

howledge into action



IISD's Signature Design

IISD's signature design is Montreal artist Stéphane Daigle's visual interpretation of sustainable development. The circular theme represents the planet Earth and the limits of the biosphere; the forms within the circle convey the interdependent nature of human *development and the ecology of our small* planet; the eyes symbolize our collective *consciousness; the trees – natural systems* which sustain life on earth; the blue background and wavy lines – the air and *water; the yellow triangles – points of energy* from the sun; the faces indicate our collective humanity. At the center of the design, open hands represent sharing resources, information *and knowledge – the heart of sustainable* development's principle of fairness and equity.

IISD is a not-for-profit corporation located in Winnipeg, Manitoba, Canada and directed by an independent, international Board. It is registered as a charity in Canada, and has 501(c)(3) status in the USA.

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Sustainable development means integrating environmental integrity, economic efficiency, and peoples' well-being.



Report from the Chair of the Board

T en years ago, as Secretary-General of the World Commission on Environment and Development, my attention was focused on producing "Our Common Future." We set a new course which is now on the agenda of many national, regional and global institutions including UNDP and the World Bank. Yet recent meetings such as Rio +5 and preparations for the UN General Assembly Special Session confirm that taking sustainable development from concept to practice remains a major challenge.

Progress is being made in recognizing the significance of sustainable development. The Rio Conventions suggest ways governments should begin to link ecosystems and human activities. UNDP's focus on sustainable human development is helping to build a practical approach. The World Business Council on Sustainable Development is successfully promoting eco-efficiency. And, as IISD and others have demonstrated, use of the Internet and other information technologies can result in real breakthroughs in our capacity to disseminate sustainable development knowledge and experience.

But change is slow in coming. For example, in December 1996 the World Trade Organization missed an opportunity at its Ministerial Meeting to link trade and sustainable development. Discussions by national governments at the UN Commission on Sustainable Development reflect a lack of progress on the domestic front, and therefore hesitancy to move quickly on major international concerns.

IISD is leading the way on how to assess traditional policies against criteria for sustainable development and to measure actual progress. By the end of this century we hope it will be possible to report a much greater rate of progress in the transition towards sustainability.

I am grateful to the staff and Board members of IISD for their contributions in 1996-97. We have never been stronger as an organization and our influence with decision-makers continues to grow. Several recent appointments to IISD's Board reflect our desire to strengthen business and industry links. During the year Keith Bezanson, a founding member of our Advisory Participants Group, moved on to new endeavors. We very much appreciate his tremendous level of commitment to IISD over the past six years.

We look forward to another year of continued success.

James MacNeill Chair

Board of Directors 1996-1997

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*Dr. Keith Bezanson, International Development Research Centre, until March 1997

Ms. Mary Simon, Foreign Affairs and International Trade

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Report from the President

A n important influencing theme for IISD is knowledge networks. Three years ago, IISD was looking at ways of using information technology to further the messages of sustainable development. Today, we are winning awards for delivering knowledge through the Internet.

IISD, along with the International Development Research Centre (IDRC) and the North-South Institute, asked our Board member, Maurice Strong, to convene a group of prominent Canadians to rethink our approach to development. The group's mandate was to reflect on Canada's role and position in the world of the 21st century and to consider Canada's strengths and capabilities with regard to global development challenges. The key conclusion of their report"Connecting with the World" is that knowledge networks and the associated communication and information technologies be placed front and center in Canada's foreign policy and international outreach. And, further, that the three sponsoring institutions be at the forefront in advising Canadian efforts on knowledge-based initiatives.

We are using the concept of knowledge networks throughout our programming. Recently we co-founded the International Centre for Trade and Sustainable Development, located in Geneva. IISD continues to foster networks through our reporting services, the Earth Negotiations Bulletin, Linkages, Sustainable Developments and Developing Ideas Digest. We are developing Internet tools and services for use by business through the Canada-Manitoba Infrastructure Works Program. Along with IDRC and other international partners IISD launched our Spinning the Web project, to deliver a state-of-the-art Internet gateway, our most challenging effort yet towards building SD electronic networks.

IISD helped to bring into existence and now serves as Secretariat to what promises to be a very successful network in the Great Plains Region - the Manitoba Rural Adaptation Council - a group of decision-makers who are committed to sustainability of the region.

In November 1996 in Bellagio, Italy, we launched a new "virtual" network on measuring sustainable development progress. Experts in this complex field produced the Bellagio Measurement Principles as guidelines for practical assessment of progress.

We also have assisted with civil society inputs to governments - through Rio +5, work with Fundación Futuro Latinamericano, and coordination of meetings reviewing Canadian departmental sustainable development plans. This use of our convening power is an important way to build new links related to knowledge networks.

Making sustainable development a reality requires knowledge-based solutions - to which IISD can be a major contributor.

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Arthur J. Hanson President and CEO

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IISD's Programs

Information and Communications Measurement and Indicators

Business Strategies Trade and Sustainable Development

Community Adaptation and Sustainable Livelihoods The Great Plains

* Throughout this report, staff members listed include those persons on staff at March 31, 1997.

n November 1996 a task force of distinguished Canadians L headed by Maurice Strong proposed that knowledge become the basis of Canada's international development assistance, and a key component of its foreign policy. The Strong Report, Connecting with the World: Priorities for Canadian Internationalism in the 21st *Century*, provides an important reinforcement of IISD's mandate.

The report argues for strengthening North-South relationships along new lines."The choice is not between doing something and

most likely to lie in its potential as a 'knowledge-broker' going far beyond what it describes as the current"Internet smorgasbord".



"The stark reality [is] that Canada in the years ahead will be challenged to maintain its place amongst the world's 15 leading economies, let alone the G7. ... Canada will be obliged to earn its way in that new century, in large part through its intellectual capacity and global leadership."

- Lloyd Axworthy, Canada's Minister of Foreign Affairs and International Trade, commenting on the Strong Report.

doing nothing; it is between making investments in sustainable development now versus the much greater and more frightening cost of providing a remedial response later."

Globalization of financial markets, of the environment and of information is "almost certainly the most transformative global force since the Industrial Revolution", says the report. This is leading to "an aggressive ideology based on 'winners', survival and hegemony. Ideas of social welfare, common good and common interest ... are being replaced by social intolerance, fundamentalism and destructive rivalry". The 'losers', says the Strong report, are "poor countries outside the North American, European, and East Asian axes, and the increasing numbers of unemployed and working poor within them".

Altruism and self-interest both lead in the same direction, the report argues. Development assistance will help create new markets and new trading partners for Canada, and a more

In the context of sustainable development, the report says, knowledge has three dimensions. First, there is the creation of substantive knowledge, products and services. Second, there are knowledge-based networks, to multiply and disseminate

sustainable future for all."Their future is our future. This is not

So Canada must build bridges. But these must be very different

from the "current efforts that are conducted primarily by and for

rich countries and for the growing numbers of rich within poor

countries". The report argues that "Canada's strategic advantage is

charity. If they do well, so does Canada."

"[Within the Strong Report] ... the core idea knowledge is influence - remains sound. The government should act on it."

- Editorial in The Globe and Mail, Toronto, November 1996

substantive knowledge. Third, there is the capacity to use, adapt and build knowledge into useful policy and appropriate action.

Although it believes Canadian foreign policy should promote all three forms of knowledge, the report focuses especially on knowledge networks. First, the task force makes very clear what it does not have in mind."The call for networking has become a mantra in the 1990s", it says."In the past far too much knowledge for development has been centralised, generalised, and loaded onto a one-way conveyor belt from North to South, without adequate regard to practical problems, local conditions or the ultimate end-user."

What the Strong report does mean by knowledge networks is "a system based on the most up-to-date communication technologies, that is both dynamic and participatory, where the conveyor belt is multidirectional, and where local adaptations can be fed back into the system and disseminated more broadly to other practitioners".

To help build knowledge networks, the report calls for the mobilization of Canadian sustainable development institutions, centred around IISD, IDRC and the North-South Institute, and linked to related organizations globally. The Canadian approach should be based on the practicality of the knowledge, who captures it, and the uses to which it is put.

For Canada to play this role, the report concludes, "public funding has been, and will continue to be, essential". Recognizing the political need for fiscal restraint, it calls for a stabilization in funding for sustainable development goals. And it says that development organizations must find innovative and imaginative ways to mobilise new sources of money, from business and elsewhere: earned income, user fees, and partnerships with like-minded institutions in Europe and the Pacific, for example.

Task Force Members

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Sponsoring Institutions

International Development Research Centre International Institute for Sustainable Development North-South Institute



F or IISD, the Strong Report is a formidable challenge for the future - and an authoritative endorsement of much of its past and present strategy.

In April 1996, as a joint activity with the International Development Research Centre (IDRC), IISD initiated an ambitious two-year program called *Spinning the Web*. Its aim is to work with a small number of strategic partners to build a series of interlocking knowledge networks for sustainable development users in many parts of the world.

Spinning the Web is at once a highly sophisticated and an extremely accessible approach. It is designed to take decision-makers beyond their current awareness of sustainable development, to an understanding of how to put these concepts into practice. It gives them access to tools for sustainable development planning, enables them to share experience about what actually works, and greatly extends the current international knowledge pool by new forms of electronically-facilitated research and dialogue.

