

Published by the  
**INTERNATIONAL INSTITUTE FOR  
SUSTAINABLE DEVELOPMENT  
(IISD)**

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## /TOPIC

### **INTERLINKAGES: MULTILATERAL ENVIRONMENTAL AGREEMENTS AND TRADE AND INVESTMENT REGIMES**

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#### I. INTRODUCTION

Since the 1970's, there has been a growing awareness of the relationship between the fields of international trade and the environment. As early as 1973, when the Convention on International Trade in Endangered Species (CITES) was concluded, nations began to recognize the potential for trade to have an adverse impact on the environment. Around the same time, at the 1972 Stockholm Conference on the Human Environment, countries also acknowledged the importance of economic development, especially for developing countries, and agreed to consider the economic effects of national and international environmental policies on developing countries.

Increasingly, multilateral environmental agreements (MEAs) address transboundary and global health and environmental problems caused by international trade and other economic activities. In some cases MEAs seek to prevent adverse environmental impacts caused by economic activities taking place within national borders that have transboundary or even global impacts. The Kyoto Protocol's regulation of carbon dioxide emissions caused by domestic energy production and the Montreal Protocol's rules on manufacture of ozone depleting chemicals are two examples of such treaties.

MEAs also address the environmental impacts of cross border economic activities, such as trade and investment. For example, the Basel Convention seeks to prevent damage to health and environment caused by transboundary shipments of hazardous waste. The Convention on Prior Informed Consent for Trade in Dangerous Chemicals focuses on the risks posed by international trade in chemicals. The Kyoto Protocol seeks to promote foreign investment in projects which reduce greenhouse gas emissions.

Because most MEAs are aimed at preventing environmental damage caused by economic activities, they are structured to regulate these economic activities such as international trade and investment. All of the major MEAs, include trade-related measures, though trade bans and sanctions are rare. The Kyoto Protocol, a new generation of MEA negotiated in an age of economic globalization, also reflects an intention to influence the environmental impacts of foreign investment by promoting investment which will prevent further climate change.

As MEAs have developed in a manner which increasingly address international economic activities, the range of issues covered by economic regimes has also expanded. The multilateral trade regime, for example, has evolved from a post-World War II tariff reduction scheme into a far more comprehensive set of agreements administered by the World Trade Organization (WTO) governing trade in services, non-tariff trade barriers, agriculture, food safety and intellectual property rights. Environmental regulations and agreements are subject to increasing scrutiny for compliance with international trade rules and controversy over the competing priorities of the environmental and trade regimes has arisen.

The potential for conflict between the goals of environmental protection and trade liberalisation was addressed at the United Nations Conference on Environment and Development (UNCED) held in 1992 in Rio de Janeiro. In Agenda 21, governments stressed the need for trade and environmental policies to be mutually supportive. In discussing the role which trade measures in multilateral environmental agreements have played in tackling global environmental problems, Chapter 2 of Agenda 21 states that:

"Trade measures have thus been used in certain specific instances, where considered necessary, to enhance the effectiveness of environmental regulations for the protection of the environment. Such regulation should address the root causes of environmental degradation so as not to result in unjustified restrictions on trade. The challenge is to ensure that trade and environment policies are consistent and reinforce the process of sustainable development. However, account should be taken of the fact that environmental standards valid for developed countries may have unwarranted social and economic costs in developing countries."

Agenda 21 also stressed the need for further study of the relationship between trade and environment and to promote a dialogue between the trade and environment communities.

In a globalized economy, reliance on international rules in both the environmental and economic arenas is likely to increase along with the potential for conflict between the two emerging fields of law. Understanding the inter-linkages among environmental, trade and investment regimes is a crucial first step in minimizing the conflicts. A greater awareness of the inter-linkages, would enable policymakers place more emphasis on policy coherence between environmental and economic agreements and contribute to the effective implementation of both.

The purpose of this paper is to examine several major MEAs and discuss some of the issues concerning the compatibility of these MEAs with trade and investment regimes. Undertaking an evaluation of the compatibility of MEAs and WTO rules is not meant to imply that one regime should be given priority over in the case of a conflict. Rather, the paper aims at enhancing policymakers understanding of the inter-linkages between regimes and areas in which greater policy coherence is needed.

## II. KYOTO PROTOCOL ON CLIMATE CHANGE

### *A. Environmental Objectives of the Kyoto Protocol*

The environmental objective of the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC) is to prevent climate change caused by anthropogenic emissions of greenhouse gases (GHG). Global climate change, caused primarily by fossil fuel energy production, results in dramatic and unpredictable change in weather patterns, destruction of agricultural and coastal areas and harmful effects on human health. In addition to energy production, industrial processes, agricultural activities, waste disposal and use of solvents also contribute to climate change.

As energy use and economic development are closely related, issues concerning energy production have tremendous implications for countries economic, energy and environmental security. Because the Kyoto Protocol is designed to affect critical economic activities, some see it as primarily an economic agreement entered into for environmental purposes. Ultimately, whether the Protocol is viewed as an environmental or economic agreement is not terribly important. However, recognizing how environmental and economic issues are inextricably linked in the field of climate change and the legal agreements that govern it is very important to understanding the relationship between the Kyoto Protocol, the WTO agreements and any future agreements on international investment.

### *B. Trade and Investment Related Provisions of the Kyoto Protocol*

Under Article 3 of the Kyoto Protocol, Parties are required to meet national GHG emission limitations. The Protocol authorizes Parties to meet these limitations by means of either domestic activities to reduce emissions or by offshore activities which reduce GHG emissions in other countries. Both domestic and international activities to reduce climate change can have effects on international trade and foreign investment activities. Set forth below is a brief discussion of the relationship between the multilateral trade and investment regimes and 1) national policies and measures to prevent climate change and 2) international measures, such as the flexibility mechanisms.

#### *1. National Implementation: Policies and Measures*

Article 2 of the Kyoto Protocol requires Parties, in achieving their quantified emission limitation and reduction commitments under Article 3 and in order to promote sustainable development, to implement national policies and measures to prevent climate change. Article 2 lists a number of possible forms these policies and measures could take and also makes it clear that each Party is free to further elaborate additional measures suited to national circumstances. Depending on how each Party designs and implements domestic policies and measures, they could have important impacts on international trade. Some of these potential impacts on trade and the relationship between the policy or measure and the WTO Agreements are discussed below.

#### *a. Enhancement of Energy Efficiency*

In Article 2, paragraph 1 (a)(i) of the Protocol, Parties are encouraged to implement policies and measures aimed at "enhancement of energy efficiency in relevant sectors of the economy." The Protocol does not specify how Parties should enhance energy efficiency, how this is accomplished is left to each country to decide. One important option, which a number of Parties are considering, is to set energy

efficiency standards for consumer products. Both the European Community and Japan have set energy efficiency standards for motor vehicles as one step in meeting their obligations under the Protocol. The trade disputes which have arisen over both Parties approaches to enhancing energy efficiency in this sector are discussed below.

In January 1999, Japan notified WTO Members under the Technical Barriers to Trade Agreement (TBT) that it intended to promulgate binding standards for energy efficiency for nine categories of cars defined by weight of the vehicle. The standards are set based on the most energy efficient vehicle currently commercially available within each weight category, the so-called "top runner." In each weight category, the top runner is a Japanese car. The Japanese standards, to be issued under the authority of the Law Concerning the Rational Use of Energy, will be legally binding.

In contrast to Japan, the EC has entered into a voluntary agreement with European auto manufacturers (the European Automobile Manufacturers Association or ACEA) under which the AECA agreed to reduce carbon dioxide emissions in new cars by about 25% by 2008. The EC are based on fleet averaging, rather than imposing specific efficiency requirements on vehicles by category.

The EC and Japan have both challenged the other Party's energy efficiency requirements arguing, from both sides, that they discriminate unfairly against imported vehicles. EC exports to Japan fall mainly within the weight classes subject to the greatest percentage of improvement for fuel efficiency, largely because European exports tend to be in the middle and heavier weight categories, that is, in the range of medium and luxury vehicles. Although the Japanese regulations do not allow for fleet averaging, this would probably not significantly help the European exporters since they do not export smaller, more energy efficient cars to Japan to reduce the overall energy consumption of the fleet. One estimate indicates that 88 percent of the European exports to Japan would be affected by the most stringent energy reduction requirements.

Japanese and Korean car companies have likewise expressed concern over the discriminatory effects of the EC voluntary standards which are based on fleet averaging. Japanese exports to the EC are primarily higher end vehicles which would need substantial improvements in energy efficiency to meet the EC standard. Because of import quotas and a ten percent import duty which the EC imposes on Japanese imports, Japanese carmakers have chosen to target the more profitable lower and upper-middle car classes rather than the entry level segment. Quotas on Japanese imports are set to expire in 1999 and it has been charged that the EC is using the new energy efficiency standards as a non-tariff trade barrier to keep Japanese cars out of the European market.

The US, which is also considering revising its energy efficiency standards for cars, has expressed concerns over both the EC and Japanese standards.

Recalling the EC-US GATT dispute over the US Corporate Average Fuel Efficiency (CAFÉ) standards of several years ago, it is easy to expect that, given the size and importance of the global market in motor vehicles, disputes are likely to escalate over standards

being promulgated to meet the Parties obligations under the Kyoto Protocol. Because the CAFÉ case was brought before the completion of the Uruguay Round, the result of these disputes, if brought to the WTO, are difficult to predict.

#### *Taxes*

Since anthropogenic emissions of greenhouse gas emissions are caused largely by the use of fossil fuels and thus are intricately tied to almost every type of economic activity, it is difficult to find ways to curb greenhouse emissions. One approach that has gained a large amount of credibility and generated a lot of interest is the use of taxes to reduce fossil fuel consumption and the resulting emissions. Carbon taxes work by internalizing the climate-related costs of using fossil fuels; the market mechanism can then ensure that such fuels are used as efficiently as possible. Under such a tax system, fossil fuel users have an incentive to use less fuel and innovators have an incentive to come up with more fuel-efficient production processes..

Under such an approach, national governments would tax goods in commerce based on how much those goods contribute to greenhouse gas emissions. This approach has many attractions, because it uses a market mechanism to limit emissions, because it creates revenues for cash-strapped governments, and because it allows individual actors the freedom to choose either to reduce their emissions or to pay a higher price to engage in greenhouse gas-emitting activities.

The use of so-called "carbon taxes" has several drawbacks, however. The Framework Convention reaffirmed the commitment of the international community to an open international economic system and the goal of free trade. If one country imposes a steep tax on energy use in a free and open international trading system then production costs in that country will rise, which will be reflected in higher prices for products produced there. This price increase will place national producers at a competitive disadvantage in relation to manufacturers in countries without such a tax. Such a disparity could make it infeasible to implement carbon taxes for simple economic reasons.

On the other hand, it is likely that under the 1994 General Agreement on Tariffs and Trade (GATT) a country would be prohibited from taking certain steps to address the disparity. For example, if a country tried to level the playing field by taxing imports based on the energy used to produce them, the tax would likely run afoul of the GATT "like product" rules. These rules prohibit any trade discrimination based on the way a product is produced--its so-called "process and production measures" or PPMs--which is exactly what carbon taxes are designed to influence. Article III of the GATT prohibits internal taxes on imported products that are "in excess of those . . . applied to like domestic products. "Products are defined as "like products" based on the product's properties, nature, quality, end uses. This restriction can create problems when countries try to tax or prohibit foreign goods based on environmentally harmful PPMs, and is a significant impediment to the use of carbon taxes.

Although the GATT does not allow countries to apply PPM taxes to products they import, it does allow products destined for export to be exempted from national taxes, even if they are PPM-related taxes.

GATT Article XVI states that products destined for export can be exempted from internal taxes "borne by the like product when destined for domestic consumption. To be eligible for this treatment, (1) the tax must actually be imposed on domestic products; (2) the exemption must not exceed the tax imposed on the domestic products; and (3) exported and domestic products must be alike. These rules facilitate the implementation of energy taxes, because they allow such taxes to apply to goods for domestic consumption without placing goods destined for export at a competitive disadvantage.

The environmental and political success of carbon taxes depends on how they are implemented, however, and there is a wide variety of forms such taxes can take. First, a tax's effectiveness will depend greatly on where in the production process the tax is levied. A carbon tax could be placed (1) on energy producers when they extract fossil fuels or generate power from them; (2) on manufacturers who buy fossil fuels (or electric power generated from fossil fuels) as inputs to the production process, or (3) on consumers who buy the finished product.

Taxes on finished products that reflect the greenhouse emissions created during the products' manufacture would pose the greatest problem in terms of potential conflict with the trading regime, as noted above. Constructing such taxes would be difficult, however, because it is difficult to measure the contribution to the greenhouse effect of a product's entire production process; it is easier to measure the amount of greenhouse gasses emitted by burning a given amount of fuel. Taxes on energy inputs to the production process may be more likely to be feasible under the GATT, which discourages taxes and charges based on production methods. Taxes can also be levied either on the energy or carbon content of fuel. Carbon-based taxes not only discourage fossil fuel use in general, but also specifically target dirtier fuels that emit more greenhouse gases for each unit of energy released.

If taxes are levied on the fossil fuel or power inputs a producer uses in making the product, they should be remitted if the producer exports the product out of the country; otherwise the finished product will be at a disadvantage in export markets because it will have paid a greenhouse tax while other countries' products will have not. This mechanism--known under the GATT as a Border Tax Adjustment, or BTA--would alleviate the problem of national goods being disadvantaged abroad. However, BTA treatment would not eliminate the disadvantage in the home market, which can never be eliminated in a situation where energy inputs are taxed, because national taxes cannot reach energy inputs used to make products in another country because of the PPM issue discussed above. While using BTA at least eliminates half the disadvantage felt by national industry, although it also undermines the effectiveness of the tax because only the domestic portion of a manufacturers' output will be affected by it.

#### *Subsidies and Tax Incentives*

The Kyoto Protocol, in Article 2 (1)(a)(v) calls for the:

"Progressive reduction or phasing our of market imperfections, fiscal incentives, tax and duty exemptions and subsidies in all greenhouse gas emitting sectors that run counter to the objectives of the (Climate Change) Convention and apply market instruments."

Perhaps no other provision of the Kyoto Protocol so clearly illustrates the potential for synergy between the Protocol and the WTO trade regime as the one noted above. The actions intended by this paragraph and the goals of the international trading regime are not only consistent but mutually supportive. This section of the Protocol envisions such actions as phase out of energy subsidies, internalizing the environmental costs of energy production in pricing and other market oriented measures.

At least one country, the United States, however, has stated its intention to promote the development and purchase of energy efficient autos through the use of tax rebates. As it is anticipated that such rebates would also be available for imported cars, this will probably not create a problem under GATT. Other issues may be raised, however, concerning the effect of the WTO Agreement on Subsidies.

## *2. International Implementation: Flexibility mechanisms*

### *Emissions Trading*

Trading in greenhouse gas emission permit is in many respects not fundamentally different from trading any other commodity. However, given that the "relevant principles, rules and guidelines" for such trading are yet to be defined by the Parties to the Convention, it is difficult at this stage to evaluate the potential for conflict or compatibility of such a system with the WTO Agreements.

One area which could be problematic in terms of compatibility with the multilateral trading regime, is the high likelihood that trading would be permitted only among Parties to the Protocol. To the extent that this is the case, a trading system might run afoul of the Most Favored Nations provision contained in Article I which requires that Members of the WTO treat other Members equally with respect to trading privileges. Similarly, if trading privileges under the Kyoto Protocol were linked to compliance with other requirements of the Protocol, this might also raise issues under Article I of the GATT.

### *Joint Implementation*

Like emissions trading, most of the specifics of joint implementation remain to be articulated, so a clear analysis of this program's potential compatibility with WTO Agreements is not feasible. However, some of the same issues could arise with respect to determining eligibility for participation in joint implementation (JI) projects, since presumably only Parties to the Protocol would be eligible for JI and membership in the Protocol and WTO would probably not be identical.

In addition, to the extent that an open investment regime is negotiated in the future either under the auspices of the OECD or the WTO, issues would certainly arise concerning restrictions on the nature of or participants in an investment. This issue is discussed more below.

### *Clean Development Mechanism*

As with the other flexibility mechanisms, the details of how the Clean Development Mechanism will function have yet to be determined. Questions about differential treatment for Parties and

non-Parties could certainly be an issue with the CDM as with the other mechanisms.

Like JI, the CDM could also raise issues concerning the ability of governments to direct investment, in the event that an open investment regime is adopted. While adoption of the OECD Multilateral Agreement on Investment appears less likely than a year ago, the issue of open investment could easily be raised during the WTO Millennium Round of negotiations. Given the increasing reliance of MEAs, particularly the Kyoto Protocol, on the use of modified market mechanisms to achieve environmental objectives and the parallel development in the international economic sphere to promote non-discrimination in investment, a conflict between environmental and investment regimes can easily be projected.

While the CDM encourages environmentally sound foreign direct investment, thus harnessing the increasing flow of private investment capital for environmental purposes (namely, to reduce GHG emissions) it also envisions state intervention in investment decisions and differential treatment for different investors and types of investments. State intervention in investment decisions and differential treatment of categories of investment and investor is likely to be contrary to the intent and provisions of any future agreement on cross-border investment.

## **III. THE DRAFT BIOSAFETY PROTOCOL**

### *A. Environmental Objectives of the Biosafety Protocol*

The environmental objective of the draft Biosafety Protocol, being negotiated under the authority of the Convention on Biological Diversity (CBD), is to ensure that the manufacture and international trade in living modified organisms (LMOs) does not have an adverse effect on human health or biodiversity.

### *B. Trade-Related Provisions of the Biosafety Protocol*

In November 1995, an open-ended Ad Hoc Working Group on Biosafety was established by the Conference of the Parties to the CBD with the mandate of formulating a Biosafety Protocol for trans-boundary transfers of LMOs. The final Protocol was expected to be adopted in February 1999 at the Sixth Meeting of the Working Group but controversy over the relationship between environmental and trade interests resulted in the negotiators being unable to achieve consensus. While negotiations were suspended this spring in Cartegena, the draft Protocol will be reconsidered in 2000.

Over the coming years, it is anticipated that a growing proportion of agricultural trade will involve LMOs such as grains, soybeans, and cotton. Given the importance of agricultural trade to the global economy, the potential application of the Biosafety Protocol has generated intense controversy. Over the coming years, it is anticipated that a growing proportion of agricultural trade will involve LMOs such as grains, soybeans, and cotton. Given the importance of agricultural trade to the global economy, the potential application of the Biosafety Protocol has generated intense controversy. Clearly, agreement on how to achieve policy coherence between the trade and environmental regimes will be crucial in finalizing the Protocol.

### *1. Definition of Living Modified Organism (LMO)*

One major area of concern for the members of the working Group is the scope of the Protocol's regulatory powers. There has been debate over whether the Protocol should apply only to those LMOs that are deliberately introduced into the environment for field testing, growth or propagation in the country of import (e.g. seeds for planting, fish for release, microorganisms for bioremediation), or whether the Protocol should include all LMOs, regardless of their intended use, as well as products of LMOs such as processed products and derivatives.

Depending on the definition of LMO which is ultimately adopted, the Protocol could have major impacts on market access and create significant barriers to international trade in food and agricultural products. Currently the draft Protocol does not include LMOs that are not likely to have adverse effects on the conservation and sustainable use of biological diversity, LMOs that are pharmaceuticals for human use or LMOs in transit.

### *2. Advanced Informed Agreement (AIA)*

A cornerstone of the draft Protocol is the provision on Advanced Informed Agreement (AIA). The AIA would require the exporting party to notify and receive consent from an importing party prior to the shipment of LMOs. A significant number of participants in the negotiations are proposing that the notification and consent procedure apply to every shipment of LMOs. Other participants advocate notification for only the initial shipment of any LMO to any given importing country.

The application of the AIA would also result in new labeling and other requirements. While the nature and scope of labeling requirements is still under discussion, it is highly likely that a final protocol will include such provisions and could potentially have a significant effect on international trade. If a broadly drafted Protocol requires notification and consent procedures for all LMO imports, countries could be inundated with notifications, posing a major challenge for any country, but particularly for developing countries. Issues about labeling and notification requirements raise issues about compatibility with the Technical Barriers to Trade Agreement, which also has provisions governing the same subject matter.

### *3. Precautionary Principle*

Another issue raised by the draft Protocol concerns the application of the precautionary principle to shipments of LMOs. Because the principle affords an importing country the right to take necessary precautions until the product is proven safe (as opposed to evidence existing that the product is unsafe), this provision could have a major impact on international trade and raised questions about the relationship between the Biosafety Protocol and the WTO Sanitary and Phytosanitary Agreement (SPS Agreement). Some countries expressed concern that unless the Protocol contains clear language about the level of evidence necessary to prove the safety of an LMO--as well as where the burden of proof to provide such evidence--the precautionary approach could become a tool for market protection.

According to Article 8.1 of the draft Protocol, a decision by a Party whether to allow imports shall be in accordance with Article 12, which concerns "Risk Assessment". Under Article 12, risk assessment shall be undertaken in a scientifically sound manner based on the notification by the Party of export and other available scientific evidence. However, there is another provision which allows the Party of import to prohibit the import of the LMOs without full scientific certainty or consensus on the potential adverse effects of the substance as follows:

8.7. Lack of full scientific certainty or scientific consensus regarding the potential adverse effects of a living modified organism shall not prevent the Party of import from prohibiting the import of the living modified organism in question as referred to in paragraph S (b) above. (underlining added)

This article appears to allow the Party to prohibit import of LMOs without scientific evidence that the LMOs could have an adverse effect on the biological diversity of the Party of import. If so, this standard concerning scientific evidence is quite different than the one contained in the SPS Agreement.

