic
- Swinburne University of Technology, Australia
- Swiss Agency for Development Cooperation
- Swiss Federal Institute of Technology (EPFL)
- Third World Academy of Sciences (TWAS)
- Tokyo Institute of Technology, Japan
- Universidade Estadual de Campinas, Brazil
- Universidade Federal de Mato Grosso, Brazil
- Universidade Federal do Pará, Brazil
- Universite de Conakry, Guinea
- University of Aalborg, Denmark
- University of Akureyri, Iceland
- University of Alexandria, Egypt
- University of Bath, UK
- University of Benin, Benin
- University of British Columbia, Canada
- University of Calgary, Canada
- University of Cape Town, South Africa
- University of Dar es Salaam, Tanzania
- University of East Anglia, UK
- University of Geneva, Switzerland
- University of Ghana, Ghana
- University of Ghent, Belgium
- University of Ibadan, Nigeria
- University of Iceland, Iceland
- University of Idaho, USA
- University of Jordan, Jordan
- University of Lausanne, Switzerland
- University of Maastricht/MERIT, The Netherlands
- University of Macau, China
- University of Malawi, Malawi
- Universiti Kebangsaan Malaysia
- University of Nairobi, Kenya
- University of Paris-Jussieu, France
- University of Paris-Sud, France
- University of Peradeniya, Sri Lanka
- University of Queensland, Australia
- University of Strathclyde, UK
- University of Sussex, UK
- University of the South Pacific, Fiji
- University of Tokyo, Japan
- University of Twente, The Netherlands
- University of Wageningen, The Netherlands
- University of Waterloo, Canada
- University of Yaoundé I, Cameroon
- University of Yaoundé II, Cameroon
- University of Zambia, Zambia
- University Leaders for a Sustainable Future, USA
- Venezuelan Institute of Scientific Research
- Viet Nam National University (VNU)
- Wageningen Agricultural University, The Netherlands
- Windsor University, Canada
- Wissenschaftszentrum, Berlin, Germany
- World Al Lootah University, UAE
- World Conservation Union (IUCN)
- World Federation of Engineering Organizations (WFEO)
- World Water Council

ANNEX 4

Contributions Received in 2003

Contributions received 1 January – 31 December 2003 (US\$)

Governments		
Canada	170,993	Operating Contribution for UNU-INWEH
Denmark	226,029	Operating Contribution for UNU-WIDER
Flemish Government	403,532	Support for UNU International Training Programme on Biodiversity at University of Ghent
Flemish Government	73,381	Operating Contribution for UNU-CRIS
Flemish Government	909,739	UNU-CRIS*
Germany	285,036	Operating Contribution for UNU-EHS
Ghana	443,188	Endowment Fund for UNU-INRA
Greece	47,000	Operating Contribution
Iceland	933,000	UNU Geothermal Programme (UNU-GTP)*
Iceland	783,000	UNU Fisheries Training Programme (UNU-FTP)*
Japan	2,959,292	Operating Contribution for UNU Headquarters
Japan	1,788,716	Operating Contribution for UNU-IAS
Japan	196,558	Support for 2003 Japanese Project for International Educational Exchange of Teachers & Professionals
Japan	1,705,350	Support for UNU Financial Assistance Programme
Jordan	500,000	Operating Contribution for UNU-ILA
Netherlands	870,945	Operating Contribution for UNU-INTECH
Netherlands	24,522	Support for Demand-Led Research in Development
Netherlands	157,957	Support for UNU-INTECH
Norway	149,577	Operating Contribution for UNU-WIDER
Sweden	108,555	Operating Contribution for UNU-WIDER
Sweden	136,396	Support for UNU-WIDER's project Building African Capacity for Policy Simulation
U.S.A.	50,000	Support for UNU Food and Nutrition Project
Uganda	41,243	Support for Lake Victoria Environmental Management Project (LVEMP)
United Kingdom	322,400	Support for UNU-WIDER programmes
Subtotal	13,286,409	

Other donors		
AGFUND	13,000	Support for AGFUND "Nitrate Drinking Water–Blue-Baby Syndrome"
Akita City Office	11,509	Support for UNU Global Seminar 2003 Tohoku Session
Asia Pacific Network, Japan	32,800	Support for UNU Capacity Development Training for Monitoring of POPs in the East Asian Hydrosphere
Asian Women's Fund	270,270	Support for various UNU projects
Canadian Embassy, Japan	8,629	Support for UNU IICISS Report Seminar
European Union (European Commission)	5,827	Support for EU-UNU Tokyo Global Forum on Children in Turmoil
European Union (European Commission)	298,930	Contribution from EIFC
Fillmore Riley	10,145	Support for African Great Lakes Research
Hokkaido Bank	424	Support for UNU Global Seminar Hokkaido Session
Institute for Global Environmental Strategies (IGE)	158,015	Support for UNU-IAS's project on Ecosystems Approach for the Transition to Sustainable Environmental Management
International Course Participants	32,986	2003 UNU International Course fees

International Development Research Centre (IDRC)	32,370	Support for Bio-pharmaceutical Innovation Project
International Development Research Centre (IDRC)	3,328	Support for LAC-IDRC project
International Peace Academy	11,000	Support for UNU project Mass Crime and Post-Conflict Peacebuilding
International Peace Academy	5,994	Support for UNU project Making State Work
InterRisk Research Institute & Consulting	6,723	Support for UNU project IT and Environmental Issues
Int'l Institute for Communication and Development	14,286	Support for UNU-INTECH's project The Impact and Potential of ICT's in SMMEs
Ishikawa Foundation for Int'l Exchange	129,569	Support for IICRC/IAS Joint Activity at Ishikawa Cooperation Research Centre
Iwate Prefecture	30,556	Support for UNU project on Coastal Environment
Japan Foundation for UNU	126,000	Support for UNU HQ's project on Environmental Monitoring and Governance in Coastal Areas
Japan Foundation for UNU	1,417	Participation fees for UNU Global Seminar Seoul Session
Japan Foundation for UNU	19,501	Zero Emission Forum Membership
Japan Foundation for UNU	10,354	Registration fees received from UNU Global Seminar 2003 Tohoku Session participants
Japan Foundation for UNU	52,598	Support for UNU Global Seminar Shonan Session 2003
Japan Foundation for UNU	1,709	Support for 3rd Michio Nagai Lecture
Japan Foundation for UNU	8,547	Support for 2003 UN Day Symposium
Japan Foundation for UNU	263	Kamei Co.'s support for UNU Global Seminar 2003 Tohoku Session
Japan Foundation for UNU	463	Support for UNU Library
Japan Foundation for UNU	12,639	Support for UNU Global Seminar 2003 Hokkaido Session
Japan Foundation for UNU	31,656	Support for UNU Global Seminar 2003 Okinawa Session
Japan HABITAT Association	250	Support for 2003 UN Day Symposium
Japan ILO Association	250	Support for 2003 UN Day Symposium
Japan Society for Promotion of Science (JSPS)	19,532	Support for UNU ZEF Symposium
Japan UNHCR Association	180	Support for 2003 UN Day Symposium
Japan Water Resources Association	5,000	Support for Third World Water Forum
K-Face (Kanagawa Foundation for Academic Exchange)	34,610	Support for UNU Global 2003 Seminar Shonan Session
Kirin Brewery Company	283,333	Kirin Fellowship 2003
Nanyang Technological University	15,362	Support for UNU Workshop on "UN Peace Operations and the Asia-Pacific Region"
NTT DoCoMo Hoddaido	1,271	Support for UNU Global Seminar 2003 Hokkaido Session
Okinawa Prefecture Government	18,018	Support for UNU Global Seminar 2003 Okinawa Session
Open Society Institute Development Foundation	14,325	Support for UNU project Ethics in Action
Organizing Committee for Global Seminar	6,470	Student enrollment fees for Global Seminar 2003 Shonan Session
Ozaki Enterprise	1,709	Support for 2003 UN Day Symposium
Ralse Co.	855	Support for UNU Global Seminar Hokkaido Session
Rockefeller Foundation	300,000	Support for UNU-IAS Biosafety Project

Sato Eisaku Memorial Foundation	4,167	Support for UNU Library
Schlaflly, Mrs.	10,000	Support for Soil Fertility Restoration and Maintenance
Schlaflly, Mrs.	5,000	Support for Western Africa Network for Natural Products Research
Shibuya Ward Office	1,709	Support for 2003 UN Day Symposium
Shichiju Shichi Bank	250	Support for UNU Global Seminar Tohoku Session 2003
State of Palestine	33,461	Support for Watershed Management Project
Swiss Agency for Development and Cooperation	12,800	Support for UNU-IAS Bio-Safety project
Togo, Yoshihisa	83	Support for 2003 UN Day Symposium
Tohoku Denryoku	2,542	Support for UNU Global Seminar Tohoku Session
Tsuchiya Homes	855	Support for UNU Global Seminar Hokkaido Session
UN/DESA	140,000	Support for UNU-WIDER projects
UN/DESA	382,490	Support for Capacity Building to Improve Water Management and to Accelerate Sustainable Investments in the Water Sector
UNCTAD	50,000	Support for UNU-INTECH project on Iran STIP Members World Bank – Coral Reef Ecology
UNDP	18,209	Support for Meso-American Caribbean Barrier Reef System World Bank — Design Methodology
UNDP	18,806	Support for Meso-American Caribbean Barrier Reef System World Bank — Coral Reef Ecology
UNDP Indonesia	10,000	Support for Sustainable Development — Zero Emissions
UNEP	22,842	Support for UNU-IAS Bio-Safety Workshop in Malaysia
UNEP/GRID-Arendal	50,000	Support for UNU Global Environmental Outlook Course
UNEP/GRID-Arendal	50,000	Support for UNU Virtual University project
UNESCO	74,500	Support for UNU-UNESCO Conference on Globalization with a Human Face
UNESCO	500	Support for UNU-IAS Workshop on Biosafety in Central Asia and Mongolia
UNESCO Jakarta	1,000	Support for KJIST-UNU-UNESCO Int'l Workshop on Regional Environmental Quality in the East Asian Coastal Hydrosphere
Water 4 Life Appeal	37,017	From UNU INWEH Fundraising Campaign
World Food Programme	230,907	Support for UNU-WFP cooperative project
World Food Programme	234,075	Support for UNU-WFP joint training programme at Cornell University
World Food Programme	42,790	Support for UNU/Tufts Univ/WFP partnership on Humanitarian Diplomacy
WOTRO	12,488	Support for Technology Shocks and the Asian Crisis project
Yamanashi University	8,547	Support for UNU Water project
Zero Emissions Forum Secretariat	1,506	Support for Zero Emissions Forum received from ZEF Network
Zero Emissions Forum Secretariat	102,198	Zero Emissions Symposium participation fees
Zero Emissions Forum Secretariat	5,938	Zero Emissions membership fees
Subtotal	3,607,353	
Grand Total	16,893,762	

* Contributions not received directly by UNU.

ANNEX 5

Titles Published in 2003

UNU Press Publications

New Titles

Agricultural Biodiversity in Smallholder Farms of East Africa, edited by Fidelis Kaihura and Michael Stocking.

Agrodiversity: Learning from Farmers Across the World, edited by Harold Brookfield, Helen Parsons and Muriel Brookfield.

Asia and Africa in the Global Economy, edited by Ernest Aryeetey, Julius Court, Machiko Nissanke and Beatrice Weder.

Conflict Prevention: Path to Peace or Grand Illusion?, edited by David Carment and Albrecht Schnabel.

Democratization in the Middle East: Experiences, Struggles, Challenges, edited by Amin Saikal and Albrecht Schnabel.

East Asian Experience in Environmental Governance: Response in a Rapidly Developing Region, edited by Zafar Adeel.

From Civil Strife to Civil Society: Civil and Military Responsibilities in Disrupted States, edited by William Maley, Charles Sampford and Ramesh Thakur.

The Globalization of Human Rights, edited by Jean-Marc Coicaud, Michael Doyle and Anne-Marie Gardner.

International Waters in Southern Africa, edited by Mikiyasu Nakayama.

Perspectives on Growth and Poverty, edited by Rolph van der Hoeven and Anthony Shorrocks.

Reforming Africa's Institutions: Ownership, Incentives, and Capabilities, edited by Steve Kayizzi-Mugerwa.

Refugees and Forced Displacement: International Security, Human Vulnerability, and the State, edited by Edward Newman and Joanne van Selm.

Regional Peacekeepers: The Paradox of Russian Peacekeeping, edited by John Mackinlay and Peter Cross.

Regionalism, Multilateralism, and Economic Integration: The Recent Experience, edited by Gary Sampson and Stephen Woolcock.

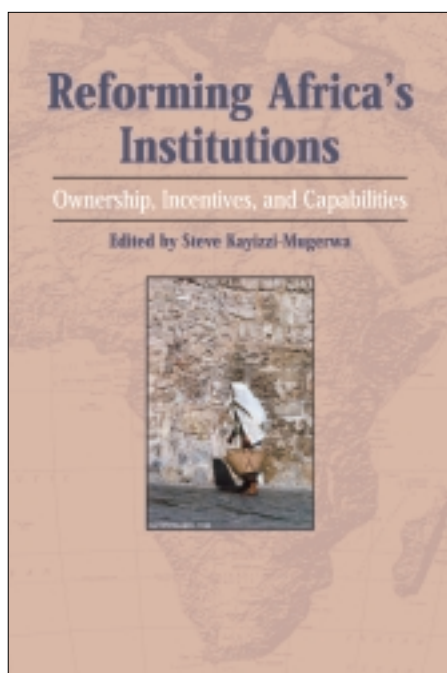
States, Markets, and Just Growth: Development in the Twenty-first Century, edited by Atul Kohli, Chung-in Moon and Georg Sørensen.