Spinning the Web seeks to combine the strengths of many information media: the animation and excitement of film, the instantaneous global outreach of television, the reflective analysis of print, the one-to-one interface of phone and mail, and the information-handling power of computer processing. And it draws on two of IISD's special strengths: cost-conscious and opportune use of new information technologies, and an ability to build effective and strategic partnerships.

In Spinning the Web, IISD and IDRC are starting to work with a small number of core partners, each an institution with its own national or regional information network in South Asia, Africa, Latin America and Central Europe, and possibly in East Asia. Project funds are being used to expand the shared electronic information capacities of all the partners. But capacity building is not a one-way street: IISD is learning first-hand from others, especially from

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developing countries, what is working effectively. Two-way staff exchange is a central component of these partnerships.

At least 10 organizations will participate as partners in Spinning the Web in its first two years, and an additional 10 or more may become involved later in a broader consortium. By early 1997, five partners had already joined IISD and IDRC: Development Alternatives in New Delhi, India; Earth Council International in San José, Costa Rica; ENDA in Dakar, Senegal; the Regional Environment Centre in Budapest, Hungary; and the Stockholm Environment Institute in Sweden.

In early 1997 IISD worked closely with the Earth Council and other Spinning the Web partners in webcasting (broadcasting on the Internet) the Rio+5 conference from Brazil. IISD shared its network and design expertise, and gained valuable hands-on experience of transmitting real-time events from the developing world to global audiences.

Spinning the Web links users to online and off-line information resources held by its partners around the world. And it assists them to integrate electronic delivery into their own communications practices. It creates and extends data banks of best practices and success stories, designed so that material

IISD's four principles for helping build Knowledge Networks

- Be innovative with existing technology.
- Use public open-system networks rather than private virtual networks or a centralised host system.
- Use affordable hardware and software which can be emulated by other organizations.
- Work in partnership with others, sharing responsibility for gathering and filtering information, to ensure that varied viewpoints are represented.

can be submitted from remote computers. Spinning the Web is decentralised, with each partner acting as an independent entry node, to ensure that quality control is not based on a single perspective.

A new innovative, interactive and user-friendly interface, the *SD Gateway*, is being designed by the project, with "intelligent filters", "electronic flags" and other tools to help decision-makers make optimal use of the information they access. Anyone passing through the SD Gateway can pursue a search freely to any of the partner web-sites.

SD reporting services

ISD aims to be the world's best Internet "hub" or starting point for information on sustainable development. It provides users with IISD insights, and with knowledge brokered by the Institute from around the world. Governments, policy analysts, business executives, consultants, academics, journalists and community leaders all use IISD information, leading to improved international negotiations, better public policy, and more sustainable businesses and communities. 1996 saw some substantial steps forward.

IISD's flagship publication is the *Earth Negotiations Bulletin*, which provides daily reports and analysis of important international negotiations related to sustainable development issues. ENB is delivered through print, e-mail and the Internet. This service is invaluable to those present at the meetings, as well as to those who follow the negotiations at a distance. Small delegations from many governments, NGOs and others cannot be present at several parallel sessions, and use the ENB to keep up with meetings they cannot attend. Linkages Journal, another electronic product, provides a bimonthly review of progress across all negotiations.

Last year, ENB launched "Sustainable Developments", an independent conference-reporting service. Organizers of sustainability-related meetings, negotiations and symposia not normally covered by the ENB can, for a fee, engage its high-quality and objective reporting team to provide a summary of their proceedings and/or daily reports. As Internet users increasingly upgrade to allow audio and video capacity, ENB hopes to offer real-time, on-line coverage of international meetings.

IISD's Linkages Internet site brings together the ENB, Linkages Journal and Sustainable Developments. These reporting services are enhanced on the web-site with background, analysis and further information on ongoing negotiations and related conferences. The site has been expanded to include photographs and Real Audio interviews with key delegates. Linkages use has more than doubled in the past year. Between 25,000 and 40,000 files are consulted every week, and two to four are downloaded every minute, 24 hours a day.

"The Bulletin is the next best thing to being there"

- ENDA Inter-arabe, Tunisia

"Excellent and timely coverage"

- Global Business Forum

"For a small delegation it is sometimes impossible to cover all the meetings ... Our task is considerably lightened by the assistance of your publication"

- Irish mission to the UN

"An excellent guide that includes historical summaries, schedules of future meetings, and pointers to related information elsewhere"

- Environment magazine, USA

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Participatory policy-making for sustainable development

D articipatory policy-making is an emerging force which brings civil society, the private sector and governments together to craft new policies and improve existing ones. Over the year IISD's outreach efforts have brought together NGOs, business, youth and indigenous groups with government to facilitate policy development related to sustainable development issues. IISD has raised its national profile by convening meetings of civil society to provide input to several government consultations in two formats. Presenting a new model of public consultations, IISD convened a national consultation with civil society prior to the government establishing its positions for the Summit of the Americas (Bolivia Summit). This resulted in the Canadian Government incorporating many of the recommendations of civil society within its position. The second approach to consultations is the more traditional model whereby groups are convened to respond to a policy initiative by government. In this past year IISD has been involved in both types of activities.

A major initiative for IISD was its commitment to host the North American Public Hearing of the World Commission on Forests and Sustainable Development in Winnipeg. In addition, IISD is helping the Commission by hosting its Website and by ongoing involvement of IISD Associate Karl Hansen, our Forests Project Manager.

IISD was invited by Fundación Futuro Latinoamericano (FFLA from Ecuador) to coordinate Canadian civil society input into the policy making process for the Hemispheric Summit of the Americas on Sustainable Development. The results of the consultation were incorporated into FFLA's overall report from civil society in the 34 countries of the Americas. This resulted in our participation in various Organization of American States (OAS) meetings and at the negotiating table as a part of the Canadian delegation to the Summit. IISD also participated with the Canadian Centre for Foreign Policy Development in the organization of Canada's National Foreign Policy Forum held in Winnipeg last December. The two issues discussed at the meeting were peacebuilding and the policy implications of communication technology. In March, we worked again with the Centre to bring together people interested in sustainable development and the Asia Pacific Economic Commission (APEC).

IISD will continue to work with others, like the Canadian Centre for Foreign Policy Development, to encourage and learn from this emerging social technology.

Responsive Policy Consultations

Increasingly, IISD is asked to help obtain civil society response to government policies or positions. In 1996 the Institute was instrumental in coordinating responses by civil society to the evolution of government policies on the following sustainable development issues:

- Department of Foreign Affairs and International Trade's (DFAIT) Sustainable Development Strategy
- CIDA's regional consultation on Canadian development assistance
- Canada's report to the United Nations General Assembly Rio+5 Special Session

These activities demonstrate IISD's commitment to supporting the role of civil society in consulting effectively with government on policy issues.



In September 1996, IISD convened the North American Public Hearing for the World Commission on Forests and Sustainable Development (WCFSD) in Winnipeg. The WCFSD, an international, independent commission established after the Earth Summit, seeks to promote policy reforms aimed at reconciling environmental, social and economic objectives for sustainable management of global forests. The North American Public Hearing was one of five multi-stakeholder hearings being held around the world to gather civil society's input into the WCFSD's final report to come out in December, 1997. Approximately 270 participants from Canada, Mexico and the US attended the trilingual Manitoba Hearing, and others participated through the interactive WCFSD website hosted by IISD. The Hearing was highly successful in engaging discussion of substantive issues of forest policy in North America. The Commissioners participated in field trips to learn first hand the issues related to the boreal forest in Manitoba and the old growth forest in Temagami, Ontario. In addition, IISD published seven issues of Countdown Forests '97, a briefing series on international forest policy including the work of the WCFSD and the Intergovernmental Panel on Forests leading up to the Spring 1997 Session of the United Nations Commission for Sustainable Development.

The Bolivia Summit

The objective of the Canadian Consultation process was: to build consensus positions and recommendations among representatives of civil society on issues they consider of major importance regarding sustainable development in the hemisphere.

Approximately 130 people and organizations were consulted in Canada and 70 participated in the consultation meeting in Ottawa. Those consulted identified eight priority issues: Trade and Sustainable Development; Biodiversity; Water; Sustainable Livelihoods and Poverty Alleviation; Indigenous Peoples; Forests; Pollution Prevention and Control; and Communication, Education and Public Participation. (Energy; and Measures and Indicators, were next on the priority list).

The recommendations from each of the working groups at the consultation shared a number of points in common. The first was advocating that Canada exert greater leadership in the hemisphere. Within that context, almost all the groups identified examples of success in Canada in tackling the issues under discussion and thought that sharing such practical examples would be a positive contribution to the summit process, facilitating a movement away from rhetoric and into action. There was a call for integrating all aspects of SD - social, economic and environmental. Recommendations regarding the need to respect Indigenous Peoples' knowledge and rights were common to the discussions, along with a concern for improving the participation of civil society in policy formulation and implementation. Participation of youth was added as we became aware of the consultations and partnership projects being undertaken under the auspices of the Canadian Environmental Network's Youth Caucus. Finally there was broad agreement on the need for continuity in support of previous and future international meetings and summits - a need to build upon agreements and gain synergy from different activities.

The Great Plains

ISD's international work is strengthened by a close involvement with its home ecozone, the Great Plains, which stretch from the Canadian prairies through the US midwest to northern Mexico.

One of the most important food-exporting regions in the world, the Great Plains today are stressed not only by new international trade rules, NAFTA and reductions in subsidies, but potentially also by the beginnings of climate change - which may fundamentally alter the area's ecology.