Under Article 5.1 of SPS Agreement, sanitary or phytosanitary measures shall be taken based on a risk assessment to human, animal or plant life or health. According to the Appellate Body report of EC - Measures Concerning Meat and Meat Products (Hormones), Article 5.1. "may be viewed as a specific application of the basic obligations contained in Article 2.2." Article 2.2 provides:

"Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence, except as provided for in paragraph 7 of Article 5. (underlining added)

Under the SPS Agreement, the sanitary and phytosanitary measures have to be taken based on the risk assessment which should be based on sufficient scientific evidence. Clearly, the standard for scientific evidence in the Protocol is lower than that of SPS Agreement. Much negotiation has focused on how the standards of Protocol and SPS Agreement on scientific evidence can co-exist.

### *Considerations of Socioeconomic Impacts and Necessity*

Another possible conflict between draft Biosafety Protocol and the SPS Agreement arises from Article 24.1 of the Protocol which provides:

"The Parties, in reaching a decision on import, may take into account, consistent with their international obligations, socio-economic considerations, arising from the impact of living modified organism on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities.(underlining added)

Unlike this provision of Protocol, the SPS Agreement does not allow Members to take into account any other considerations than "to protect human, animal, plant life and health". On the other hand, under this Article the prohibition of import of LMOs could be decided

primarily due to socio-economic considerations and without a finding of a sufficient level of adverse effects of LMOs on the conservation and sustainable use of biological diversity. Thus, the threshold for imposing import restrictions could be much lower under Protocol than under SPS Agreement. Exporting countries have raised concerns about this provision during Protocol negotiations.

One additional point of difference between the Protocol and the SPS Agreement is that while the latter imposes a discipline based on the “necessity” of the measure in order to minimize the effect a restriction on import under the Article 2.2 (only to the extent necessary to protect...), the Protocol does not include this type of discipline on trade restrictions. Exporting countries have expressed concern over the possibility that importing countries would restrict imports without meeting a test of necessity under the draft Protocol.

### *5. Treatment of Non-Parties*

Trade with non-parties is another major issue of contention in the negotiations. Many developing member countries support a provision prohibiting or restricting trade with non-parties, stressing that it would encourage countries to sign on to the CBD and the Protocol. Others emphasize that a provision which bans or restricts trade with non-party suppliers could discourage such countries from becoming parties to the agreement, particularly if they are concerned with retaining access to vital LMO products such as food and pharmaceuticals.

Non-party provisions have been criticized as inconsistent with international trade rules on the theory that parties to a convention cannot strip non-parties of their trading rights as specified under the WTO agreements. While there are provisions addressing trade with non-parties in certain multilateral environmental agreements, such provisions are not the norm. Moreover, the few environmental agreements which include a non-party provision normally are aimed at addressing a global environmental problem, as distinct from largely local or regional impacts. The draft Cartegena Protocol does not contain language of a ban on trade with non-parties. Rather, it states that transboundary movements of LMOs between parties and non-parties shall be consistent with the objectives and principles of the Protocol.

### *6. Savings Clause*

The relationship between the Protocol and existing international agreements, primarily WTO agreements, has been another issue of controversy. As noted above, there are clear inconsistencies between the Biosafety Protocol and the SPS Agreement. Since in some areas, these two treaties deal with the same subject matter, it might be required to decide which treaty prevails in the case of a dispute. This potential conflict raises questions about both which regime would apply and issues about disputes between countries which are parties to one regime or the other. Questions about choice of forum and choice of law to apply in disputes are common to many trade and environment disputes, but in the case of trade in LMOs they are especially obvious and controversial.

Some countries, advocate the inclusion of a “savings clause” to clarify that the Protocol is not intended to affect the rights and obligations of parties under other international agreements. Under such a provision, the Protocol must be compatible with existing interna-

tional agreements, including but not limited to WTO Agreements. In the presence of a savings clause provision, disputes under the Protocol could probably be challenged at the WTO. For example, under a savings clause, a country could challenge the application of the AIA to exports under the SPS or TBT Agreements of the WTO. A number of countries oppose a savings clause provision and would have the Protocol trump existing agreements such as the WTO agreements.

## **IV. THE BASEL CONVENTION ON TRANSBOUNDARY MOVEMENTS OF HAZARDOUS WASTE**

### *A. Environmental Objectives of the Basel Convention*

The main environmental objective of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal is: “to minimize the risk of damage to human health and the environment caused by the generation and disposal of hazardous waste.” In order to achieve this overarching objective, the Basel Convention sets out several more specific goals: 1) to reduce the quantity and toxicity of wastes generated, 2) to ensure environmentally sound hazardous waste management, 3) to ensure that wastes are disposed of in the country of generation whenever this can be done in a safe and efficient manner, and 4) to ensure that transboundary movement of waste occurs only when the movement would not endanger human health or the environment and the ultimate waste disposal will take place in an environmentally sound manner.

### *B. Trade-Related Provisions of the Basel Convention*

As its name implies, the main objective of the Basel Convention is to protect human health and the environment by controlling trade in hazardous waste. Therefore, in a broad sense all of the provisions of the Convention can be said to be trade-related. In addition, Convention provisions not directly related to trade are aimed at eliminating the incentives for transboundary movement by promoting waste minimization and environmentally sound disposal in the country of generation. These key provisions are:

### *1. Restrictions on Waste Exports and Imports*

Articles 4, 7 and 8 of the Basel Convention specify the restrictions on imports and exports of hazardous and other wastes. Three types of restrictions on transboundary movements of Basel wastes are found in Article 4: prohibitions and duties regarding exports and imports; obligations incident to permissible exports or imports; and encouraged alternatives to transboundary movements. Article 4, paragraphs 1, 2(e), 2(g), 5 and 6 comprise prohibitions on exports and imports. Article 4, paragraph 1, recognizes the right of Parties to prohibit imports of hazardous wastes and other wastes. It also requires Parties to prohibit or not permit exports to Parties which have notified them of their decision to prohibit imports. Article 4, paragraph 2(e), expands on this obligation by adding that each Party shall take measures to not allow exports to a Member State of an economic and/or political integration organization that is a Party prohibiting importation of hazardous and other wastes. If a State of import has not prohibited imports, the Party of export is required to prohibit or not permit an export without the written consent of the State of import to the specific shipment.

Other explicit export or import prohibitions on hazardous and other wastes are found in Articles 5 and 6. According to these articles, a party shall not permit exports to a non-Party or permit importation of wastes from a non-Party. The Parties have also agreed not to allow exports to any country south of 60 degrees South latitude.

In addition Parties have agreed to take appropriate measures to ensure that transboundary movements of hazardous and other wastes are only allowed in three situations: (1) if the State of export lacks the technical capacity and facilities for environmentally sound and efficient disposal; (2) if the wastes are required by the State of import as a raw material for its recycling or recovery industries; or (3) the transboundary movement satisfies other criteria established by the Parties.

The Parties, through the Technical Working Group, are in the process of devising criteria for the environmentally sound management of hazardous and other wastes. In this light, Parties have also agreed to take measures to prevent both the export and import of hazardous and other wastes if there is reason to believe that the wastes will not be managed in an environmentally sound manner. Related to this obligation is the duty of Parties to require exports of hazardous and other wastes to be managed in an environmentally sound manner in the State of import or elsewhere.

Article 4 also indirectly restricts transboundary movements of hazardous wastes and other wastes by obligating Parties to take appropriate measures to minimize the generation of such wastes and reduce transboundary movements, for example, by ensuring availability of adequate disposal facilities within its territory.

If transboundary movement of hazardous wastes and other wastes is permissible, Parties are required to apply certain process-oriented restrictions. For example, persons who transport or dispose of the Basel wastes must be authorized or allowed to do so by the Party with jurisdiction over them.

In addition, wastes must be packaged, labeled and transported according to generally accepted and recognized international rules and standards. Finally, a movement document must accompany the wastes from the commencement of transboundary movement to the point of disposal.

Other restrictions on exports and imports of wastes are contained in Articles 7 and 8. Article 7 mandates the application of notification and consent provisions found in Article 6, paragraph 2, to movements of regulated wastes from a Party through a State or States which are not Parties. As a result a non-Party transit State shall respond to an entity providing written notification of a shipment of wastes, and consent with or without conditions, deny permission, or request additional information.

Article 8 establishes a duty of a State of export to ensure the exporter re-imports the hazardous wastes or other wastes. This duty attaches when the transboundary movement of the wastes cannot satisfy the terms of the governing contract, and alternative arrangements cannot be made for their environmentally sound disposal. The entities involved have 90 days, or the amount of time agreed to

by the States concerned, to arrange an alternative course of action. Once the wastes are destined for re-importation, "the State of export and any Party of transit shall not oppose, hinder or prevent the return of the wastes to the State of export."

### *2. Prior Informed Consent Procedure*

Article 6 of the Basel Convention outlines the prior informed consent procedure to be followed before a shipment of wastes controlled by the Convention begins its journey. The generator or exporter shall notify in writing the designated competent authority of the State of import of a proposed transboundary movement of hazardous wastes or other wastes according to the guidelines set out in Annex V A of the Convention. The State of import must then consent to the movement, deny permission or request additional information in writing. Consent may be with or without conditions. If the State of import agrees in writing, the generator or exporter may use a general notification that the same type of hazardous or other wastes will be shipped regularly to the same disposal facility along the same route each time. A general notification arrangement may cover shipments of controlled wastes for 12 months at most.

A transboundary movement of hazardous wastes and other wastes may commence only upon the State of export's receipt of written confirmation that the generator or exporter received from the State of import its written consent to the shipment and "confirmation of the existence of a contract between the exporter and disposer specifying the environmentally sound management of the wastes in question."

The State of export also shall not allow commencement of the movement unless it received confirmation of the consent of States of transit. States of transit which are also Parties to the Convention shall unconditionally or conditionally consent to the shipment, deny permission, or request additional information within 60 days from receipt of notification of the proposed shipment. If a transit Party informs other Parties of its waiver of the prior written consent requirements, and it does not respond to a notification within 60 days of receipt, then the State of export may allow the transboundary movement to proceed. When the shipment is underway, "each person who takes charge of a transboundary movement of hazardous wastes and other wastes [must] sign the movement document either upon delivery or receipt of the wastes in question." Upon completion of disposal as detailed in the notification document, must inform both the State of export and the exporter of final disposal.

### *3. Ban Trade Between Annex VII and Non-Annex VII Countries*

There has been a great deal of discussion about the compatibility between the GATT and Decision III/1, which essentially bans exports from OECD countries to non-OECD countries. One of the main concerns is whether the ban is environmentally justified under Article XX exceptions to GATT, given the disparity in hazardous waste disposal capability among countries listed in Annex VII and among the countries not listed in Annex VII

### *4. Relationship to WTO Agreements*

GATT applies to products, but this term is not clearly defined. In the case of the Basel Convention, it is not clear whether hazardous wastes are products within the meaning of GATT. If wastes are deemed products within the meaning of GATT, then GATT's trade

disciplines apply. In other cases, the export of waste may be covered under the General Agreement on Trade in Services, which would govern activities such as transport, recycling or disposal.. It is also possible that both the main GATT provisions and the GATS apply to activities governed by the Basel Convention. At the same time, the provisions of the TBT Agreement are likely to be applied with respect to technical regulations and labeling requirements related to hazardous waste export.

In general, a great deal could be done to increase the awareness of the relationship between the Basel and the WTO Agreements, including TBT and GATS, and the need for further policy coherence between the regimes.

## **THE MONTREAL PROTOCOL ON SUBSTANCES THAT DEPLETE THE OZONE LAYER**

### *A. Environmental Objectives of the Montreal Protocol*

The environmental objective of the Montreal Protocol is to protect the atmospheric ozone layer by phasing out the global production and consumption of man-made ozone depleting chemicals.

### *B. Trade-Related Provisions of the Montreal Protocol*

One of the important aspects of the Montreal Protocol is that it was drafted in a manner which acknowledges the impact of international trade and investment on the environment. The drafters of the Protocol recognised that unregulated trade in ozone depleting chemicals would be likely to result in relocation of production facilities to countries which did not join the Protocol and re-export of the chemicals or products manufactured with them.

As the ozone layer is affected by global emissions of ozone depleting chemicals without regard to the source of these emissions, the drafters were concerned that emission reductions in one country would be offset by increases in production or consumption in another country. As a result of these concerns, the Montreal Protocol contains various provisions which directly or indirectly impact international trade.

Trade measures in Article 4 of the Montreal Protocol are designed to enable the Parties to manage trade in (1) ozone depleting chemicals controlled under the Protocol, (2) products containing the ozone depleting chemicals, and (3) products manufactured with, but not containing ozone depleting substances. The Protocol provides for the regulation of both imports and exports by Parties of substances and products.

The Protocol stipulates that: (1) within a year of entry into force (1 January 1992), imports of controlled substances from non-Parties were be banned; (2) from 1 January 1993, exports to non-Parties of controlled substances were banned; (3) within three years of the Protocol's entry into force, the Parties would elaborate a list of products containing ozone depleting chemicals and that Parties which did not

object to the list would be obliged to ban their import from non-Parties within one year (1 January 1992); and (4) within five years of the Protocol's entry into force, the Parties would determine the feasibility of banning or restricting imports of products manufactured with, but not containing, ozone depleting chemicals (1 January 1994).

Viewed from a perspective of increasing the compatibility between the Montreal Protocol and WTO Agreements, the non-discrimination provision in Article 4, paragraph 8 is important. This provision states that:

"Notwithstanding the provisions of this Article, imports referred to in [this Article] and exports referred to in [this Article] may be permitted from, or to, any State not party to this Protocol, if that State is determined, by a meeting of the Parties, to be in full compliance with Article 2, Articles 2A to 2E and this Article, and have submitted data to that effect as specified in Article 7."

This provision has served as the authority for allowing exports to non-Parties who have shown compliance with the control measures in the Protocol. The Parties have also made more general exceptions to these trade prohibitions such as that contained in Decision IV/17C adopted at the Fourth Meeting of the Parties which provided for a temporary exemption from the ban on exports to non-Parties from 1 January 1993 until the Fifth Meeting of the Parties for countries which met certain conditions.

## **CONCLUSION**

Obviously, the linkage between the environmental and trade regimes will continue to increase over time. The example of the Bio-safety Protocol, where negotiations broke down over the inability of countries to agree on the appropriate balance between environmental and trade priorities, highlights the importance of the need for greater awareness of the inter-linkages and earlier efforts to achieve policy coherence.

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*This paper was written for and presented at the International Conference on Synergies and Coordination Between Multilateral Environmental Agreements, held at the UNU Centre, Tokyo, Japan, from 14-16 July 1999. The meeting's web site can be found at <http://www.geic.or.jp/interlinkages/>.*

*Full coverage of the meeting by Sustainable Developments can be found at <http://www.iisd.ca/linkages/sd/interlinkages/index.html>*



## /TOPIC

### A PROPOSAL ON THE SUPPLEMENTARITY ISSUE FOR EMISSIONS TRADING AND JOINT IMPLEMENTATION

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#### Abstract

The Kyoto Protocol incorporates the *international* flexibility mechanisms such as emissions trading, etc., in addition to setting the quantified commitments for Annex I Parties. The Protocol also recognizes the importance of *domestic* actions, and supports the concept of *supplementarity* in Articles 6 and 17.

The EU proposes to *limit* the tradeable amounts of emissions to meet this concept. A new idea to *develop common physical performance indicators* is proposed in this paper. This proposal reflects the spirit of Article 2 of the Protocol and is expected both to promote domestic actions in Annex I Parties and also to develop an international cooperative framework.

#### Background

##### Kyoto Protocol and Supplenessity

The Kyoto Protocol enables the Annex I Parties to meet their legally binding quantified targets through international acquisition of their assigned amounts of emissions in a flexible manner. On the other hand, it notes the concept of supplenessity for these emissions (assigned amounts) transfer schemes within Annex I:

*Article 6.1(d):* The acquisition of emission reduction units shall be *supplemental* to domestic actions for the purposes of meeting commitments under Article 3.

*Article 17:* Any such trading shall be *supplemental* to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under that Article (Article 3).

This reflects the concern of relying heavily on such international instruments *without domestic efforts*. However, it should be noted that this supplenessity was not be specified in detail in the Protocol with the objection by the US and some others.<sup>1</sup> This issue is important for designing the regime. If we cannot agree with some concrete solution filling the gap among the countries, implementing flexibility instruments cannot but be deferred. Early resolution of this issue is needed in this regard.

This paper proposes an new idea to tackle this supplenessity issue from the aspect of domestic policies/measures respecting the

1. In Kyoto, "limit to the tradeable amounts" shown in section II was negotiated. This quantified ceiling idea could not be agreed.

spirit of the Article 2 (Common Actions) of the Protocol, not limiting tradeable amounts.

#### Designing Issue under Tough Kyoto Targets

It is important but often neglected in the design of flexibility mechanisms such as emissions trading that "how the difficulty in meeting Kyoto targets influences the regime design." In reality, from the view points of energy economics, Kyoto targets are at very demanding levels to meet domestically, judging from the past/current trends and outlook of each OECD country. Moreover, few countries might be able to completely implement effective measures in the near future.

In case that the targets are loosely defined so that many OECD countries will be able to meet them using domestic measures only, designing flexibility mechanisms is not so difficult. Almost all of the Annex I Parties will be able to comply with the Protocol using such mechanisms as a buffer. This feature is completely different from other treaties like Montreal Protocol. In the Kyoto Protocol, excess emissions can be cancelled by purchasing emission permits in the market. The problem is whether the market can supply enough emission permits driven by price increase, in other words, whether the market functions properly.<sup>2</sup>

To the contrary, on the condition that the market functions properly, the whole amount of GHGs emissions in Annex I are maintained in the level specified in the Kyoto Protocol. In other words, the market mechanism may have strong confinement effect in the functioning emissions trading regime.<sup>3</sup>

In case that the market cannot function properly, a country cannot purchase the permits in order to comply with the Protocol. In this situation, most OECD countries might not be able to comply with the Protocol judging from the current emissions trends. This may destroy the confidence and working relations between developed and developing countries and may result in the collapse of the established framework of the UNFCCC and Kyoto Protocol.

A balanced and more stringent approach is probably needed: domestic mitigation efforts, as well as international flexibility mechanisms. Limiting one of them may lower the possibility to comply with the Protocol and magnify the possibility for the collapse of the framework of the Protocol. At least until the market functions properly, we should promote mitigation measures both from domestic side and international side.

#### Problems with Limiting Tradeable Amounts

##### Options Discussed at the EU Council

The EU has claimed the necessity of the supplenessity concept and the ceiling on tradeable amounts as the means to realize it. The EU Council for Environmental Ministers prior to COP-4 discussed

2. The condition that the market functions properly is often assumed with no doubt. The author's concern is the applicability of this assumption (especially, in the early stage of the market like the first commitment period).

3. Of course, climate change is the function of the whole amount of emissions only. In this regard, the concept of supplenessity is *ethical*, not of environmental load. On the other hand, another view is possible as described earlier that both of the domestic and international measures are needed fully to meet the Annex I target in the Kyoto Protocol.

a paper with options for the ceiling idea. According to the paper, three options such as,

- Ceiling is defined as 50% of the emission reductions;
- Using quantitative and/or qualitative criteria involving early domestic actions;
- Ceiling is defined as a percentage of emissions in 1990 or 1995,

are presented. Finally, the EU supports quantitative and/or qualitative limitations on the use of the flexibility mechanisms, although it has adopted no concrete figure for the ceiling.

Germany—supported by Austria and Denmark—proposed the first option of 50% ceiling “from the 1990 level” to the target level, on the other hand, Spain proposed the 50% ceiling “from the business-as-usual (BaU) path”.<sup>4</sup>

## Problems

Potential problems for limiting tradeable amounts artificially are summarized below:

- Limiting the confinement effect of the emissions trading within the quantified target for Annex I as a whole may link to the risk for occurrence of non-compliant Parties by impeding market mechanisms;
- Negative effects for efficient GHGs abatement<sup>5</sup> due to the distortion to the market mechanism such as illiquidity and growing abatement cost;
- Inconsistency probability with the GATT/WTO Rule;
- Technical difficulty for designing limitation for private sector trading in the end of the commitment period.
- It is difficult for regime design to solve all of these problems. If it may possible, it might take long time to settle it. Therefore, we are going to consider and propose an alternative solution to this suppleness issue from another aspect in the following section.

## Proposal for Performance Indicators

### Spirit of the Kyoto Protocol and Domestic Actions

Originally, “suppleness” intends Annex I country to implement domestic efforts sufficiently. For domestic actions, Article 2 (Common Actions) of the Kyoto Protocol describes:

*Article 2. 1 (b): Cooperate with other such Parties to enhance the individual and combined effectiveness of their policies and measures adopted under this Article, pursuant to Article 4, paragraph 2(e)(i), of the Convention. To this end, these Parties shall take steps to share their experience and exchange information on such policies and measures, including developing ways of improving their comparability, transparency and effectiveness. The Conference of Parties serving as the meeting of the Parties to this Protocol shall, at its first*

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4. Naïvely speaking, tradeable amounts in the German proposal is 10.5% of assigned amounts for Germany, 3.5% for US, 0% for New Zealand and unclear for Australian case. In the Spanish proposal,  $(30\_+7\_-)/2 = 18.5\_-$  can be tradeable for the US if we assume that the BaU emissions will be 30% over the 1990 levels. However, defining BaU path might have large arbitrariness.

5. Efficiency is the most fundamental principle for GHGs abatement in the UNFCCC as well as the equity.

session or as soon as practicable thereafter, consider ways to facilitate such cooperation, taking into account all relevant information.

This paper proposes an idea respecting this spirit and aims for promoting effective selection and implementation of domestic measures. Maximum application of *both* domestic and international measures utilizing market is envisaged.