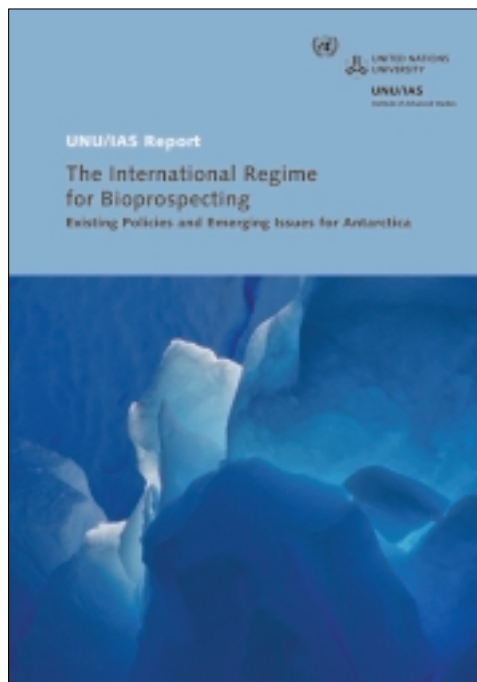
Reprints

Globalization and the World of Large Cities, edited by Fu-Chen Lo and Yue-man Yeung.

The Legitimacy of International Organizations, edited by Jean-Marc Coicaud and Veijo Heiskanen.

The Mekong: Environment and Development, by Hiroshi Hori.





Other UNU Publications

2003 Nansen Memorial Lecture: Challenges in Peace and Reconciliation in the Twenty-first Century, Kjell Magne Bondevik, UNU Public Lectures Series No. 10 (UNU Centre).

Biodiversity Access and Benefit-Sharing Policies for Protected Areas: An Introduction, Sarah Laird, Sam Johnston, Rachel Wynberg, Estherine Lisinge, and Dagmar Lohan, UNU-IAS Report (UNU-IAS).

Defining an Ecosystem Approach to Urban Management and Policy Development, edited by Peter J. Marcotullio and Grant Boyle, UNU-IAS Report (UNU-IAS).

Forests in Transition: The Role of Research and Higher Education in Developing National Forest Programmes in Countries with Economies in Transition, edited by Libor Jansky, Ilko Tikkanen and Paavo Pelkonen (UNU Centre).

The Future of Higher Education in Japan, Akita Arima, UNU Public Lectures Series No. 9 (UNU Centre).

How Can the Impoverishment of the Poorest Countries be Stopped?, Rubens Ricupero, UNU Public Lectures Series No. 8 (UNU Centre).

In Search of Biosecurity: Capacity Development on Access to Genetic Resources, Benefit-Sharing, and Biosafety in Central Asia and Mongolia, Carol Smith Wright and Kirsten Neumann, UNU-IAS Report (UNU-IAS).

Integrating Africa: Perspectives on Regional Intergration and Development, edited by Hans van Ginkel, Julius Court and Luk van Langenhove (UNU Centre and UNU-CRIS).

The International Regime for Bioprospecting: Existing Policies and Emerging Issues for Antarctica, Dagmar Lohan and Sam Johnston, UNU-IAS Report (UNU-IAS).

Sustainable Management of Marginal Drylands: Application of Indigenous Knowledge for Coastal Drylands, edited by Zafar Adeel, UNU Desertification Series No. 5 (UNU Centre and UNU-INWEH).

UNU/IIST 10th Anniversary Colloquium, edited by Bernhard K. Aichernig and Tom Maibaum, LNCS, Vol. 2757, Springer-Verlag (UNU-IIST).

Urban Ecosystem Analysis: Identifying Tools and Methods, Awais L. Piracha and Peter J. Marcotullio, UNU-IAS Report (UNU-IAS).

User Measures: Options for Developing Measures in User Countries to Implement the Access and Benefit-Sharing Provisions of the Convention on Biological Diversity, Charles Victor Barber, Sam Johnston and Brendan Tobin, UNU-IAS Report (UNU-IAS).

World Forests, Society and Environment — Executive Summary, edited by P. Wardle, L. Jansky, G. Mery, M. Palo, J. Uusivuori & H. Vanhanen (UNU-Centre).

Other Books Based on UNU Work or by UNU Staff

AfricaDotEdu: IT Opportunities and Higher Education in Africa, edited by Maria A. Beebe, Kouakou Koffi Magloire, Banji Oyeyinka and Madanmohan Rao, Tata McGraw-Hill (UNU-INTECH).

Agricultural Biotechnology in Africa: Building Public Confidence and Scientific Capacity for Food Production, John O. Mugabe, UNU-INRA Annual Lectures 2002, Woeli Publishing Services, Accra (UNU-INRA).

Biodiversity in Mangrove Ecosystems — Course Manual, edited by K. Kathiresan and A.N. Subramanian, Annamalai University, India (UNU-INWEH).

Bio-safety in Agri-food Biotechnology — Risk Assessment and Management of Living Modified Organisms, UNU-BIOLAC RNBio, Volumes I and II (UNU-BIOLAC).

Can Law Save the Forest? Lessons from Finland and Brazil, Sophia R. Hiraokuri, published by Center for International Forestry Research (CIFOR), Indonesia (UNU-IAS).

Computers and the Environment: Understanding and Managing their Impacts, edited by R. Kuehr and E. Williams, Kluwer Academic Publications, Dordrecht (UNU Centre).

From Capital Surges to Drought: Seeking Stability for Emerging Economies, edited by Ricardo Ffrench-Davis and Stephany Griffith-Jones, Palgrave Macmillan, Basingstoke (UNU-WIDER).

From Conflict to Recovery in Africa, edited by Tony Addison, Oxford University Press, Oxford (UNU-WIDER).

Handbook on Water, T. Taniguchi, Kaizosha, Tokyo (UNU Centre).

Historical Dictionary of Kyrgyzstan, Rafis Abazov, Scarecrow Press, Lanham (Maryland) and London (UNU-IAS).

The Impact of Women-specific Projects Involving Natural Resources Management: Experiences from Ghana, Ruby Dagadu and Esther Ofei-Aboagye, UNU-INRA Policy Brief No.2, Woeli Publishing Services, Accra (UNU-INRA).

Inequality and Social Structure During the Transition, edited by Vladimir Mikhalev, Palgrave Macmillan, Basingstoke (UNU-WIDER).

La Adecuación de los países al Protocolo de Cartagena: ejemplos Latinoamericanos, J.C. Carullo, UNU-BIOLAC RNBio.

La Percepción Pública de la Ciencia: el caso de la Biotecnología, J.C. Carullo, UNU-BIOLAC RNBio.

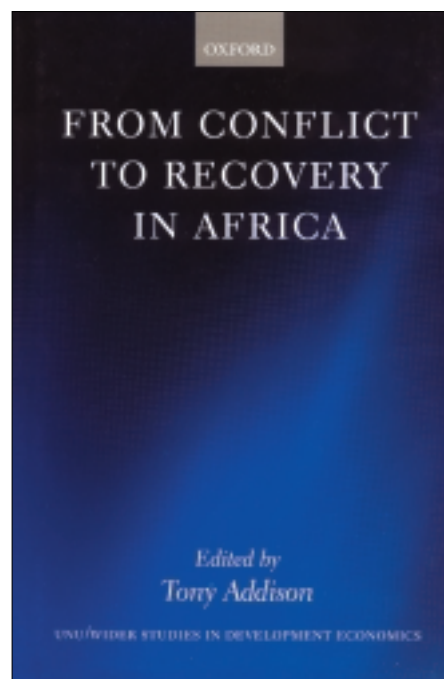
Manual para la Evaluación de Campo de la Degradación de la Tierra, M. Stocking and N. Murnaghan, Mundi-Prensa Libros, Madrid (UNU Centre).

The New Regionalism in Africa, edited by Andrew Grant and J. & F. Söderbaum, Ashgate (UNU-CRIS).

Ownership and Governance of Enterprises: Recent Innovative Developments, edited by Laixiang Sun, Palgrave Macmillan, Basingstoke (UNU-WIDER).

Participatory Methods Toolkit: A Practitioner's Manual, Nikki Slocum, King Baudouin Foundation, Flemish Institute for Science and Technology Assessment, Brussels (UNU-CRIS).

Perfiles Genéticos en Pruebas de Paternidad y Medicina Forense: Ejemplos del uso de la tecnología en



Latinoamérica, edited by José Luis Ramirez, UNU-BIOLAC RNBio.

Policy Guidelines — Water and Ecosystem Management in the GCC, edited by Kamel Mustafa Amer, Mike Brook, Benno Böer, Miguel Clüsener-Godt and Walid Saleh, UNU-INWEH.

Privatisation and Regulation: A Fair Deal for Consumers?, edited by Cecilia Ugaz and Catherine Waddams-Price, Edward Elgar, Cheltenham (UNU-WIDER).

Regionalism and Uneven Development in Southern Africa: The Case of the Maputo Development, edited by F. Söderbaum and I. Taylor, Corridor, Ashgate, Aldershot (UNU-CRIS).

Small and Medium Enterprises in Transitional Economies, edited by Robert J. McIntyre and Bruno Dal-lago, Palgrave Macmillan, Basingstoke (UNU-WIDER).

Theories of New Regionalism, F. Söderbaum and T. Shaw, Palgrave, London (UNU-CRIS).

Towards Sustainable Cities: East Asian, North American, and European Perspectives on Managing Urban Regions, edited by Peter J. Marcotullio, Andre Sorenson and Jill Grant, Ashgate Publishing, Aldershot (UNU-IAS).

Zero Emissions Manual, Zero Emissions Manual Drafting Committee, Kaizosha, Tokyo (UNU-ESD).

Translations

La Adecuación de los países al Protocolo de Cartagena: ejemplos Latinoamericanos (in English: *The Adjustment of Countries to the Protocol of Cartagena: Latin American Examples*), published by UNU-BIOLAC RNBio.

La Percepción Pública de la Ciencia: el caso de la Biotecnología (in English: *Public Perception and Science: the case of Biotechnology*), published by UNU-BIOLAC RNBio.

Water Management in Islam (in French: *La gestion de l'eau selon l'Islam*), published by Editions Karthala.

Transboundary Freshwater Dispute Resolution (in Japanese: *Kokusai Mizu-funso Jiten*), published by Shimizu Kobundo.

Local Reprints (Low-Cost Editions)

Malaysia (reprinted by MDC for sale in ASEAN countries)

Financing for Development: Proposals from Business and Civil Society, edited by Barry Herman, Federica Pietracci and Krishnan Sharma.

Global Environmental Risk, edited by Jeanne Kasperson and Roger Kasperson

Human Rights and Comparative Foreign Policy, edited by David Forsythe.

The Role of the World Trade Organization in Global Governance, edited by Gary Sampson.

Water for Urban Areas: Challenges and Perspectives, edited by Juha Uitto and Asit Biswas.

Water Management in Islam, edited by Naser Faruqui, Asit Biswas and Murad Bino.

India (reprinted by Rawat Publications for sale in South Asia)

Global Environmental Risk, edited by Jeanne Kasperson and Roger Kasperson.

Human Development and the Environment; Challenges for the United Nations in the New Millennium, edited by Hans van Ginkel, Brendan Barrett, Julius Court and Jerry Velasquez.

India (reprinted by Bookwell for sale in South Asia)

Enhancing Global Governance, edited by Andrew F. Cooper, John English and Ramesh Thakur.

Trade, Environment and the Millennium (second edition), edited by Gary P. Sampson and W. Bradnee Chambers.

ANNEX 6

Journal Articles, Book Chapters and Working Papers Published in 2003

Journal and Magazine Articles

Addison, T. and S. M. Murshed, "Debt Relief and Civil War," *Journal of Peace Research*, 40(2) (March), pp. 159–176.

Addison, T., P. Le Billon and S. M. Murshed, "Conflict in Africa: The Cost of Peaceful Behaviour," *Journal of African Economies*, 11(3):365–386.

Adebooye, C.O., "Ethnobotany of the Indigenous Leafy Vegetables of SW Nigeria," *Delpinoa* (Journal of the University of Naples, Italy), pp. 233–253.

Adeel, Zafar, "Introduction to an Academic Programme Designed to Meet the Human Capacity Needs of Drylands," *Journal of Global Environmental Change*, Vol. 13, No. 3.

Aichernig, Bernhard K., "Mutation Testing in the Refinement Calculus," *Formal Aspects of Computing Journal*, Vol. 15, pp. 280–295.

Añez, N., A. Rojas, G. Crisante, P. Guevara and J.L. Ramírez, "Use of Sentinel Animals to Demonstrate Active Leishmanial Transmission in an Area with Low Frequency of Human Lesions in Western Venezuela," *Revista do Patologia Tropical*, 32:63–72.

Aoi, Chiyuki, "Human Security — A Conceptual Reappraisal," *The Journal of International Security (Kokusai Anzen Hoshō)*, Vol. 30, No. 3, Winter/2002–2003, pp. 26–41.

Aoi, Chiyuki, "Post-9/11 Use of Force and the UN System," *The Journal of International Security (Kokusai Anzen Hoshō)*, Vol. 30, Nos. 1–2, September 2002, pp. 85–102 [Best Paper Award (2003), Japan Association for International Security].

Aoi, Chiyuki, "Power and Legitimacy: New Security Threats and the Use of Force after 9/11," *New Threats to International Community and the Responses of the United Nations*, pp. 85–99.

Carlowitz, Leopold von, "UNMIK Lawmaking between Effective Peace Support and Internal Self-Determination," *Archiv des Völkerrechts (German Public International Law Journal)*, Vol. 41/3.

Chambers, William B., "Emerging International Rules on the Commercialization of Genetic Resources: The FAO International Plant Genetic Treaty and CBD Bonn Guidelines," *The*

Journal of World Intellectual Property, Vol. 6, No. 2 (March).

Chambers, William B., "WSSD and an International Regime on Access and Benefit Sharing: Do We Need Another Protocol?," *Review of European Community and International Environmental Law Journal*, Vol. 12, Issue 3 (November).

Chiurillo, M.A., A. Morales, A.M. Mendes, N. Lander, F. Tovar, A. Fuentes, and J.L. Ramírez, "Genetic Profiling of a Central Venezuelan Population using 15 STR Markers that May Be of Forensic Importance," *Forensic Science International*, 136:99–101.

Chiurillo, M.A., N. Añez, G. Crisante, A. Rojas, A. Peralta, P. Guevara, and J.L. Ramírez, "A Duplex PCR Assay for the Simultaneous Detection of *Trypanosoma cruzi* and *Trypanosoma rangeli* Infections," *Clinical Diagnostic Laboratory Immunology*, 10:775–779.

Chowdhury, Abdur and Inna Verbina, "Reforming Russia's Education System," *Russian Economy — The Month in Review*, 11 February: 4 (Institute for Economies in Transition, Bank of Finland).