Great Plains policies are set by a multiplicity of jurisdictions and agencies. IISD has been working to analyze the growing pressures on the prairies, to facilitate new institutional arrangements which can effectively respond to new sustainable development challenges, and to exchange concepts and results with analogous regions elsewhere in the world.

During the past year, the Great Plains program has focused on strengthening the linkages between community adaptation strategies, public policy and investment strategies through the development of institutions which allow for communication, consultation and negotiation among interested stakeholders. The use of relevant science and technology plays an important role in furthering these activities. IISD's future endeavors may include modeling the Great Plains work in areas such as Africa, Asia and Eastern Europe.

The Great Plains Program

Allen Tyrchniewicz - Program Director Marion Meyer - Program Officer Edward Tyrchniewicz - Senior Fellow Jacqueline Pilon - Program Assistant

> Lotte Hansen - Student Associate

New institutions for new challenges

In October 1994 IISD helped organize the Great Plains Leadership Forum in Minnesota, one of the US states bordering the Institute's home province of Manitoba. The forum unanimously agreed that new institutions were needed to maintain this dialogue. As a first step, it called for an institutional structure to establish a cross-border link between Minnesota and Manitoba, which could later bring other Great Plains jurisdictions into a broader partnership.

By the end of 1996 the Great Plains Institute had been formed, and an interim executive director appointed. Located in Minnesota, it will serve decision-makers in the US and Canadian Great Plains, initially working primarily with IISD and with the Minnesota Sustainable Development Institute, one of the most ambitious statelevel initiatives in the USA.

In mid-1995 IISD helped convene the Manitoba Adaptation Workshop, to examine community responses to the market and policy changes affecting the livelihoods of rural Manitobans. This meeting also called for a new institution to bring people together and, by the end of 1996, the Manitoba Rural Adaptation Council (MRAC) had come into legal existence, with a board representing a broad range of rural interests, including First Nations. Federal funding has been received, by MRAC. Dr. Edward Tyrchniewicz is serving as Acting Executive Director to assist in establishing MRAC as a funding agency for rural adaptation initiatives in Manitoba. MRAC's goal is to assist rural Manitobans and their communities in developing and implementing long term sustainability strategies that will maximize social, economic and environmental benefits. IISD is providing research and secretariat services, and also expects to help with designing the electronic networks which will give rural communities access to available information on sustainable development opportunities.

The winds of change

The Great Plains program was asked by Environment Canada to review the relationship between climate variability and potential change, and community adaptation. Three research projects linked to climate variability examined how climate change was likely to affect agriculture, insurance, and recreation and tourism in the Canadian prairies.

Farming Impacts

Agriculture is highly dependent upon weather and climate in order to produce the food and fibre necessary to sustain human life. Not surprisingly, agriculture is deemed to be an economic activity that is expected to be vulnerable to climate variability and change. The scenarios for the prairie region all show an increase in temperature and reductions in soil moisture with a doubling of atmospheric carbon dioxide.

Possible Climate Change Impacts

decreased precipitation in already spring/summer moisture deficit regions

increased need for irrigation with reduced water availability

overwintering of insects and diseases which have previously been killed due to harsh climate

introduction of new insects and diseases with a warmer climate

some insecticides become less effective as temperatures rise

Adverse effects from climate variability can be reduced through successful adaptation, which would likely be less than the cost of the impacts that would otherwise occur without adaptation.

Another consideration that will have to be taken into account as agriculture adjusts to increased climate

variability on the Great Plains, is that of food security in the rest of the world. Canada and the United States possess approximately one-sixth of the earth's arable land and only one-twentieth of its population. The Great Plains will be under increased pressure from the rest of the world to produce food.

There are many unanswered questions that need to be addressed before farming on the Great Plains can adapt in a sustainable fashion to the predicted climate variability. As IISD progresses in the area of climate variability, it will endeavor to facilitate communications between researchers and the stakeholders of the Great Plains.

Insuring unquantified risks

Although scientists are uncertain about exactly how climate change will affect the weather in any locality, there is consensus that extreme events are likely to increase. The purpose of insurance is to reimburse individuals for losses on property, health, crops, life etc. Insurance can generally be defined as provisions against losses and is the pooling of risk. Climate change poses a unique problem in the assessment of risk for the insurance industry. Characteristically the assessment of risk has been based on the assumption that events in the past adequately reflect what can be expected in the future. Climatologists are not convinced that the results of climate change can be predicted with much certainty and are of the opinion that calculation of climate change related risk should be based on expectations of the future, not the past. In this regard, good scientific knowledge, in combination with engineering and financial analysis techniques are necessary.

With a greater expected frequency of climate related disasters on the prairies such as hail damage to crops and

property, or crop failure due to drought, pests or storms, as well as direct and indirect health effects (like an increased incidence of allergy disorders) demand for insurance will increase.

Demand for insurance will only be met if the global insurance market has the capacity to underwrite the risk. Thus, insurance in the prairie region is not only affected by local events but also by climate catastrophes in the rest of the world. Insurance companies both in the prairies and across the globe will attempt to reduce their losses and thus increase their capacity to underwrite risk - by increasing premiums, withdrawing coverage altogether, or by making the underwriting of risk conditional on certain actions being taken by the policy holder.

"Climate change could bankrupt the industry."

- Frank Nutter, President of the Reinsurance Association of America, 1996.

Golf on thin ice

As prairie communities react to the loss of subsidies and falling employment in agriculture, tourism and recreation have played a growing role in local livelihoods. Is this a sensible long-term response, given probable shifts in weather and climate?

Although there is still controversy about the specific changes, most climate change scenarios suggest an overall summer and winter warming for the Canadian prairies. There is uncertainty whether total snow and rainfall will increase or decrease, but the availability of water in summer seems likely to drop because of higher evaporation. Rivers and lakes are likely to freeze later and melt earlier, with greater summer algal and waterweed growth, and reduced oxygen levels. The overall warming is likely to shift the prairie grassland ecozone northwards at the expense of the boreal forest, with impacts on many animal and plant species.

The above scenarios are still very general and are not fine enough to reflect specific locations in the prairies. As scenarios become more specific to locales within the region changes in recreational activities can be anticipated and the necessary contingency plans made. For now, the generalization can be made that summer season outdoor activities should be possible over a longer period, although water levels will play a role in by how much. Shorter and milder winters could also reduce the possibilities for winter outdoor activities such as skiing, snowmobiling, skating, and ice-fishing. Creating favorable conditions for these activities (such as snow for skiing) will cost recreation providers and consumers more money. So far very little has been done to determine what this cost will amount to. Since there is limited understanding of how consumers will respond to changing weather, conditions and costs, it is difficult to know whether these costs are justified. This warrants some investigation. Competing attractions outside the prairies may vie for consumers' attention. A deeper understanding of this aspect is needed.

Since it is expected that the ecozone will shift northward, shifts in demographics, vegetation and wildlife populations need to be researched so that they can be anticipated. As various users - both people and wildlife begin to compete for increasingly scarce resources (especially water) new management strategies will need to be developed.

Trees as a carbon sink

IISD was commissioned by the Prairie Farm Rehabilitation Administration to examine the feasibility of tree-planting on the prairies as a means of reducing net emissions of carbon dioxide (CO₂), the key gas contributing to the greenhouse effect which causes climate change.

There are three basic ways in which humankind can reduce net CO_2 emissions: by reducing activities which produce CO_2 (eg. by using less energy), by substituting lower-carbon fuels (eg. by replacing coal with natural gas), and by increasing "carbon sinks" which absorb CO_2 (eg. by planting more trees).

IISD's study concluded that a reduction in Canada's energy use (one of the highest per capita in the world) was the most effective of the three ways of reducing the nation's net carbon dioxide emissions. But tree planting on the prairies would still be valuable, by providing substitutes for fossil fuels (as technology improves to make fuel alcohol as a gasoline substitute). And tree-planting (shelter belts) would have other inherent benefits such as erosion control, fruit production, increased biodiversity, recreation and amenity.



"Realism dictates that what gets measured ultimately gets considered in decisions."

- Laszlo Pinter, IISD

S ustainable development is no longer a trendy new idea. Governments, businesses, communities and individuals are taking it more and more seriously. But to go beyond parroting the phrase in speeches and annual reports, they need targets to aim for, and statistics to measure their performance.

Without such figures, small businesses, multinational corporations, municipalities, nations or the public cannot accurately judge whether their activities are effective. They cannot measure results; they cannot set targets of where they would like to be a year or a decade hence; they cannot identify the barriers which are blocking their work; they cannot compare costs with movement towards their goals; they cannot choose rationally among different options; they cannot check their success against others, or from year to year.

The Institute's work in this field is based on two key components. First, there must be grass-roots, multistakeholder participation, to identify the issues which matter, and to set sustainable development goals. Second, there must be a coherent framework for choosing measurable indicators. IISD's work on indicators received international recognition in June 1996, when the UN Environment Program designated IISD as a centre of excellence, and as UNEP's Collaborating Centre for International Environmental Assessment, Reporting and Forecasting. UNEP appoints only one collaborating centre in any country, and only one collaborating centre for each major environmental theme.