However, we must note that the mandatory common measures were not be able to be incorporated in the negotiation process of Article 2. 1 (a) from the view point of political sovereignty and efficiency.

### Proposal for Performance Indicators

In this paper, we propose the following as the solution for suppleness instead of limiting tradeable emissions amounts:

- Adopting a decision to develop “common performance indicators” at a COP session.
- These indicators are measurable and physical energy consumption or GHGs emissions intensity. These should be well-defined technically and represent energy efficiency explicitly. Phased development approach from certain and contributing ones is preferable.<sup>6</sup>
- The development should be under cooperation of the countries. It might be realistic for OECD/IEA to organize some task forces of experts.
- Selection of indicators are adopted by COP through the discussion at SBSTA and advice by the experts of the task forces.
- Each Annex I Party shall communicate to the Secretariat of the UNFCCC annually with its GHGs inventory data. It is also obliged to analyze the results in its National Communication.
- It is possible to set this responsibility for the Annex I Party to the Protocol only. Each Party may select its important indicators.<sup>7</sup>
- Each Party can be well acquainted with its key energy efficiencies by sector and/or by usage through the comparison with other countries and chronological trends.
- The Secretariat of the UNFCCC shall compile the data communicated by each Party and publish the data as *comparable* tables as in the case of GHGs inventories.
- Yardstick-type competition can be expected by this comparison.<sup>8</sup>
- The method to set some standards for each indicator and review the achievement level is possible. However, it might

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6. The intensities based on GDP or IIP (index of industrial production) can be considered. These intensities are useful to analyze the domestic development chronologically. However, we must be careful to use them for international comparison of their absolute values because of the issues such as exchange rate, different industrial structure and different categories in statistics. In this sense, we propose microscopic physical indicators rather than macroscopic ones. For the policy makers, micro information might be more useful than macro one to design/implement concrete measures.

7. For example, the thermal efficiency of coal fired power plant is meaningless for the Party with hydro only.

8. Yardstick-type competition is the indirect competition through the apparent comparison of performance.

be realistic to start with voluntary efforts of each country.<sup>9</sup>

- For Transition Parties, a supporting system shall be organized by Annex II Parties. This system also supports developing country Parties voluntarily participating this programme.
- Capacity building is important for this supporting activities.
- Coverage of indicators shall be broaden through the regular review/revision.

This proposal well reflects the spirit of National Communications. It aims at getting opportunities for more accurate information, which enables policy-makers to promote developing concrete domestic policies and measures.

#### *Examples of Indicators*

Several categories of performance indicators like physical energy consumption efficiency are listed. Followings are examples of the indicators:

**Energy Transformation Sector:** Mean power plant thermal efficiency (by type; net); Transmission loss; Introduction ratio of co-generation/renewables; Electricity consumption per capita;

**Industrial Sector:** Energy consumption intensities per physical outputs by principal industry by principal process (e.g., crude steel production intensity);

**Household Sector:** Energy consumption per household/capita; Efficiency of principal home appliances; Thermal insulation by warming degree day;

**Commercial Sector:** Energy consumption per floor space by category; Efficiency of principal commercial appliances;

**Transportation Sector:** Energy consumption intensity per passenger-kilometer/ton-kilometer by category; Mean fuel efficiency for new cars; Transportation energy use per capita;

Other indicators including financial aspects can be considered:

#### *Public Sector-*

- R&D expenditure for energy-saving/renewables as the ratio of general governmental expenditure; energy tax by fuel;
- Of course, some of them are already established as global standards. Some of them are difficult to agree on the common basis for standard (politically). Moreover, technical difficulties for some cases as mixed fuel thermal power plant efficiency and statistical lack of information are seen.
- However, each industry may be beneficial in the long term if it agrees to develop such indicators (and standards) in case of low technical barriers.

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9. It is possible to agree with some stronger procedures like recommendation corresponding to the level based on some standards in the future. In this case also, each Party can select its own way to improve its performance.

#### **Concluding Remarks**

The idea to develop common performance indicators proposed in this paper is useful and should be promoted not only for the solution to "supplementarity" concept but also for the opportunity to prepare the lacking world-wide comparable information of energy consumption pattern and energy saving potential. This matches the spirit of Article 2 of the Protocol as well.

Especially for the EU emphasizing common policies and measures, this idea might be acceptable because it well reflects the spirit of common actions.

This idea can clarify the countries which have been implementing energy-saving measures. In this regard, this idea might soften the unfair feeling generated by setting the quantified targets by negotiations.

To the contrary, countries with less energy-saving efforts might be pressured indirectly to promote energy efficiency. In this case, they can obtain useful political information to specify the fields for effective implementation.

We must stress again that the Kyoto target for Annex I as a whole is very ambitious. In order to meet it, all of the Annex I Parties must do their sincere efforts both domestically and also internationally especially in the initial stage of emissions trading.

Once this idea is recognized as useful and is adopted at the COP(MOP), the following steps are: (1) initiating developing programme of common indicators, (2) research and communication by each government and (3) compilation by the UNFCCC Secretariat. This information might supply information basis to tackle the climate change in the future together with the Annex I GHGs abatement marginal cost information.<sup>10</sup>

We hope that this idea will be on the table in discussion of the UNFCCC/Kyoto Protocol negotiation process.

#### **Acknowledgement**

The author would like to thank Dr. R.K. Dixon of USIJI/Country Program for useful comments. He is a visiting research fellow of IGES.

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10. Needless to say, this cost information is provided by the market price of the tradeable permit in principle.



## /TOPIC

### **/SYNERGIES AND CO-ORDINATION IN THE AREA OF OCEANS AND SEAS**

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#### **1. The Distinction between Inter-governmental Decision-Making and Agency-Level Activities**

Although the concept of national sovereignty seems to be in a process of transformation, through pressures at the sub-national level and the impacts of globalization processes, nation-states remain the primary decision makers in the international system. The roles of the programmes and staff of United Nations agencies and other international organisations can be defined (with a great deal of simplification) as fulfilling the instructions given to them by governments through the governing bodies of the various agencies and organizations.

This distinction has tended to become blurred in some discussions. This paper focuses on the former, that is linkages among MEAs and institutions in relation to governments as the decision-makers in international processes, as distinct from linkages among agency-level activities.

#### **2. The Limits of Co-ordination**

It often seems to be taken as a given that increasing co-ordination activities among MEAs is desirable. However, this may not always be the case. The large number of new MEAs, non-binding instruments and bodies that have been put into place in the last decade are the results of disparate negotiating processes, time pressures, political compromises and other similar factors. Without a "grand design" for how instruments and institutions should relate to each other, there is significant potential for overlap and duplication.

The rapid shift in decision-making from the national to the international level and the proliferation of fora and processes seems to have had an overwhelming effect on many governments, resulting in engagements in international processes that are essentially reactive. The practice of "recycling" outcomes, where an international body endorses an outcome already agreed in another body, seems symptomatic of this.

In light of the time and resources absorbed in negotiating outcomes that add little value, results-oriented approaches that are directed towards concrete and specific outcomes need emphasis. In 1994, the cost of a standard 24-page UN report was estimated at US \$ 19,920 in New York and US \$ 26,400 in Geneva (not including the cost of preparation or drafting), while production and distribution of UN documentation in New York and Geneva (not including

specialized agencies) amounted to nearly US \$ 300 million in 1994-95. Adding costs such as those of meeting services and of government representatives attending meetings (and the costs of their absence from national tasks) indicates that the total costs of policy-making through international fora are considerable.

Calls for increasing co-ordination attempt to address the fragmentation of the current system. However, taking into account the resources required, it is important to consider carefully how much co-ordination is desirable, what type of co-ordination activities are appropriate and, most importantly, for what purpose co-ordination is undertaken. Future co-ordination efforts may need to be clearly targeted towards producing specific (ideally measurable) results. It may be that in some situations the best way ahead is for MEAs and institution to focus more on achieving their core missions and less on co-ordinating with other MEAs. Instead, better co-ordination at the national level may offer the key in some situations.

#### **3. Proposals by the UN Task Force on Environment and Human Settlements and Co-ordination of National Government Approaches in Different International Fora**

The United Nations Task Force on Environment and Human Settlements found that:

"Further steps are needed to strengthen linkages and provide support that will ensure that the international community derives maximum benefit from the investments it has made in this system of international instruments."<sup>11</sup>

The Task Force recommended that the Executive Director of UNEP should continue to sponsor joint meetings of heads of Secretariats and should use this forum to recommend actions to ensure that work programmes are complementary, fill gaps and take advantage of synergies and avoid overlap and duplication. It recommended that the President of the UNEP Governing Council consult the Presidents of selected MEA Conferences of Parties on arrangements for periodic meetings between representatives of these MEAs to address cross-cutting issues. The Task Force proposed further that efforts should be made to co-locate new MEAs with other MEAs in the same cluster (e.g. biological resources, chemicals/waste, marine pollution) and that, in the longer term, umbrella conventions covering each cluster should be negotiated.<sup>12</sup>

However, the Task Force also emphasized the importance of national government approaches, noting that there is a lack of coherent guidance from intergovernmental fora:

"Specialized agencies, for example, are responsible only to their governing bodies. In the environmental field, some specialized agencies have sectoral missions that correspond to specific elements within national Governments; hence, the agendas of those agencies may reflect very different priorities."<sup>13</sup>

11. "Report of the United Nations Task Force on Environment and Human Settlements." Annex to "Environment and Human Settlements. Report of the Secretary-General." UN Doc. A/53/463 (6 October 1998), para 31.

12. As above, recommendation 2.

The Task Force found that:

"The only entities that can give consistent guidance to these different bodies are national Governments. In view of the important role that is played in the field of environment ... by international institutions not under the authority of the Secretary-General, co-ordination cannot be fully effective unless Governments themselves give co-ordinated guidance. In short, co-ordination at the international level should begin at home."<sup>14</sup>

The report of the Task Force went on to recommend that "[g]overnments make additional efforts to achieve consistency of national positions in different intergovernmental forums."<sup>15</sup>

These recommendations identify national government approaches as a critical intervention point for strengthening MEAs and institutions. As noted, national government approaches to international fora seem to be of a very reactive nature, although the system of institutions and instruments that deal with environment and sustainable development is in a phase of development when strategic guidance from governments would be particularly important.

Strategic reassessments of engagements in international policy processes by national governments, including clear priority-setting, consideration of which fora particular issues should be dealt in and what purpose they are being considered for might be very helpful at this stage.<sup>16</sup> Better co-ordination and better strategic planning at the national level, leading to greater consistency in different international fora and more strategic approaches to engagements in international policy processes may provide the best basis for capturing synergies among MEAs.

## 4. Global Oceans Management

### 4.1 Background

Developments in the oceans area in the 1990s have included entry into force of the UN Convention on the Law of the Sea (LOS Convention or Convention)<sup>17</sup>, adoption of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (the UN Fish Stocks Agreement), the FAO Code of Conduct for Responsible Fisheries and the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (the Global Programme of Action). New bodies such as the Commission on Sustainable Development (CSD) and the Convention on Biological Diversity (CBD), whose mandates

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13. As above, para 43.

14. As above, para 44.

15. As above, recommendation 11.

16. For a more detailed discussion, see Hyvarinen J. 1999, "Strengthening Multilateral Environmental Agreements and Institutions: National Government Strategies in International Fora as a Key Factor". Paper for Foundation for International Environmental Law and Development (FIELD), Project to Enhance Policy-making Capacity under the UNFCCC. Draft, March 1999.

17. The LOS Convention is strictly speaking not an MEA, as it deals with a range of other than environmental issues.

cover oceans issues among several other ones, have also been established.

The rapid creation of new MEAs, instruments and bodies, with unclear or as yet undefined mandates, has brought about a situation where there is significant risk for overlap and duplication of work.<sup>18</sup> However, in the oceans and seas area two existing mechanisms - the UN Convention on the Law of the Sea and the UN General Assembly's annual debate on oceans - provide extremely helpful "global management tools" that can be used to address these issues.

### 4.2 The UN Convention on the Law of the Sea

The LOS Convention is often referred to as "a constitution for the oceans". It is a giant of a treaty that covers most aspects of global oceans management. After nearly a decade of negotiations, the UN Convention on the Law of the Sea was finally adopted in 1982. UNCLOS is often referred to as a constitution for the oceans and some governments consider it second in importance only to the United Nations Charter. It is an enormous convention, which covers everything from maritime delimitation issues and marine scientific research to passage through international straits and protection of the marine environment. The Convention regulates some areas in considerable detail, such as delimitation of maritime zones. In other areas it provides framework-type rules, leaving it up to appropriate international organizations to regulate these areas in detail.<sup>19</sup>

The Convention, adopted in 1982, only entered into force in 1994, because of objections by the US and other industrialized countries to Part XI, which deals with the deep sea-bed mining regime. One of the great achievements of the LOS Convention is its confirmation of the deep seabed and its resources beyond the limits of national jurisdiction as the "common heritage of [hu]mankind"<sup>20</sup>. Part XI aimed to ensure that the benefits of deep seabed mining were shared fairly and equitably between developed and developing countries.

The objections of the industrialized countries were overcome after a series of informal consultations undertaken by the UN Secretary-General, which led to the adoption in 1994 of the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982 (the Part XI Agreement).

The other "Implementing Agreement" deals with fisheries. High seas fisheries was one of the areas where the Convention provided general rules, but where detailed regulations had not been developed by any other body at the time the Convention was adopted. This gap was only filled (in part) with the adoption of the UN Fish Stocks Agreement in 1995. The Agreement covers straddling and highly migratory fish stocks, which comprise many of the world's most important fisheries.

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18. For a more detailed discussion, see Hyvarinen J., Wall E. and Lutchman I., "The United Nations and Fisheries in 1998" *Ocean Development and International Law* 29:323-338, 1998 (Taylor & Francis).

19. See for example LOS Convention Art. 65 (Marine mammals) or Art. 207 (Pollution from land-based sources).

20. LOS Convention Art. 136.

#### 4.3 The UN General Assembly and oceans issues

The UN General Assembly holds an annual debate on "Oceans and the Law of the Sea". Assembly resolution 49/28<sup>21</sup>, adopted in 1994, confirmed that the Assembly would "undertake an annual review and evaluation of the implementation of the Convention and other developments relating to ocean affairs and the law of the sea".

The annual debate has the potential to become an extremely important event, as it provides an opportunity to set broad global priorities, consider linkages and address successes and challenges in oceans management. The international community could use the debate to identify and discuss emerging issues, such as endocrine disruptors, which have relatively recently been identified as a threat to marine life in particular, or the impacts of climate change on marine ecosystems. The debate, which is based on the Secretary-General's report on oceans and the law of the sea, is an excellent opportunity to give some coherence to the currently fragmented system of international policy-making on oceans.

Preparation for the annual Assembly debate could provide a focus for co-ordination at the national level among the various authorities or departments that are usually involved with marine issues. This might be a particularly important aspect of the debate.

#### 4.4 The UN General Assembly and the UN Fish Stocks Agreement

The Assembly has a particularly important role to play in relation to the UN Fish Stocks Agreement. The final session of the United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks recommended that that the UN General Assembly review developments relating to the conservation and management of straddling and highly migratory fish stocks, on the basis of a report by the Secretary-General, on a biennial basis.<sup>22</sup> In alternate years, the Assembly considers large-scale pelagic drift-net fishing, unauthorized fishing in zones of national jurisdiction and on the high seas, fisheries by-catch and discards and other developments.

So far, the Assembly's consideration of the UN Fish Stocks Agreement has been disappointing for anyone looking for in-depth scrutiny or action to encourage implementation. This weakness is particularly significant in light of the state of world fisheries and the challenges facing the Agreement. Looking further ahead, the UN Fish Stocks Agreement foresees a Review Conference, to be convened by the Secretary-General four years after entry into force of the Agreement.<sup>23</sup> Ideally, the reviews undertaken by the Assembly should prepare for and inform the Review Conference.

### 5. The Commission on Sustainable Development

#### 5.1 The Fourth Session of the Commission on Sustainable Development

At its fourth session, the CSD reviewed Chapter 17 of Agenda 21, which deals with oceans and seas.<sup>24</sup> As part of the review, the CSD considered the UN Fish Stocks Agreement, then recently adopted af-

ter lengthy inter-governmental negotiations. This involved the CSD entering into a debate on specific provisions of the Agreement and spending extensive negotiating time on producing text which added little to what had already been agreed during the negotiations on the Agreement. While the CSD has provided a very important forum for debate on environment and sustainable development, the results it has produced are somewhat limited.

On international co-operation and co-ordination, the fourth session of the CSD adopted a decision which recognized the need to identify global priorities and improve co-ordination, but reaffirmed a role for the CSD in undertaking a periodic overall review of "all aspects of the marine environment and its related issues".<sup>25</sup> However, the CSD did note that the results of these reviews would be considered by the General Assembly.

#### 5.2 The Seventh Session of the Commission on Sustainable Development

The outcome of the seventh session of the CSD this year marks a significant change. In addition to considering fisheries and other marine issues, the CSD adopted a set of recommendations on international co-ordination and co-operation<sup>26</sup> that give a central role to the UN General Assembly's annual oceans debate.

In its decision, the CSD urged national, regional and global institutions to enhance collaboration, promote co-ordinated approaches and avoid duplication.<sup>27</sup> It requested the Secretary-General to complement his reports to the Assembly with "suggestions on initiatives that could be undertaken in order to improve co-ordination and achieve better integration".<sup>28</sup>

The CSD recommended that the Assembly consider ways and means of enhancing the annual debate and proposed the establishment of "an open-ended informal consultative process" which would facilitate "the effective and constructive consideration" of oceans matters in the Assembly.

The CSD then listed a set of "Principles", which noted that "[b]ecause of the complex and interrelated nature of the oceans, oceans and seas present a special case as regards the need for international co-ordination and co-operation." The CSD confirmed that "[t]he General Assembly is the appropriate body to provide the co-ordination that is needed to ensure that an integrated approach is taken to all aspects of oceans issues, at both the intergovernmental and the inter-agency levels." The CSD also stated in this section that "[t]he role of the General Assembly is to promote co-ordination of policies and programmes. It is not intended that the General Assembly should pursue legal or juridical co-ordination among the different legal instruments."<sup>29</sup> However, consideration of global

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24. "Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources".

25. As above, para 45.

26. CSD decision E.CN.17/1999/17, p 29 of unedited text.

27. As above, para 37.

28. As above, para 38(b).

29. As above, point 5 of "Principles".

priorities, issues and future directions by governments in the Assembly does not conflict with this.

Under "Practicalities", the CSD emphasized the role of the Secretary-General's annual report on Oceans and the Law of the Sea. It noted that the informal consultative process (or any other process that the Assembly might decide on) should identify emerging issues that would need to be considered by the Assembly. It proposed that the informal consultative process should take place for a week each year and that it should promote the participation of different governmental agencies involved in oceans and marine issues. The CSD also proposed that discussion panels might be the best way of achieving input from representatives of major groups.<sup>30</sup>

## 6. Concluding Notes

The outcome of the recent CSD session corresponds with several proposals made in the last few years to reinforce the role of the Assembly's annual debate on oceans and the law of the sea.<sup>31</sup> The proposals have emphasized the need for priority-setting, good use of existing resources and negotiating time and for informed, results-oriented decision-making.

Strengthening the role of the annual oceans debate would make use of an existing process, which should be seen as an important consideration at a time when UN reform proposals are emphasizing the need for lean and stream-lined international institutions. It would also make a contribution to revitalizing the Assembly's role.

The question is now how governments will take the CSD's recommendations forward, including what form the "informal consultative process" might take. Ensuring the active participation of non-governmental organizations should be a priority. The informal consultative process provides an opportunity to develop innovative approaches to constructive, in-depth debate, but it may also run the risk of becoming yet another mechanism for exchanging general statements that do not result in meaningful action.

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/TOPIC

## THE GLOBAL OBSERVING SYSTEMS FOR CLIMATE: AN INFORMAL LOOK AT THE REPORT TO SBSTA11

*Global Climate Observing System (GCOS) Secretariat*

The Fourth Session of the Conference of Parties considered the state of the global observing systems for climate and, in its Decision 14/CP.4, urged Parties to:

- undertake** programmes of systematic observation including the preparation of national plans;
- undertake** free and unrestricted exchange of data to meet the needs of the Convention;
- support** capacity-building in developing countries;
- strengthen** programmes assisting countries to acquire and use climate information; and
- support** relevant national observing systems.

### *Guidance for reporting on systematic observation*

On behalf of the global observing systems for climate, GCOS has drafted guidance for the preparation of national communications by Annex I parties and where appropriate for non-Annex I Parties on systematic observations. An initial draft prepared under the guidance of the GCOS Steering Committee was further developed after extensive consultation with scientists and Party experts, and feedback from SBSTA.

The full draft guidance is given as the annex to FCCC/ SBS-TA/1999/13/Add.2. The guidance proposes that a Party's national report be divided into five main sections. Quantitative information is recommended where appropriate.

#### 1. General The first section would describe:

- status of the national programme planning for systematic climate observations;
- data provided to others and data centres;
- actions that support the building of capacity in developing countries;
- actions to strengthen international and intergovernmental programmes associated with global observing systems for climate.

#### 2. Meteorological and atmospheric This would describe the Party's national programmes for meteorological and atmospheric climate observations including the GCOS Surface Network (GSN), GCOS Upper Air Network (GUAN) and Global Atmosphere Watch requirements, and the degree to which these observations adhere to best practices. It would also report on other national programmes

30. As above, under "Practicalities".

31. See Hyvarinen J. and Lutchman I. "The Commission on Sustainable Development and Oceans - Value for Money?", made available at the Second London Oceans Workshop, 10-12 December 1998, London, England and subsequently published as "Commission on Sustainable Development - Value for Money?", *Samudra Report April 1999*, p 33-36 (International Collective in Support of Fishworkers), Hyvarinen J., Wall E. and Lutchman I. as above at note 8, or Werksman J., "A Global Framework for the Responsible Management of the Oceans", Foundation for International Environmental Law and Development (FIELD) 1995.

such as those established under the World Climate Research and the International Geosphere Biosphere Programmes.