Chowdhury, Abdur and Inna Verbina, "Reforming Russia's Education System. *Transition*, 14(1–3):43, World Bank.

De Lombaerde, P. and A. Mordonu, "Research on Central and Eastern Europe at UNU-CRIS," *Oost-Europa Tijdingen*, ICO, XXV(45):29–35.

De Lombaerde, P. and C.L. Lizarazo, "La problématique de l'intégration monétaire en Amérique Latine et dans les Caraïbes," *Cahiers du GELA-IS*, L'Harmattan, 3.

De Lombaerde, P., "The EU-Mexico Free Trade Agreement: Strategic and Regulatory Issues," *Journal of European Studies*, 11.

Dutta, D. and S. Herath, "Flood Inundation Modeling and Need of High Resolution DEM," *Asian-Pacific Remote Sensing and GIS Journal*, AIT.

Dutta, D. and S. Herath, "Urban Flood Risk Analysis using Distributed Mathematical Model: A Case Study in Yom River Basin, Thailand," *Seisan-Kenkyu (Journal of Institute of Industrial Science)*, University of Tokyo.

Dutta, D., S. Herath and K. Musiaka, "A Mathematical Model for Flood Loss Estimation," *Journal of Hydrology*.

Dutta, D., S. Herath and N.T.S. Wijesekara, "Impact of

DEM Horizontal Resolution in Flood Inundation Modeling,” *Asian Journal of Geoinformatics*, AIT.

Eilu, G., J. Obua, J.K. Tumuhairwe and C. Nkwine, “Traditional Farming and Plant Species Diversity in Agricultural Landscapes of South-western Uganda,” *Agriculture, Ecosystems and Environment*, 99:125–134.

Farrell, M., “Regional Integration and Cohesion — Lessons from Spain and Ireland in the EU,” *Journal of Asian Economics*, Dec.

Feeny, Simon and Mark McGillivray, “Aid and Public Sector Borrowing in Developing Countries,” *Journal of International Development*, 5(7).

Franco, A. and P. De Lombaerde, “Latin American Multinationals: A Historical and Theoretical Approach,” *Global Economic Review*, 32(1):81–102.

Fridleifsson, I.B., “Status of Geothermal Energy Amongst the World’s Energy Sources,” *Geothermics*, 32: 379–388.

Gavin, B., “Trade and Investment in the Wider Europe: EU Neighbourhood Policy for Enhanced Regional Integration,” *The Journal of World Investment*, 4(5):893–907.

George, Chris and Anne Haxthausen, “The Logic of the RAISE Specification Language,” *Computing and Informatics*, Vol. 22, Nos. 3–4.

Habib, A., S. Herath and K. Musiake, “A Process-based Approach to Model Soil Erosion and Sediment Transport at Regional Scale: Model Structure, Modeling Strategies and Validation,” *Japan Society of Geoinformatics*, Vol. 14, No. 1, pp. 29–36.

Haouas I., M. Yagoubi and A. Heshmati, “Labour-Use Efficiency in Tunisia’s Manufacturing Industries: A Flexible Adjustment Model,” *The Review of Middle East Economics and Finance*, 1(3).

Harré, R and N. Slocum, “Disputes as Complex Social Events: On the Uses of Positioning Theory,” *Common Knowledge*, 9:3.

He Jifeng and Xu Qiwen, “Advanced features of DC and their Applications,” *Formal Aspect of Computing*, Vol. 15, No. 1, pp. 84–99.

Herath, S., D. Dutta and S. Wijesekera, “A Coupled River and Inundation Modeling Scheme for Efficient Flood Forecasting,” *Geoinformatics*, Vol. 14, No. 1, pp. 37–41.

Herath, S., K. Musiake and S. Hironaka, “A Simulation Study of Infiltration Facility Impact on the Water Cycle of an Urban Catchment,” *Water Resources Systems — Hydrological Risk, Management and Development*, IAHS, No. 281, pp. 294–302.

Herath, S., P. Shivastrava and U. Ratnayake, “Comparison of Global DEM Data for Hydrological Analyses of Mekong Basin,” *Proc. Global Mapping Forum 2003*, Okinawa.

Herath, S., V. Raghavan and S. Masumoto, “Geoinformatics for Spatial-Infrastructure Development in Earth and Allied Sciences,” GIS-IDEAS Special Issue, *Japan Society of Geoinformatics*, Vol. 14, No. 1.

Heshmati, Almas, “Productivity Growth, Efficiency and Outsourcing in Manufacturing and Service Industries,” *Journal of Economic Surveys*, 17(1):79–112.

Jansky, L., I. Tikkanen, P. Pelkonen and K. Furuyashiki, “Training and Research Capacities for Forestry Policy Development in Countries with Economies in Transition,” *Global Environmental Change*, 13(2):145–148.

Kanegae, Hidehiko, Hideki Kaji, Jerry Velasquez and Kenichi Ishibashi, “Web-based Gaming Simulations: UNCRD’s PANGEA Regional Sustainable Development and Planning,” *The Applications and Impacts of Web-based Technology in Urban Planning. Environment and Planning B: Planning and Design*, Hong Kong.

Kanie, Norichika, “Leadership and Domestic Policy in Multilateral Diplomacy: The Case of The Netherlands’ Kyoto Protocol Negotiation,” *International Negotiation*, Vol. 8, No. 2.

Kanie, Norichika, “Reflecting on the Johannesburg Summit: Towards Implementation of Sustainable Development” (in Japanese), *Global Environmental Policy in Japan*, Vol. 8, May, pp. 10–18.

Lal, Kaushalesh and N. S. Siddharthan, “Liberalisation and Growth of Firms in India,” *Economic and Political Weekly*, May 17, XXXVIII (20):1983–1988.

Liu, Yinliang, “IPR Protection for New Traditional Knowledge: With a Case Study of Traditional Chinese Medicine,” *European Intellectual Property Review*, Vol. 25, Issue 4 (April).

Löf H. and A. Heshmati, “On the Relationship between Innovation and Performance: A Sensitivity Analysis,” *Economics of Innovation and New Technology*, 11(6).

Lööf H. and A. Heshmati, "The Link Between Firm Level Innovation and Aggregate Productivity Growth: A Cross-Country Examination," *Scientometrics/Research Evaluation*, 58(2).

Lööf H., A. Heshmati, R. Asplund and S-O. Näs, "Innovation and Performance in Manufacturing Industries: A Comparison of the Nordic Countries," *ICFAI Journal of Management Research*, September.

Mani, Sunil, "Moving Up or Going Back the Value Chain: An Examination of the Role of Government with Respect to Promoting Technological Development in the Philippines," *Philippine Journal of ICT and Microelectronics*, Special Issue (January), pp. 5–39.

Marcotullio, Peter J. and Yok-Shiu F. Lee, "Urban Environmental Transitions and Urban Transportation Systems: a Comparison of the North American and Asian Experiences," *International Development Planning Review* (formerly *Third World Planning Review*), November.

Marcotullio, Peter J., "Globalization, Urban Form and Environmental Conditions in Asia Pacific Cities," *Urban Studies*, 40(2): 219–248.

Marcotullio, Peter J., Sarah Rothenberg and Miki Nakahara, "Globalization and Urban Environmental Transitions: Comparison of New York's and Tokyo's Experiences," *Annals of Regional Science*, Vol. 37, No. 3, pp. 369–390.

Mayfield, Colin, Velma I. Grover, and Ralph J. Daley, "The United Nations Water Virtual Learning Centre: A Flexible Distance Learning Programme for Integrated Water Resource Management," *Journal of Global Environmental Change*, Vol. 13, No. 4.

McGillivray, Mark, "Aid Effectiveness and Selectivity: Integrating Multiple Objectives into Aid Allocation," *DAC Journal*, 4(3).

McGillivray, Mark, "Structural Adjustment, Policy-based Lending and Growth in Pakistan," *Journal of Policy Modeling*, 25(2):113–121.

Moravčík, M., B. Konôpka and L. Jansky, "Management of High-Mountain Forests in the Western Carpathians, Slovak Republic: Research Results and Perspectives," *Mountain Research and Development*, 23(4):383–386.

Murshed, S. Mansoob, "The Decline of the Development Contract and the Development of Violent Internal Conflict," Inaugural lecture by Price Claus Chair in Development and

Equity, Utrecht University, 12 May, published by Communications Service Centre, Utrecht University.

Newman, Edward, Henning Melber and Roland Rich, "Zur Rolle der Vereinten Nationen in Demokratisierungsprozessen," *Vereinte Nationen*, Vol. 51, No. 5.

Oyelaran-Oyeyinka, Banji "Knowledge Networks and Technological Capabilities in African Clusters," *Science, Technology & Society*, 8:1.

Oyelaran-Oyeyinka, Banji and Catherine Nyaki Adeya, "Internet Access in Africa: Empirical Evidence from Nigeria and Kenya," *Telematics and Informatics*, Special Issue (March).

Oyelaran-Oyeyinka, Banji, "Innovation and Learning by Firms in Nigeria: The Role of Size, Skills and Ownership," *International Journal of Business and Society*, 4:1.

Pathirana, A., S. Herath and T. Yamada, "On the Modeling of Temporal Correlations in Spatial-Cascade Rainfall Downscaling," *IAHS Red Book*, IAHS Publ. No. 282, pp. 74–82.

Pathirana, A., S. Herath and T. Yamada, "Using Fractals in Space-Time Scaling of Rainfall," *Asian Journal of Geophysics*, Bangkok.

Ramírez, J.L., "Bio-safety: Why and for Whom? Latin America on Target," *Interciencia*.

Ramírez, J.L., "International Workshop: Building (Bio) pharmaceutical Systems in Developing Countries, United Nations University Institute for New Technologies (INTECH), Maastricht: 26–27 February 2003," *Memorias do Instituto. Oswaldo Cruz*, 98:573–575.

Rasiah, Rajah and Rajiv Kumar, "Export Competitiveness of Asian Firms: Towards an Alternative Conceptual and Methodological Framework," *International Journal of Business and Society*, 4(2):1–25.

Rasiah, Rajah and Yeo Lin, "Structure, Technical Change and Government Intervention: The Development of the Information Hardware Electronics Industry in Taiwan," *International Journal of Business and Society*, 4(2): 135–171.

Rasiah, Rajah, "FDI, Technological Capabilities and Export Performance in Indonesia, Malaysia, Philippines and Thailand," *Development Engineering*, 9:1.

Rasiah, Rajah, "Foreign Ownership, Technology and

Electronics Exports from Malaysia and Thailand,” *Journal of Asian Economics*, 14:5, pp. 785–811.

Rasiah, Rajah, “Systemic Coordination and the Knowledge Economy: Human Capital Development in Malaysia’s MNC-driven Electronics Clusters,” *Transnational Corporations*, 11:3.

Rasiah, Rajah, “Technological Capabilities and Exports: A Study of Foreign and Local Firms in Malaysia and Thailand,” *Journal of Asian Economics*, 14:5.

Rasiah, Rajah, “TRIPS and Technological Capability Building: Critical Issues,” *Journal of Contemporary Asia*, 33:3.

Sakamoto, K., “Economic Development and Environment in North-East Asia in the 21st Century,” *Shimane (University) Journal of North Asian Research*, No. 5 (March).

Sanchez, B., L. Reverol, I. Galindo-Castro, A. Bravo, R. Rangel-Aldao and J.L. Ramirez, “Brewer’s Yeast Oxidoreductase with Activity on Maillard Reaction Intermediates of Beer,” *Masters Brewers Associations of Americas Tech. Quarters*, 40:204–212.

Smith, Hazel, “Asymmetric Nuisance Value: The Border in China-Democratic People’s Republic of Korea Relations,” in Timothy Hildebrandt, ed., *Uneasy Allies: Fifty Years of China-North Korea Relations*, Woodrow Wilson Center Asia Program Special Report, September, pp. 18–25.

Smith, Hazel, “Giving Peace a Chance: What the EU Can teach the U.S.,” *EUSA Review*, Vol. 16, No. 1, pp. 5–6

Smith, Hazel, “Gobbledygook,” *The World Today*, Vol. 59, No. 2, pp. 15–16.

Smith, Hazel, “North Koreans in China: Defining the Problems and Offering Some Solutions,” in Tsuneo Akaha (ed.), with Anna Vassilieva and Shizu Naruse, *Human Flows across National Borders in Northeast Asia*, seminar proceedings, Monterey: Monterey Institute of International Studies, January 31, pp. 115–134.

Smith, Hazel, “Northeast Asia Frustrated by US Pyongyang Policy,” *Jane’s Intelligence Review*, November, pp. 32–35.

Smith, Hazel, “Winning the Peace in Korea: Pursuing a Policy of Intelligent Intervention” (in Japanese), *Ronza (Forum)*, Asahi Shinbun Publications, November, pp. 74–81.

Tanhueco, R.M., J. Velasquez, P. Ching, J. De Guzman III

and J.J.C. Sta Barbara, “Disaster Vulnerability in the City of Manila: Quantifying the Social Aspect,” *10th ASEP International Proceedings: The Art and Science of Structural Engineering*, Association of Structural Engineer’s of the Philippines, Inc., May, Manila, Vol. 1, pp. 13–34.

Thakur, Ramesh, “A United Nations for Our Times,” *U.S.I. Journal*, Vol. 123, No. 551 (January–March), pp. 69–85.

Thakur, Ramesh, “Global Governance and the Existing Challenge in the Relationship between USA and UN” (in Arabic), *Al Mountada*, Vol. 18, No. 212, Aug./Sept. 2003, pp. 36–47.

Thakur, Ramesh, “Humanitarian Intervention: A Forum,” *The Nation*, 277:2 (7 July), pp. 19–20.

Thakur, Ramesh, “In Defence of The Responsibility to Protect,” *International Journal of Human Rights*, 7:3 (Autumn), pp. 160–178.

Thakur, Ramesh, “Iraq, UN and Changing Bases of World Order,” *Economic and Political Weekly*, Vol. 38, No. 23 (June 7–13), pp. 2261–2266.

Thakur, Ramesh, “Letter to America: War for the Wrong Reasons will Deligitimize the Instrument Itself,” *The Nation*, 276:8 (3 March), pp. 30–31.

Thakur, Ramesh, “Reforming the United Nations: Changing With and For the Times,” *International Peacekeeping*, 10:4 (Winter), pp. 40–61.