The Institute's lead position in this field was further underlined in November 1996, when it convened a meeting at the Rockefeller Foundation's conference centre at Bellagio in northern Italy. The goal of the 24 worldranking specialists invited there was to distill their knowledge, experience and insights into a simple statement which could guide the measurement of sustainable development into the 21st century.

Their conclusions have been published by IISD as the Bellagio Principles for Measurement of Sustainable Development; a set of practical case-studies illustrating each principle is currently being prepared.

The Bellagio Principles for Measurement cannot, of course, be the final word in such a rapidly-developing field. IISD is working with the support of the Wallace Global Fund to establish a permanent consultative group, linked primarily through the Internet, to keep up with the latest thinking on indicators. The group's long-term goal will be to develop a single internationally-accepted indicator of sustainable development - an index which could one day be as widely quoted as the Dow Jones or GNP.

IISD is working with the World Bank and Environment Canada to compile an electronic database of all indicator initiatives being carried out at the international, national and provincial/state levels, as an update of IISD's existing *Compendium* (published 1995). The work will include an annotated bibliography of relevant publications. It will share experiences and ideas, help avoid duplication of effort, identify areas for future research, and provide governments, NGOs, business and the public with an Internet-based source of information and experts.

IISD has drafted a chapter on sustainability in the prairie ecozone for the 1997 *Manitoba State of the Environment Report*. This is a leading pilot effort to make the transition from state-of-the-environment to sustainable development reporting.

Based on this work in rural Manitoba, IISD has started a joint project with two other NGOs in the NAFTA region -

Sustainable Seattle and Pro-Habitat of Guadalajara, Mexico. This undertaking has three goals. The first is to improve community capacities to identify local sustainable development issues, to set goals, and to measure progress towards them. The second is to help the development of sustainability indicators in other communities across North America, by providing guidance on cross-cultural methods of indicator selection and use. And the third is to enhance the cross-regional comparability of sets of indicators, by providing a common framework and reporting structure.

> "IISD's work has been at the cutting edge of sustainable development reporting through the establishment of methodologies such as indicators, and the development and promotion of electronic information networks and systems."

- Elizabeth Dowdeswell, Executive Director, UNEP.

The Bellagio Principles for Measuring SD

The assessment of progress toward sustainable development should:

- Have a clear vision, and goals to define that vision.
- Be holistic: review social, ecological and economic subsystems and interactions among them; review their current state, and rate and direction of change; consider positive and negative human impacts, human and ecological costs and benefits.
- Consider ecological conditions, human well-being, and equity (within and between generations, including resourceuse, over-consumption, poverty and human rights);
- Have adequate scope: a timescale long enough for future generations; taking account of long distance impacts; and anticipating where humankind may want to go in the future.
- Be practical: have an organizing framework, a limited number of key issues and of indicators, and standardized measurement; compare measurements to targets, thresholds or trends.
- Be open: use accessible data and make explicit judgments.
- Be understandable: address the needs of users, engage decision-makers, and use clear, stimulating language.
- Ensure broad participation: include grassroots, professionals, youth, women and indigenous peoples; involve decision-makers to ensure policy attention.
- Be ongoing: allow repeated measurement to determine trends; be adaptive in response to changing conditions; promote collective learning, and feedback into decisionmaking.
- Assure continuity: establish clear responsibilities; ensure institutional capacity and local community involvement.

The full text of the Bellagio Principles, the IISD background paper Towards Principles of Sustainable Development - Performance Measurement, which was the starting point of the Bellagio meeting, and a more detailed review Measuring Sustainable Development, are all available from IISD, or at IISDnet - http://iisd1.iisd.ca/

Performance measurement for industry and government

Last year, IISD published Global Green Standards, which examines ISO 14000, and its relationship to such issues as eco-labelling, environmental auditing, and life-cycle assessment. ISO 14000 is a new, voluntary environmental management system, drawn up by a large group of committees working under the aegis of national standards bodies and the International Organization for Standardization (ISO).

ISO 14000 does not itself set any environmental goals. Instead, it provides an agreed framework within which a company can establish its own eco-management standards, draw up accepted methods of monitoring its performance against these targets, and provide objective ways for customers, consumers and the public at large to verify its environmental claims.

Although ISO 14000 is already beginning to be used by industry, it is fair to assume it will evolve further to address many of its current weaknesses. And IISD's report identifies what some of these are. For example, ISO 14000 deals with environmental management, not sustainable development, and largely ignores the social performance of a company: community relations, labour force equity issues and so on. And the IISD report warns that with inexperienced auditors, new training programs and evolving management systems "there will be plenty of room for mistakes", and "those who want to deliberately mislead the system may find it fairly easy to do so".

Canadian Government Departments must table sustainable development strategies and progress reports. IISD worked with the Department of Indian and Northern Affairs in developing tools for measuring sustainable development, and with Industry Canada to review current approaches to measuring progress.

Ecozones and SD

When asked by the Manitoba government to measure sustainable development progress across the province's Prairie Eco-zone, IISD recommended that Prairie residents and stakeholders be consulted, in this way the process would be fully participatory.

During the consulting process, focus groups became active and helped clarify the elements of an SD report:

- Identify what should be measured
- Prioritize the identified SD issues
- Search for data to measure these issues
- If no data are available, suggest alternative issues or identify data closely resembling the original issue
- Apply an SD assessment framework for measuring issues
- Aggregate indicators into indices and use them to evaluate trends in time and over the geographic region

A Technical Advisory Group was consulted to determine data and availability. IISD came up with indicators in four areas:

> Natural Environment Economic Development Human Well-being Community Assets

Linking these dimensions is essential for understanding sustainable development. Building a template using these variables has given us a chance to look at how this framework might be applied to other ecozones.

Measurement and Indicators Program

Peter Hardi - Program Director and Senior Fellow Stephan Barg - Associate and Senior Program Advisor Laszlo Pinter - Program Officer Valentina Kaltchev - Proaram Assistant Shannon Brown - Program Assistant Hernán Fernández - Research Assistant Lisa McRorie-Harvey - Research Assistant Terry Zdan - Research Ássistant Bryan Oborne - Research Assistant Tony Hodge - Associate Norman Myers - Associate

115D's Business Program

A ction by business is central to achieving sustainable development. Major shifts are already underway. The private sector is moving beyond compliance and risk management towards eco-efficiency and zero emissions, towards environmental performance and reputation as a crucial element in competitiveness, towards stakeholder involvement, towards sustainability auditing, and towards market-oriented self-regulation which is sometimes well ahead of imposed government standards.

IISD is completing planning for a second phase of its Business Program, which will become operational in 1997. Headed by Jim Leslie, a well-known leader from the private sector, the program will work closely with business partners.

The business program will focus on:

- Assisting progressive firms to develop, implement and measure sustainable development initiatives
- Assisting business, generally, to understand sustainable development concepts and indicators, and to initiate first steps towards sustainability
- Working to improve policy frameworks and other factors enhancing conditions for sustainable development
- Utilizing the Internet as a research, information and communications tool for sustainable development and business practices

The program will have a strong initial focus on Canadian business. Sustainable development presents a significant challenge for Canadian business given its dependence on natural resources and international trade. The program will build on our interest in climate change and on our expertise in developing measures and indicators of sustainable development performance and progress.

IISD will help identify and advocate less expensive and more effective market-based approaches to regulation, with an emphasis on voluntary initiatives by industry. We will search out and document best practices and trends. And it will rapidly expand the business components of IISDnet, making it an intelligent gateway to key business sites on the Internet.

The Business Program

Jim Leslie -Program Director June Wozny -Associate

IISD Board Business Committee

Ken McCready -Business Advisor, Chair

Jacqueline Aloisi de Larderel -Director, UNEP Industry and Environment Centre

David Buzzelli -Dow Chemical Company

Dian Cohen -Business Advisor

Arthur J. Hanson -President and CEO, IISD

Jack MacLeod -Business Advisor

Jim MacNeill -Chair of the Board, IISD



The international system still has two distinct agendas, free trade and environment, each pursued by different government negotiating teams, lobbied by different NGOs, meeting at different conference tables, drafting different agreements, thinking different thoughts and aware (or unaware) of different issues.

Trade negotiations, including the Uruguay Round, have led to the replacement of GATT by WTO, and the TRIPS agreement on intellectual property rights. Environmental negotiations have led to a number of Multilateral Environment Agreements (MEAs), notably the climate change convention, the Montreal protocol covering CFCs, and the biodiversity convention. But the WTO barely recognises the environmental dimensions of trade; the MEAs are proving to have significant trade impacts; and rules are not in place to resolve inconsistencies between MEAs and the WTO.

At Rio in 1992, the OECD countries struck a bargain with the developing world. The South would buy much of the Northern environment agenda, and in return the North would take the first steps to resolve international environmental problems (for which they are primarily responsible), would tackle the South's debt crisis, and would provide increased funds and technology to help the South pay the costs of addressing these global environmental concerns.

Today, the Rio bargain is bankrupt. Many Northern nations are failing to meet their climate change commitments, and the additional funds for the incremental costs to the South of implementing the MEAs have not materialised. The South is increasingly suspicious, both of the North's environmental agenda, and of its trade liberalization policies.

Can trade help pay for sustainability?

In the twilight of the 20th century, free trade has become the aspirin of the economists, the cure-all remedy which will banish poverty and environmental degradation. As Dan Glickman, US Secretary of Agriculture, said recently: "Our farmers plant for the world, and want to compete in a global market free of trade barriers. They need a level playing-field; and the world needs our exports to eradicate hunger."