**3. Oceanographic** This section would describe national programmes for oceanographic climate observations including, for example, sea surface temperatures, sea level, temperature and salinity profiles, and energy and carbon fluxes requirements and the degree to which these observations adhere to best practices.

**4. Terrestrial** The fourth section would describe national programmes for terrestrial climate observations including for example, land use, land cover, land use change and forestry, CO<sub>2</sub> flux, hydrology, glaciers, snow and ice extent, and permafrost, and the degree to which these observations adhere to best practices.

**5. Space-based** The guidance recommends reporting by a Party which operates a space programme, or which uses satellite data to derive climate-related data or products. As satellite data are essential for climate monitoring, reports should indicate the priority given by space agencies to ensuring long-term continuity in conformity with climate requirements and principles.

To date, Parties' reports on observational systems have used different formats and been both diverse and limited. Adoption of the GCOS guidance as the basis for future reports should result in the provision of more uniform and comprehensive information and so enable more useful analysis of the global observing systems for climate. Moreover, use of the guidance by non Annex I Parties should provide a better basis for ascertaining their technical and financial needs.

Other key matters in relation to the global observing systems for climate are discussed in FCCC/ SBSTA/1999/10:

As GCOS moves **from planning to implementation**, monitoring of the system's performance is essential to ensure that data are being collected and archived with the required timeliness and quality. Best practice guidance is available for the GSN and the GUAN and is being developed for the remainder of the system.

The accompanying Tables, based on monitoring conducted under the WMO's World Weather Watch for surface observations (GSN), by the ECMWF for upper-air observations (GUAN) and by Meteo France for ocean observations, give indication of recent performance of these systems. These results lend substance to the reports of degradation of observing capability, especially in developing countries, which was noted with concern by SBSTA10.

Table 1 shows significant deficiencies in the GSN in South America and Africa where only 20 to 30% of GSN stations provide 90% or more of required observations. About 15% of stations in each of these regions and in the Southwest Pacific are "silent".

Table 1(see FCCC/SBSTA/1999/10 for details)

WMO Region	OK (%)	Not OK (%)	Silent (%)
GSN (WWW monitoring, 1-15 October 1998)			
I - Africa	30	18	16
II - Asia	70	7	5
III - Sth America	20	18	13
IV Nth & Cent America	77	2	8
V - SW Pacific	75	1	14
VI - Europe	86	0	3
Antarctica	80	5	0
Global	63	7	8
GUAN (ECMWF monitoring, March-April 1999)			
I - Africa	65	9	0
II - Asia	65	8	4
III - Sth America	40	12	12
IV Nth & Cent America	75	0	5
V - SW Pacific	62	3	5
VI - Europe	93	0	0
Antarctica	67	8	0
Global	69	6	4

Deficiencies in the GUAN are significant in South America where only 40% of stations provide sufficient observations, while about a quarter are completely "silent" or have low implementation levels. The situation is only a little better in Africa, Asia and the Southwest Pacific. The reasons for low or non-availability of observational data from these areas include obsolete equipment, lack of qualified staff, and costs of consumables and spare parts.

The situation with regard to basic atmospheric/ocean surface variables is indicated in Table 2. The figures represent the range of WWW requirements met for a recent period (GCOS requirements are similar). Since most of the observations are derived from Voluntary Observing Ships or buoys, there is considerable variation even within each ocean basin, and the table reflects this. The availability of data from the oceans is far from satisfactory at the present time, though it is relatively stable.

Ocean	Pressure	Sea temp	Air temp	Wind
	% WWW requirements			
Nth Atlantic	50-200	50-150	20-90	20-100
Sth Atlantic	25-90	20-70	0-30	0-50
Nth Pacific	5-90	40-100	5-40	5-60
Sth Pacific	< 10	20-70	0-20	0-15
Indian	5-60	10-50	0-30	0-20
Southern	< 10	0 - 70	< 5	0-20

Table 2(see FCCC/SBSTA/1999/10 f or details)

Although GCOS requires global networks, it is clear, from long experience of the agencies involved, that regional or other sub-global approaches will be needed to address deficiencies. Regional workshops could explore the guidance prepared for systematic observations and assist the development of national communications. Deficiencies in networks or needs of Parties in a given region, or with a commonality of interest (e.g. the small island states) could be defined and become the basis for proposals to funding agencies.

Decision 14/CP.4 invited agencies participating in the Climate Agenda to initiate an **intergovernmental process** to address priori-

ties for action on observing systems. This was explored at the third session of the Inter-Agency Committee on the Climate Agenda earlier this year. Due to the breadth of the climate agenda, no organisation or mechanism encompasses all aspects of a global observing system for climate. The GCOS Secretariat is working with a number of interested nations and organizations to better document a possible process.

**Funding** for systematic observations is a problem for almost all Parties. Developing nations face the need for three vital things: training and development of their human resources, observing equipment that is consistent with their level of infrastructure, and ongoing funding for supplies and maintenance. The first two of these requirements may be tractable using existing funding mechanisms but long term, ongoing operational funding is not addressed by any of the existing financial mechanisms.

The international co-ordination of observing systems is under severe financial constraints. Additional financial support is required to develop the necessary responses to the COP 4 decision.

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An urgent need is now emerging for:

- the development of a process to integrate and analyse national reports on observations; and
- the preparation of specific actions to address deficiencies in climate observing systems, possibly involving the use of regionally focussed meetings.

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## /SUSTAINABLE DEVELOPMENT

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**SECOND MEETING OF THE BUREAU OF THE EIGHTH SESSION OF THE COMMISSION ON SUSTAINABLE DEVELOPMENT (CSD):** The second meeting of the Bureau of the eighth session of the Commission on Sustainable Development (CSD-8) took place in Bogota, Colombia on 4 October 1999. The meeting was chaired by Minister Juan Mayr Maldonado (Colombia), the Chair of CSD-8. Regarding the status of preparations for CSD-8, the Bureau was briefed on the status of the documents for the session, the outcomes of the Conference on Multifunctional Character of Agriculture and Land (Maastricht, 13-17 September 1999), state of preparations for the Fifth Expert meeting on Financial Issues of Agenda 21 (Nairobi, December 1999), as well as on the outcomes of the XIV session of the Inter-Agency Committee on Sustainable Development (Vienna, 9-10 September 1999). The Bureau agreed there was a need to clarify as soon as possible all specific issues that are to be addressed under the agenda of CSD-8. The Bureau welcomed the fact that the Task Managers, in preparing the draft reports of the Secretary-General, would include various inputs, including the outcomes of recent and forthcoming international meetings which are related to the agenda of CSD-8. On the preparatory process for CSD-8, the Bureau agreed that the order of the two Ad Hoc Intersessional Working Groups would be as follows:

- Working Group on Finance, Trade, Investment and Economic Growth - 22-25 February 2000.
- Working Group on Integrated Planning and Management of Land Resources and Agriculture - 28 February-3 March 2000.

The Bureau also outlined the organization of work during CSD-8. It was agreed that the next meeting of the Bureau will take place in New York during the week of 8 November 1999. The following meeting will take place in New York in mid-January 2000. For more information contact: UN Division for Sustainable Development; tel: + 1 (212) 963 3170; fax: + 1 (212) 963 4260; e-mail: dsd@un.org; Internet: <http://www.un.org/esa/sustdev/csd8/csd8meet2.htm>

**UNGA SPECIAL SESSION TO REVIEW IMPLEMENTATION OF THE PROGRAMME OF ACTION FOR THE SUSTAINABLE DEVELOPMENT OF SIDS:** The Special Session of the General Assembly (GA) for the review and appraisal of the implementation of the Programme of Action (POA) for the Sustainable Development of Small Island Developing States (SIDS) convened in New York from 27-28 September 1999. Over the course of the meeting, delegates met in five Plenary sessions and heard addresses from 11 Heads of State or Vice-Presidents, 59 Ministers and more than 50 permanent representatives. The Special Session established an Ad Hoc Committee of the Whole (COW), which met in two parallel sessions to the Plenary. The Special Session adopted a political declaration and a text on the state of initiatives for the future implementation of the POA. The Special Session also forwarded a draft resolution on the Caribbean Sea to the regular session of the

GA for further consideration. For more information, contact: Deonan Oudit; tel: +1-212-963-4671; fax: +1-212-963-4260; e-mail: oudit@un.org; Internet: <http://www.un.org/esa/sustdev/sids.htm>. The ENB report can be found at <http://www.iisd.ca/linkages/vol08/enb0831e.html>

**INTERNATIONAL CONFERENCE ON CONSUMPTION:** "Down to Earth - An International Conference on Consumption and the Consumer" met in Hampshire, UK from 22 - 24 September 1999. It was hosted by the Project Integra and Hampshire, and supported by the UNED-UK Committee, Onyx Aurora - Integrated Waste Management, and Hampshire County Council. The Conference's objectives included: examining and identifying the causes of over-consumption; creating ownership of solutions at a local and national level; encouraging research for the mutual benefit of all; encouraging manufacturers to further modify the design of products and packaging to reduce material resulting in waste; and contributing to the international debate on sustainable consumption. Approximately 200 delegates from a variety of sectors attended the main conference. A number of satellite events throughout the county brought an additional 700 people together to discuss topics such as better building design, improving businesses and profits in a sustainable way, the impact of tourism, and the future for waste management. The latter event announced the outcome of a research project that analyzed categories of products in trash bins (e.g. plastics, glass etc.), the weight produced by household type, and the waste collected by district. This data was also linked to the views and opinions of 1,500 people who were asked about their lifestyle in relation to waste. The Conference's proceedings will be reported at Earth Summit III in 2002. For information contact: Conference Administration, Index Communications Meeting Services; tel: +44 (0) 1794 511331/2; e-mail: [icms@dial.pipex.com](mailto:icms@dial.pipex.com); Internet: <http://www.down-to-earth.co.uk/>.

**ALTERNATIVE APPROACHES TO DEBT RELIEF:** The Meeting on Alternative Approaches to Debt Relief took place from 24-25 September 1999 in Washington DC, US. Organized jointly by the Global Coalition for Africa (GCA) and the Center for International Development, Harvard University (CID), the meeting attracted approximately 60 participants, including government ministers and other senior officials from highly indebted poor countries (HIPC)s and representatives of non-governmental organizations (NGOs), academic institutions, foundations, the media and international organizations such as the African Development Bank (ADB) and the United Nations Development Programme (UNDP). The meeting aimed to bring together key stakeholders to promote debt forgiveness and a transparent debt relief programme. Over the course of the two-day meeting, participants considered HIPC's debt repayment experiences, the recent Cologne Initiative of the Group of Seven countries (G-7), alternative approaches to debt relief and the role of NGOs and HIPC's in achieving debt relief. Participants were also addressed by leading figures from the debt relief movement, including the musician Bono, economist Jeffrey Sachs and US Congressman Spencer Bachus. The meeting's main outcome was agreement on a set of principles on achieving debt cancellation. The principles are intended to generate support for redesigning and strengthening debt relief programmes at the highest levels, particularly among bilateral and multilateral donors. A Sustainable Developments summary of the meeting can be found at: <http://www.iisd.ca/sd/hipc/>.

**AFRICAN NGO-UNEP WORKSHOP:** More than 50 delegates representing various African non-governmental organizations

met at UNEP headquarters in Nairobi from 20-22 September 1999 for a workshop aimed at strengthening collaborative links with UNEP and to prepare for the Seoul International Conference of NGOs to be held from 10 - 16 October 1999. The UNEP Governing Council's decision to strengthen partnerships with major groups and civil society at large provided the basis and framework for this workshop. Participating countries included Benin, Botswana, Burkina Faso, Cameroon, Djibouti, Egypt, Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, Senegal, South Africa, Sudan, Tanzania, Togo, Tunisia, Uganda and Zimbabwe.

UNEP reiterated its support for Africa and extended an invitation to NGOs to assist in the implementation of its African initiatives. An interactive capacity building session on the theme "Women, Sustainable Development and Governance" was held on the second day. Delegates also drafted a position paper to be presented at the 1999 Seoul International Conference of NGOs. For more information contact: Tore J. Brevik, UNEP, Nairobi, Kenya; tel: + (254-2) 523292; fax: + 623692; Email: [tore.brevik@unep.org](mailto:tore.brevik@unep.org).

**NATURE, WEALTH AND THE HUMAN ECONOMY IN THE NEXT MILLENNIUM:** This conference met from 27 - 29 August 1999 at the University of Regina, Saskatchewan, Canada. Sponsors included the Canadian Society for Ecological Economics, International Center for Sustainable Global Development, Canadian Plains Research Center and Saskatchewan Environment and Resource Management. The conference addressed the limitations of some modern economic beliefs, assumptions and practices and how these relate to current economic and environmental issues. It also offered delegates a new way to examine and address essential questions such as can the free market provide effective solutions to the challenges of global warming, environmental pollution and conserving biodiversity and how do we reconcile economic development with environmental protection? Conference topics included: economic and social implications of climate change; progress on full cost accounting; economic instruments for sustainability - progress and challenges; social, economic and environmental indicators of sustainability; valuing natural capital - does anybody care?; ecological footprints as measures of human impact; ecological tax reforms; and trade, global markets and ecological economics. The Conference web site contains links to the thirteen papers and presentations offered during the three-day meeting: <http://socserv2.socsci.mcmaster.ca/~cansee/htmldocs/biennial.html>. For more information contact: Paul C. James, CANSEE Conference Planning Committee; tel: +1 (306) 787-9058; fax: +1 (306) 787-9544; e-mail: [paul.james.erm@govmail.gov.sk.ca](mailto:paul.james.erm@govmail.gov.sk.ca).

**WORLD COMMISSION ON DAMS:** A WCD Regional Consultation (Latin America) was held from 12 - 13 August 1999 in Sao Paolo, Brazil. This Latin American Regional Consultation on Dams represented the first time in Latin America that governments, companies and NGOs involved in the debate over large dams met to discuss the economic, social, and environmental impacts of dams. The Consultation was convened to facilitate the public exchange of ideas and views among various constituencies in the region and to provide the Commissioners with an opportunity to develop a shared knowledge base. Thirty-four individuals from more than a dozen Latin American countries were selected to present their views at the consultation. In total, 650 people attended the first day's sessions and over 250 attended the following day.

The Consultation was organized around seven panels on the following topics: Large Dams and their Alternatives in Brazil; Large Dams and their Alternatives: Future Energy Trends; Large Dams

and Indigenous/Traditional People; Large Dams and the Environment; Social and Resettlement Issues; Conflict and Negotiation; and Policy and Institutional Frameworks. Abstracts of the individual speakers' presentations can be found on the WCD web site (<http://www.dams.org>). Among the recommendations for future direction of policies, planning and action were suggestions to: address environmental and social issues related to the management of existing dams alongside issues related to the development of new projects; clarify the roles of the government, private sector, civil society, and project-affected peoples in the planning process; and carefully assess and integrate renewable energy options that match local needs and priorities with an evaluation of the potential of the Clean Development Mechanisms to influence technology choice based on international demand for clean energy sources.

The Commissioners of the WCD will take these deliberations into consideration as they deliberate and prepare a final report, which will be completed in August 2000. A consultation for the Africa/Middle East region is planned for December 1999. For more information contact: Ms. Saneeya Hussain; World Commission on Dams, 5<sup>th</sup> Floor Hycastle House, 58, Loop Street, PO Box 16002, Vlaeberg, Cape Town 8018, South Africa; tel: +27 21 426 4000; e-mail: shussain@dams.org; Internet: <http://www.dams.org>.

**1999 STOCKHOLM WATER SYMPOSIUM:** This Symposium met in Stockholm, Sweden from 8-14 August 1999. Eight hundred experts from 101 countries attended this series of globally-focused water discussions. Under the title "Urban Stability through Integrated Water-Related Management," participants met in workshops, general sessions, meetings and other events to analyze the problems and seek constructive strategies to secure a stable yet dynamic and creative urban situation. Workshop topics included water reuse, urban flood mitigation, water and social stability and non-technical challenges of urban water management in developing countries. Symposium delegates concluded that urban stability requires societal ability to cope with both unavoidable floods and water pollution from consequences of activities upstream. They noted that urban growth is threatened by water quality destruction and recognized that wastewater is a resource. Additional conclusions highlighted the benefits of dry sanitation, the asset that catchment can provide for development, the need for upstream-downstream partnerships, and the importance of a feminization of water management. For more information contact: David Trouba, Stockholm International Water Institute; tel: +46 8 522 139 89; fax +46 8 522 139 61; e-mail: [Dave.Trouba@siwi.org](mailto:Dave.Trouba@siwi.org).

**WORKSHOP ON MARKET-BASED INSTRUMENTS FOR ENVIRONMENTAL PROTECTION:** This Workshop met in Cambridge, Massachusetts, US from 18 - 20 July 1999. Harvard University hosted the workshop, which was co-sponsored by the Association of Environmental and Resource Economists (AERE), the John F. Kennedy School of Government and the Harvard University Committee on Environment. One hundred seventy-five participants from approximately 25 countries participated in the workshop's deliberations, which included the presentation of fourteen papers. Among the topics addressed were: tax and charge systems; tradable permit systems; motor-vehicle emissions; and new applications of market-based instruments. Both normative and positive analyses of the full range of market-based environmental policy instruments were considered, including retrospective assessments of previous and current use of market-based instruments and prospective investigations of potential new applications. The papers presented at the workshop and a full list of workshop participants can be found at

<http://ksgnotes1.harvard.edu/BCSIA/ENRP.nsf/wkshp/Home>. For more information contact: Robert N. Stavins, tel: +(617) 495-1820; fax: +(617) 496-3783, e-mail: [robert\\_stavins@harvard.edu](mailto:robert_stavins@harvard.edu); Internet: <http://www.ecu.edu/econ/aere>

**FARN COLLOQUIUM:** The Second FARN (La Fundación Ambiente y Recursos Naturales) Colloquium for the Elaboration of Public Policies on Sustainable Development was held from 23 - 27 June 1999 in Villa Carlos Paz, Córdoba, Argentina. Close to 300 participants attended the Colloquium, including 50 guest speakers from Argentina and other countries. Topics addressed included: business and sustainability; education for a sustainable world; rural areas in the XXI century; cooperative processes towards environmental objectives; international trade, environment and sustainable development; media and access to public information; water as a strategic resource; disposal and management of domestic waste; Mercosur and environmental policy; and eco-efficiency and self-regulation. Participants introduced proposals on these topics, which were discussed and agreed upon in different workshops and in a final plenary session. The agreed upon proposals are to be published as recommendations and introduced to local authorities from the Argentine cities of Córdoba, Santafé and Buenos Aires after new authorities are elected in October 1999. For more information contact: María López Dardaine – Colloquium Secretariat; tel: + (54 11) 4787-5919; fax: + (5411) 4783-7032; e-mail: [coloquios@farn-sustentar.org](mailto:coloquios@farn-sustentar.org); Internet: <http://www.farn-sustentar.org/coloquios2.html>.

**INTERNATIONAL SYMPOSIUM ON EFFICIENT WATER USE IN URBAN AREAS:** The UNEP-International Environmental Technology Centre (UNEP-IETC) organized the "International Symposium on Efficient Water Use in Urban Areas - Innovative Ways of Finding Water for Cities" on 8-10 June 1999 at WHO Kobe Centre. The Symposium's goal was to enhance the capacity of urban managers and decision-makers in water resources management. The Environmental Agency of Japan, the Global Environment Centre Foundation (GEC) in Osaka and the International Lake Environment Committee Foundation (ILEC) in Shiga co-sponsored the event, which was attended by about 150 delegates from 45 countries, mostly managers and decision/policy-makers in either national or local government, senior managers of aid agencies, water supply authorities, urban-planning departments, international agencies and NGOs with interest in efficient water use.

Over the course of six sessions, 26 papers were presented on various approaches for securing water by efficient use of existing water sources (rainwater utilization, water reuse, aquifer recharge, leakage control, water demand management, etc.) as measures to avoid water shortages in urban areas. The Symposium produced recommendations regarding: awareness, education and training; planning and policy; regulatory and legal frameworks; financing; and research and development to promote approaches for efficient water use. For more information contact: IETC; fax: +81-6-6915-0304; e-mail: [ietc@unep.or.jp](mailto:ietc@unep.or.jp); Internet: <http://www.unep.or.jp/ietc/News-Events/Issue-28.html>.

**1999 OPEN MEETING OF THE HUMAN DIMENSIONS OF GLOBAL ENVIRONMENTAL CHANGE RESEARCH COMMUNITY:** This meeting was held from 24-26 June 1999 in Shonan Village, Kanagawa, Japan. Its object was to promote an international and closely-knit network of researchers specializing in both social and natural sciences. The meeting was hosted by the Institute for Global Environmental Strategies (IGES), with co-sponsorship from the Environment Agency of Japan, the Asia-Pacific Network for Global Change Research (APN), and other internation-

al organizations. Over three hundred participants from forty-two countries attended.

The meeting's major themes were: conflict and the environment; lifestyles, attitudes and behavior; decision-making processes in response to global environmental change; land use and land cover change; valuation of ecosystem services; demographic change and the environment; and industrial transformation. Participants met in plenary as well as 47 parallel sessions. The program featured a total of 177 presentations by individuals from 38 different countries. Twelve posters and one PC demonstration were also available. The fourth meeting is anticipated to be held in 2001 in the Southern Hemisphere. For more information contact IGES; fax: +81 468 55 3709; e-mail: [hdgec@iges.or.jp](mailto:hdgec@iges.or.jp); Internet: <http://www.iges.or.jp/>.