Thakur, Ramesh, “Security in the New Millennium,” in Andrew F. Cooper, John English and Ramesh Tahkur (eds.), *Enhancing Global Governance: Towards a New Diplomacy?* (UNU Press, 2002), pp. 268–286, reprinted in *Canadian Foreign Policy* 10:1, pp. 57–70.

Usui, Mikoto, “Sustainable Development Diplomacy in the Private Business Sector: An Integrative Perspective on Game Change Strategies at Multiple Levels,” *International Negotiation*, 8, pp. 167–310.

Velasquez, J. and RTT Tanhueco, “Quantifying the Social Aspects of Disaster Vulnerability,” *Asian Conference on Disaster Reduction 2003*, January, Kobe, Japan.

Velasquez, J. and RTT Tanhueco, “Quantifying the Social Aspects of Disaster Vulnerability,” *Proceedings of the 2nd International Symposium on New Technologies for Urban Safety of Mega Cities in Asia*, Tokyo, October, pp. 191–200.

Velasquez, Jerry and Uli Piest, "Case Studies on Inter-linkages and Environmental Governance in 14 Asia and Pacific Countries," *Global Environmental Change*, 13:63–68.

Williams, E. and T. Tagami, "Energy Use in Sales and Distribution via B2C E-commerce and Conventional Retail: A Case Study of the Japanese Book Sector," *Journal of Industrial Ecology* 6(2): 99–114.

Williams, E., "Forecasting Material and Economic Flows of the Global Production Chain for Silicon," *Technological Forecasting and Social Change*, 70(4):341–357.

Williams, E., "Environmental Implications of Microchips," *UN Chronicle*, 40(4):48.

Yimyam, N., K. Rerkasem and B. Rerkasem, "Fallow Enrichment with Pada (Macaranga denticulata (Bl.) Muell. Arg.) Trees in Rotational Shifting Cultivation in Northern Thailand," *Agroforestry Systems*, 57(2):79–86.

Book Chapters

Coicaud, Jean-Marc and Luiz A. Pereira da Silva, "The Legitimacy of International Organizations and the Future of International Governance," in Geoffrey Underhill and Xiaoke Zhang (eds.), *What is to be Done? Global Economic Disorder and Policies for a New International Financial Architecture*, Cambridge University Press.

Coicaud, Jean-Marc, "Human Rights in Discourse and Practice: The Quandary of International Justice," in Jean-Marc Coicaud, Michael W. Doyle and Amy Gardner (eds.), *The Globalization of Human Rights*, UNU Press.

De Lombaerde, P., "Perspectives for Monitoring Regional Integration in Southern Africa. Implications of the Cotonou Agreement," in D. Hansohm et al. (eds.), *Monitoring Regional Integration in Southern Africa Yearbook 2003*, Gamsberg Macmillan (Windhoek).

De Lombaerde, P., "Liberación comercial, concentración industrial y política de competencia en Colombia," in M. Anzola and C.L. Lizarazo (eds.), *Regulación Económica: Tendencias y Desafíos*, Universidad del Rosario-Temis (Bogotá).

Francis, D., "Expanding the Frontiers of ECOWAS Integration: The Nexus between Economic and Security Regionalism in West-Africa," in H. van Ginkel, J. Court and L. Van Langenhove (eds.), *Integrating Africa: Perspectives on Regional Integration and Development*, UNU Press.

Funes, Ana and Chris W. George, "Formal Foundations in RSL for UML Class Diagrams," in Liliana Favre (ed.), *Formalizing UML Class Diagrams of UML and the Unified Process*, IRM Press.

Gavin, B. and L. Van Langenhove, "Trade in a World of Regions," in G.P. Sampson and S. Woolcock (eds.), *Regionalism, Multilateralism, and Economic Integration: The Recent Experience*, UNU Press.

Gavin, B., "From the Convention to the IGC: Visioning the Future of Europe," in *The Federal Trust for Education and Research*.

Gavin, B., "Regional Integration and Governance: How will the Wider Europe be Governed?," in *Beyond Enlargement: Trade, Business and Investment in a Changing Europe*, UN.

Grant, A. and F. Söderbaum, "Introduction: The New Regionalism in Africa," in A. Grant and F. Söderbaum (eds.), *New Regionalism in Africa*, Ashgate.

Ginkel, Hans van, "What Does Globalization Mean for Higher Education?" in Gilles Breton and Michel Lambert (eds.), *Universities and Globalization — Private Linkages, Public Trust*, UNESCO Publishing/Université Laval/Economica (also published in French: "Que signifie la globalisation pour les universités?" in *Globalisation et Universités: nouvel espace, nouveaux acteurs*).

Ginkel, Hans van, "Building Regional Communities: Challenges and Opportunities," in *Community Building in North-east Asia — Challenges and Opportunities*, UNU Global Seminar — Seoul Session, Korean National Commission for UNESCO.

Ginkel, Hans van, "City-to-City Cooperation as a Means to Promote Sustainable Urbanization," in *Report of the International Forum-Asia, Looking to the Future*, 11–12 March 2003, Osaka International House Foundation (also in Japanese).

Ginkel, Hans van and L. Van Langenhove. "Introduction and Context," in Hans van Ginkel, Julius Court and Luk Van Langenhove, *Integrating Africa: Perspectives on Regional Integration and Development*, UNU Press.

Guha-Khasnobis, Basudeb, and Faisal Bari, "Sources of Growth in South Asian Countries," in I. J. Ahluwalia and J. Williamson (eds.), *The South Asian Experience with Growth*, Oxford University Press India.

Jansky, L., "History of Irrigation and Drainage in

Czechoslovakia,” in G. Cseko and L. Hayde (eds.), *Danube Valley — History of Irrigation, Drainage and Flood Control*, ICID.

Johnston, Sam, “Biodiversity Access and Benefit-Sharing Policies for Protected Areas: An Introduction,” in Sarah Laird, Sam Johnston, Rachel Wynberg, Estherine Lisinge and Dagmar Lohan (eds.), *The Role of Protected Areas in the Convention on Biological Diversity*, Secretariat of the Convention on Biological Diversity (CBD Technical Series No. 9).

Kanie, Norichika, “Domestic Capacity, Regional Organization and Global Climate Change Regime Building Process,” in Michael Faure, Joyeeta Gupta and Andries Nentjes (eds.), *Institutions and Instruments to Control Climate Change: Kyoto and After*, Edward Elgar.

Kuehr, R., “Managing PCs through Policy: Review and Ways to Extend Lifespan,” in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer Academic Publications.

Kuehr, R., J. Velasquez and E. Williams, “Computers and the Environment — An introduction to Understanding and Managing their Impacts,” in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer Academic Publications.

Lee, Irenes M., “Baseline Data in ASEAN Member Countries,” in Takehito Takano (ed.), *Healthy Cities & Urban Policy Research*, Spon Press.

Mani, Sunil, “Role of Government in Shaping the National Systems of Innovation: The South African Experience since 1994,” in Mammo Muchie, Peter Gammeltoft and Bengt-Åke Lundvall (eds.), *Putting Africa First: The Making of African Innovation Systems*, Aalborg University Press.

Marcotullio, Peter J., “Why Asian Urbanization Experiences Should Make Us Think Different About Planning Approaches,” in Andre Sorenson, Peter J. Marcotullio and Jill Grant (eds.), *Towards Sustainable Cities, East Asian, North American and European Perspectives on Managing Urban Regions*, Ashgate Publishing Limited (Aldershot).

Marcotullio, Peter J., Andre Sorenson and Jill Grant, “Toward Sustainable Cities,” in Andre Sorenson, Peter J. Marcotullio and Jill Grant (eds.), *Towards Sustainable Cities, East Asian, North American and European Perspectives on Managing Urban Regions*, Ashgate Publishing Limited (Aldershot).

Marcotullio, Peter J., Andre Sorenson and Jill Grant, “Towards Land Management Policies for More Sustainable Cities,” in Andre Sorenson, Peter J. Marcotullio and Jill Grant (eds.), *Managing Urban Change: East Asian, North American and European*, Ashgate Publishing Limited (Aldershot).

Mytelka, Lynn and Fulvia Farinelli, “From Local Clusters to Innovation Systems,” in J.E. Cassiolato, H.M.M. Lastres and M.L. Maciel, *Systems of Innovation and Development — Evidence from Brazil*, Edward Elgar.

Mytelka, Lynn and Keith Smith, “Interactions between Policy Learning and Innovation Theory,” in P. Conceicao, M. Heitor and B-A Lundvall (eds.), *Innovation, Competence Building and Social Cohesion in Europe*, Edward Elgar.

Mytelka, Lynn, “The Dynamics of Catching Up: The Relevance of an Innovation System Approach in Africa,” in Mammo Muchie, Peter Gammeltoft and Bengt-Åke Lundvall (eds.), *Putting Africa First: The Making of African Innovation Systems*, Aalborg University Press.

Newman, Edward, “La sicurezza umana e la risposta alle sfide del saccheggio globale,” in Sandro Calvani and Martina Melis (eds.), *Saccheggio Globale*, Sperling and Kupfer Editori (Milan).

Newman, Edward, “Refugees, International Security, and Human Vulnerability: Introduction and Survey,” in Edward Newman and Joanne van Selms (eds.), *Refugees and Forced Displacement: International Security, Human Vulnerability and the State*, UNU Press.

Obstfeld, Maurice, “How Integrated are World Capital Markets? Some New Tests,” from Calvo et al. (eds.), 1989, *Debt, Stabilization and Development*, reprinted in S.C.W. Eijffinger and J.A.G. Lemmen (eds.) *International Financial Integration*, The International Library of Critical Writings in Economics, Vol. II, Edward Elgar.

Oyelaran-Oyeyinka, Banji and Catherine Nyaki Adeya, “Internet Access in Nigerian and Kenyan Universities,” in M. Beebe, M. Rao, K. Kouaku and B. Oyelaran-Oyeyinka (eds.), *AfricadotEdu: IT Opportunities and Higher Education*, McGraw Hill (New Delhi).

Oyelaran-Oyeyinka, Banji, “Human Capital and Systems of Innovation in Africa,” in Mammo Muchie, Peter Gammeltoft and Bengt-Åke Lundvall (eds.), *Putting Africa First: The Making of African Innovation Systems*, Aalborg University Press.

Piracha, Awais, "Critical Links Between Environment and Development in South Asia," in Zafer Adeel and Awais L. Piracha (eds.), *South Asia in the World: Problem Solving Perspectives on Security, Sustainable Development, and Good Governance*, UNU Press.

Rasiah, Rajah, "Industrial Technology Transition in Malaysia," in Sanjaya Lall and Shujiro Urata (eds.), *Technology Development in East Asia*, Edward Elgar.

Rasiah, Rajah, "The Competitive Impact of China on South-east Asian Labor Markets," in N. von Hofmann and E. Sweishelm (eds.), *WTO, China and Southeast Asia's Labour Markets*, FES (Singapore).

Rasiah, Rajah, "The Export Manufacturing Experience of Indonesia, Malaysia and Thailand," in K.S. Jomo (ed.), *Southeast Asia's Paper Tigers*, Routledge.

Rasiah, Rajah, with K.S. Jomo, A. Rokiah and Jaya Gopal, "Industrial Policy and the Emergence of Internationally Competitive Manufacturing Firms in Malaysia," in K.S. Jomo and Ken Togo (eds.), *Manufacturing Competitiveness: How Internationally Competitive Nations Firms and Industries Developed in East Asia*, Routledge.

Saied, M. and Jerry Velasquez, "Green PCs and Consumption — A Look at Demand, Use and Disposal," in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer Academic Publications.

Sakamoto, K., "Environmental Management Strategy Handbook," in R. Yamamoto (ed.), *Zero Emissions*, Sangyo Chosakai (Tokyo).

Schnabel, Albrecht and David Carment, "Conflict Prevention: A Concept in Search of a Policy," in David Carment and Albrecht Schnabel (eds.), *Conflict Prevention: Path to Peace or Grand Illusion?*, UNU Press.

Schnabel, Albrecht and David Carment, "Conflict Prevention: Taking Stock," in David Carment and Albrecht Schnabel (eds.), *Conflict Prevention: Path to Peace or Grand Illusion?*, UNU Press.

Schnabel, Albrecht, "A Rough Journey: Nascent Democratization in the Middle East," in Amin Saikal and Albrecht Schnabel (eds.), *Democratization in the Middle East: Experiences, Struggles, Challenges*, UNU Press.

Schnabel, Albrecht, "Democratization and Peacebuilding," in Amin Saikal and Albrecht Schnabel (eds.), *Democratiza-*

tion in the Middle East: Experiences, Struggles, Challenges, UNU Press.

Shaw, T., F. Söderbaum, J. E. Nyang'oro and J. Grant, "The Future of New Regionalism in Africa: Regional Governance, Human Security/Development and Beyond," in Andrew Grant and Fredrik Söderbaum (eds.), *New Regionalism in Africa*, Ashgate.

Slocum, N. and L. Van Langenhove, "Integration Speak: Introducing Positioning Theory in Regional Integration Studies," in R. Harré and F. Moghaddam (eds.), *The Self and Others: Positioning Individuals and Groups in Personal, Political, and Cultural Contexts*, Praeger/Greenwood.

Slocum, N., A. Mordonu and P. De Lombaerde, "The Zambia-Malawi-Mozambique Growth Triangle: A Case Study in New Regionalism," in H. van Ginkel, J. Court and L. Van Langenhove (eds.), *Integrating Africa: Perspectives on Regional Integration and Development*, UNU Press.

Söderbaum, F. & I. Taylor, "Introduction: Understanding the Dynamics of Micro-regionalism in Southern Africa," in F. Söderbaum and I. Taylor (eds.), *Regionalism and Uneven Development in Southern Africa. The Case of the Maputo Development Corridor*, Ashgate.

Söderbaum, F. & I. Taylor, "The Role of the State in the Maputo Development Corridor," in F. Söderbaum & Ian Taylor (eds.), *Regionalism and Uneven Development in Southern Africa. The Case of the Maputo Development Corridor*, Ashgate.

Söderbaum, F. and I. Taylor, "Conclusion," in F. Söderbaum and I. Taylor (eds.), *Regionalism and Uneven Development in Southern Africa. The Case of the Maputo Development Corridor*, Ashgate.