Not everyone shares this perspective. Says Rosa Laranjo, one of 1.2 million Filipino peasant farmers who depend on selling maize for their livelihoods: "I don't know about world markets. And I don't understand how the Americans can sell us maize so cheaply. All I know is that we cannot compete. Our prices are going down, our children are going hungry, and our community is dying." (*Guardian Weekly*, UK, 16 February 1997).

Yet trade is the engine of the global economy. Yes, it can lead to increased impoverishment both for people and for their environments. But without the resources it mobilises, it is difficult to see where the money to finance sustainability is to come from.

IISD's trade program aims to influence trade negotiations and the operation of the international trading system, so that they foster rather than undermine sustainable development. The Institute does this first by contributing timely ideas and promoting dialogue, second by monitoring the World Trade Organization (WTO), and third by helping reinforce Southern capacities in the trade-sustainability debate. The past year has seen significant achievements in all three areas.

In 1996, IISD published a working paper analysing this logjam: *Shall We Dance*. It identifies many of the problems faced by the South:

- Green protectionism in the North, such as packaging and recycling regulations which small and medium Southern producers find it almost impossible to follow; voluntary eco-labels and standards such as ISO 14000 which may work against Southern producers; and unilateral government action such as the 1991 US ban on tuna imports to protect dolphins.
- Restrictions on imports based not on final product quality but on environmentally-harmful process and production methods (PPMs), which the South sees as assaults on its sovereignty.
- The TRIPS agreement on intellectual property rights, which the South sees as undermining their industries and devaluing traditional knowledge and national biodiversity.

The *Shall We Dance* study also proposed some elements on which a new North-South consensus might be based: action to reduce environmentally-perverse subsidies (currently costing around US\$1 trillion a year), less unilateral environmental protectionism in the North, capacity-building to enable the South to work within MEAs, changes to the TRIPS agreement, and a more open dialogue within WTO. Several of these components were the subject of IISD initiatives during the past year.

W70 performance

In advance of the WTO Ministerial Meeting held in Singapore last December, IISD published a detailed report on WTO's first two years, and a second working paper on the lack of openness in its work. The IISD report, which Reuters news agency called "a fierce critique", charged that the WTO had so far failed to integrate sustainable development concerns into international trade policies. "Accolades for the WTO may well be premature", warned IISD."The first two years have not been encouraging."

Unlike most UN agencies, the WTO has no NGO liaison body, and all its meetings are held behind closed doors: no NGOs, industry, scientific community, environmental organizations or media. Even the agendas for WTO meetings are unavailable to outsiders. The IISD study proposed that only when WTO is actually negotiating tariffs and similar deals should NGOs and media be excluded; that virtually all documents should be publicly available; and that NGOs should be able to submit friendof-the-court briefs to the WTO adjudication panels which rule on trade disputes.

Working with the South

If NGOs find difficulty in understanding the ramifications of global negotiations on trade and sustainable development, so too do many governments, especially in the South. IISD is committed to helping foster strong Southern voices on these issues, and leads the trade and environment working group of the China Council on International Cooperation, which reports to the Chinese government at a high level.

In 1996 China started its Cross-Century Green Plan, a 15-year program which aims to make marked improvements to its severelydegraded environment. Based on the polluter-pays principle, it lays pollution-control responsibilities firmly on enterprises and municipalities. The plan foresees the expenditure of 180 billion yuan (US\$ 1.5 billion) by the year 2000, including US\$ 3-4 billion from foreign capital. The main focus will be on water pollution, acid rain and sulphur dioxide, with some attention to the ozone layer, greenhouse gases and biodiversity.

During 1996 IISD helped organize a major conference on the implications for China of ISO 14000; finalised reports on China's green food development and on eco-labelling for organic foods; and continued a study of its production and use of ozone-depleting substances.

IISD, in partnership with IUCN and IDRC, is actively exploring extending this capacity-building work from China to one or two more Southern countries, and is seeking funds to work with identified partners in the southern cone of Latin America, SE Asia and southern Africa.

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IISD on the WTO

"The first two years have not been encouraging. The dominant theme has been continuity from the GATT to the WTO. A culture of closed decisionmaking has persisted, inefficient internal structures have carried over without reflection, and the disputes settlement process still resembles the rules committee of a club."

- From The World Trade Organization and Sustainable Development: An independent assessment, IISD, 1996

IISD provided World Wide Web coverage of the WTO Ministerial Meeting through its Sustainable Developments Reporting Service and participated in a special independent session on Trade and Sustainable Development organized by the International Centre for Trade and Sustainable Development (ICTSD).

Trade and Sustainable Development Program

David Runnalls -Program Director and Senior Fellow

Aaron Cosbey -Program Officer

Wan Hua Yang -Program Officer

Konrad von Moltke -Senior Fellow

Mohamed Sahnoun -Senior Fellow

Tom Conway -Associate

Jennifer Zelmer -Administrative Assistant

115D helps found Geneva Centre

The publication of these reports on WTO underlined the importance of another IISD success in 1996, when the Institute joined Consumer Unity and Trust Society (India), Fundación Futuro Latinoamericano (Ecuador), the Swiss Coalition of Development Organizations, and the World Conservation Union (IUCN), to establish the International Centre for Trade and Sustainable Development (ICTSD) in Geneva. IISD carried out the feasibility study on which the ICTSD was based, and has assisted in securing its initial funding.

The centre will benefit NGOs by circulating the sort of information not contained in official WTO press releases. What issues are controversial now, and what are the main lines of debate? What important subjects will soon be on the agenda? What issues should be discussed, and are not? And it will also benefit the trade community, whose progress towards sustainable development will depend critically on an informed and active international civil society.

The Geneva Centre will concentrate on WTO, UNCTAD and a few other trade and development fora. It will make their documents available on-line, with a brief commentary; publish a monthly bulletin; help with NGO

"Canada has strongly advocated a more open multilateral trading system. Transparency will enhance the effectiveness of the WTO and the promotion of sustainable development."

- Arthur C. Eggleton, Canadian Minister for International Trade

networking; offer informal advice on the Geneva scene; provide office services to NGOs visiting Geneva; facilitate meetings among NGOs; and hold policy dialogues with the trade community. It will not itself lobby WTO, nor develop or promote any common NGO position.

The ICTSD is already in operation, with an executive board, a core staff headed by Ricardo Melendez-Ortiz, and offices near to WTO. It has adequate start-up funding for two years, from four European governments, the canton of Geneva, a US foundation and about 10 NGOs. Some 25 NGOs, and a group of distinguished international trade figures, serve on advisory panels.

PPMs: not what, but how

IISD is now starting an analysis of PPMs: Process and Production Methods. Nearly all environmental trade standards are at present based on the final traded product. Do refrigerators use CFCs? Have automobiles got catalytic converters? Do bananas contain pesticide residues? But what is increasingly at issue is the environmental impact not of the product itself, but of how it is produced. Are shrimps caught in ways that kill turtles? Was a fur-producing animal trapped humanely? Does paper manufacture involve unacceptable clearcutting?

These are highly-contentious issues. To many in the South, controlling PPMs sounds like green imperialism, an intolerable intrusion into how they manage their own environments. To many in the North, ignoring PPMs means a failure to accept responsibility for the social and environmental consequences of their own consumption. IISD hopes to develop ideas and principles which could form the basis of a North-South consensus on PPMs, and which might be included in a new international agreement on trade and the environment, using PPMs to promote sustainable development.

Knowledge: Over or Under Protected?

The TRIPS (Trade-Related Aspects of Intellectual Property Rights) agreement, which became effective in January 1995, increases and extends patents and copyrights. Previously, countries could decide whether or not to join existing international agreements, such as the Berne Convention on the copyright of books. Now, the TRIPS agreement is compulsory for all members of the WTO, and a country can opt out only by also excluding itself from the international trading system.

For centuries, patent and copyright laws have sought to balance the welfare of the inventor or author (who deserves fair compensation) against the welfare of the public (which benefits from cheap or unlimited access to the invention, book or music). Both rewarding innovation, and affordable access to innovation, are essential components of sustainable development.

TRIPS increases the period of protection for newlyinvented and patented products and processes, and extends it in some circumstances to new varieties of plants, animals and micro-organisms. Last year, IISD published a working paper which analysed the likely effects of TRIPS on the South.

TRIPS shifts the balance of benefit towards inventors. So those developing countries with existing strengths in R&D, literature and the arts will on the whole benefit. And those which mainly use the inventions of others may find that new products, technology, publications and computer programs will become both more expensive and more difficult to acquire.

Countries such as India, which have developed large generic drug programs on the basis of not paying royalties to the original inventors, are likely to see their health costs soar. And most of the South will see the prices of movies, videos, computer programs and foreign books rise, as pirated versions disappear. But it may be in agriculture that the most profound effects will be felt.

TRIPS allows the patenting of new varieties of crops, but it gives no protection to the tens of thousands of locallyadapted strains of staples such as rice and maize, selected by farmers over centuries of stewardship, which are regularly used to infuse new characteristics into centrallyproduced seed. So TRIPS is expected to accelerate the free transfer of crop biodiversity, from farms and wildland in the South to agricultural laboratories in the North, where it can be used to develop patentable new seeds, which can be sold back to the South at whatever price the patent-holder cares to charge - a situation that a new IISD report calls"nonsense".