**MICROCREDIT SUMMIT MEETING OF COUNCILS:** This meeting was held from 24-26 June 1999 in Abidjan, Côte D'Ivoire. Six hundred delegates from 85 countries attended this second follow-up meeting to the Microcredit Summit. The original Summit, held in February 1997, launched a nine-year campaign to reach 100 million of the world's poorest families, especially the women of those families, with credit for self-employment and other financial and business services by the year 2005.

Participants addressed four core themes: reaching the poorest, reaching women, building financially self-sufficient institutions, and ensuring impact on the lives of clients and their families. Participants also attended sessions that examined how to, *inter alia*: use poverty wealth ranking and the housing index to identify the poorest women; institute national frameworks for success; identify the basics on starting a microcredit program, especially in the African context; and work with the Media, advocate with government and reach new constituencies. The Meeting of Councils in Abidjan also featured more than 100 private meetings with donors where microcredit practitioners began dialogues for future partnerships. For more information contact: Summit Secretariat; fax: + 1 (202) 637-3566; e-mail: [microcredit@igc.apc.org](mailto:microcredit@igc.apc.org); Internet: <http://www.microcreditsummit.org/meetings/intro.htm>

**WORLD CONFERENCE ON SCIENCE:** "Science for the Twenty-first Century: A New Commitment" was held in Budapest from 26 June - 1 July 1999. The United Nations Educational, Scientific and Cultural Organization (UNESCO) and the International Council for Science (ICSU), in cooperation with other partners, convened the Conference, which sought to analyze where the natural sciences stand today, where they are heading, what their social impact has been, what society expects from them, and what efforts should be invested to make science advance in response to these expectations. Participation was by invitation only and included representatives from the financial institutions and specialized agencies of the UN and governmental and non-governmental bodies directly concerned with scientific activities.

Participants gathered in three Forums to examine: the intellectual, institutional and economic challenges the scientific endeavor now faces; the interfaces between science and society at large, societal requirements and expectations, ethical issues and the public understanding of science; and an increased commitment to science by governments, policy-makers and other partners and obligations toward society on the part of the scientific community. The Conference developed two documents, the "Declaration on Science and the Use of Scientific Knowledge" and the "Science Agenda: Framework for Action." The Declaration addresses knowledge for progress, science for peace, science for development, and science in society and science for society. The Science Agenda outlines actions under the

same headings and adds a section on "Follow-up," including calls for efforts to ensure the full participation of women, girls and disadvantaged groups in science and technology and for UNESCO and ICSU to submit the Declaration and Science Agenda to their General Conference and General Assembly, respectively. For full texts of these documents, see <http://www.unesco.org/general/eng/programmes/science/wcs/eng/confen.htm>. For more information contact: Secretariat, World Conference on Science, UNESCO, 7, Place de Fontenoy, 75352 PARIS, France; fax: +(33) 1 45 68 58 23; e-mail: [confsci@unesco.org](mailto:confsci@unesco.org); Internet: <http://www.unesco.org/general/eng/programmes/science/wcs/eng/confen.htm>.

**FIFTH MEETING OF THE MEDITERRANEAN COMMISSION ON SUSTAINABLE DEVELOPMENT:** The Fifth Meeting of the MCSD was held in Rome, Italy from 1-3 July 1999. The Commission elected a new Steering Committee composed of four representatives of Contracting Parties and three representatives of major partner groups. Following extended discussion, recommendations and proposals for action on sustainable development indicators, tourism and sustainable development and information, awareness and participation were made, reviewed and adopted. These will be submitted to the Contracting Parties to the Mediterranean Action Plan at their October 1999 meeting in Malta. Participants also reviewed a progress report and the proposed programme for the next biennium and, to facilitate the selection of new themes, requested the Secretariat to prepare a series of brief feasibility studies on ten new subjects. The feasibility studies will be reviewed and, if possible, finalized at the next MCSD meeting in November 2000 in Tunis. The meeting also decided to focus on the preparation of a Strategic Review for the year 2000, which will also be presented to the next MCSD meeting in November 2000. For more information contact: Lucien Chabason, Coordinator, UNEP/MAP; 48, Vassileos Konstantinou Avenue, 11635 Athens, Greece; tel: + 0030 (1) 72-73-100; fax: + 0030 (1) 72-53-196/7; e-mail: [unepmedu@unepmap.gr](mailto:unepmedu@unepmap.gr); Internet: <http://www.unepmap.org/>.

**INDEX 99:** The Second Biennial International Conference on Indices and Indicators of Sustainable Development met from 11 - 16 July 1999 in St. Petersburg, Russia. The Conference was organized by the Institutions of the Russian Academy of Sciences, the St. Petersburg Scientific Center and the Center for International Environmental Cooperation (INENCO). Participants discussed possible ways to harmonize national and international efforts in the field of sustainable development indicators/indices and examined existing methods of indicator selection and transformation into highly-aggregated indices, including systems analysis, econometrics/statistics, conceptual and computer models, etc. Conference themes included: global change (GC) and sustainable development (SD) indicators; biodiversity as an SD indicator; environmental indicators in the framework of SD indicators; social-economic-environmental interactions and SD indicators; social indicators in the framework of SD indicators; systems analysis approach for SD indices design; international consensus, national level indicators and the evolution of standards; community-based indicators projects; and regional practices on SD indicators. The proceedings of the Conference will be published by EOLSS Publishers Co. Ltd., Oxford, UK. For information contact: Irina G. Malkina-Pykh; tel: +1 (812) 232-9772; fax: +1 (812) 272-4265; e-mail: [malkina@mail.admiral.ru](mailto:malkina@mail.admiral.ru); Internet: [http://www.inenco.org/index\\_conferences.html](http://www.inenco.org/index_conferences.html).

**WORKSHOP ON ENFORCEMENT OF AND COMPLIANCE WITH MULTILATERAL ENVIRONMENTAL AGREEMENTS:** UNEP convened this workshop in Geneva from 12-14 July 1999, with the support of the G8 countries and financial contribution from the UK, Canada, Germany, and Japan. Participants addressed the enforcement of and compliance with MEAs focusing on illegal trade, environmental crime and violations of the provisions of the CITES, Basel Convention and Montreal Protocol on Substances that Deplete the Ozone Layer. Attendees included 49 experts from developed and developing countries, including countries with economies in transition, drawn from law enforcement, customs, prosecution and police. Officers from UNEP, relevant convention secretariats, Interpol and the World Customs Organization participated as resource persons and facilitators in the three working groups established to discuss specific illegal trade and traffic issues pertaining to each of the three conventions.

Among the recommendations made to improve enforcement of and compliance with the three MEAs as well as other relevant agreements, such as PIC, both at the national and international level, included: ensuring that UNEP takes a leadership role in the area of environmental crime by establishing a liaison person/unit at UNEP to facilitate dialogue and build consensus among various regional and MEAs; supporting continuous dialogue and collaboration between different groups of countries and the convention bodies and promoting national and regional enforcement networks to ensure synergy in ways and means to curb environmental crimes by supporting and sharing seizure information and trade data; developing guidelines and training manuals for cooperation at national, regional and global levels related to compliance, enforcement and environmental crime; encouraging Parties to the three conventions to develop and/or strengthen national laws and regulations against illegal trade and traffic under the three MEAs; and enhancing harmonized periodical reporting of data to MEA secretariats and sharing of information on best technologies in application of intelligence systems and electronic exchange of data to detect and prevent crime. For more information contact: Fay Goode, UNEP; tel: + (41 22) 917 82 90; fax: + (41 22) 917 80 24; e-mail: fgoode@unep.ch.

**AFRICAN INTERNATIONAL ENVIRONMENTAL PROTECTION SYMPOSIUM:** This Symposium was held in Pietermaritzburg, South Africa from 5-8 July 1999. Participants included approximately 100 delegates as well as trade exhibitors. The delegates were mainly from South Africa, although 19 individuals from other countries attended. Delegates represented a very broad background, from environmental law to waste water treatment (aerobic and anaerobic) as well as soil remediation specialists. The Symposium included 47 formal paper presentations, 18 open poster sessions, discussion groups and a trade exhibition. The main themes of the Symposium were: environmental legislation; curiosity-driven research - fundamental chemistry, biochemistry and microbiology; kinetics, models and microcosms; and needs-driven research. Organizers anticipate that this Symposium was the first in a series of AIEPS symposia, which they hope will be organized every two years. For more information contact the Conference Secretariat; fax: +27 331 420246; e-mail: soil&pol@sprs.co.za; Internet: <http://www.sprs.co.za/>

**HEALTHY PLANET FORUM:** The Healthy Planet Forum (HPF) took place as a parallel event to the WHO European Region Ministerial Conference on Environment and Health on 15 - 18 June 1999 in London. The HPF was aimed to influence, contribute to and extend the Ministerial conference by providing a voice for civil so-

cietry in the process through a parallel event where citizens of the WHO region could share ideas on best practice, plan action on environment and health and develop their thinking on the issues linking environment and health. It was also aimed at raising awareness of the linkages between human health and the environment in relevant stakeholder groups. Fifty-one countries in the WHO European region were represented and an estimated 1200 people attended the Forum over the four days of the event.

Among the issues addressed by the Forum were: poverty, environment and health; women, environment and health; building healthy communities; freshwater issues; interactive healthy ecology access links (IHEAL-Europe) data base; street children and substance misuse in Central and Eastern Europe; tobacco, health and environment; pesticides at home; the Aral Sea Region; children and environmental health; toxic chemicals; spirituality, religion and health; health care waste – policy, handling and management; tools for the empowerment of citizens; the sustainable workplace; the social dimensions of Y2K; effective local action on environmental health; climate change and human health; Water Protocol Implementation; the role of non-governmental organizations and the public and radiation, environment and health.

A declaration was agreed on 15 June 1999. The general reaction of the HPF to the ministerial conference, as outlined in the HPF declaration, can be summarized in three main areas: welcoming the involvement of NGOs and civil society in the WHO process, criticizing the depth of political and financial commitment to action after the ministerial conference, and regretting the failure of the ministerial conference to address several key issues. In particular attention was drawn to: the necessity of securing funding and sharing know-how to successfully translate the Protocol on Water and Health into action after ratification; the strong desire of the non-governmental sector to see the Charter on Transport, Environment and Health developed into a legally binding convention; the need to ratify and implement the provisions of the Aarhus Convention; the need to develop a proposal for an effective mechanism to monitor children's health in the region and for limit values to be set based on the unique vulnerability of children; and the importance of the precautionary principle in determining policy where there is uncertainty over the risks. For more information contact: Bjorg Sandkjar, UNED-UK; fax + (44 171) 930 5893; e-mail: 106655.1325@compuserve.com.

**FOURTH INTERNATIONAL CONFERENCE ON ECOLOGICAL ENGINEERING FOR WASTEWATER TREATMENT:** This Conference met at the Agricultural University of Norway, Ås, on June 7-11, 1999. Participants included researchers, engineering consultants, architects and decision-makers interested in new ways of treating wastewater. Participants presented recent research applications for treating water from households, explored new techniques for upgrading conventional treatment alternatives and discussed ecological engineering in urban and rural planning. These issues were considered through approximately 100 papers and 50 posters presented by individuals from more than 30 countries. In addition, twelve keynote lectures addressed technical solutions and how to best implement ecological engineering. The main issues addressed by the Conference were: constructed wetlands; wastewater infiltration and biofilter media; combining conventional treatment with ecological engineering; source separation and agricultural uses of wastewater; improving the sustainability of conventional systems; wastewater-fed aquaculture; surface and storm water treatment; economics, planning and systems analysis; and pathogen

removal and health risks. For more information e-mail Ecoeng99@jordforsk.nlh.no or see <http://wwworg.nlh.no/ecoeng99/>.

**TWENTY-FIFTH SESSION OF THE COMMITTEE ON WORLD FOOD SECURITY:** The Committee on World Food Security (CFS) held its Twenty-fifth session from 31 May to 3 June 1999 in Rome, Italy. Delegates from 109 countries of the 128 members of the Committee for the biennium 1998-99, representatives from 6 UN agencies and observers from 5 intergovernmental and 23 international non-governmental organizations, among others, attended the meeting. The substantive items of this session's agenda included: assessment of the world food security situation; nutrition; reporting format for monitoring progress in implementation of the World Food Summit Plan of Action; broadened participation of civil society; and other partners in the work of the Committee on World Food Security.

The Committee, *inter alia*: welcomed the new structure of the document on assessment of the world food security situation; stressed the importance it attached to the work of the Inter-Agency Working Group on Food Insecurity and Vulnerability Information and Mapping Systems (FIVIMS) initiative; recommended that further development of the indicators be used by the CFS for its monitoring work to be undertaken within that context and requested that a report on progress in implementing the FIVIMS initiative at national and global levels be tabled at each future session of the CFS; recognized the importance of food quality and safety as an integral component of food security and stressed the importance for developing member countries to participate more actively in the work of the Codex Alimentarius Commission; endorsed a reporting format for Commitments One, Two, Five and relevant sections of Commitment Seven of the WFS Plan of Action and agreed that the format should form the basis for all future reporting on progress in the implementation of the Plan of Action; invited NGO and civil society organizations (CSOs) to be closely involved in the follow-up actions to the WFS recommendations and suggested that, in each subsequent session, the NGOs/CSOs present a report on their activities related to WFS follow-up and make any necessary suggestions; agreed that the thematic issue for consideration at its Twenty-sixth Session would be "who are the food insecure," linked to a thorough debate on FIVIMS; and agreed to hold its Twenty-sixth Session at FAO Headquarters in Rome in September 2000. Delegates also decided that the document CFS: 99/LIM/1 "Implementation of the World Food Summit Plan of Action: Report of the Committee on World Food Security through the FAO Council to ECOSOC" should be submitted to the Council for transmittal to ECOSOC within the context of Objective 7.3 (a) of the WFS Plan of Action, and in line with the request of the FAO Conference.

The FAO Council considered the Committee's report at its 116<sup>th</sup> Session, 14-19 June 1999. For documents related to the Committee's 25<sup>th</sup> session, see <http://www.fao.org/unfao/bodies/cfs/default.htm>. For more information contact: Barbara Huddleston, FAO; e-mail: [Barbara.Huddleston@fao.org](mailto:Barbara.Huddleston@fao.org); Internet: <http://www.fao.org/events/default.htm>

**SECOND INTERNATIONAL CONFERENCE ON ECO-SYSTEMS AND SUSTAINABLE DEVELOPMENT (ECOSUD II- 99):** The second international Conference on Ecosystems and Sustainable Development took place on the island of Lemnos, Greece from 31 May to 2 June 1999. The meeting was organized by the University Juame I of Spain and the Wessex Institute of Technology from the UK. The Conference addressed topics including:

the application of ecological models in environmental management; biodiversity; sustainable development; environmental risk; natural resources management; lakustrine and wetlands ecosystems; computational modeling of natural and human ecosystems; climate modeling and ecosystems; integrated modeling; and forestation issues. Participants also discussed the next ECOSUD Conference, which is to take place in 2001. For more information contact Karen Kasavage; Wessex Institute of Technology; tel: +(02380) 293223; fax: +(02380) 292853; [ksavage@wessex.ac.uk](mailto:ksavage@wessex.ac.uk); Internet: <http://www.wessex.ac.uk>.

## /TRADE AND ENVIRONMENT

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**FORUM ON TRADE AND ENVIRONMENT:** Gary Sampson of the London School of Economics and James Cameron of the Foundation for International Environmental Law and Development, with institutional support from the International Centre for Trade and Sustainable Development (ICTSD), convened a Forum on Trade and Environment for high-level experts, who attended in their personal capacities. The Forum met from 17-18 September 1999 in Geneva, Switzerland, and was chaired by Jan Pronk, the Netherlands Minister for Environment. Participants included ministerial-level government personnel, high-level individuals from non-governmental organizations, academics from developed and developing countries and the heads of UNCTAD and UNEP. Attendees worked towards a balanced process of negotiations for the November WTO Ministerial meeting on a number of issues relating to trade, environment and development. The Forum decided to come together again in the near future to resume its work and to follow-up on ideas presented in the course of the proceedings. For a list of participants or copies of documentation discussed at the meeting, contact the International Centre for Trade and Sustainable Development (ICTSD), e-mail: [ictds@ictsd.ch](mailto:ictds@ictsd.ch).

**APEC MINISTERIAL MEETING:** The 11th APEC Ministerial Meeting was held from 9-10 September 1999 in Auckland, New Zealand. The Ministers encouraged the acceleration of accession negotiations for APEC's non-WTO members and agreed that these economies should be able to participate in some capacity in the forthcoming WTO Round. Other significant outcomes include the recommendation for the abolition of export subsidies. APEC Ministers approved measures to move more rapidly towards paperless trading throughout the region, with the goal of achieving paperless trading by 2005 for developed member economies and 2010 for developing ones. The Ministers also agreed electronic commerce was a potential catalyst for economic growth and asked the APEC Electronic Steering Group to progress with a planning tool, allowing member economies to chart their individual readiness in this area.

The "APEC Economic Leaders' Declaration" identified ways they would "Support Growth through Strong and Open Markets," including through: providing greater transparency and predictability in corporate and public sector governance; enhancing the role of competition to improve efficiency and broaden participation by enterprises; reducing compliance costs and facilitating business growth; and building a favorable regional and international environment for free and fair competition. The leaders also pledged that APEC will continue to play a leadership role in strengthening the global economy and noted that the establishment of the Financial Stability Forum and the new informal mechanism to enhance dialogue among the systemically important economies should advance cooperation on strengthening the international financial system.

They agreed that the new round of negotiations under the WTO should: include comprehensive market access negotiations covering industrial tariffs in addition to the already mandated negotiations on services and agriculture; lead to timely and effective improvements in market access to the benefit of all participating economies, particularly developing economies; and have a balanced and sufficiently broad-based agenda and be concluded within three years as a single package that does not preclude the possibility of early results on a provisional basis. For more information contact: the APEC Secretariat; tel: + 65-276-1880; fax: + 65-276-1775; e-mail: info@mail.apecsec.org.sg; Internet: <http://www.apecsec.org.sg/>.

**WTO COMMITTEE ON TRADE AND ENVIRONMENT:** The CTE met from 29-30 June 1999 in Geneva under the chairmanship of Ambassador István Major of Hungary. The CTE invited the secretariats of several multilateral environmental agreements to an information session to update Members on trade-related developments in environmental fora. In relation to the linkages between the multilateral environment and trade agendas, Members focused on four items of the work programme. A wide range of views were expressed on the relationship between MEAs and the WTO, including dispute settlement; the export of domestically prohibited goods (DPGs); and the relationship between the relevant provisions of the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) and the Convention on Biological Diversity (CBD). Discussions were also held on eco-labelling, the environmental benefits of reducing trade distorting subsidies for fisheries, and agricultural subsidies. Observer status was extended to the United Nations Framework Convention on Climate Change and the International Commission for the Conservation of Atlantic Tunas. A press release on the deliberations is available at <http://www.wto.org/wto/environment/te029.htm>. For more information contact Hans-Peter Werner, WTO; tel: + (41-22) 739-5286; Internet: <http://www.wto.org/>.

**OECD CONFERENCE ON TRADE AND COMPETITION:** The OECD Conference on Trade and Competition, which was organized by the Directorate for Financial, Fiscal and Enterprise Affairs and the Trade Directorate, was held from 29-30 June 1999. This Conference sought to encourage a lively and informal exchange of views on the interaction between competition and trade policies in the run-up to the November 1999 WTO Ministerial meeting. To encourage such an exchange, each participant spoke in his or her personal capacity. The Conference was divided into three sessions. The first focused on market access problems relating to trade, competition and regulatory policies; the second identified the different options available to improve the coherence between trade, competition and regulatory policies; and the third examined whether existing multilateral rules are sufficient to deal with problems identified or whether governments should consider supplementing or improving them with additional multilateral rules and disciplines, and if so, of which kind. See <http://www.oecd.org/daf/ech/INDEX.HTM> for more information on the Conference or contact the Trade Directorate; e-mail: ech.contact@oecd.org; Internet: <http://www.oecd.org/ech/>.

**APEC TRADE MINISTERS MEETING:** The APEC Trade Ministers Meeting was held from 29-30 June 1999 in Auckland, New Zealand. The Ministers focused their discussion around the three themes that New Zealand as Chair had established for APEC 99: expanding opportunities for doing business throughout the region, strengthening markets and broadening support for APEC. Under these themes, the ministers discussed individual and collective action plans, the APEC Food System, the World Trade Organiza-

tion, economic and technical cooperation, electronic commerce and Y2K. Outcomes and initiatives identified at the close of the meeting included agreements to study: the impact of non-tariff barriers in the forest products industry, whether global fishing subsidy practices comply with WTO rules, and the APEC environmental goods and services markets to highlight opportunities for exporters.

In addition to the ministerial deliberations, a Trade Roundtable with business representatives from around the region was held for the first time as part of the Ministerial meeting. Conclusions from this roundtable included calls for: reducing the compliance costs associated with trade, which are especially severe for SMEs, through improved cooperation in such areas as customs and standards; improving and strengthening intellectual property rights in the region especially in the area of biotechnology (genetic patterns); and developing innovative models to address environment, labor and human rights, but not linking them to trade issues and penalizing developing economies. Ministers welcomed the conclusions of the Roundtable and directed officials to examine the conclusions to make sure that they inform their work.