Söderbaum, F. and T.M. Shaw, "Conclusion: What Futures for New Regionalism?," in F. Söderbaum and T. M. Shaw (eds.), *Theories of New Regionalism. A Palgrave Reader*, Palgrave.

Söderbaum, F., "Governance in the Maputo Development Corridor," in F. Söderbaum and I. Taylor (eds.), *Regionalism and Uneven Development in Southern Africa. The Case of the Maputo Development Corridor*, Ashgate.

Söderbaum, F., "Introduction: Theories of New Regionalism," in F. Söderbaum and T. M. Shaw (eds.), *Theories of New Regionalism. A Palgrave Reader*, Palgrave.

Söderbaum, F., "Regional Governance in Africa," in Hans

van Ginkel, Julius Court and Luk Van Langenhove (eds.), *Integrating Africa: Perspectives on Regional Integration and Development*, UNU Press.

Söderbaum, F., "Whose Security? Comparing Security Regionalism in West and Southern Africa," in J.J. Hentz and M. Bøås (eds.), *New and Critical Security and Regionalism: Beyond the Nation-State*, Ashgate.

Söderbaum, F., R. Tavares and B. Hettne. 'Regionness and the Construction of Peace in Europe', in P. Cramér (ed), *Whither Europe. The Development of a New European Security Architecture*, Centre for European Research at Göteborg University.

Subramanian, S., "Aspects of Global Deprivation and Disparity. A Child's Guide to Some Simple-Minded Arithmetic," in F. Carlucci and F. Marzano (eds.), *Poverty, Growth and Welfare in the World Economy in the 21st Century*, Peter Lang.

Thakur, Ramesh with Dipankar Banerjee, "India: Democratic, Poor, Internationalist," in Charlotte Ku and Harold K. Jacobson (eds.), *Democratic Accountability and the Use of Force in International Law*, Cambridge University Press.

Thakur, Ramesh, "UN Peace Operations and U.S. Unilateralism and Multilateralism," in David Malone and Yuen Foong Khong (eds.), *Unilateralism and U.S. Foreign Policy: International Perspectives*, Lynne Rienner (Boulder).

Thakur, Ramesh, William Maley and Charles Samford, "Introduction," in William Maley, Charles Sampford, and Ramesh Thakur (eds.), *From Civil Strife to Civil Society: Civil and Military Responsibilities in Disrupted States*, UNU Press.

Williams, E. and R. Kuehr, "Today's Markets for Used PCs: And Ways to Enhance Them," in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer.

Williams, E. and Y. Sasaki, "Strategizing the End-of-Life Handling of Personal Computers," in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer.

Williams, E. "Environmental Life Cycle Assessment and Municipal Solid Waste Management," in Saskia Sassen (ed.), *Encyclopedia of Life Support Systems*, E1-18: Institutional and Infrastructural Resources, Human Settlement Development, UNESCO.

Williams, E., "Environmental Impacts Associated with the Production of Personal Computers," in R. Kuehr and E. Williams (eds.), *Computers and the Environment: Understanding and Managing their Impacts*, Kluwer, pp. 41–72.

Discussion/Working Papers and Reports

Abdulkhamidov, Abdugani and Chris George, "Extending the RSL C++ Translator to Generate SQL," *UNU-IIST Internal Technical Report 279*.

Acheampong, K., 2003. "An Assessment of the Impacts of UNU-INRA/Department of Botany International Training Course on Plant Tissue Culture (1998–2002)," unpublished paper presented at annual meeting of UNU-INRA Advisory Board, July, Accra.

Addison, Tony and Abdur R. Chowdhury, "A Global Lottery and a Global Premium Bond," *UNU-WIDER Discussion Paper 2003/80*.

Addison, Tony and Almas Heshmati, "The New Global Determinants of FDI Flows to Developing Countries: The Importance of ICT and Democratization," *UNU-WIDER Discussion Paper 2003/45*.

Addison, Tony and Mina Balamoune-Lutz, "Institutional Quality, Reforms and Integration in the Maghreb," *UNU-WIDER Discussion Paper 2003/76*.

Addison, Tony, Mark McGillivray and Matthew Odedokun, "Donor Funding of Multilateral Aid Agencies: Determining Factors and Revealed Burden Sharing," *UNU-WIDER Discussion Paper 2003/17*.

Adenawo, Gabriel and Bernhard K. Aichernig, "Mutation Testing in the Unifying Theory of Programming," *UNU-IIST Internal Technical Report 289*.

Adeya, C. Nyaki, "Sources of Training in African Clusters and Awareness of ICTs: A Study of Kenya and Ghana," *UNU-INTECH Discussion Paper 2003-6*.

Akinkugbe, Oluyele, "Flow of Foreign Direct Investment to Hitherto Neglected Developing Countries," *UNU-WIDER Discussion Paper 2003/02*.

Ali, M.A., A.B.M. Badruzzaman, M.A. Jalil, M.D. Hossain, M.F. Ahmed, A. Al-Masud, M. Kamruzzaman and M.A. Rahman, "Fate of Arsenic Extracted with Groundwater," presented at the BUET-UNU International Symposium on Fate of Arsenic in the Environment, Dhaka, February.

- Ali, M.A., A.B.M. Badruzzaman, M.A. Jalil, M.F. Ahmed, M. Kamruzzaman, M.A. Rahman and A. Al-Masud, "Fate of Arsenic in Wastes Generated from Arsenic Removal Units," presented at the BUET-UNU International Symposium on Fate of Arsenic in the Environment, Dhaka, February.
- Andersen, Birgitte and Marva Corley, "The Theoretical, Conceptual and Empirical Impact of the Service Economy: A Critical Review," *UNU-WIDER Discussion Paper 2003/22*.
- Anderson, Kym, "Trade Liberalization, Agriculture, and Poverty in Low-income Countries," *UNU-WIDER Discussion Paper 2003/25*.
- Apirumanekul, C. and S. Herath, "Identifying Spatial and Temporal Scales for Downscaling of Global Rainfall Data Sets," *Proc. Annual Conference Japan Hydrology and Water Resources Association*.
- Appleton, Simon, "Regional or National Poverty Lines? The Case of Uganda in the 1990s," *UNU-WIDER Discussion Paper 2003/90*.
- Aten, Bettina and Alan Heston, "Regional Output Differences in International Perspective," *UNU-WIDER Discussion Paper 2003/55*.
- Atkinson, A.B., "Innovative Sources for Development Finance: Over-Arching Issues," *UNU-WIDER Discussion Paper 2003/88*.
- Azzoni, Carlos, Naercio Menezes-Filho and Tatiane Menezes, "Opening the Convergence Black Box: Measurement Problems and Demographic Aspects," *UNU-WIDER Discussion Paper 2003/56*.
- Bandyopadhyay, Sanghamitra, "Convergence Club Empirics: Some Dynamics and Explanations of Unequal Growth across Indian States," *UNU-WIDER Discussion Paper 2003/77*.
- Barclay, Lou Anne A., "FDI-facilitated Development: The Case of the Natural Gas Industry of Trinidad and Tobago," *UNU-INTECH Discussion Paper 2003-7*.
- Blume, Kræn, Björn Gustafsson, Peder J. Pedersen and Mette Verner, "A Tale of Two Countries: Poverty among Immigrants in Denmark and Sweden since 1984," *UNU-WIDER Discussion Paper 2003/36*.
- Boadway, Robin, "National Taxation, Fiscal Federalism and Global Taxation," *UNU-WIDER Discussion Paper 2003/87*.
- Borjas, George J., "The Economic Integration of Immigrants in the United States: Lessons for Policy," *UNU-WIDER Discussion Paper 2003/78*.
- Capasso, Salvatore and George Mavrotas, "Loan Processing Costs and Information Asymmetries — Implications for Financial Sector Development and Economic Growth," *UNU-WIDER Discussion Paper 2003/84*.
- Castles, Stephen and Sean Loughna, "Trends in Asylum Migration to Industrialized Countries: 1990–2001," *UNU-WIDER Discussion Paper 2003/31*.
- Cernat, Lucian, Sam Laird, Luca Monge-Roffarello and Alessandro Turrini, "The EU's Everything But Arms Initiative and the Least-developed Countries," *UNU-WIDER Discussion Paper 2003/47*.
- Chang, Ha-Joon, "Regulation of Foreign Investment in Historical Perspective," *UNU-INTECH Discussion Paper 2003-12*.
- Chatelard, Géraldine, "Iraqi Forced Migrants in Jordan: Conditions, Religious Networks, and the Smuggling Process," *UNU-WIDER Discussion Paper 2003/34*.
- Choe Sun Yong and Zhiming Liu, "Apply Object-Orientation and UML to the Development of Web-based Learning System," *UNU-IIST Internal Technical Report 274*.
- Chowdhury, Shyamal K. and Susanne Wolf, "Use of ICTs and the Economic Performance of SMEs in East Africa," *UNU-WIDER Discussion Paper 2003/06*.
- Christiaensen, Luc, Lionel Demery and Stefano Paternostro, "Reforms, Remoteness and Risk in Africa: Understanding Inequality and Poverty during the 1990s," *UNU-WIDER Discussion Paper 2003/70*.
- Cornia, Giovanni Andrea and Tony Addison, with Sampsa Kiiski, "Income Distribution Changes and their Impact in the Post-World War II Period," *UNU-WIDER Discussion Paper 2003/28*.
- Dang Van, Hung and Zhiming Liu (eds.), "Proceedings of the Workshop on Formal Aspects of Component Software FACS'03: Satellite Workshop of the FM 2003" (Pisa, Italy; 8–9 September 2003), *UNU-IIST Internal Technical Report 284*.
- Davis, Donald R. and David E. Weinstein, "Market Size, Linkages, and Productivity: A Study of Japanese Regions," *UNU-WIDER Discussion Paper 2003/53*.

Decoster, André and Inna Verbina, "Who Pays Indirect Taxes in Russia?," *UNU-WIDER Discussion Paper 2003/58*.

Dercon, Stefan and John Hoddinott, Health, "Shocks and Poverty Persistence," *UNU-WIDER Discussion Paper 2003/08*.

Dercon, Stefan and Pramila Krishnan, "Food Aid and Informal Insurance," *UNU-WIDER Discussion Paper 2003/09*.

Dimaranan, Betina, Thomas Hertel and Roman Keeney, "OECD Domestic Support and Developing Countries," *UNU-WIDER Discussion Paper 2003/32*.

Domanski, Dietrich, "Idiosyncratic Risk in the 1990s: Is It an IT Story?," *UNU-WIDER Discussion Paper 2003/07*.

Dutta, D. and S. Herath, "GIS and Mathematical-based Urban Flood Risk Analysis System," *Proceedings of the International Symposium on New Technologies for Urban Safety in Asian Mega Cities*, ICUS Report 2, University of Tokyo.

Dutta, D. and S. Herath, "Development and Application of an Urban Flood Risk Analysis System," *Proceedings of the First International Conference of Asia-Pacific Hydrology and Water Resources Association*, Kyoto.

Elbers, Chris, Peter Lanjouw, Johan Mistiaen, Berk Özler and Ken Simler, "Are Neighbours Equal? Estimating Local Inequality in Three Developing Countries," *UNU-WIDER Discussion Paper 2003/52*.

Escobal, Javier and Máximo Torero, "Adverse Geography and Differences in Welfare in Peru," *UNU-WIDER Discussion Paper 2003/73*.

Faini, Riccardo, "Is the Brain Drain an Unmitigated Blessing?," *UNU-WIDER Discussion Paper 2003/64*.

Feeny, Simon, "What Determines Foreign Aid to Papua New Guinea? An Inter-temporal Model of Aid Allocation," *UNU-WIDER Discussion Paper 2003/05*.

Fenning, J.O., "Soil Fertility Status of the Interior Savannah Zone of Ghana," *SRI Technical Bulletin No. 217*. CSIR, Ghana.

Förster, Miachael, David Jesuit and Timothy Smeeding, "Regional Poverty and Income Inequality in Central and Eastern Europe: Evidence from the Luxembourg Income Study," *UNU-WIDER Discussion Paper 2003/65*.

Fridleifsson, I.B. and M.V. Gunnarsson (eds.) "Lectures on the Sustainable Use and Operating Policy for Geothermal Resources," short course prior to the International Conference IGC2003 on Multiple Integrated Use of Geothermal Resources, Sept., *UNU-GTP Publication 1*.

Friedman, Jed, "How Responsive is Poverty to Growth? A Regional Analysis of Poverty, Inequality, and Growth in Indonesia, 1984–99," *UNU-WIDER Discussion Paper 2003/57*.

Gagnon, Stéphane "E-business Model Innovation and Capability Building," *UNU-WIDER Discussion Paper 2003/40*.

Gehl-Sampath, Padmashree, "Defining an Intellectual Property Right on Traditional Medicinal Knowledge: A Process-Oriented Perspective," *UNU-INTECH Discussion Paper 2003-5*.

Gehl-Sampath, Padmashree, "Designing National Regimes that Promote Public Health Objectives," *UNU-INTECH Discussion Paper 2003-8*.

Georgsson, L.S. (ed.), "Geothermal Training in Iceland 2002," *Research Reports of the UNU-GTP Fellows in 2002*, UNU-GTP.

Gholami, Roghieh, Sang-Yong Tom Lee and Almas Heshmati, "The Causal Relationship between Information and Communication Technology and Foreign Direct Investment," *UNU-WIDER Discussion Paper 2003/30*.

Ghosh, Nilabja, "Impact of Trade Liberalization on Returns from Land: A Regional Study of Indian Agriculture," *UNU-WIDER Discussion Paper 2003/50*.

Gibney, Matthew J. and Randall Hansen, "Asylum Policy in the West: Past Trends, Future Possibilities," *UNU-WIDER Discussion Paper 2003/68*.

Glinkina, Svetlana P. and Dorothy J. Rosenberg, "Social and Economic Decline as Factors in Conflict in the Caucasus," *UNU-WIDER Discussion Paper 2003/18*.

Grabel, Ilene, "The Revenue and Double Dividend Potential of Taxes on International Private Capital Flows and Securities Transactions," *UNU-WIDER Discussion Paper 2003/83*.