The IISD study suggests a number of ways in which developing countries can maximise the limited flexibility

Livelihoods.

Community Adaptation and Sustainable

of TRIPS, including developing their own systems to protect plant breeders' rights rather than allowing them to be patented, and the legalization of "farmers' privilege", which permits a farmer to save seed from one year's crop to sow the following season, without paying a second royalty to the plant breeder.

> Community Adaptation and Sustainable Livelihoods Program

Naresh Singh -Senior Fellow

Charles Agobia -Program Officer Virginia Gonzales -

Program Assistant

Adapting to stress in Zimbabwe

The continent of Africa is often described as the poorest, its various countries are the most in need of foreign aid. IISD however, views the continent and its people from another perspective - as rich - rich in culture, intelligence and survival skills. There is a wealth of experience and human and natural capital in Africa which has been ignored by traditional development models and agencies. For the past two years we have devoted our efforts to identifying a different model for development which builds on the strengths of African communities. The program focuses on what they have, rather than on their poverty or what they do not have.

The conceptual framework we have been testing involves the interaction between three elements: the local strategies which the communities have evolved over a number of years to cope with shocks and stresses (such as multi-cropping to cope with drought and soil degradation); the policy context which influences those adaptive strategies (such as agriculture programs, credit, incentives and subsidies); and the information and technology available to the communities (such as access to appropriate seeds, electricity, milling equipment, markets etc.). Too often aid efforts have considered only one of these elements in isolation, attempting to introduce different crops for example without considering the policies and technologies which are required in order to support their sustained use. Similarly, advice on policies, particularly that which involves external consultants, often occurs without reference to what local people already know and do. There are innumerable stories of such failed aid. To overcome these limitations and forge a more useful response involves both a different way of thinking and a different set of relationships. The challenge is for policy and decision makers in influential positions in national and local governments and aid agencies to come together with local people and scientists to identify and assess appropriate long term strategies to enhance sustainable livelihoods and build viable communities.

In order to test, refine and expand this conceptual framework and methodology, in 1996 IISD embarked upon a CIDA-funded three-year drought mitigation project with ENDA (Environment and Development Activities) Zimbabwe. This is in follow up to our previous work with two villages, Makaha and Gwanda. ENDA provides the African expertise and IISD provides the policy expertise and international perspective. The project is funded by the Canadian International Development Agency. All of our work in this program area is expected to result in a social action framework linking community development with sustainable livelihoods. Our work helps to build new alliances among government, local communities, the private sector, scientists and educators. Building upon this broad base of knowledge, IISD hopes to influence aid agencies and those who make policies which have direct impact on poverty alleviation.

SD Report

ISD is committed to promoting a global transition to sustainable development. In doing so, we follow operating policies which conserve and protect resources needed for the survival of future generations. In accordance with our Sustainable Development Policy, we pursue the following Sustainable Development Objectives in our workplace.

Environmental Integrity

Energy Efficiency - IISD staff are encouraged to use energy efficient means of transportation to commute to work (bicycle, walk, public transport, or car pool) and to use the stairs rather than elevators. A bicycle rack located in a secure parking garage is provided by IISD for staff use. Energy saver office equipment including photocopiers and computers is used. Notices are posted throughout our premises to encourage staff to conserve energy by turning out lights and turning off office equipment.

Pollution Prevention - All employees actively participate in the Institute's multi-material recycling program. We are a project partner with the Skyline Recycling Project, an activity that provides meaningful employment opportunities for Winnipeg's core area youth while diverting many items and materials from the landfill sites. IISD's office policies were featured in the fall of 1996 on CBC Radio's "Green Office" program.

Purchasing - We use suppliers who adhere to environmentally responsible practices and standards. Preference is given to bulk purchasing of products with maximum use of post-consumer waste and minimal packaging. We use hotels and caterers who have practical environmental conservation programs in place. We offer repeat business to suppliers who are exemplary in their sustainable development practices.

People's Well-Being

IISD is an evolving organization. Our polices are based on values which are lasting and promote sustainable development within the organization while remaining adaptable to the changing work environment. Hour long weekly staff meetings are held to keep communication channels open and clear, and to provide a forum for training and the exchange of information. Other less structured "breakfast brainstorming sessions" are held periodically to encourage program teams to communicate with each other and exchange ideas and information in greater depth on specific topics of common interest. Team building takes place within the office, with individuals from different program areas joining together to work on specific initiatives, and at informal gatherings outside the office.

Including 18 freelance writers on the ENB team and persons working full and part time, in the Winnipeg office and virtual offices elsewhere, there were 74 people associated with IISD at March 31, 1997. A snapshot picture of our organizational profile on that date shows that 49% are women, 1% are disabled, and 20% are minorities or of aboriginal descent. Of our Senior Fellows and Associates, 19% are women, a significant increase from last year where all of these roles were occupied by men. 27% of Board members on March 31 were women.

IISD actively engages in outreach activities in our home community of Winnipeg, Manitoba. These include participation in the environment, finance, and opening ceremonies committees of the 1999 Pan Am Games and the sustainable development committee of the Winnipeg Chamber of Commerce. Other activities include participation in locally organized Earth Day and Careers Day exhibitions, the city's Centreplan initiative, the Forest Festival held at the Fort Whyte Centre and other community events. Over the past year we have organized and hosted a number of meetings and consultations in Winnipeg - ranging from small receptions with the Provincial Council of Women to the large North American Public Hearing for the World Commission on Forests and Sustainable Development. Our staff are frequent speakers and guest lecturers at local universities and community colleges.

IISD is a funding partner for a Fulbright scholarship in Manitoba and for a new scholarship program established by the Manitoba Round Table on Environment and Economy (MRTEE). These scholarships will further IISD's mandate by strengthening its links to youth in academic institutions, and promoting understanding of sustainable development among decision-makers of the future.

We invite students and other community groups who are interested in sustainable development to tour the Institute and visit our information centre, which acts as an information clearinghouse for sustainable development issues. We make our conferencing facilities available to other organizations in the community, on a cost recovery basis, when they are not required for our own activities.

Economic Efficiency

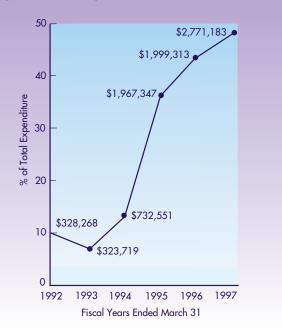
We continue to dedicate efforts to maintaining or improving our cost effectiveness. Program expenditures as a proportion of total expenditures have declined slightly from 82% last year to 81% this year. We operate as an electronic institute. We emphasize the use of electronic mail, faxing directly from our workstations and using the Internet, computer discs and other electronic media for communication and data storage. Whenever practical we operate nationally and internationally using telephone, video conferencing and electronic communication rather than travel. Virtual office links have been established as the network of people associated with the Institute expands to include representation in various strategically significant places outside of the Winnipeg centre. We enjoy the benefits of representation in these localities, without having to incur significant additional fixed infrastructure costs.

We are creating an "intranet". It will use the Internet WWW technology within our organization to improve communications among our staff and associates working in both our virtual and physical office locations. This approach will improve our internal communications.

One of IISD's strategic goals has been to generate revenues from an increasingly diverse base of supporters. Designated grants and other income as a proportion of total expenditures have increased to 49% this year from 43% last year. Our continuing success in achieving this goal is a tangible measure of IISD's expanding influence among decision-makers in Canada and internationally.

1996-97

Designated Grants and Other Income as a Percentage of Total Expenditure



INTERNATIONAL INSTITUTE FOR SUSTAINABLE DEVELOPMENT INDEPENDENT OPINION OF MANAGEMENT'S SUSTAINABLE DEVELOPMENT REPORT

To the Members

International Institute for Sustainable Development

We have assessed the attached Sustainable Development Report for the year ending March 31, 1997. The report is the responsibility of the management of the Institute. Our responsibility is to express an opinion on the report based on procedures described in the next paragraph.

We have reviewed the Institute's policies and objectives related to sustainable development and assessed management's approach to measuring the achievement of these objectives. Our assessment included interviews with management and staff, observation of the premises and office practices and examination, on a test basis, of relevant documents.

Based on the above measures, in our opinion, the objectives related to sustainable development and management's approach to measuring achievement of these objectives are reasonable and management's conclusions in the attached Sustainable Development Report are presented fairly.

plalaine + Touche

Chartered Accountants Winnipeg, Manitoba April 18, 1997

AUDITORS' REPORT

To the Members

International Institute for Sustainable Development

We have audited the statement of financial position of the International Institute for Sustainable Development as at March 31, 1997 and the statements of operations, changes in net assets and cash flows for the year then ended. These financial statements are the responsibility of the Institute's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these financial statements present fairly, in all material respects, the financial position of the Institute as at March 31, 1997 and the results of its operations and the changes in its financial position for the year then ended in accordance with generally accepted accounting principles.

plalaire + Touche.