The Statement of the Chair of the Ministerial can be found at [http://www.apecsec.org.sg/whatsnew/press/rel37\\_99.html](http://www.apecsec.org.sg/whatsnew/press/rel37_99.html). For more information contact: the APEC Secretariat; tel: + 65-276-1880; fax: + 65-276-1775; e-mail: info@mail.apecsec.org.sg; Internet: <http://www.apecsec.org.sg/>.

**NAFTA COUNCIL FOR ENVIRONMENTAL COOPERATION:** The 1999 Regular Session of the Council was held from 27-29 June 1999 in Banff, Alberta, Canada. Christine Stewart, Canadian Minister of Environment, hosted her counterparts, Carol Browner, Administrator of the United States Environmental Protection Agency, and Julia Carabias, Mexico's Minister of Environment, Natural Resources and Fisheries. Issues discussed included environmental priorities and international commitments in light of emerging trends, priority actions that build from trilateral efforts on the sound management of chemicals, accomplishments in biodiversity protection, and environmental sustainability in open markets. The meeting comprised several in-camera sessions of the Council, a public session and, in conjunction with a regular session of the Joint Public Advisory Committee, a round-table on CEC program initiatives.

The environment ministers directed the CEC to develop the North American Regional Action Plan (NARAP) to reduce the presence in the environment of the highly toxic substances dioxins and furans, and hexachlorobenzene, to further protect human health and the environment in North America. They also gave the CEC the green light to launch the North American Bird Conservation Initiative (NACBI) to protect critical bird habitats across the continent, and to develop an implementation strategy to protect the upper San Pedro River, one of North America's most important migratory bird corridors. Additional decisions included the announcement of the first ever North American Symposium on Understanding the Linkages between Trade and Environment, to be held in October 2000. For more information contact: Julie-Anne Bellefleur; tel: + (514) 350-4310; e-mail: jabellef@ccemtl.org; Internet: <http://cec.org>.

**AGRICULTURE, TRADE AND THE WTO:** This NGO meeting convened in Geneva, Switzerland from 21-23 June 1999. It was organized by Rudolf Buntzel-Cano (Protestant Farmers' Association of Wurttemberg, Germany) and Sophia Murphy (Institute for Agriculture and Trade Policy, US). 70 participants from NGOs and farm organizations from 25 countries in every region of the world attended.

Last May in Geneva, at the time of the 2<sup>nd</sup> WTO Ministerial Conference, over 100 NGOs discussed case studies and policy options for revising the WTO agreement on agriculture. Drawing on the language of the agreement itself, which in Article 20 calls on governments to review the agreement based on the experience of implementation, NGOs organized to both document their experiences and to develop some alternative policy proposals for governments to consider. This year's meeting was a follow-up to this 1998 meeting. NGOs reviewed the policy proposals already taking shape and furthered their regional strategies for influencing the debate before the 3<sup>rd</sup> WTO Ministerial in Seattle formalizes the launch of new negotiations on agriculture.

The meeting did not produce a formal agreed report, but participants reached widespread agreement on the following points: governments need to be informed by assessments of the impact of the agreement thus far and not continue to rely on projections and forecasts, as they did during the Uruguay Round; developing countries should not be obliged to undertake further liberalization commitments until real progress is made in gaining market access from the developed countries; a world-wide moratorium on genetically modified organisms (GMOs) should be instituted until there is stronger evidence that neither human health nor biodiversity will be adversely affected by the new crops; and multilateral agreements such as the Convention on Biological Diversity, Agenda 21, the UN Convention on Human Rights and the World Food Summit Plan of Action should not be over-ruled by international trade law. For information contact: Sophia Murphy, Institute for Agriculture and Trade Policy, 2105 First Avenue South, Minneapolis, MN, 55404, US; tel: +1-612/870 3454; fax: +1-612/8704846; e-mail: smurphy@iatp.org; Internet: <http://www.iatp.org>.

**FOURTH INTERNATIONAL CONFERENCE OF THE INSURANCE INDUSTRY INITIATIVE ROUNDTABLE:** The Fourth International Conference of the Insurance Industry Initiative round table took place from 1-11 June in Oslo, Norway. Over 120 financial services executives (insurers, investment companies, banks, brokers and pension funds) from Africa, Asia, North American and Europe gathered in Oslo for the largest-ever international conference on insurance and investments industries and the global environment. Entitled "Natural Capital at Risk," this year's annual United Nations Environment Programme's (UNEP's) Insurance Industry Initiative meeting (hosted by Storebrand Insurance Co., Norway) explored the linkages between critical environmental issues and global economic prosperity and sustainable growth. Participants agreed that two facts shed new light on the nexus between environment and insurance: an increasing awareness among US insurance companies and US markets in the areas of new investment opportunities and new insurance products -- from emissions credit certification via sustainable investment projects to a recycling insurance policy. The UNEP Insurance Industry Initiative also launched a study on the possible implications for insurers of the Kyoto Protocol. It suggests that the implementation of the Kyoto Protocol offers business opportunities for the insurance sector once the modalities have been adopted. For more information contact: Mr. H. Abaza, Trade and Environment Unit, UNEP; tel: + (41 22) 979-9179; fax: + (41 22) 796-9240; e-mail: Hussein.abaza@unep.ch.

**UNCTAD-ICDA NGO BRIEFING ON UNCTAD X:** This briefing was convened in Brussels, Belgium on 10 June 1999. The meeting facilitated a dialogue between representatives of UNCTAD and NGOs with the objectives of: informing European NGOs about UNCTAD X issues and preparations; stimulating NGO discussion

and action on UNCTAD X issues; and initiating UNCTAD X preparations at the European regional level. UNCTAD X will take place from 12 to 20 February 2000. Among the issues discussed and concerns raised were: UNCTAD is trying to develop links between developing countries' small and medium enterprises and transnational corporations; UNCTAD will give more attention to voluntary codes of conduct and corporate social responsibility; a pre-UNCTAD X Expert Workshop on Trade, Sustainable Development and Gender took place from 12-13 July 1999; developing countries should be helped to take advantage of the services negotiation (part of the Uruguay Round); UNCTAD will support developing countries in developing their positions for the November WTO ministerial meeting by providing background information on the impact of the Uruguay Round on their countries; and NGOs need to work at the international level to increase ODA and in Europe on questions related to agriculture, CAP, food subsidies and trade protectionism. For information contact Hisako Nomura, ICDA, Rue Stévin 115, B-1000, Brussels; tel: + (32-2) 230-0430, fax: + (32-2) 230-5237, e-mail: icda@skynet.be; Internet: <http://www.icda.be>

## /CLIMATE AND ATMOSPHERE

**INFORMAL EXCHANGE OF VIEWS AND INFORMATION ON COMPLIANCE UNDER THE KYOTO PROTOCOL:** The informal exchange of views and information on compliance under the Kyoto Protocol to the Framework Convention on Climate Change (FCCC) was held from 6-7 October 1999 at the Diplomatische Akademie in Vienna, Austria. The informal exchange was designed to facilitate deliberations on the development of a compliance system under the Kyoto Protocol. The workshop was organized by the Austrian Government in cooperation with the FCCC Secretariat and the Co-Chairs of the Joint Working Group on Compliance (JWG). Ninety-seven participants attended the meeting, including experts, representatives from governments, UN agencies, and intergovernmental and non-governmental organizations. Participants met in several sessions over two days to hear presentations from experts and discuss various issues related to compliance, including: compliance regimes under the Montreal Protocol, the Convention on Long-range Transboundary Air Pollution (LRTAP) and its protocols, the International Labour Organization (ILO) and the World Trade Organization (WTO); institutional issues such as facilitative and enforcement functions, eligibility to raise issues and information gathering; and issues related to the consequences of non-compliance. The Co-Chairs of the JWG will prepare a non-paper on elements of a compliance system based on discussions held during the workshop to be presented to the fifth Conference of the Parties to the FCCC. The ENB report of the meeting can be found at <http://www.iisd.ca/climate/ccom1/>.

**WORKSHOP ON IMPLEMENTATION OF FCCC ARTICLE 4, PARAGRAPHS 8 AND 9 (ADVERSE EFFECTS):** COP-4 agreed on the programme of work outlined in the annex to decision 5/CP.4, including the organization of an expert workshop. Under the guidance of SBSTA Chair Kok Kee Chow and SBI Vice-Chair Mohammad Reza Salamat, this workshop was held from 21 - 24 September 1999 in Bonn. The subsidiary bodies will consider the outcome of the workshop and prepare a report including conclusions and/or a draft decision for COP-5, identifying initial actions to address the implementation of FCCC Articles 4.8 and 4.9 and Kyoto Protocol Articles 2.3 and 3.14 (adverse effects). The workshop included expert presentations followed by panel discussions ad-

dressing the policy-related implications of the information presented.

Regarding preliminary actions, some participants suggested that the policies and measures reported by Annex I Parties and the projected actions to implement the Protocol be examined to analyze potential impacts on the economies of the oil producing and other developing countries. In this context, it was suggested that the subsidiary bodies continue to examine information needed to minimize the adverse social, environmental and economic impacts of Annex I Parties' response measures on developing countries, including: tax restructuring to reflect the carbon content of fuels; measures to discourage the production of fossil fuels and nuclear energy; compensation; and assistance to developing countries, including increasing investment, to help them diversify their economies. Other participants said the uncertainties associated with the impact of implementing response measures are such that consideration of specific actions is premature. They noted that such actions under the Protocol would be considered at the COP serving as the Meeting of the Parties to the Protocol at its first session (COP/MOP-1). They also recalled that compensation was not provided for under the FCCC or the Protocol. Some participants stressed the need to identify and analyze initial actions to meet the specific needs and concerns of developing countries arising from the adverse effects of climate change and the impact of response measures, including information on the possible use of insurance and other appropriate mechanisms. For more information contact: the FCCC Secretariat: e-mail; secretariat@unfccc.de.

**INFORMAL MINISTERIAL CONSULTATIONS:** Informal ministerial consultations were held in Warsaw, Poland on 20 September 1999. Participants considered three questions: what needs to be accomplished at COP-6; what ministers should do at COP-5 to set the stage for a successful COP-6; and how Parties should proceed from COP-5 to COP-6. Participants supported maintaining or increasing the momentum of the negotiations through the next year. Many participants said a package was needed at COP-6 that would encourage ratification. A number of participants noted that if certain Parties do not ratify the Protocol, it would not come into effect. Participants generally agreed on the need for a balanced outcome, with resolution of both FCCC and Protocol issues. Some participants listed the cooperative mechanisms, compliance, sinks, and participation of a broader number of countries under the Protocol as key issues that need to be resolved.

Given the number and complexity of the outstanding issues, a number of participants preferred to hold COP-6 in early 2001. Some also noted that this would allow the COP to consider the IPCC Third Assessment Report. However, others expressed a preference for COP-6 to be held in the fall of 2000. COP-5 must decide on the date of COP-6.

A number of participants sought parallel progress on those key issues. Some called for flexibility and urged Parties not to set pre-conditions for agreement. A few participants urged Parties to focus on the BAPA rather than introduce new issues.

Most participants acknowledged that areas of significant disagreement remained, but urged Parties to set aside as many of them as possible at COP-5 to permit progress on areas of convergence. They called for the development of negotiating text at COP-5 in areas such as national communications by both Annex I and non-Annenx I Parties, the mechanisms, AIJ, and compliance. Many participants also urged continued constructive progress on capacity building and technology transfer. Ministers noted the need for the

COP-5 high-level segment to provide political direction to the negotiations. They also called for additional high-level consultations to periodically assess progress and resolve outstanding issues. Such consultations could be held in the Spring of 2000 in New York during the Eighth Session of the Commission on Sustainable Development (CSD). For more information contact: the FCCC Secretariat: e-mail; secretariat@unfccc.de.

**WORKSHOP ON EMISSION FACTORS AND ACTIVITY DATA FOR THE IMPROVEMENT OF GREENHOUSE GAS (GHG) INVENTORIES:** The FCCC Secretariat convened the second Workshop on Emission Factors and Activity Data for the Improvement of GHG Inventories from 6 - 8 August 1999 in Accra, Ghana, to provide a forum for the exchange of experiences in the development of emission factors and activity data for the estimation of inventories. Fifty participants from 26 countries attended this workshop, including representatives from national teams and international agencies who are experts in GHG inventories, especially in the energy and LULUCF sectors. The objectives of the workshop were: to continue a process that identifies strategies to improve the quality of emission factors and activity data for GHG inventories; to address related problems and gaps, with a view to improving the accuracy, consistency and comparability of GHG inventories; to prioritize immediate and longer term needs, including national, regional and global capacity-building; and to propose and prioritize a list of project concepts on the improvement of emission factors and activity data in the energy and LULUCF sectors at the national, regional and global levels.

Two working groups, one on the LULUCF, the other on the energy sector, reassessed and confirmed the related key sectoral issues identified at an earlier workshop held in Cuba. On this basis, 20 project concepts were proposed, aimed at improving the quality of national and regional emission factors and activity data. Two of the five project concepts proposed by the LULUCF sector working group, and eight of the 15 project concepts proposed by the energy sector working group, were ranked as high priority. For information contact: the FCCC Secretariat: e-mail; secretariat@unfccc.de.

**INTERNATIONAL SYMPOSIUM ON NON-CO<sub>2</sub> GREENHOUSE GASES:** One hundred seventy-five individuals from 37 countries gathered in Noordwijkerhout, the Netherlands from 8 - 10 September 1999 for the International Symposium on Non-CO<sub>2</sub> Greenhouse Gases: Scientific Understanding, Control, and Implementation. Participants included scientists and environmental professionals as well as representatives from governments, international institutions and nongovernmental organizations. The Clean Air section of the Netherlands Association of Environmental Professionals (VVM-CLAN) presented a programme of nearly one hundred oral and poster presentations on topics related to non-CO<sub>2</sub> greenhouse gases. The programme showed that the attention for NCGGs has stimulated scientific research in this area and has already resulted in improved emission inventories, a stream of mitigation options and detailed studies aiming at optimal national and international approaches. Themes included: emission inventories, scenarios, and scientific understanding of sources, sinks, and atmospheric processes; technological options; and policy aspects.

A condensed report from the meeting will be presented to the IPCC and other international and national institutions. Proceedings from the Symposium will be available in February/March 2000. The organizers have been asked to convene a third conference on the topic of NCGGs, which is currently under consideration for the second half of 2001. For information contact: the Symposium Bureau;

e-mail: j.vanham@plant.nl; Internet: <http://pubsys.wolters-kluwer.com/MWEB/deelnemers/100007514.html>.

**AIR POLLUTION CONFERENCE:** The International Conference on Modeling, Monitoring and Management of Air Pollution was held from 27 - 29 July 1999 at Stanford University, California, US. Topics discussed included air pollution modeling, urban and suburban transport emissions, air pollution meteorology, pollution engineering, turbulence modeling at small and meso scales, health problems, monitoring and field studies, pollution management, emissions inventories and modeling, urban air pollution, and aerosols and particles.

Participants noted that, despite recent advances and some good improvements, air pollution problems are becoming more severe in many parts of the world. The ability to reduce pollution has been limited by concerns about the possible economic impact and changes in the standard of living arising from such reductions. To win the battle against emissions technological innovation, conservation and regulation are needed. These goals can only be met if we are knowledgeable about the extent of air pollution problems and the impact of different types of emission contents in air pollution formation and evolution. More specifically, it is necessary to understand the extent to which air pollution spreads from urban to regional and global scales, and the extent to which pollution is emitted, transported and transformed. The conference report can be found at <http://www.wessex.ac.uk/conferences/1999/air99/>. For more information contact: the Conference Secretariat, AIR POLLUTION 99, Wessex Institute of Technology, Ashurst, Southampton, SO40 7AA, UK; tel: +44 (0) 1703 293223; fax: +44 (0) 1703 29285; e-mail: wit@wessex.ac.uk; Internet: <http://www.wessex.ac.uk/>.

**AOSIS WORKSHOP ON CLIMATE CHANGE AND THE CLEAN DEVELOPMENT MECHANISM OF THE KYOTO PROTOCOL:** The Alliance of Small Island States (AOSIS) Workshop on the Clean Development Mechanism (CDM) of the Kyoto Protocol took place in Majuro, Republic of the Marshall Islands from 14 - 16 July 1999. The Workshop was organized and hosted by AOSIS and the Government of the Republic of the Marshall Islands. Over 50 participants attended, including country representatives from the small island states in the South Pacific, Indian Ocean, South China Sea, Mediterranean and Caribbean, experts from various UN and regional organizations, a representative from an environmental NGO and special invitees from the Philippines, Mauritania, the US, the UK, Australia, Norway, New Zealand and Switzerland. Participants discussed elements of the CDM, including assessment of vulnerability and adaptation, use of renewable energy in the design of mitigation projects under the CDM, and capacity building for AOSIS member states.

The participants adopted the Majuro Statement on Climate Change, which will be brought to the attention of, *inter alia*, the Fifth Conference of Parties to the UN Framework Convention on Climate Change (COP-5) in Bonn, 25 October-5 November 1999. The Statement highlighted domestic action in achieving the Protocol commitments; noted the need for the CDM to be a credible and viable Protocol mechanism; stressed the need for special capacity building initiatives in the least developed states and small island developing states; underscored the importance of vulnerability assessment and adaptation to the members of the AOSIS; and resolved to work together to coordinate donor activities and domestic priorities to more effectively address capacity building and adaptation needs of small island developing states. The complete Sustainable Developments Report can be found at: <http://www.iisd.ca/sd/aosis/>.

**RENEWABLE ENERGY FOR THE DEVELOPING WORLD:** This workshop met from 28 June to 2 July 1999 in Carbondale, Colorado, US. Organized by Solar Energy International, the workshop explored different applications for renewable energy technologies in developing countries. Participants learned how to successfully accomplish sustainable development projects with renewable energy. Effective technology transfer methods were presented, as well as setting up infrastructure and the economics and financing of renewable energy projects. Case studies were presented on solar cooking, rural household electrification, rural health care and micro-enterprises using renewable energy. For more information contact: Solar Energy International; tel: +1 (970) 963-8855; fax: +1 (970) 963-8866; e-mail: sei@solarenergy.org; Internet: <http://www.solarenergy.org/solarck.html>

**INDUSTRY AND INNOVATION IN THE 21ST CENTURY:** This meeting was held in Saratoga Springs, New York, US from 15 - 18 June 1999 and was sponsored by the American Council for an Energy-Efficient Economy (ACEEE). Participants from around the world gathered for three days to discuss the technical, policy and program issues related to increasing energy efficiency in industry. Presentations focused on: technical advances in various industrial areas; policies to increase use of energy efficiency, including carbon impacts; partnership programs sharing insights of successful programs; analytical underpinnings of policy areas; and combined heat and power in view of utility restructuring. About sixty papers were formally presented in the mornings along with several roundtables. The afternoons featured site tours of local companies and opportunities for participants to organize informal discussions about self-selected topics. Participants also took part in poster and plenary sessions. For more information contact: ACEEE; e-mail conf@aceee.org; Internet: <http://aceee.org/conf/99ss/about.htm>.

**19TH OPEN-ENDED WORKING GROUP OF THE PARTIES TO THE MONTREAL PROTOCOL:** The 19th Open-ended Working Group of the Parties to the Montreal Protocol met from 15 - 18 June 1999 in Geneva, Switzerland. Parties worked on finalizing a series of recommendations to the Eleventh Meeting of the Parties, to be held in Beijing from 29 November to 3 December 1999. Representatives from 110 governments and 35 NGOs attended.

A key item on the agenda was the fourth replenishment of the Multilateral Fund. The Fund helps developing countries meet their commitments regarding the phase-out of CFC and halonsat chemicals. The Working Group reviewed an analysis conducted by a special Task Force set up earlier under the auspices of the Technology and Economic Assessment Panel. The Task Force report finds that growth rates of CFCs in the baseline period of 1995-1997 were significantly lower than expected, which implies that, to comply with the minimal requirements of the Protocol for a freeze on CFC and halon consumption, replenishment of the Fund could be set at US\$306 million -- significantly lower than the \$465 million required for 1997-1999. However, if governments want to accelerate the phase-out momentum for the period 2003-2005, the Task Force suggested that a replenishment level of \$500 million would be more appropriate. The Working Group asked the Task Force to conduct further study and to report back in August. The Group met again in Washington D.C. from 30 September to 1 October to consider the results. The final decision on replenishment will be taken at the December Meeting of the Parties.

Additional items discussed included proposals by the European Community to advance the phase-out schedule for HCFCs (a lead-

ing replacement for CFCs), to introduce trade controls on methyl bromide, and to control new ozone-depleting substances emerging from research laboratories. The Working Group also considered the 1998 assessment of the ozone layer as well as the environmental impacts and technological and economic aspects presented by the assessment panels. The report of the 19<sup>th</sup> Open-Ended Working Group can be found at <http://www.unep.org/ozone/19oewg.htm>. For more information contact: Secretariat; tel: + (254-2) 62-1234; fax: + (254-2) 62-3601; e-mail: [ozoneinfo@unep.org](mailto:ozoneinfo@unep.org); Internet: <http://www.unep.org/ozone/>.

#### TENTH SESSION OF THE FCCC SUBSIDIARY BODIES:

The subsidiary bodies to the UN Framework Convention on Climate Change (FCCC) held their tenth sessions at the Maritim Hotel in Bonn, Germany, from 31 May - 11 June 1999 and began the process of fulfilling the Buenos Aires Plan of Action, which was adopted at the Fourth Conference of the Parties (COP-4) in November 1998. Under the Plan of Action, Parties set a two-year deadline for strengthening implementation of the FCCC and preparing for the future entry into force of the Kyoto Protocol. The Subsidiary Body for Scientific and Technological Advice (SBSTA) considered topics such as Annex I communications, methodological issues and the development and transfer of technology. The Subsidiary Body for Implementation (SBI) discussed, *inter alia*, administrative and financial matters and non-Annex I communications. SBI and SBSTA jointly considered the mechanisms of the Kyoto Protocol, activities implemented jointly and compliance. Delegates clarified their positions on the Kyoto Protocol mechanisms and agreed that a new synthesis document should be prepared. Progress was also made on compliance. Difficulties remained in a number of methodological debates and on proposals for an expanded biennium budget from the FCCC Executive Secretary. Recommendations by the FCCC subsidiary bodies at their tenth session are to be considered and decided upon by the Fifth Conference of Parties to the UN Framework Convention on Climate Change (COP-5) to be held from 25 October to 5 November 1999 in Bonn. The complete Earth Negotiations Bulletin report can be found at: <http://www.iisd.ca/linkages/vol12/>.