Greenspan-Bell, R. and L. Jansky, "Public Participation in the Management of the Danube River — Necessary but Neglected," presentation at Improving Public Participation and Governance in International Watershed Management, University of Virginia, School of Law, April.

Guha-Khasnobis, Basudeb, "Some Welfare Implications of 'Who Goes First?' in WTO Negotiations," *UNU-WIDER Discussion Paper 2003/63*.

Guha-Khasnobis, Basudeb, "Who Gains from Tariff Escalation?," *UNU-WIDER Discussion Paper 2003/62*.

Hatcho, N. and L. Jansky (eds.), "History of Water — Lessons to Learn," 3rd World Water Forum Event, March, Kyoto-Shiga-Osaka.

Hatton, Timothy J. and Jeffrey G. Williamson, "What Fundamentals Drive World Migration?," *UNU-WIDER Discussion Paper 2003/23*.

Haveman, Jon D. and Howard J. Shatz, "Developed Country Trade Barriers and the Least Developed Countries: The Economic Results of Freeing Trade," *UNU-WIDER Discussion Paper 2003/46*.

He Jifeng and Tony Hoare, "Equating Bisimulation with Refinement," *UNU-IIST Internal Technical Report 282*.

He Jifeng, "An Operational Approach to Communicating Processes," *UNU-IIST Internal Technical Report 278*.

He Jifeng, Liu Zhiming, and Li Xiaoshan, "Component Calculus," *UNU-IIST Internal Technical Report 285*.

He Jifeng, Liu Zhiming, and Li Xiaoshan, "Modelling Object-oriented Programming with Reference Type and Dynamic Binding," *UNU-IIST Internal Technical Report 280*.

He Jifeng, Zhiming Liu and Li Xiaoshan, "Contract-Oriented Component Software Development," *UNU-IIST Internal Technical Report 276*.

Herath, S., "A System for Collecting Field Information for Disaster Reduction," *Proc. US-Japan Workshop on Comparative Studies for Earthquake Risk Reduction*.

Herath, S., P. Shivastrava and U. Ratnayake, "Characteristics of Mekong Basin from Indices Extracted from Global Data Sets," *Proc. of 2003 Annual Conference Japan Hydrology and Water Resources Association*.

Heshmati, Almas, "Measurement of a Multidimensional Index of Globalization and its Impact on Income Inequality," *UNU-WIDER Discussion Paper 2003/69*.

Hunukumbura, P., S. B. Weerakoon and S. Herath, "Performance Comparison of Two Different Hydrological Models

Applied to Upper Kotmale Basin in Sri Lanka," JSCE summer symposium.

Iregui, Ana María, "Efficiency Gains from the Elimination of Global Restrictions on Labour Mobility: An Analysis using a Multiregional CGE Model," *UNU-WIDER Discussion Paper 2003/27*.

Jansky, L., "Runoff Formation in Small Catchments and Erosive Land Degradation — Case Studies from Japan," in *APHPW 2003: 1st International Conference on Hydrology and Water Resources in Asia Pacific Region*, Kyoto.

Jin Naiyong and He Jifeng, "Resource Semantic Models for Programming Languages," *UNU-IIST Internal Technical Report 277*.

Johnston, Sam, Brendan Tobin and Charles Barber, "Options for Developing Measures in User Countries to Implement the Access and Benefit Sharing Provisions of the Convention on Biological Diversity," *UNEP/CBD/WG-ABS/2/1/INF/5*.

Johnston, Sam, "Background Note on the Benefits that Protected Areas Provide People," *Vth World Parks Congress* (September).

Johnston, Sam, "Concept Paper on Financial Mechanisms for the Like Minded Megadiverse Countries Group," *Document 2, Meeting of the Like-Minded Megadiverse Countries Group, GML/2003/KL/REF/OIS*.

Johnston, Sam, "The International Regime for Bio-prospecting: Existing Policies and Emerging Issues for Antarctica," *IP-075-UKNO (ATCM XXVI)*.

Kelly, Roger and George Mavrotas, "Financial Sector Development — Futile or Fruitful? An Examination of the Determinants of Savings in Sri Lanka," *UNU-WIDER Discussion Paper 2003/14*.

Kelly, Roger and George Mavrotas, "Savings and Financial Sector Development: Panel Cointegration Evidence from Africa," *UNU-WIDER Discussion Paper 2003/12*.

Kolenikov, Stanislav and Anthony Shorrocks, "A Decomposition Analysis of Regional Poverty in Russia," *UNU-WIDER Discussion Paper 2003/74*.

Koser, Khalid and Nicholas Van Hear, "Asylum Migration and Implications for Countries of Origin," *UNU-WIDER Discussion Paper 2003/20*.

Li Dan and Bernhard Aichernig, "Automatic Test Case

Generation for RAISE,” *UNU-IIST Internal Technical Report 273*.

Liang Luohui, “Building on Local Expertise for Biodiversity Management in *Agricultural Landscapes*,” side event “Agriculture for Peace” at TICAD III, Tokyo, September.

Lin, Songhua, “International Trade, Location and Wage Inequality in China,” *UNU-WIDER Discussion Paper 2003/61*.

Liu, Zhiming, He Jifeng, Xiaoshan Li and Jing Liu, “Unifying Views of UML,” *UNU-IIST Internal Technical Report 288*.

Liu, Zhiming, He Jifeng, Xiaoshan Li and Yifeng Chen, “A Relational Model for Formal Object-Oriented Requirement Analysis in UML,” *UNU-IIST Internal Technical Report 287*.

Maimbo, Samuel Munzele and George Mavrotas, “Financial Sector Reforms and Savings Mobilization in Zambia,” *UNU-WIDER Discussion Paper 2003/13*.

Mani, Sunil, “Deregulation, Entry of MNCs, Public Technology Procurement and Innovation Capability in India’s Telecommunications Equipment Industry,” *UNU-INTECH Discussion Paper 2003-1*.

Martin, Philip, “Economic Integration and Migration: The Mexico-US Case,” *UNU-WIDER Discussion Paper 2003/35*.

Martin, Susan F., Andrew I. Schoenholtz and David Fisher, “Impact of Asylum on Receiving Countries,” *UNU-WIDER Discussion Paper 2003/24*.

Masso, Jaan and Almas Heshmati, “Optimality and Overuse of Labour in Estonian Manufacturing Enterprises,” *UNU-WIDER Discussion Paper 2003/51*.

Mavrotas, George and Bazoumana Ouattara, “Aid Disaggregation, Endogenous Aid and the Public Sector in Aid-Recipient Economies: Evidence from Côte d’Ivoire,” *UNU-WIDER Discussion Paper 2003/15*.

Mavrotas, George and Bazoumana Ouattara, “The Composition of Aid and the Fiscal Sector in an Aid-Recipient Economy: A Model,” *UNU-WIDER Discussion Paper 2003/11*.

Mavrotas, George, “The International Finance Facility: The UK HM Treasury–DFID Proposal to Increase External

Finance to Developing Countries,” *UNU-WIDER Discussion Paper 2003/79*.

Mavrotas, George, “Which Types of Aid Have the Most Impact?,” *UNU-WIDER Discussion Paper 2003/85*.

Mayer, Jörg, “Export Dynamism and Market Access,” *UNU-WIDER Discussion Paper 2003/42*.

McGillivray, Mark and Bazoumana Ouattara, “Aid, Debt Burden and Government Fiscal Behaviour: A New Model Applied to Côte d’Ivoire,” *UNU-WIDER Discussion Paper 2003/33*.

McGillivray, Mark, “Aid Effectiveness and Selectivity: Integrating Multiple Objectives into Aid Allocations,” *UNU-WIDER Discussion Paper 2003/71*.

McGillivray, Mark, “Descriptive and Prescriptive Analyses of Aid Allocation: Approaches, Issues and Consequences,” *UNU-WIDER Discussion Paper 2003/21*.

McGillivray, Mark, “Modelling Aid Allocation: Issues, Approaches and Results,” *UNU-WIDER Discussion Paper 2003/49*.

Micklewright, John and Anna Wright, “Private Donations for International Development,” *UNU-WIDER Discussion Paper 2003/82*.

Mochrie, Robbie, “Economic and Theological Approaches to Debt Cancellation,” *UNU-WIDER Discussion Paper 2003/16*.

Mortimore, Michael, “Illusory Competitiveness: The Apparel Assembly Model of the Caribbean Basin,” *UNU-INTECH Discussion Paper 2003-11*.

Moses, Jonathon W. and Bjørn Letnes, “If People were Money: Estimating the Potential Gains from Increased International Migration,” *UNU-WIDER Discussion Paper 2003/41*.

Mytelka, Lynn, “New Wave Technologies: Their Emergence, Diffusion and Impact. The Case of Hydrogen Fuel Cell Technology and the Developing World,” *UNU-INTECH Discussion Paper 2003-3*.

Nissanke, Machiko, “Revenue Potential of the Currency Transaction Tax for Development Finance: A Critical Appraisal,” *UNU-WIDER Discussion Paper 2003/81*.

Odedokun, Matthew, “A Holistic Perception of Foreign

Financing of Developing Countries' Private Sectors: Analysis and Description of Structure and Trends," *UNU-WIDER Discussion Paper 2003/01*.

Odedokun, Matthew, "Analysis of Deviations and Delays in Aid Disbursements," *UNU-WIDER Discussion Paper 2003/26*.

Odedokun, Matthew, "Economics and Politics of Official Loans versus Grants Panoramic Issues and Empirical Evidence," *UNU-WIDER Discussion Paper 2003/04*.

Odedokun, Matthew, "The 'Pull' and 'Push' Factors in North-South Private Capital Flows: Conceptual Issues and Empirical Estimates," *UNU-WIDER Discussion Paper 2003/43*.

Oyelaran-Oyeyinka, Banji and Kaushalesh Lal, "Internet Diffusion in Sub-Saharan Africa: A Cross-Country Analysis," *UNU-INTECH Discussion Paper 2003-5*.

Oyelaran-Oyeyinka, Banji and Lou Anne Barclay, "Systems of Innovation and Human Capital in African Development," *UNU-INTECH Discussion Paper 2003-2*.

Pei Yu and Xu Qiwen, "Checking Interval Based Properties for Reactive Systems," *UNU-IIST Internal Technical Report 283*.

Perälä, Maiju, "'Looking at the Other Side of the Coin': The Relationship between Classical Growth and Early Development Theories," *UNU-WIDER Discussion Paper 2003/38*.

Perälä, Maiju, "Persistence of Underdevelopment: Does the Type of Natural Resource Endowment Matter?," *UNU-WIDER Discussion Paper 2003/37*.

Phuong, Catherine, "Controlling Asylum Migration to the Enlarged EU," *UNU-WIDER Discussion Paper 2003/59*.

Piest, Uli & Jerry Velasquez, "Environmental Governance in Papua New Guinea — A Review," National Case Study of Inter-linkages Synergies and Coordination among Multilateral Environmental Agreements, Tokyo, October.

Pu Geguang, Wang Yi, Dang Van Hung and He Jifeng, "An Optimal Approach to Hardware/software Partitioning for Synchronous Model," *UNU-IIST Internal Technical Report 286*.

Rasiah, Rajah and Yeo Lin, "The Role of Market, Trust and Government in the Development of the Information Hard-

ware Industry in Taiwan," *UNU-INTECH Discussion Paper 2003-10*.

Ravallion, Martin, "Externalities in Rural Development: Evidence for China," *UNU-WIDER Discussion Paper 2003/54*.

Rerkasem, Kanok, "Agrodiversity Lessons: Examples from the Highlands of Northern Thailand," Symposium on Alternative Approaches to Enhancing Small-Scale Livelihoods and Natural Resource Management in Marginal Areas — Experience in Monsoon Asia, Tokyo, October.

Reyna-Cerecero, Mario and George Mavrotas, "Inflation, Output and Perfectly Enforceable Price Controls in Orthodox and Heterodox Stabilization Programmes," *UNU-WIDER Discussion Paper 2003/44*.

Ri Hyon Sul and He Jifeng, "A Complete Verification System for Timed RSL," *UNU-IIST Internal Technical Report 275*.

Rodríguez-Pose, Andrés and Javier Sánchez-Reaza, "Economic Polarization Through Trade: Trade Liberalization and Regional Growth in Mexico," *UNU-WIDER Discussion Paper 2003/60*.

Round, Jeffery I. and Matthew Odedokun, "Aid Effort and its Determinants," *UNU-WIDER Discussion Paper 2003/03*.

Sakamoto, K. and H. Sasaki (eds.), "How to Promote the Creation of Sustainable Society in Sites."

Sandmo, Agnar, "Environmental Taxation and Revenue for Development," *UNU-WIDER Discussion Paper 2003/86*.

Shaw, Timothy M., "Conflict and Peace-building in Africa: The Regional Dimensions," *UNU-WIDER Discussion Paper 2003/10*.

Solimano, Andrés, "Development Cycles, Political Regimes and International Migration: Argentina in the Twentieth Century," *UNU-WIDER Discussion Paper 2003/29*.

Solimano, Andrés, "Remittances by Emigrants: Issues and Evidence," *UNU-WIDER Discussion Paper 2003/89*.

Stocking, Michael, "Grappling with Diversity," Symposium on Complexity and Generality in Development-Oriented Research, Thun, Switzerland, June.

Stocking, Michael, "Land Degradation Control and the Global Environmental Benefits," Conference on Land Degradation and Mitigation — Problems Solutions and Conflicts,

International Geographical Union, Commission on Land Degradation and Desertification, Reykjavík, Iceland, August.

Sun Meng and Bernhard Aichernig, “*Coalg_{KPF}*: Towards a Coalgebraic Calculus for Component-Based Systems,” *UNU-IIST Internal Technical Report 271*.

Sun Meng and Bernhard Aichernig, “Towards a Coalgebraic Semantics of UML: Class Diagrams and Use Cases,” *UNU-IIST Internal Technical Report 272*.

Sun Meng and Luis S. Barbosa, “On Refinement of Generic Software Components,” *UNU-IIST Internal Technical Report 281*.

Tazreiter, Claudia, “Asylum-seekers as Pariahs in the Australian State: Security Against the Few,” *UNU-WIDER Discussion Paper 2003/19*.

te Velde, Dirk Willem and Oliver Morrissey, “Spatial Inequality for Manufacturing Wages in Five African Countries,” *UNU-WIDER Discussion Paper 2003/66*.