Chartered Accountants Winnipeg, Manitoba April 18, 1997

Financial Statements

Statement of Financial Position

March 31, 1997

1997	1996
\$ 742,937	\$ 700,685
1,494,768	2,131,106
8,784,447	6,219,533
193,112	111,032
68,235	115,699
11,283,499	9,278,055
435,626	455,231
\$ 11,719,125	\$ 9,733,286
\$ 513,235	\$ 346,373
4,041,975	2,433,130
4,555,210	2,779,503
435,626	455,231
4,251,783	4,251,783
2,143,129	1,871,250
333,377	375,519
7,163,915	6,953,783
\$ 11,719,125	\$ 9,733,286
	\$ 742,937 1,494,768 8,784,447 193,112 68,235 11,283,499 435,626 \$ 11,719,125 \$ 513,235 4,041,975 4,555,210 435,626 4,251,783 2,143,129 333,377 7,163,915

Finance and Operations

lan Seymour -Secretary-Treasurer, Director of Operations Ramzan Hirji -Accounting and Finance Officer

Robert Jones -Project Accountant Janice Gair -Operations Manager Darlene Gregoire -Accounting Clerk Lael Dyck -Administrative Assistant

Statement of Changes in Net Assets

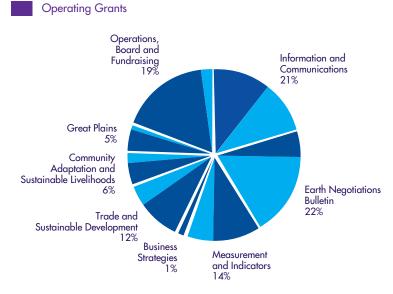
Year Ended March 31, 1997

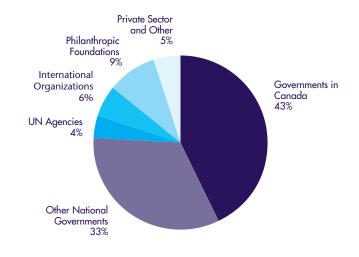
	 let Assets vested in Capital Assets	Reserve for Program Development	Reserve for Long-Term Development	_	nrestricted t Operating Assets	Total 1997	Total 1996
BALANCE, BEGINNING OF YEAR	\$ 455,231	\$ 4,251,783	\$ 1,871,250	\$	375,519	\$ 6,953,783	\$ 6,346,916
Excess of revenue over expenses (expenses over revenue)	(235,068)	-	-		445,200	210,132	606,867
Investment in capital assets	215,463	-	-		(215,463)	-	-
Internally imposed restriction	-	-	271,879		(271,879)	-	-
BALANCE, END OF YEAR	\$ 435,626	\$ 4,251,783	\$ 2,143,129	\$	333,377	\$ 7,163,915	\$ 6,953,783

1996-97 Revenue and Expenses by Program

Designated Grants and Other Revenue

1996-97 Designated Grant Revenue by Donor





Total designated grant revenue of 2,158,430 = 100%

Total expenses of \$5,626,883 = 100%

Notes to the Financial Statements March 31, 1997

1. Incorporation, Mandate and Tax Status

The International Institute for Sustainable Development (IISD) was incorporated on March 15, 1990 as a corporation without share capital under Part II of the Canada Corporations Act. It commenced operations shortly thereafter at its head office in Winnipeg, Manitoba, Canada.

IISD is a registered charity in Canada. It is also exempt from U.S. income tax under paragraph 501(c)(3) of the Internal Revenue Code.

The objects of IISD are to promote the concept of environmentally sustainable economic development and the integration of the principles and practices of sustainable development within and between the public, private and voluntary sectors on a national and international basis.

2. Significant Accounting Policies

The financial statements have been prepared in accordance with generally accepted accounting principles and include the following significant accounting policies:

a) Revenue recognition

i) Operating grant revenue

Operating grants are subject to the condition that they must be expended in accordance with the mandate of the Institute. Operating grant revenue from the Government of Canada is recorded annually in the accounts in an amount

continued...

Statement of Operations

Year Ended March 31, 1997

	1997	1996
REVENUE (Notes 2(a) and 3)		
Operating grants	\$ 3,065,832	\$3,295,000
Designated grants	2,158,430	1,502,143
Interest	478,449	406,008
Other revenue	134,304	91,162
TOTAL REVENUE	5,837,015	5,294,313
EXPENSES (Schedule 1)		
Programs		
Information and Communications	1,186,081	779,624
Earth Negotiations Bulletin	1,235,981	982,825
Measurement and Indicators	805,892	269,891
Business Strategies	89,564	317,413
Trade and Sustainable Development	668,478	532,895
Community Adaptation and	010.107	544 700
Sustainable Livelihoods	318,127	566,730
The Great Plains	266,840	381,581
	4,570,963	3,830,959
Operations	661,877	605,623
Fundraising	206,570	117,201
Board	187,473	133,663
TOTAL EXPENSES	5,626,883	4,687,446
EXCESS OF REVENUE OVER EXPENSES APPROPRIATION FROM (TO) NET ASSETS	210,132	606,867
Net assets invested in capital assets Reserve for program development	19,605	21,109
Reserve for long-term development	(271,879)	(252,457)
(DECREASE) INCREASE IN NET OPERATING ASSETS	(42,142)	375,519
NET OPERATING ASSETS, BEGINNING OF YEAR	375,519	-
NET OPERATING ASSETS, END OF YEAR	\$ 333,377	\$ 375,519

Statement of Cash Flows

Year Ended March 31, 1997

	1997	1996
CASH PROVIDED BY OPERATIONS		
Operating Grants		
Government of Canada		
	1,700,000	\$ 2,300,000
Canadian International Development Agency	1,000,000	1,000,000
Government of Manitoba	1,145,833	1,375,000
	3,845,833	4,675,000
Designated Grants (Schedule 2)		
Government of Canada	1,466,705	797,547
Governments of provinces	212,666	55,000
Governments of other nations	773,530	698,411
United Nations agencies	78,687	430,635
International organizations	233,728	-
Philanthropic foundations	151,465	160,886
Private sector and other	137,277	121,476
	3,054,058	2,263,955
Other Revenue		
Publication sales	33,945	31,207
Cost recoveries	97,958	66,883
	131,903	98,090
	7,031,794	7,037,045
Interest received for operating purposes	-	36,350
Cash used in operating activities	(4,605,534)	(5,555,344)
NET CASH PROVIDED BY OPERATING ACTIVITIES	2,426,260	1,518,051
CASH PROVIDED BY INVESTMENTS		
Interest received for long-term development	396,369	355,046
Purchase of capital assets	(215,463)	(145,285)
NET CASH PROVIDED BY INVESTING ACTIVITIES	180,906	209,761
NET INCREASE IN CASH AND MARKETABLE SECURITIES	2,607,166	1,727,812
CASH AND MARKETABLE SECURITIES, BEGINNING OF YEAR	6,920,218	5,192,406
CASH AND MARKETABLE SECURITIES, END OF YEAR \$	9,527,384	\$6,920,218
Represented by:		
Cash	\$742,937	\$700,685
Marketable securities	8,784,447	6,219,533
\$	9,527,384	\$ 6,920,218

2. Significant Accounting Policies (continued)

equivalent to one fifth of the total funding commitment over the period April 1, 1995 to March 31, 2000. Operating grant revenue from the Province of Manitoba is recorded in an amount equal to the lesser of one third of funding from all other sources and annual amounts prescribed in the funding agreement. Any additional amounts received under current grant agreements are reflected as deferred revenue.

ii) Designated grant revenue

Designated grants must be expended in accordance with the donor's designation. Revenue for grants designated for specific current activities is recorded in the accounts as the related expenses are incurred. Designated grant commitments for specific future activities are reflected as deferred revenue. Revenue for grants designated generally for use in program or long-term development activities is recorded in the accounts in the year in which the grant is awarded.

iii) Interest income

Interest income is recorded on an accrual basis, net of amortization of discounts or premiums on the purchase of bonds.

concluded in sidebar on page 29

3. Funding Arrangements

Operating grants

IISD has entered into renewed funding arrangements with the Government of Canada (Environment Canada and the Canadian International Development Agency (CIDA)) and the Government of Manitoba. The arrangements with the Government of Canada provide operating grants for the five year period April 1, 1995 to March 31, 2000. The arrangement with the Government of Manitoba provides operating grants for the six year period April 1, 1995 to March 31, 2000. The 31, 2001. During the year CIDA reduced its aggregate funding commitment by \$38,000 to \$4,962,000.

A summary of the funding is as follows:

	Funding Commitment (\$000's)		Funding Recorded 1996 1997 (\$000's)				Funding mmitment emaining (\$000's)
Government of Canada							
Environment Canada	\$	4,600	\$ 2,300	\$	1,700	\$	600
Canadian International							
Development Agency		4,962	1,000		1,000		2,962
Government of Manitoba		6,875	1,375		1,146		4,354
	\$	16,437	4,675		3,846	\$	7,916
Less: Increase in deferred revenue			(1,380)		(780)		
Operating grant revenue (Note 2(a)(i))			\$ 3,295	\$	3,066		
(0/2/0	Υ	0,000		

Designated grants

IISD receives funding from a variety of public and private sources to finance specific projects within its programs. Projects may carry on over more than one year. The related designated grants are recorded as deferred revenue when the funding commitment is made and recognized in revenue as the projects progress. A summary of designated grant funding committed and recognized in revenue during the year is as follows:

	Com	unding imitments \$000's)	R	nated Grant evenue \$000's)	Re Inc (De	ferred venue crease crease) 000's)
Governments and agencies						
Canada	\$	1,679	\$	925	\$	754
International		774		711		63
		2,453		1,636		817
United Nations agencies		79		86		(7)
International organizations		234		123		111
Philanthropic foundations		151		194		(43)
Private sector and other		137		119		18
	\$	3,054	\$	2,158	\$	896

Designated grants and other revenue which includes publication sales and cost recoveries are summarized by program as follows:

Program	Sales and Cost Recovery (\$000's)		Designated Grants (\$000's)		Total (\$000′s)	
Information and Communications	\$	18	\$	544	\$	562
Earth Negotiations Bulletin	Ψ	1	Ψ	906	Ψ	907
Measurement and Indicators		26		265		291
Business Strategies		13		-		13
Trade and Sustainable Development		15		219		234
Community Adaptation and Sustainable Livelihoods		7		120		127
The Great Plains		5		68		73
Operations		49		36		85
	\$	134	\$	2,158	\$ 2	2,292

4. Valuation of Financial Instruments

Short-term financial assets and liabilities and marketable securities are defined as financial instruments.