## BIODIVERSITY

#### EXPERTS' PANEL ON ACCESS AND BENEFIT-SHARING:

The Experts' Panel on Access and Benefit-Sharing met from 4-8 October 1999 in San José, Costa Rica. The meeting, co-hosted by the Governments of Costa Rica and Switzerland, with additional funding from Norway, drew together 58 experts representing governments, international organizations, academic institutions, NGOs, representatives of local and indigenous communities, and the private sector. Over the course of the meeting, experts focused their discussions on four substantive items: access and benefit-sharing arrangements for scientific and commercial purposes; review of legislative, administrative and policy measures at national and regional levels; review of regulatory procedures and incentive measures; and capacity building as a cross-cutting issue. The Panel resulted in a set of recommendations, including general conclusions as well as specific points on prior informed consent (PIC), mutually agreed terms (MAT), information needs and capacity building. These conclusions, as well as the Panel's report, will be forwarded to the fifth Conference of the Parties (COP-5) to the Convention on Biological Diversity (CBD) to be held in Nairobi, Kenya, in May 2000. The ENB report on the meeting can be found at <http://www.iisd.ca/linkages/vol09/enb09131e.html>.

**INFORMAL CONSULTATIONS REGARDING THE RESUMED SESSION OF THE EXTRAORDINARY MEETING OF THE COP FOR THE ADOPTION OF THE PROTOCOL ON BIOSAFETY TO THE CBD:** The informal consultations regarding the resumed session of the Extraordinary Meeting of the Conference of the Parties (ExCOP) for the adoption of the Protocol on Biosafety to the Convention on Biological Diversity met in Vienna, Austria from 15 - 19 September 1999. Approximately 300 representatives from over 115 governments and 70 representatives from intergovernmental, nongovernmental and industry organizations attended. The first two days of the meeting were devoted to consultations within the negotiating groups that emerged from the Cartagena meeting: the Miami Group (Argentina, Australia, Canada, Chile, Uruguay and the US), the European Union, the Central and Eastern European Countries, the Compromise Group (Japan, Mexico, Norway, South Korea and Switzerland), and the Like-Minded Group of Countries (which includes most of the developing countries). The third day was for informal exchanges between groups and the final two days were devoted to resolving differences between groups on pending core issues.

During the final two days of discussions, negotiating groups addressed the issues of commodities, the Protocol's relationship with other international agreements, the Protocol's scope and application of the advance informed agreement procedure. The Miami Group also noted that a biosafety protocol reference to the precautionary principle would be the first operational usage of the principle in an environmental agreement. The Miami Group stressed the need to ensure that such an inclusion would be consistent with other existing international environmental agreements. The Compromise Group noted the presence of the precautionary approach in the WTO Agreement on Sanitary and Phytosanitary Measures (SPS), but the Miami Group pointed out that the SPS is not an environmental agreement. Negotiating groups agreed on a basic set of concepts for commodities and relations with other international agreements, while acknowledging that the central differences on those and other issues remain. The results will be forwarded as a president's summary to the resumed session of the ExCOP, currently scheduled for 20 - 28 January 2000. A full Earth Negotiations Bulletin briefing note on the last two days of this meeting can be found at [http://www.iisd.ca/linkages/biodiv/bswg6/ExCOP\\_informals.html](http://www.iisd.ca/linkages/biodiv/bswg6/ExCOP_informals.html).

**FAO/NETHERLANDS CONFERENCE ON THE MULTIFUNCTIONAL CHARACTER OF AGRICULTURE AND LAND:** The overall objective of this Conference, which met from 12 - 17 September 1999 in Maastricht, the Netherlands, was to develop practical ways for society, at different scales, to promote sustainability by increasing the awareness of the multiple functions of agriculture. Government policy-makers, agricultural and environmental experts and civil society representatives from more than 100 countries gathered at this Conference, which was jointly-organized by the UN Food and Agriculture Organization (FAO) and the Government of the Netherlands. The Conference's findings and conclusions will be incorporated into discussions at the eighth annual session of the UN Commission on Sustainable Development (CSD-8) from 24 April-5 May 2000. The discussions at the Maastricht conference are also relevant to the upcoming WTO talks on agriculture set to begin later this year.

Delegates discussed the role of trade policy in contributing to sustainable agriculture and rural development. Developing countries warned that the multifunctional character of agriculture should not be used as a pretext for maintaining trade subsidies. In the final con-

ference report, participants agreed to language stating that a "fair and market-oriented" agricultural trading system would facilitate further integration of agricultural and environmental policies, and emphasized the need to ensure that policy measures do not unfairly limit market access, especially for developing countries. Delegates also noted the important role women play in sustainable agriculture and rural development and called on countries to take urgent action to address environmental and economic degradation in developing countries. The Sustainable Developments summary of the Conference can be found at <http://www.iisd.ca/sd/agr/>. For more information contact: Lucas Janssen, FAO/SDRN; fax: + (39-6) 57053369; e-mail: agr99-conference@fao.org; Internet: <http://www.fao.org/mfcal/>.

**CONFERENCE ON THE ECOSYSTEM APPROACH FOR SUSTAINABLE USE OF BIOLOGICAL DIVERSITY:** The Norway/UN Conference on the Ecosystem Approach for Sustainable Use of Biological Diversity took place in Trondheim, Norway, from 6-10 September 1999, and was attended by approximately 300 participants from 95 countries, representing governments, intergovernmental and nongovernmental organizations, and scientific and academic institutions. The conference was hosted by the Norwegian Ministry of Environment in collaboration with the UN Environment Programme (UNEP) and organized by the Norwegian Directorate for Nature Management and the Norwegian Institute for Nature Research.

The conference sought to build upon the results of the Workshop on the Ecosystem Approach held in Lilongwe, Malawi in January 1998, which developed a set of twelve principles and characteristics of the ecosystem approach to biodiversity management (the Malawi Principles). The conference's three objectives were to: contribute to a sound scientific knowledge base on issues related to the sustainable use of biodiversity; further develop the concept and principles of an ecosystem approach to sustainable use; and provide a forum for cross-sectoral and multidisciplinary dialogue between scientists and policy-makers on research and management issues related to the sustainable use of biodiversity, contributing to ongoing deliberations in other relevant fora.

Participants met in nine substantive sessions on: the ecosystem approach and sustainable use; decentralization of resource management; management in dynamic environments; the socio-economics of sustainable resource use; cascading effects of resource exploitation on ecosystems; the ecosystem approach in marine resource use; the ecosystem approach in forest resource use; globalization versus decentralization; and case studies in the use of biological resources. There was also a panel debate on local resource management in the context of the WTO and GATT. A closing session on follow-up to the conference reviewed the recommendations and conclusions gathered from presentations, participant comments and informal discussions throughout the week. The outputs of the meeting will include: a brief summary of conclusions and recommendations; a Chair's Report; proceedings of the workshop, including presentations; and a peer-reviewed collection of scientific papers. These materials will provide input into the fifth meeting of the CBD's Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) and other relevant fora. The Sustainable Developments summary of the meeting can be found at: <http://www.iisd.ca/sd/nor/index.html>.

**INTERNATIONAL CONFERENCE ON BIOTECHNOLOGY IN THE GLOBAL ECONOMY:** The Center for International Development (CID) at Harvard University organized an Internation-

al Conference on Biotechnology in the Global Economy, which met from 2 - 3 September 1999 at Harvard University in Cambridge, Massachusetts, US. The Conference addressed the implications of biotechnology for: international trade; intellectual property rights; biodiversity prospecting; developing countries; human and environmental safety; and social values. The Conference attracted over 200 participants from academic institutions, civil society, industry, government departments and international organizations, including the UN Commission on Science and Technology for Development, UN Conference on Trade and Development (UNCTAD), UN Food and Agriculture Organization (FAO), the World Bank and the Global Environment Facility (GEF). The Conference aimed to broaden the debate on biotechnology beyond the narrow confines of the biosafety question and to foster dialogue between researchers, entrepreneurs, political leaders, policy makers and practitioners.

Participants met in four plenary sessions to hear keynote speeches on science and economy in the new millennium; science, technology and international development; biotechnology in the global economy; and the way ahead. They also met in nine break-out sessions to discuss: the evolution of the biotechnology industry; biotechnology in international trade; intellectual property rights (IPRs) in biotechnology; biotechnology and international relations; bioprospecting; biotechnology in developing countries; environmental aspects of biotechnology; biotechnology and human health; and ethics, social values and biotechnology. Calestous Juma will prepare a brief summary of the discussions, focusing on solutions. This conference material is expected to feed into research agendas, policy discussions, and training and educational material on biotechnology and public policy. Harvard's CID will set up a task force to keep open the emerging dialogue among participants on the continually evolving issues in the biotechnology field. The Sustainable Developments summary of the Conference can be found at <http://www.iisd.ca/sd/har/index.html>. For more information contact: Calestous Juma, Harvard University; tel: +1 (617) 496-0433; e-mail: Calestous\_Juma@Harvard.Edu.

**NINTH EUROPEAN CONGRESS ON BIOTECHNOLOGY:** The Ninth European Congress on Biotechnology (ECB9) was held from 11 - 15 July 1999. The programme included four sectors of applied biotechnology and five mainstream fundamental sciences underpinning biotechnology. 1500 participants from more than 40 countries attended the Congress, which offered 80 different panels. Four poster sessions also displayed research on chemicals manufacture, the agro-food sector, environmental biology and health-related biotechnology. The organizers have begun preparing a CD-ROM with all abstracts and some extended abstracts from the meeting. For more information contact: ECB9 Secretariat, Reyerslaan 80, B-1030 Brussels, Belgium; tel: +32 2 706 8174; fax: +32 706 8170; e-mail: secretariat@ecb9.be; Internet: <http://www.ecb9.be/>.

**INTERSESSIONAL MEETING ON THE OPERATIONS OF THE CONVENTION:** The Intersessional meeting on the Operations of the Convention (ISOC) convened in Montreal, Canada from 28-30 June 1999. ISOC was convened based on CBD COP-4 Decision IV/16, which called for an open-ended meeting to consider possible arrangements to improve preparations for and conduct of the meetings of the Conference of the Parties. ISOC also held preparatory discussions on the COP-5 agenda item on access to genetic resources and benefit sharing, focusing on the upcoming Experts Panel on Access and Benefit Sharing, which will meet in October 1999 in Costa Rica, *ex situ* collections that were acquired prior to the Convention's entry into force and the relationship between intellec-

tual property rights and the relevant provisions of the Agreement on Trade-Related Aspects of Intellectual Property Rights and the CBD.

Regarding administrative arrangements for the implementation of the Convention, delegates developed a number of options for COP-5 to consider, ranging from retaining the existing institutions and procedures, to holding a second intersessional meeting on implementation to establishing a Subsidiary Body on Implementation. The final decision on Intellectual Property Rights and TRIPS recognizes: the need to ensure the mutual supportiveness between the TRIPs agreement and the CBD; the need for CBD exploration of the implications of IPR on biodiversity and equitable benefit sharing; and the urgency for the CBD to achieve observer status in the WTO TRIPs Council. The Earth Negotiations Bulletin summary of the deliberations and decisions can be found at <http://www.iisd.ca/biodiv/sbstta4/>. For information contact: CBD Secretariat; World Trade Center, 393 St. Jacques Street, Suite 300, Montreal, Quebec, Canada H2Y 1N9; tel: +1 (514) 288-2220; fax: +1 (514) 288-6588; e-mail: chm@biodiv.org; Internet: <http://www.biodiv.org>.

**FOURTH MEETING OF SBSTTA FOR CBD:** The fourth session of the Subsidiary Body for Scientific, Technical and Technological Advice (SBSTTA-4) to the Convention on Biological Diversity (CBD) met in Montreal, Canada, from 21 - 25 June 1999. SBSTTA-4 delegates met in two working groups. The first considered developing a work programme on dryland ecosystems, principles for the prevention of impacts of alien species, and further advancement of the Global Taxonomy Initiative. Working Group II discussed: new plant technology for the control of plant gene expression; sustainable use of biological resources, including tourism; and incorporation of biological diversity considerations into environmental impact assessments. Delegates also discussed the SBSTTA work programme, cooperation with other bodies and progress on thematic areas. They considered the terms of reference of *ad hoc* technical expert groups, but deferred making a decision to SBSTTA-5.

On dryland ecosystems, delegates requested the Executive Secretary to prepare a draft work programme, in consultation with the Secretariat of the CCD, and to present it to SBSTTA-5. Delegates recommended that the COP instruct the Executive Secretary to further develop the Global Taxonomy Initiative and undertake preliminary activities required to build a framework for implementing it. Discussions over genetic use restriction technologies (GURT) generated the most heated debate and a final decision that included preambular paragraphs recognizing that any country may establish a moratorium, subject to national legislation, and stressing the precautionary approach, and operative paragraphs recommending that products incorporating GURT not be approved by Parties for field testing until appropriate scientific data justifies such testing and for commercial use until appropriate authorized and strictly controlled scientific assessments. The Earth Negotiations Bulletin summary of the deliberations and decisions can be found at <http://www.iisd.ca/biodiv/sbstta4/>. For information contact: CBD Secretariat; World Trade Center, 393 St. Jacques Street, Suite 300, Montreal, Quebec, Canada H2Y 1N9; tel: +1 (514) 288-2220; fax: +1 (514) 288-6588; e-mail: chm@biodiv.org; Internet: <http://www.biodiv.org>.

**GLOBAL BIODIVERSITY FORUM:** GBF14 met in Montreal, Canada from 18 - 20 June 1999. One hundred forty-five individuals from government, NGOs, local and indigenous communities, academia and the private sector participated. They focused on the themes of: building biodiversity into sectoral strategies and action

plans; ecosystem approaches to the management of biodiversity in drylands; and resolving the conundrum of scale in adaptive management - households to large landscapes.

GBF-14 recommended that Parties rise to the challenge of integrating the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies, and suggested that high-level champions can help win over policy-makers in other sectors to the biodiversity cause. Other key requirements are to make biodiversity meaningful to policy makers in other sectors by using economic arguments to illustrate the imperative of integrating biodiversity into their decision making, capacity building to train a new generation of biodiversity economists, and the development of tools to integrate biodiversity into sectoral planning. Participants in groups working on forests, fisheries, agriculture, tourism and drylands all expressed the need for practical, clear indicators to monitor and evaluate the impact on biodiversity of sectoral activities and policies. Regarding forests, participants called for broader support to convert the many existing guidelines for sustainable forest management into reality on the ground and suggested that such support can be based on clearly identifying the interests of different stakeholders; using incentives for the fair and equitable sharing of benefits; and promoting participatory management, especially with local communities. For more information contact: Laurence Christen, IUCN; fax: +41-22-999-0025; e-mail: lac@hq.iucn.org.

**CONFERENCE ON BIOTECHNOLOGY TRANSFORMATION:** The International Consortium on Agricultural Biotechnology Research (ICABR) and the Center for International Studies on Economic Growth (CEIS) of the University of Rome "Tor Vergata" hosted an international conference on "The Shape of the Coming Agricultural Biotechnology Transformation: Strategic Investment and Policy Approaches from an Economic Perspective" in Rome, from 17-19 June 1999. Panel discussions covered a range of issues, including intellectual property policy, regulatory policy, industry structure, consumer acceptance, economic evaluation and environmental issues. The Conference web site contains links to abstracts of many of the presenters' papers (see <http://www.economia.uniroma2.it/conferenze/icabr/Program.htm>). For more information on the conference contact: Vittorio Santaniello; e-mail: v.santaniello@economia.uniroma2.it; Internet: <http://www.economia.uniroma2.it/conferenze/icabr/Program.htm>.

**UNEP/IUCN WORKSHOP ON LEGAL ASPECTS OF IMPLEMENTING BIODIVERSITY-RELATED CONVENTIONS:** A UNEP/IUCN Workshop on Legal Aspects of Implementing Biodiversity-related Conventions took place in Kokshetay, Kazakhstan from 7 - 11 June 1999. With the assistance of facilitators from CITES, CMS, RAMSAR, REC, FIELD, FAO, UNEP and IUCN, participants from 17 countries within Central and Eastern Europe (CEE) and the Commonwealth of Independent States (CIS) shared their knowledge on their countries' experiences with regard to different issues on implementing biodiversity-related conventions in national law. The workshop was arranged according to six broad themes: the relationship of international environmental law with national legislation; the legal and institutional considerations of access to genetic resources; the legal and institutional considerations of area-based biodiversity conservation (within and outside protected areas); the legal and institutional considerations of species-based biodiversity conservation (protection and use); the legal and institutional considerations of regulating or managing processes or activities adversely affecting biological diversity; and the

legal and institutional considerations of national biodiversity planning (biodiversity strategies and action plans). Other interlinking issues such as enforcement and compliance, public participation, reporting requirements, and financing/economic instruments were addressed within the context of the above-mentioned themes. The workshop focused on the practical aspects of implementing international obligations for biodiversity conservation in national law, in particular, what is required by the major biodiversity-related instruments and what broad issues should be considered to translate these requirements into national legislation and institutions. For more information contact: Sabine Hoefnagel, UNEP/ROE; fax: (41 22) 797 3420; e-mail: sabine.hoefnagel@unep.ch.

**WORKSHOP ON AGRICULTURAL BIOTECHNOLOGY AND RURAL DEVELOPMENT PRIORITIES FOR THE WORLD BANK:** Approximately 100 participants from the World Bank, international and non-governmental organizations, the academic community and the private sector gathered at World Bank Headquarters in Washington, D.C. from 3 - 4 June 1999 for a workshop on agricultural biotechnology and rural development. The workshop sought to contribute to the process of policy making and consensus building within the World Bank with respect to agricultural biotechnology. Participants discussed key issues and recent developments in the field, reviewed the draft background paper "Agricultural Biotechnology and Rural Development, Issues and Options for the World Bank," which is being prepared by the World Bank's Biotechnology Task Force, and considered specific priorities for World Bank lending, partnerships and other activities.

Participants met in Plenary sessions on the first day to outline the major issues and provide background information on recent developments and controversies in the field. They broke into small groups during the second day to discuss World Bank priorities and actions on specific topics. Participants proposed a variety of World Bank actions, including capacity building within the Bank and developing countries, support for agricultural research in the public sector, and examination of the relationship between biotechnology, intellectual property rights (IPR) and poverty alleviation, as well as best practices to link these variables. The World Bank's Biotechnology Task Force intends to use the workshop's output as they establish priorities for short and long term action. The Sustainable Developments summary of the workshop can be found at <http://www.iisd.ca/linkages/sd/sdabi/>.

## **/FORESTS**

**SOUTH PACIFIC SUB-REGIONAL WORKSHOP ON INTERGOVERNMENTAL FORUM ON FORESTS (IFF) ISSUES:** This Workshop met from 22-24 September 1999 in Nadi, Fiji. Thirty-seven participants from government, non-government, regional and international organizations attended the Workshop, which was organized by Australia and co-sponsored by New Zealand with support from Fiji to enable Pacific Island countries to consider Intergovernmental Forum on Forests (IFF) issues. Participants addressed categories I, II and III of the IFF work programme with the objectives of identifying potential regional cooperation to implement IPF proposals for action and views from experts in the region on: IFF Category II issues; key issues for (or elements of) international cooperation; international arrangement functions and options; an agreed approach for representation at IFF-4 and CSD-8; and future opportunities for interaction.

Participants agreed to a list of 4 priority actions concerning IPF proposals, provided views on Category II issues and identified priorities among these, and noted the emerging support for the establishment of a permanent forum for policy implementation and co-ordination supported by a non-legally binding but permanent forum. The meeting recommended that the report of the workshop, including the list of elements, functions and options considered and agreed by the workshop, should be transmitted to the Costa Rica and Canada Initiative, the UN Secretary General as an official document for IFF-4, and the Secretariat of the Pacific Community (SPC). The outcome of this Workshop will also be forwarded to the Council of Regional Organizations in the Pacific (CROP) Land-Based Resources Working Group for consideration in finalization of the Regional Forest and Trees Strategy and its submission to CSD-8. For information contact: Gary Dolman; tel: +61-2-6272-4500; e-mail: gary.dolman@affa.gov.au.

**COSTA RICA-CANADIAN INITIATIVE:** Regional consultations for the CRCI took place in Kuala Lumpur, Malaysia, from 2 - 5 August 1999. The East and South-East Asia Regional Meeting on the Arrangements and Mechanisms to Promote the Management, Conservation and Sustainable Development of All Types of Forests (ESEARM) was hosted by the Malaysian Government and co-sponsored by the Japanese Government. The meeting was attended by representatives of Governments, intergovernmental institutions, NGOs, social groups (indigenous peoples, rural organizations, women's groups, labor, etc.), the private sector and other special invitees.