Thomas, Jonathan P., “Bankruptcy Proceedings for Sovereign State Insolvency and their Effect on Capital Flows,” *UNU-WIDER Discussion Paper 2003/75*.

Thomas-Hope, Elizabeth, “Irregular Migration and Asylum Seekers in the Caribbean,” *UNU-WIDER Discussion Paper 2003/48*.

Umezaki, Masahiro, “Working with Small Farmers for Conservation: PLEC Experience in Papua New Guinea,” 2003 UN Day, Tokyo, October.

UNU-ZEF, “Summary Report of Academic Study 2002: ‘The Method on How to Realize a Sustainable Recycle-oriented Society at Site’.”

Vaitsos, C.V., “Growth Theories Revisited: Enduring Questions with Changing Answers,” *UNU-INTECH Discussion Paper 2003-9*.

Vasquez, Miguel Pinedo, “Smallholder-developed ‘Hybrid Systems’ as an Underutilized Resource: PLEC Experience,” Symposium on Alternative Approaches to Enhancing Small-Scale Livelihoods and Natural Resource Management in Marginal Areas — Experience in Monsoon Asia, Tokyo, October.

Väyrynen, Raimo, “Illegal Immigration, Human Trafficking, and Organized Crime,” *UNU-WIDER Discussion Paper 2003/72*.

Velasquez Jerry, “Improving the Role of the United Nations in Environmental Governance,” United Nations General Assembly Second Committee Workshop, New York, November.

Velasquez, Jerry & Jacques Mougeot, “The Basel and Waigani Conventions. Inter-linkages among Chemicals and Hazardous Waste-related Conventions (Stockholm, Rotterdam, Basel and Waigani Conventions), including CD-ROM Handbook. UNU, SPREP, Tokyo.

Velasquez, Jerry and R.T. Tanhueco, “The UNU Study on the Quantification of the Social Aspects of Disaster Vulnerability,” UNU.

Velasquez, Jerry, “Challenges in Compliance and Enforcement of MEAs,” UNEP Workshop on Compliance and Enforcement of MEAs in the English Speaking Caribbean Region, Kingston, Jamaica, October.

Velasquez, Jerry, “Compliance and Enforcement of MEAs: Results of 15 Country Case Studies in Asia and the Pacific,” UNEP Workshop on Compliance and Enforcement of MEAs in the Asia Pacific Region, Colombo, August.

Velasquez, Jerry, “Environmental Governance in Bhutan: National Case Study of Inter-linkages Synergies and Coordination among Multilateral Environmental Agreements,” UNU, Tokyo.

Velasquez, Jerry, “Inter-linkages Approach to Capacity Building in the ASEAN,” ASEAN Regional Workshop on Integrated Capacity Building for MEAs, Kuala Lumpur, March.

Velasquez, Jerry, “Inter-linkages between the Kyoto and Montreal Protocols,” ASEAN Regional Workshop on Integrated Capacity Building for MEAs, Kuala Lumpur, March.

Velasquez, Jerry, “Inter-linkages: Synergies and Coordination Among Multilateral Environmental Agreements,” UNFCCC Workshop on Synergies, Espoo, Finland, July.

Velasquez, Jerry, “Key Issues among the Rio Conventions: Technology Transfer, Capacity Building, Awareness and Outreach,” UNFCCC Workshop on Synergies, Espoo, Finland, July.

Velasquez, Jerry, “The Inter-linkages Approach and the WSSD Outcomes,” UNU Session on Inter-linkages at the Commission of Sustainable Development, New York, May.

Velasquez, Jerry, Uli Piest, Raman Letchumanan and Brook

Boyer (eds.), "Integrated Capacity Building in the ASEAN," UNU, Tokyo.

Verbina, Inna, "Inconsistency in Savings Pattern: Is there an Endogeneity Bias?," *UNU-WIDER Discussion Paper 2003/39*.

Williams, E., "Energy Analysis of End-of-Life of Computers: Resell, Upgrade, Recycle," 2003 IEEE International Symposium on Electronics and the Environment, IEEE: Piscataway, New Jersey.

Williams, E., "Extending PC Lifespan through Secondary Markets," 2003 IEEE International Symposium on Electronics and the Environment, IEEE, Piscataway, New Jersey.

Williams, E., "Sustainable Consumption and the Information Technology Revolution," First International Workshop on Sustainable Consumption, Society of Non-Traditional Technology, Tokyo.

Williams, E., "Potential of Telework for Macro-level Energy Savings in Japan," 2003 IEEE International Symposium on Electronics and the Environment, IEEE, Piscataway, New Jersey.

Yemtsov, Ruslan, "Quo Vadis? Inequality and Poverty Dynamics across Russian Regions," *UNU-WIDER Discussion Paper 2003/67*.

Conference Proceedings

Adeel, Zafar and Monthip Tabucanon, "Capacity Development Challenges in the Chao Phraya River Basin," presented at 3rd World Water Forum, Kyoto, 16–22 March.

Adeel, Zafar, "Approaches for Water Management in Drylands," presented at session on Sustainable Management of Scarce Water Resources in Dry Areas, 3rd World Water Forum, Kyoto, 19 March.

Adeel, Zafar, "Harmonization of Environmental Quality Standards for POPs in East Asia," presented at UNU-APN-Shimadzu International Workshop: Monitoring of POPs in the East Asian Hydrosphere, Tokyo, 1–2 Sept.

Adeel, Zafar, "The Arsenic Crisis in the Asian Region and UNU's Role," presented at session on Technological and Policy Dimensions of Arsenic Contamination in the Asian Region at 3rd World Water Forum, Kyoto, 16 March.

Adeel, Zafar, "UNU's Role in Management of Coastal

Ecosystems — Perspectives from the Asia Pacific Region," presented at 4th ASPACO Interregional Meeting and Training Seminar, Olmue, Chile, 6–12 Nov.

Ahmed, M.F., M.A. Ali, and Z. Adeel (eds.), *Fate of Arsenic in the Environment*, UNU-BUET, Dhaka, Bangladesh.

Aichernig, Bernhard K., "Contract-based Testing," *LNCS 2757*, Springer-Verlag, October.

Aichernig, Bernhard K., "The Commuting V-Diagram: On the Relation of Refinement and Testing," *Proceedings of CSL/KGC 2003, the Annual Conference of the European Association for Computer Science Logic and 8th Kurt Godel Colloquium*, 25–30 August, Vienna, Austria; *Lecture Notes in Computer Science*, Springer-Verlag.

Aichernig, Bernhard K., "Test Derivation in a Refinement Process," *Proceedings of RCS'03, the 2nd International Workshop on Refinement of Critical Systems: Methods, Tools and Developments*, 3 June, Turku, Finland.

Aoi, Chiyuki, "From Description to Explanation: a Framework for International Organization Analysis," Japan Association for International Relations, October.

Aoi, Chiyuki, "Japan, the US, and the UN: In Search for Creative Relations," Japan Association for United Nations Studies, May.

Atsa, Roger and Marcel Fouda, "Mobile-based Support for Business Processes: Feasibility and Correctness," *Proceedings of ACS/IEEE International Conference on Computer Systems and Applications (AICCSA'03)*.

Atsa, Roger and Marcel Fouda, "Security-Based Approach to Data Consistency in a Virtual Enterprise," *Proceedings of ACS/IEEE International Conference on Computer Systems and Applications (AICCSA'03)*.

Daley, Ralph J., "Environmental Quality and Human Health in the 21st Century," keynote presentation at IUPAC International Conference, Ottawa, 14 August.

Daley, Ralph J., "Global Water Crisis," presented at Freshwater Forum organized by the UN Association of Canada, Belleville, 26 Feb.

Daley, Ralph J., "Integrated Capacity Development for Water," presented at 3rd World Water Forum, Kyoto, 16–22 March.

Dang Van Hung, "A Technique for Improving the

Performance of Hardware/Software Partitioning,” *Proceedings of FAIR’03*, Hanoi, 4–5 Oct.

Dang Van Hung, “Real-time Systems Development with Duration Calculus: an Overview,” *LNCS 2757*, Springer-Verlag, Oct.

Fridleifsson, I.B., “Twenty-five Years of Geothermal Training in Iceland,” *Proceedings of the International Geothermal Conference IGC-2003 on Multiple Integrated Uses of Geothermal Resources* (Plenary session), Reykjavík, Iceland, 1: 4–21.

Gehl Sampath, Padmashree, “Adoption of Agricultural Biotechnology: Issues for Biosafety Governance in Asian Countries,” *Proceedings of INREF-AGITS Conference on “Environmental Governance in Asia: New State-Society Relations: Globalization, Industrial Transformation and Environmental Regulation,”* 10–12 October, Chiang Mai University, Thailand.

George, Chris, “The Development of the RAISE Tools,” *LNCS 2757*, Springer-Verlag, Oct.

Girard, Pierre, “Building Capacity for Integrated Management of the Pantanal Wetlands, South America,” presented at 3rd World Water Forum, Kyoto, 16–22 March.

Guelev, Dimitar P. and Dang Van Hung, “Projection onto State in Duration Calculus: Relative Completeness,” *Proceedings of the Third Workshop on Automated Verification of Critical Systems (AVoCS 2003)*, 2–3 April, Southampton, UK.

Hatcho, N. and L. Jansky (eds.), “History of Water — Lessons to Learn,” 3rd World Water Forum Event, 17 March, Kyoto-Shiga-Osaka, ICID, IWHA, UNU.

He Jifeng, “An Algebraic Approach to the VERILOG Programming,” *LNCS 2757*, Springer-Verlag, Oct.

He Jifeng, “An Integrated Approach to HW/SW Co-design,” *Proceedings of MENA Summer School*, Springer-Verlag.

He Jifeng, “Deriving an Operational Semantics of VERILOG from IS Algebraic Semantics,” *Proceedings of the First Sino-Germany Computer Science Symposium*, Shanghai, China.

Hearth, S. and Z. Adeel, “Environmental Dimensions of Poverty,” *Proc. UNU-RIVM Workshop* in Katmandu, Nepal.

Hearth, S. and R. Shaw, “Catastrophic Flood Risk Assess-

ment in the Asia Pacific Region,” *Proc. UNU-UNCRD Regional Workshop* in Bangkok, Thailand.

Janowski, Tomasz, “X2Rel: An XML Relation Language with Formal Semantics,” *LNCS 2757*, Springer-Verlag, Oct.

Jansky, L., “Runoff Formation in Small Catchments and Erosive Land Degradation — Case Studies from Japan,” *APHPW 2003: 1st International Conference on Hydrology and Water Resources in Asia Pacific Region*, Kyoto, 13–15 March.

Liu, Zhiming, He Jifeng, Xiaoshan Li and Jing Liu, “Unifying Views of UML,” *Workshop on Compositional Verification of UML at UML 2003*, 20–24 Oct., San Francisco.

Liu, Zhiming, He Jifeng, Xiaoshan Li and Yifeng Chen, “A Relational Model for Formal Object-Oriented Requirement Analysis in UML,” *Proceedings of ICFEM03*, 5–7 Nov., Singapore.

Mani, Sunil, “Market-Friendly Innovation Policies in Developing Countries,” *Proceedings of the 9th General Conference of the European Association for Development Research and Training (EADI)*, published by Karthala and GEMDEV, Paris.

Mayfield, Colin I., Velma I. Grover, Ralph J. Daley and Manuel Dengo, “The United Nations Water Virtual Learning Centre: A Flexible Distance Learning Programme For Integrated Water Resource Management,” presented at Sixth Water Information Summit, Breaking the Barriers: Let Water Information Flow, Delft, 9–12 Sept.

Mokwunye, Uzo, “Science and Technology Strategies and Policies for Improved Agricultural Production in West and Central Africa,” presented at Inter-Academy Council Workshop on Science and Technology Strategies and Policies for Improved Agricultural Production in Africa.

Ng S. T. Chong and Teeratep Sosakul, “A Framework for Video-centered Discussions on the Web,” *ED-MEDIA 2003*, World Conference on Educational Multimedia, Hypermedia & Telecommunications, June, Hawaii.

Ng S.T. Chong, “FlexNetDiscuss: A Generalized Contextual Group Communications System to Support Learning Inside and Outside the Classroom,” *Proceedings of the 3rd IEEE International Conference on Advanced Learning Technologies*, July, Athens.

Piracha, Awais, “Urban Ecosystems Analysis Using an Innovative Blend of ICTs,” *Proceedings of the 8th International*

Conference on Computers in Urban Planning and Urban Management CUPUM'03 Sendai, Japan.

Quain, M., P. Berjak and E. Acheampong, "Complementary Conservation of Root and Tuber Genetic Resources: Discorea Species and Solenostemon rotundifolius," Seminar presented to the Department of Botany, University of Natal, Durban, South Africa.

Quain, M., P. Berjak and E. Acheampong, "Towards the Cryopreservation of Discorea rotundata: The Response of in vitro-grown Shoot Tips and Axillary Buds to Dessication," Seminar presented to the Department of Botany, University of Ghana, Accra.

Siba, K. Udgate and Dang Van Hung, "A Formal Model for Channel Allocation in Distributed Mobile Computing Systems," *Proceedings of the 2003 International Conference on Parallel and Distributed Processing Techniques and Applications* (PDPTA'03), 23–26 June, Las Vegas.

Velasquez, Jerry, "Social Aspects of Disaster Vulnerability, in Catastrophic Flood Risk Assessment in the Asia Pacific Region," *Proc. UNU-UNCRD Regional Workshop* in Bangkok, Thailand.

Williams, E. and H.S. Matthews, "Potential Impact of Telework Programs on Energy Use in the US and Japan," *Proceedings of 11th LCA Case Studies Symposium — Environmental Assessment in the Information Society*, SETAC, Belgium.

Williams, E. and T. Hatanaka, "Sustainable Consumption and the Information Technology Revolution," *Proceedings of the First International Workshop on Sustainable Consumption*, Society for Non-Traditional Technology, Tokyo.

Williams, E., "Assessing the Potential of Telecommuting as an Energy Savings Technology in Japan," *2003 IEEE International Symposium on Electronics and the Environment*, IEEE, Piscataway, New Jersey.