Short-term financial assets and liabilities include cash, accounts receivable, accounts payable and accrued liabilities. The carrying amounts of these assets and liabilities are a reasonable estimate of fair values because of their short maturities.

Marketable securities include investments in Canadian dollar denominated, fixed rate debt instruments issued or guaranteed by the governments of Canada, its provinces, or large Canadian chartered banks. These securities are carried at amortized cost. Discounts or premiums on the purchase of bonds are amortized on a straight-line basis over the investment's remaining term. Maturities range from one month to five years based on expected future cash flow requirements. Investments are normally held to maturity.

A summary of marketable securities is as follows:

Maturity	Amortized Cost (\$000's)	Market Value (\$000's)
1997	\$ 2,886	\$ 2,891
1998	1,193	1,214
1999	1,797	1,828
2000	778	792
2001	2,130	2,118
	\$ 8,784	\$ 8,843

2. Significant Accounting Policies (continued)

b) Capital asset expenditures

Capital asset expenditures are recorded at cost. Amortization, which is based on the cost less the residual value over the useful life of the asset, is computed using the straight-line method over the following terms:

Equipment 10 years, 5% residual

Leaseholds Initial term plus one renewal

Computer systems 3 years, no residual

c) Publication production costs

Publication production costs are expensed in the year in which the publication is printed.

d) Change in accounting policies

IISD has adopted the recommendations of the Canadian Institute of Chartered Accountants applicable to Not for Profit entities which were issued in March 1996. This resulted in recording capital assets and a related category of net assets invested in capital assets in the amount of \$455,231. In addition, as a result of these recommendations, IISD established a reserve for program development into which accumulated unexpended balances of unrestricted grants previously received were transferred amounting to \$4,251,783. These changes were adopted during the year ended March 31, 1996 and are reflected in the comparative figures presented for 1996.

5. Capital Asset Expenditures and Amortization

		1997							
Category		ost DO's)	Amo	mulated rtization 000′s)	V	t Asset ′alue 000′s)	Net Asset Value (\$000's)		
Equipment	\$	584	\$	331	\$	253	\$	296	
Leaseholds		83		58		25		33	
Computer systems		629		471		158		126	
	\$1,	296	\$	860	\$	436	\$	455	

The categories of capital assets and components of net assets invested in capital assets are summarized as follows:

6. Deferred Revenue

The amount by which recorded commitments exceed the revenue recognized as Operating or Designed grants is reflected as deferred revenue. The principal components of deferred revenue are summarized below:

	1997 (\$000's)		
Operating grants	\$ 2,160	\$ 1,380	\$ 780
Designated grants			
Government agencies			
Canada	1,341	587	754
International	330	267	63
United Nations agencies	10	17	(7)
International organizations	111	-	111
Philanthropic foundations	58	101	(43)
Private sector and other	28	10	18
	1,878	982	896
Other	4	71	(67)
	\$ 4,042	\$ 2,433	\$ 1,609

7. Commitments

	(\$000′s)	
1998	\$ 75	
1999	75	
2000	74	
2001	18	
2002	13	

The IISD is obligated to make payments under various leases expiring up to March 31, 2002 as follows:

Schedule 1 - Expenses

Year Ended March 31, 1997

(000's)

The following table summarizes expenses incurred in each of the IISD's programs:

	740	ons affi	t ons	Pur			Pup	ains				
	Information Communition and	Earth Negotiations Bulletin Gotiations	Measurement con .	Business Strateai	Trade and Sustainable	Community Adaptation Sust	Livelihoods The Great Di	Operations	Fundre	Board	1997 Total	1996 Total
Personnel	\$560	\$261	\$403	\$15	\$350	\$152	\$220	\$402	\$85	\$ -	\$2,448	\$2,306
Travel	127	446	95	18	71	41	7	32	17	-	854	583
Publishing	49	137	7	10	28	10	2	4	42	-	289	189
Consulting	145	285	124	21	64	46	8	(2)	14	-	705	535
Meetings	114	-	9	8	1	-	5	1	9	-	147	54
Rent	56	31	54	4	51	10	8	34	2	-	250	261
Supplies and other	43	16	27	7	28	9	5	36	10	-	181	172
Telecommunications	s 27	40	26	3	23	5	5	22	1	-	152	118
Research materials	13	-	9	1	9	2	1	5	-	-	40	52
Amortization of capital assets (Note 5)	47	20	51	3	42	38	6	28	-	-	235	188
Special projects	5	-	1	-	1	5	-	100	27	-	139	95
Board	-	-	-	-	-	-	-	-	-	187	187	134
\$	1,186	\$1,236	\$806	\$90	\$668	\$318	\$267	\$662	\$207	\$187	\$5,627	\$4,687

Schedule 2 - Designated Grants Committed Year Ended March 31, 1997

(000's)

Government of Canada (and Agencies)	
Canadian International Development Agency (CIDA)	\$545
International Development Research Centre (IDRC)	475
Infrastructure Agreement - Federal Portion	166
China Council for International Cooperation	
on Environment and Development (CCICED)	102
Department of Foreign Affairs and	E 4
International Trade Canada	54
Indian and Northern Affairs Canada Industry Canada	38 26
Agriculture and Agri-Food Canada	20
Natural Resources Canada	20
Environment Canada	17
CANARIE Inc. (prior year adjustment)	(2)
	1,466
	1,400
Government of provinces	
Infrastructure Agreement - Manitoba Portion	167
Manitoba	25
British Columbia	20
Prince Edward Island	1
	213
Governments of other nations	
France (ACCT/IEPF)	256
Germany	86
Denmark	78
United Kingdom (ODA)	69
Switzerland	68
Norway	61
Sweden	54
European Commission	36
Austria	34
Netherlands	20
United States of America	14
Currency Adjustments	(2)
	774

United Nations agencies	
United Nations Environment Programme (UNEP)	27
Food and Agriculture Organization of the United Nation	s 26 15
Plant Genetic Resources Secretariat	
Climate Change Secretariat	11
	79
International organizations	
Commission for Environmental Cooperation	135
Institute for Environment Studies	46
Global Environment Facility	21
International Centre for Trade and	
Sustainable Development	20
World Bank	12
	234
Philanthropic foundations	
Wallace Global Fund	92
The Rockefeller Foundation	31
The John D. & Catherine T. MacArthur Foundation	15
The San Francisco Foundation	7
The Ford Foundation	6
	151
Private sector and other	
Monsanto	31
Manitoba Rural Adaptation Council	31
EXPO 2000 Hannover	30
Cowater International Inc.	14
Canadian Pulp and Paper Association	14
University of Nebraska	6
Manitoba Hydro	5
Council of Forest Industries	4
City of Winnipeg	1
Other	1
	137
	\$3,054

FINANCIAL CONTRIBUTORS

In addition to those supporters having contributed funding to its programs during the year, IISD would like to acknowledge contributions in kind from the following organizations:

Rockefeller Foundation

The Assembly of Manitoba Chiefs

The City of Winnipeg

Environment Canada

The International Model Forest Program

The Manitoba Model Forest

Prairie Computers

Tourism Winnipeg

Wasaanaabiya - Shining Waters Heritage Region

115D: Knowledge into action

For our farms, businesses, homes and lifestyles, business as usual is no longer an option. Each must become more sustainable, which means they must help improve economic efficiency, protect and restore ecosystems, and enhance the well-being of all peoples.

IISD's mission is to promote sustainable development in decision-making, internationally and within Canada. We contribute new knowledge and concepts, analyze policies, identify and disseminate information about best practices, demonstrate how to measure progress, and build partnerships to amplify these messages.

IISD is now the world's leading Internet hub for sustainable development knowledge. Through its new Spinning the Web project, the Institute is working with key partners around the world to build knowledge networks for decision-makers from the village to the boardroom.

IISD is helping move sustainable development from concept to practice. We are working in rural Africa and in Chinese cities, in industrialized countries and in nations in transition to market economies, sharing experiences and building bridges.

IISD's Earth Negotiations Bulletin makes international conferences more open and understandable. Our homepages, IISDnet and Linkages, provide thousands of users on every continent, each hour around the clock, with information for sustainable development.

The Institute is spearheading global efforts to develop accurate measurements of progress towards sustainable development. We are monitoring and influencing global trade negotiations, and working to promote more sustainable livelihoods in our home ecozone in the Manitoba prairies.

IISD is an independent not-for-profit corporation headquartered in Manitoba, Canada, with partners and associates throughout the globe. It is funded by Canadian and international sources, and from the sale of products and services.

IISD

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