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 maximum 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
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.
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.
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.

“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 deepening 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.

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 Monterey 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 “political” 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.
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.

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.

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.

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;
• 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.
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 interlinkages among Multilateral Environmental Agreements (MEAs) to the impact of information technology (IT) and its products on environment. IT for environmental management 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
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, 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.
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.

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.

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
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 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

**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
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.