Williams, E., "Energy Analysis of End-of-Life for Personal Computers: Resell, Upgrade, Recycle," *2003 IEEE International Symposium on Electronics and the Environment*, IEEE, Piscataway, New Jersey.

Williams, E., "Extending PC Lifespan through Secondary Markets," *2003 IEEE International Symposium on Electronics and the Environment*, IEEE, Piscataway, New Jersey.

Williams, E., "Hybrid Analysis of Energy Required for Production of a Desktop Computer," *Proceedings of 11th LCA*

Case Studies Symposium — Environmental Assessment in the Information Society, SETAC, Belgium.

ZEF, *New Action Models Aiming for a Zero Emissions-based Society Centralization and Decentralization*, Zero Emissions Symposium.

Others (including Electronic Dissemination Media)

Addison, Tony, "A Recuperação de África após os Conflitos: Levar aos Pobres os Benefícios da Paz," *UNU-WIDER Policy Brief* 6.

Addison, Tony, "Africa's Recovery from Conflict: Making Peace Work for the Poor," *UNU-WIDER Policy Brief* 6, March.

Addison, Tony, "L'Afrique de la guerre à la paix: garantir l'avenir des populations pauvres," *UNU-WIDER Policy Brief* 6.

Brookfield, H. and H. Parsons (eds.), *PLECserv*, 20 issues: <http://c3.unu.edu/plec>.

Brookfield, H. and H. Parsons (eds.), *PLEC News and Views*, No. 1 (March) and No. 2 (July) and No. 3 (Oct.), <http://www.unu.edu/env/plec/periodicals.html>

Clarke, Matthew, "e-development? Development and the New Economy," *UNU-WIDER Policy Brief* 7, Nov.

"Delegate's Guide to UN at the 3rd World Water Forum" prepared for 3rd World Water Forum, Kyoto, 16–22 March.

The Economic Journal, Vol. 113, no. 486, March, Special Session on "Risk, Insurance and Poverty," (3 UNU-WIDER articles).

Gehl Sampath, Padmashree and Richard Tarasofsky, "Study on the Inter-relationships Between Intellectual Property Rights Regimes and Conservation of Genetic Resources," prepared for European Commission, DG Environment (published on website of Secretariat to the Convention on Biological Diversity, <http://www.biodiv.org>).

Jansky, L. (co-author), "World Lake Vision — A Call to Action," World Lake Vision Committee, ILEC, UNEP.

Jansky, L. (ed.), "Environment and Sustainable Development," UNU International Courses, Tokyo, CD-ROM.

Journal of African Economies, Vol. 12, Issue 4, December.

UNU-WIDER CSAE conference papers on spatial inequality in Africa (6 UNU-WIDER articles).

Journal of Economic Development, Vol. 28, Issue 1, June, UNU-WIDER collection on “Issues in the Supply of Bilateral Official Development Assistance,” guest editor Matthew Odedokun (4 UNU-WIDER articles).

Journal of International Development, Vol. 15, Issue 4, May, UNU-WIDER Special Issue on “Explaining Violent Conflict: Going Beyond Greed versus Grievance,” guest editors Tony Addison and S. Mansoor Murshed (10 UNU-WIDER articles).

Lal, Kaushalesh, “ICTs for Innovation: Policy Issues for Developing Countries,” *UNU-INTECH Technology Policy Brief 6* (Vol. 2, Issue 2).

Pathirana, A., S. Hironaka and S. Herath, “Rainfall Scaling at High Temporal Resolutions: An Experimental Study,” *Proc: Annual Conference of JSCE* (CD-ROM).

Ramirez, J.L. and D. Holmes, “The Need for Genomics Networking in Latin America, *SciDev*. (Nature-Science journals) *Net* (<http://www.scidev.net/>), Aug. 14.

Rasiah, Rajah, “Transnational Corporations, Learning and Innovation: Implications of the TRIMs Agreement,” *UNU-INTECH Technology Policy Brief 5* (Vol. 2, Issue 1).

Sakamoto, K., “Towards Sustainable Society — On the Viewpoint of Global Summit/Agenda 21,” Training Centre, Ministry of Environment, Japan.

Thakur, Ramesh and Albrecht Schnabel (eds.), *Conflict Prevention — The Secretary-General’s Report: The Way Forward, Report of UNU/EOSG Expert Forum*, UNU.

Velasquez, Jerry & Jacques Mougeot, *Inter-linkages among Chemicals and Hazardous Waste-related Conventions* (Stockholm, Rotterdam, Basel and Waigani Conventions), CD-ROM Handbook. UNU, SPREP, Tokyo.

Velasquez, Jerry and S. Herath (eds.), “Water E-Course Modules,” UNU, LEAD Japan, ISDR and Asian Disaster Reduction Center, CD-ROM.

Velasquez, Jerry and Uli Pietsch (eds.), *UNU Work in Progress* Vol. 17, Number 1 (Spring) (13 articles focusing entirely on inter-linkages).

Velho, Léa and M.V. Prochazka, “Mulheres na Ciência: No que o mundo da ciência difere dos outros mundos? [Women

in Science: is the world of science different from the other worlds?],” *ComCiência* [The electronic journal of the Brazilian Society for the Advancement of Science], Dec., <http://www.comciencia.br/reportagens/mulheres/09.shtml>.

Velho, Léa, “Biotecnologia e Recursos Genéticos: Ação e Cooperação [Biotechnology and Genetic Resources: Action and Cooperation],” research report, <http://www.mct.gov.br/Temas/biotec/CoopIntern-Doc-II.PDF>.

Velho, Léa, “Capacity Building in Social Sciences and Impact in Policy-Making: A Case Study of Bolivia,” Research report for the Dutch Ministry of Development Cooperation, The Hague, October.

Velho, Léa, “Research for Development in the Latin America and the Caribbean,” Research report commissioned by the International Development Research Centre, Ottawa, Canada, July.

Velho, Léa, “Um nova visão para a pós-graduação? O debate nos Estados Unidos e Europa [A new vision for graduate studies? the debate in the US and Europe],” *ComCiência* [The electronic journal of the Brazilian Society for the Advancement of Science], Feb., <http://www.comciencia.br/reportagens/framereport.htm>.

ANNEX 7

Members of the Council of the United Nations University for 2003

Appointed Members

Professor Elisabeth J. Croll (United Kingdom) (Chair of the Council), Head, Department of Development Studies, University of London, United Kingdom

Dr. Yoginder K. Alagh (India), Member of Parliament (Upper House), India; Vice-Chairman, Sardar Patel Institute of Economic and Social Research; and former Minister of State (Independent Charge) for Science and Technology and Power, Government of India

Professor Faizah M. Al-Kharafi (Kuwait), former President, Kuwait University, Safat, Kuwait

Professor Rafaa Ben Achour (Tunisia), Faculté des Sciences juridiques, politiques et sociales de Tunis; former Président d'université; and former Secrétaire d'état auprès du ministre de l'éducation chargé de l'innovation pédagogique, Ministère de l'éducation, Tunis, Tunisia

Dr. Josep Bricall (Spain), former President, Conference of European Rectors (CRE) — Association of European Universities; and former Rector, Universidad de Barcelona, Spain

Professor Ana Maria Cetto (Mexico), Deputy Director-General and Head, Department of Technical Cooperation, International Atomic Energy Agency; and former Research Professor, Institute of Physics, National University of Mexico (UNAM), Mexico

Dr. Donald Gerth (United States), President Emeritus, California State University, Sacramento, California, USA

H. E. Dr. Ahmad Jalali (Iran), Ambassador and Permanent Delegate of the Islamic Republic of Iran to UNESCO, Paris, France

H. E. Professor Peter H. Katjavivi (Namibia), Ambassador to Belgium and the European Union, Embassy of Namibia, Brussels, Belgium; and former Vice-Chancellor, University of Namibia, Windhoek, Namibia

Professor Aleksandra Kornhauser (Slovenia), Director, International Centre for Chemical Studies, University of Ljubljana, Slovenia

Professor Lin Quan (China), Secretary-General, Ministry of Science and Technology, Beijing, People's Republic of China

Professor José Raymundo Martins Romeo (Brazil), Rector, Colégio do Brasil; former Rector and currently Professor of Physics, Universidade Federal Fluminense, Niteroi, Rio de Janeiro, Brazil

Professor Ahmadou Lamine Ndiaye (Senegal), former Ministre Conseiller special du Président de la République, Dakar; and former Rector, Université Gaston-Berger de Saint-Louis, Senegal

Dr. Dorothy L. Njeuma (Cameroon), Vice-Chancellor, University of Buea, Cameroon

Professor Jocelyne Perard (France), Centre de Recherches de Climatologie, Université de Bourgogne UMR CNRS, Dijon, France

Dr. Jairam Reddy (South Africa) Independent Consultant in Higher Education; and former Vice-Chancellor, University of Durban, South Africa

Prof. Dr. Dagmar Schipanski (Germany), Minister of Science, Research and Art, Thüringer Ministerium für Wissenschaft Forschung und Kunst, Erfurt, Germany

Professor Wichit Srisa-an (Thailand), former Rector, Suranaree University of Technology, Thailand

Professor Vappu Taipale (Finland), Director-General, National Research and Development Centre for Welfare and Health (STAKES), Helsinki, Finland

Professor Françoise Thys-Clement (Belgium), Pro-Rector, Université Libre de Bruxelles, Belgium

Dr. Carlos Tünnermann Bernheim (Nicaragua), Consultant on Higher Education; and former Special Adviser to the Director-General of UNESCO for Latin America and the Caribbean, Managua, Nicaragua

Dr. Juan Vela Valdes (Cuba), Rector, Universidad de la Habana, Cuba

Prof. Dr. Lyudmila A. Verbitskaya (Russian Federation), Rector and Professor of Linguistic, Saint-Petersburg State University, St. Petersburg, Russian Federation

Ambassador Chusei Yamada (Japan), Member, International Law Commission of the United Nations; and former Professor of International Law, Faculty of Law, Waseda University, Tokyo, Japan

UNU Rector

Professor J. A. van Ginkel (The Netherlands)

Ex-Officio Members

Mr. Kofi Annan (Ghana), Secretary-General, United Nations, New York, USA

Mr. Koichiro Matsuura (Japan), Director-General, United Nations Educational, Scientific and Cultural Organization, Paris, France

Dr. Marcel Boisard (Switzerland), Executive Director, United Nations Institute for Training and Research, Geneva, Switzerland

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

UNU-IAS brings together international expertise locally, regionally and globally. UNU-IAS is dedicated to advanced research and capacity development at the frontiers of knowledge, and committed to contributing creative solutions to pressing issues of global concern. The Institute is mandated to offer a flexible and multi-thematic programme concerned with interactions of societal and natural systems focusing on sustainable development.

UNU Institute for Environment and Human Security (UNU-EHS), Bonn, Germany (2003)

UNU-EHS focuses on the assessment of vulnerabilities and coping capacities of affected communities facing natural hazard events and potential technological disasters. In this context, the aggregated effect of creeping environmental deterioration and of short-term emergencies is of particular importance. While the mandate of UNU-EHS covers the entire scope of environmental hazards and their consequences, the Institute's activities give priority to hazards, risks, vulnerabilities and coping capacities in flood plains and deltas and, especially, in urban environments.

UNU Food and Nutrition Programme for Human and Social Development, Ithaca, New York, USA (1975)

The Food and Nutrition Programme carries out research and capacity development on issues that relate human development to food and nutrition. The Programme assists countries and agencies with the design, evaluation and improvement of nutrition and health programmes using relatively rapid qualitative techniques.

UNU Geothermal Training Programme (UNU-GTP) (1979), and UNU Fisheries Training Programme (UNU-FTP) (1998), Reykjavík, Iceland

UNU-GTP provides six-month specialized training in geothermal research, exploration and development at the postgraduate level. Nine specialized lines of training are offered, as well as an M.Sc. programme offered in cooperation with the University of Iceland where UNU-GTP's six-month training constitutes 25 per cent of the credits required for the degree.

UNU-FTP provides six-month specialized training in fisheries research and development at the postgraduate level. Six specialized lines of training are offered: quality management, policy and planning, resource assessment, fishing technology, company management, and environmental studies.

UNU Programme for Biotechnology in Latin America and the Caribbean (UNU-BIOLAC), Caracas, Venezuela (1988)

UNU-BIOLAC is a capacity development programme with the mission of promoting the production and use of biotechnology for development and integration of Latin America and the Caribbean. UNU-BIOLAC accomplishes its mission through training, creating and exchanging new knowledge, and conducting research oriented to solving problems that are of major concern to the region.

UNU International Leadership Academy (UNU-ILA), Amman, Jordan (1995)

UNU-ILA seeks to promote, encourage and facilitate leadership development for a secure, just and equitable human and democratic world. The Academy pursues this mission through a three-pronged strategy aimed at building leadership capacity, conducting original research on leadership, and enhancing public awareness.

UNU International Network on Water, Environment and Health (UNU-INWEH), Hamilton, Ontario, Canada (1996)

UNU-INWEH focuses on the global water crisis that impacts the lives of millions of people and is a serious impediment to global sustainable development. UNU-INWEH undertakes integrated and demand-driven capacity development and supports policy-relevant research to improve water management in developing countries.

UNU Programme on Comparative Regional Integration Studies (UNU-CRIS), Bruges, Belgium (2001)

UNU-CRIS aims to contribute, through research and training from multidisciplinary and comparative perspectives, to a better understanding of the processes and impact of intra- and inter-regional integration. The goal is to build policy-relevant knowledge about new forms of governance and cooperation, and to contribute to capacity development on issues of regional integration and cooperation, particularly in developing countries.

Postgraduate training activities

Between 1976 and 2003, approximately 2,200 UNU fellows received postgraduate training in UNU networks. UNU's postgraduate training programme strengthens 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 when their training is completed.

Dissemination activities

UNU Press produces academic publications and cooperates in the production of five journals. *Work in Progress*, an online *UNU Update*, and various brochures issued by the UNU Public Affairs Section are the main information vehicles used in reporting research and ongoing developments within the University's academic networks.

Financing

UNU receives no funds from the regular UN budget. Its activities are supported entirely by voluntary contributions from governments, agencies, international organizations, private companies and foundations. The University's basic annual income comes from investment income derived from its Endowment Fund and from operating and specific programme contributions made available for the University's work. The annual budget in 2003 was US\$36.8 million.



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