Among the points emphasized by participants were the importance of: the principle of equal partnership between developed and developing countries in decision making; the right to socio-economic development; an integrated and holistic approach to SFM; the role of conversion forests, whereby the conversion of forests outside the permanent forest reserve should be regarded as sustainable if undertaken within the context of an integrated land use management plan; local/traditional forest related knowledge (TFRK) protection (Intellectual Property Rights) and compensation for TFRK; equitable sharing of benefits; financial resources and mechanisms including international forestry fund and technical assistance; international trade in forest products, including market access, transparency and non-discriminatory practices; and cooperation in combating trans-boundary pollution, including airborne pollutants. Further information can be found at <http://www.kpu.gov.my/english/asia.htm>.

For information contact: Guido Chaves, MINAE-SINAC, Apdo. 10104- 1000, San José, Costa Rica; tel: +506-283-7654; fax: +506-283- 7118; e-mail: guidocha@ns.minae.go.cr; or Michael Fullerton, Policy, Planning and International Affairs Branch, Canadian Forest Service, Department of Natural Resources, 580 Booth Street, 8th Floor, Ottawa, Ontario, Canada K1A 0E4; tel: +1-613-943-5258; fax: +1-613-947-9033; e-mail: mfullert@nrcan.gc.ca; Internet: <http://www.nrcan.gc.ca/cfs/crc>.

**GENERAL ASSEMBLY OF THE FOREST STEWARDSHIP COUNCIL (FSC):** The General Assembly of the FSC met from 23 - 28 June 1999 in Oaxaca, Mexico. Members elected new Board Members, heard the Treasurer's report and considered approximately 50 motions. Among those motions that passed were decisions to: commission a study that identifies the advantages and risks of the various options for the involvement of public sector bodies that manage forests in the FSC; define the precautionary approach as a tool for the implementation of the precautionary principle; strengthen the Social Chamber and reaffirm the existence

of the Social Working Group; not formally "endorse" or otherwise officially "recognize" any other body or programme in the absence of an approved FSC policy ensuring that the body or programme is substantially equivalent in its relevant policies, standards and procedures to the FSC; and establish activities encouraging community forestry certification.

Motions that did not pass included proposals to: establish minimum periods between which FSC board members could become FSC staff and vice-versa; create a certification commission; collaborate with the International Federation of Organic Agriculture Movements (IFOAM) and the Fairtrade Labelling Organizations (FLO) in further improving the standards of FSC-products; and limit FSC-accredited certifiers' and companies' trading FSC-products ability to make statements supporting non-certified products and companies. Draft minutes from the meeting can be found on the FSC web site: <http://www.fscoax.org/principal.htm>. For more information contact: FSC; e-mail: [fscoax@fscoax.org](mailto:fscoax@fscoax.org); Internet: <http://www.fscoax.org/principal.htm>.

## /DESERTIFICATION

**RIOD GLOBAL MEETING:** The RIOD Global Meeting was held from 23 - 28 August 1999. RIOD is the global network of NGOs involved with desertification issues. The meeting had two main goals: restructure the network and readapt its objectives regarding the implementation phase of the Convention to Combat Desertification; and elaborate a new five year action plan for 1999-2004. For better coordination, NGOs established a Global Coordinating Committee, which contains proportional representation for different regions. The GCC will be facilitated by ENDA TM during a one-year interim phase. For more information contact: ENDA TM, BP 3370, Dakar, Senegal; tel: + 221-8222496/8225983; fax: + 221 - 821 7595; e-mail: [masselo@enda.sn](mailto:masselo@enda.sn); Internet: <http://www.enda.sn/indexuk.htm>

**REGIONAL MEETING OF THE LATIN AMERICAN AND CARIBBEAN COUNTRIES:** The Latin American and Caribbean countries Party to the CCD gathered in Lima, Peru from 9-12 August 1999 for their 5<sup>th</sup> Regional Meeting. Issues discussed included projects for the implementation of the Regional Action Programme (RAP), the Global Financial Mechanism, traditional knowledge and practices, the harmonization of public policies to combat desertification and the newly established Regional Coordinating Unit.

Regarding RAPs, participants took a decision requesting the Chair of the Regional Meeting to discuss with different UN agencies financial support for projects approved under the RAP and calling on the Global Financial Mechanism to take steps during COP-3 to include RAP projects in its budget for 2000. A decision on the Global Financial Mechanism also requests that body to ensure financing of the implementation of the Platform of Cooperation between Africa and Latin America. A decision on technology, traditional knowledge and practice requests COP-3 to extend the mandate of the panel of experts of the Committee on Science and Technology with the aim of continuing its compilation of information on such knowledge and practices and proposing steps and action for their adequate use. Participants also adopted the project on Harmonization of Public Policies to Combat Desertification as presented by the Secretariat, with a number of specifications. On the Regional Coordinating Unit, participants thanked the entities that ensured its functioning and invited financing for the Unit, including through the inclusion of the

Regional Technical Secretary's salary in the core budget of the Permanent Secretariat. For more information contact: CCD Secretariat, PO Box 260129, D-53153 Bonn, Germany; tel: (+49-228) 8152800; fax: (+49-228) 8152899; e-mail: [secretariat@unccd.de](mailto:secretariat@unccd.de); Internet: <http://www.unccd.de>

**ASIA – AFRICA TECHNICAL WORKSHOP ON EARLY WARNING SYSTEMS:** Forty-five experts from Africa, Asia and international, regional and sub-regional organizations (CCD, UNDP, UNEP, FAO, ESCAP, WMO, etc.) met in Beijing, China from 22 – 23 July 1999 for the Asia – Africa Technical Workshop on Early Warning Systems (EWS). Participants discussed Asia – Africa inter-regional cooperation in the areas of combating desertification and mitigating the effects of drought. They recognized the potential of inter-regional cooperation for developing more coherent and cost effective data management systems, capacity building frameworks and research and development for the sustainability of EWS and emphasized the respective experience gained by Asia in desertification monitoring and assessment and by Africa in early warning forecast for drought emergencies.

Recommendations from the meeting included the suggestion that the Committee on Science and Technology should, in its review of information and experiences on EWS, integrate a perspective on active linkages between the regional implementation annexes as well as foster inter-regional cooperation in its overall work program with a view to pursuing mutual and collective benefits. African country Parties were encouraged to identify an institution or a set of institutions that can act as African regional focal points in inter-regional EWS cooperation and to participate in the establishment of a scheme for promoting inter-regional cooperation to enhance EWS through standardization of data, capacity building, training and research. Participants also urged that the CCD Secretariat, with the assistance of the Global Mechanism, donor countries, international organizations and other interested entities, assist South - South cooperation in EWS and that UN organizations such as UNEP, the FAO, WMO, the Economic and Social Commission for Asia and the Pacific (ESCAP), and relevant sub-regional and regional organizations share with the relevant Asian and African focal points, institutes and sub-regional and regional organizations, the needed information and technical expertise on EWS. For more information contact: CCD Secretariat, PO Box 260129, D-53153 Bonn, Germany; tel: (+49-228) 8152800; fax: (+49-228) 8152899; e-mail: [secretariat@unccd.de](mailto:secretariat@unccd.de); Internet: <http://www.unccd.de>.

**ASIAN THEMATIC PROGRAMME NETWORK:** National focal points, experts and representatives from international organizations, sub-regional organizations and NGOs gathered in Beijing, China on 26-27 July 1999 to participate in the launching meeting for the Asian Thematic Programme Network on Desertification Monitoring and Assessment for Asia (TPN1). Participants agreed that the overall objective of TPN1 would be to enhance desertification monitoring and assessment capacities in Asia through the establishment of a network that will harmonize data management, analytical methods, capacity building and research in the use of new information technologies and space based technologies so as to enable decision making for sustainable development. TPN1 will be structured as a flexible network of institutions or agencies taking part on a voluntary basis with each member's individual autonomy remaining intact. The network will exist via linkages among identified national focal institutions, which will play a participatory role involving all the key actors operating at the national and local levels in the field of desertification monitoring and assessment. As Network Task

Manager, China's national focal institution will play a facilitating role in the functioning of the network.

Participants suggested that key elements for the network's programme include: developing the framework for the conduct of assessment and monitoring on the status of desertification at regional, sub-regional and national levels using various systems of new information technologies and space based technologies; supporting national focal points to enhance and improve the linkage of national databases with regional, sub-regional and international databases applying digital and communication technology; and developing a regional framework for the conduct of joint or collaborative information gathering and database consolidation of scientific information on desertification control, land and water management and biomass protection. Priority activities are to include: a survey of desertification monitoring and assessment capacities, constraints and opportunities in Asia; preparation and publishing of a TPN1 newsletter with all the network members and partners as the targeted readership, making available relevant scientific information; launching of an interactive TPN1 web site; and making available a set of maps for the Asian region showing the extent of desertification in the region, paying due attention to efforts made in this field by competent international organizations. For more information contact: CCD Secretariat, PO Box 260129, D-53153 Bonn, Germany; tel: (+49-228) 8152800; fax: (+49-228) 8152899; e-mail: secretariat@unccd.de; Internet: <http://www.unccd.de>.

**AD HOC PANEL ON TRADITIONAL KNOWLEDGE:** Based on a CCD COP-2 decision, an *Ad Hoc* Panel convened in Matera, Italy from 15 – 18 July 1999 to identify successful experiences and conclusions relating to threats and other constraints confronting traditional knowledge, strategies for integrating traditional knowledge with modern knowledge and mechanisms for promoting and exchanging successful approaches. Jean-Claude Bomba (Central African Republic) chaired the meeting of ten experts.

The Panel's recommendations included the suggestion that the COP identify and support local processes of innovation in natural resource management and include them as starting points in the implementation of national action programmes. They suggested that the COP facilitate a compilation of research and information on traditional knowledge in databases and develop procedures for their compilation. The COP should develop and promote adequate methodologies and procedures that ensure action-oriented research is carried out as a truly horizontal dialogue to promote bottom-up development approaches to combating desertification. The COP could include farmer study and exchange visits on traditional knowledge and local innovations. The COP should also: monitor and follow-up the mechanisms by which reciprocity between traditional and modern knowledge is being addressed and promoted; evaluate how the networks created by the UNCCD are incorporating traditional knowledge; and reappoint the present panel to develop appropriate criteria, methodology and mechanisms for implementation of these activities.

**ANNEX IV COUNTRIES:** Ministers and focal points for the Annex IV countries (the Northern Mediterranean region) met in Lisbon, Portugal from 17 - 18 June 1999. Participants discussed the progress being made in their respective National Action Programmes. They also considered the elaboration of a Regional Action Programme, the enhancement of cooperation with other regions, and the approach of the European Union. An expert group was established to work on the preparation of Terms of Reference for the Annex IV Regional Action Programme. For more information contact:

CCD Secretariat, PO Box 260129, D-53153 Bonn, Germany; tel: (+49-228) 8152800; fax: (+49-228) 8152899; e-mail: secretariat@unccd.de; Internet: <http://www.unccd.de>.

**STAP WORKSHOP ON LAND DEGRADATION INTERLINKAGES:** The STAP Workshop on Land Degradation Interlinkages was held at the Department of Agronomy, University of Bologna, Italy from 14 - 16 June 1999. Forty independent experts and UN agency representatives including the GEF, UNEP, UNDP and CCD attended. The Workshop aimed at further delineating interlinkages of land degradation with GEF focal areas, particularly climate change, biodiversity and international water issues, with a view to increasing GEF's support to activities related to land degradation.

A working group on climate change elaborated "feed forwards" (impacts of land degradation on climate change) such as increase of carbon emissions/reduction of carbon storage, increase of surface roughness, increase of sensible temperature of ground surface and disorder of hydro-circulation, and feed backs (impacts of climate change on land degradation) such as increase of water evaporation, soil/wind/water erosion, flood/drought/extreme events/El Nino, and coastal degradation. The group also identified relevant interventions such as reforestation, revegetation, agroforestry, water resource management/irrigation, rationalization of water use, good agricultural management and provision of incentives, modern use of biomass as a substitute for fossil fuel, tree nursery, use of renewable energy as a substitute for fossil fuel and fuel woods, capacity building, education, awareness raising, waste recycling, land use monitoring, enabling policies and early warning systems.

A working group on biodiversity examined the formula under which the net loss of biodiversity caused by land degradation is calculated. They identified causes of land degradation, which range from overgrazing, over-cultivation, over-logging, water depletion, devegetation, mining, human settlement, soil toxication and salinization, and drivers of land degradation, such as population growth, shocks (natural disaster, war, etc), trade globalization, poverty, policy deficiency, technological deficiency, environmentally detrimental consumption and production patterns and tourism. Suggested interventions by the GEF include efforts to: improve the complexity of agro-ecosystem and tree planting, maintain pastoral eco-systems, improve policies and management strategies to conserve biodiversity in dry lands and reduce the pressure for climate change, and capacity building.

A working group on international water analyzed how to rectify deficiencies in the current system by: promoting proper regulations of water tables and water flows; conducting the proper assessment and analysis of water related projects and programmes going beyond mere cost-benefit analyses; increasing and maintaining vegetation coverage; improving water quality; promoting artificial recharge and discharge of water tables; mitigating drought; and promoting the integrity of ecosystems around international water basins.

Participants also reflected on earlier STAP meetings, including the 1996 Dakar Workshop, and noted that scientists have already proven and articulated the interlinkages between land degradation and the GEF focal areas. Therefore, some suggested that a policy decision will be needed to mainstream desertification/land degradation control projects in the GEF portfolio. For more information contact: CCD Secretariat, PO Box 260129, D-53153 Bonn, Germany; tel: (+49-228) 8152800; fax: (+49-228) 8152899; e-mail: secretariat@unccd.de; Internet: <http://www.unccd.de>.

**MAYORS FORUM:** On 11 - 12 June 1999 the City of Bonn, the City of Rome, the UNCCD Secretariat and IFAD convened the second "World Forum of Mayors on Cities and Desertification" in Bonn, Germany. As a follow up to the recommendations of the 1997 Rome Forum, over 100 mayors and local authorities mainly from affected developing countries gathered to send a clear message to national and international authorities on their potential role in combating desertification and called for more effective involvement in activities that directly deal with the implementation of the CCD.

Mayors discussed concrete initiatives such as private sector partnerships, international municipal know-how transfer and the participation of citizens in solving related problems. Participants addressed the issue of the "Interrelation between Cities and Desertification," then divided into two working groups on "Roles and responsibilities of cities and municipalities in territorial management" and "Project partnerships and awareness raising." Participants highlighted the need for better communication systems that would allow for sharing of experiences and know how, as well as for better access to basic information. They stressed that more awareness raising initiatives should be addressed to developed countries.

Proposals and discussions are included in the draft proposal of a Cities Against Desertification Programme (CADP). CADP aims to support cities in their fight against desertification and to strengthen the implementation at the local level of Agenda 21 (notably Chapter 12) and the UN Convention to Combat Desertification. Its objectives are to: promote partnerships between local authorities (South-South, North-South and North-North) to combat desertification; help local authorities to understand and to combat the underlying causes of desertification; promote and facilitate an exchange of information, knowledge and experiences, and technology among cities to combat desertification at the local level; and develop and test various instruments and procedures for combating desertification at the local level. For more information contact: CCD Secretariat, PO Box 260129, D-53153 Bonn, Germany; tel: (+49-228) 8152800; fax: (+49-228) 8152899; e-mail: secretariat@unccd.de; Internet: <http://www.unccd.de>.

## /WILDLIFE

**CITES:** The 15th meeting of the Animals Committee met from 5 - 9 July 1999 in Antananarivo, Madagascar. Agenda items included reports and reviews on resolutions regarding the transport of live animals, status of international trade in sharks species, ranching and trade in rashed specimens, conservation of sturgeons, and use of coded-microchips for marking live animals in trade. Participants also heard reports and reviews on decisions regarding crocodile tagging, specimens of animal species bred in captivity, trade in alien species, and trade in animal species used in traditional medicines. Among other issues, the Committee discussed in detail the possible approaches to its task of undertaking a periodic review of animal species included in the CITES appendices [in accordance with Resolution Conf. 9.1 (Rev.) Annex 2, paragraph v]. Participants agreed to review a number of the animal taxa currently included in the appendices. Certain Parties at the meeting agreed to carry out the review of certain species, although no Party volunteered to conduct the review for seven species. For these the Chairman of the Animals Committee awaits offers from Parties, in particular range States, to carry out the review. For more information contact the CITES Secretariat; tel: + (41 22) 917 8139; fax: + (41 22) 797 3417; e-mail: [cites@unep.ch](mailto:cites@unep.ch); Internet: <http://www.wcmc.org.uk/CITES>.

## /OCEANS AND COASTS

**TWENTIETH SESSION OF THE IOC ASSEMBLY:** The 20th Session of the IOC Assembly (IOC-XX) met in Paris, France from 29 June- 9 July 1999. The Executive Council met prior to the Assembly on 28 June 1999. During the Executive Council, a brief debate took place on the title of the Commission. The Council decided to recommend to the Assembly that a change to the name of the IOC was a relevant question that should be dealt with in a substantial manner in the future, however, it should not be one of the items for the present discussion of the changes to the statutes.

The IOC Assembly agenda included issues related to: ocean sciences, such as oceans and climate, oceans and global change, marine pollution research and monitoring, and ocean science in relation to living resources; ocean services, such as data and marine information management and ocean mapping; operational observing systems, such as the Global Ocean Observing System (GOOS) and Global Climate Observing System; regional activities; and cooperation with the UN and other international organizations. The IOC web site contains links to the reports presented during the Assembly at <http://ioc.unesco.org/ioc20/>.

**COASTAL ZONE 99:** The eleventh symposium in this series, Coastal Zone 99 (CZ99), met in San Diego, California, US from 24 - 30 July 1999. Approximately 1100 individuals from 40 countries participated. On each of the three main days of the Conference, participants commenced with a Plenary session, following which they broke into sessions that focused on one of the four major themes: the Human Dimension, the Ocean Realm, the Watershed Perspective and the Public Connection. Keynote speaker Janet Luhrs spoke on the keys to living a simpler, more fulfilling life. The CZ99 web site contains abstracts for the papers presented during the plenary and break-out sessions: <http://www.czconference.org>. For information contact: CZ99 Secretariat; University of Massachusetts; e-mail: [CZ99@umbsky.cc.umb.edu](mailto:CZ99@umbsky.cc.umb.edu); Internet: <http://omega.cc.umb.edu/~cz99>.

## /CHEMICAL MANAGEMENT

**THIRD SESSION OF THE POPs INTERGOVERNMENTAL NEGOTIATING COMMITTEE (INC):** The Third Session of the International Negotiating Committee (INC- 3) for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants (POPs) was held from 6-11 September 1999 in Geneva, Switzerland. Delegates from over 110 countries, as well as representatives from UN agencies, non-governmental organizations (NGOs), intergovernmental organizations (IGOs) and industry, convened to continue preparation of an international legally binding instrument on an initial list of 12 POPs grouped into three categories: 1) pesticides: aldrin, chlordane, DDT, dieldrin, endrin, heptachlor, mirex and toxaphene; 2) industrial chemicals: hexachlorobenzene and polychlorinated biphenyls (PCBs); and 3) unintended byproducts: dioxins and furans.

INC-3 made advances on language for articles on measures to reduce or eliminate releases, national implementation plans, the process for adding chemicals, and information exchange, and continued discussion on technical and financial assistance. It also made great strides in placing chemicals in the prohibition and restriction annexes. A legal drafting group completed text on 15 procedural articles of the convention. While INC-3 built upon the successes of INC-2, the pace of progress slowed a bit as divergent positions hindered

movement on several key issues such as obligations and technical and financial assistance. This change from INC-2 indicates that delegates have now shifted gears from discussing general concepts and framing the issues to negotiating the actual text of a future convention to manage, reduce and/or eliminate certain persistent organic pollutants. The Earth Negotiations Bulletin summary of the meeting can be found at: <http://www.iisd.ca/chemical/pops3/index.html>. For more information contact: Jim Willis, UNEP Chemicals; tel: + (41 22) 979-9111; fax: + (41 22) 797-3460; e-mail: [jwillis@unep.ch](mailto:jwillis@unep.ch).

**BASEL CONVENTION:** The *Ad Hoc* Working Group of Legal and Technical Experts to Consider and Develop a Draft Protocol on Liability and Compensation for Damage Resulting from Trans-boundary Movements of Hazardous Wastes and their Disposal held its tenth session from 30 August to 3 September 1999 in Geneva, Switzerland. Delegates from 87 countries gathered under the chairmanship of Perla de Alfaro of El Salvador in an effort to finalize the text of a Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal. The negotiations on the protocol began in 1993. A remaining outstanding issue concerns the creation of an emergency and compensatory fund to assist developing countries faced with unwanted wastes. For more information contact: the Secretariat; tel: + (41 22) 917 82 13; e-mail: [iwona.rummel-buliska@unep.ch](mailto:iwona.rummel-buliska@unep.ch).

**SIXTH SESSION OF THE INC FOR AN INTERNATIONAL LEGALLY BINDING INSTRUMENT FOR THE APPLICATION OF THE PRIOR INFORMED CONSENT PROCEDURE FOR CERTAIN HAZARDOUS CHEMICALS AND PESTICIDES IN INTERNATIONAL TRADE (PIC):** The sixth session of the Intergovernmental Negotiating Committee (INC-6) for an international legally binding instrument for the application of the prior informed consent (PIC) procedure for certain hazardous chemicals and pesticides in international trade was held from 12 - 16 July 1999 in Rome, Italy. The first meeting since the adoption of the Rotterdam Convention, INC-6 gathered approximately 300 delegates from 121 countries to address arrangements for the interim period prior to entry into force of the Convention and implementation of the interim PIC procedure. INC-6 resulted in the adoption of outline draft decisions on the definition and provisional adoption of PIC regions, the establishment of an interim Chemical Review Committee (ICRC) and the adoption of draft decision guidance documents (DGDs) for already identified chemicals. Delegates also considered the activities of the Secretariat during the interim period and their budgetary implications, preparations for the Conference of the Parties (COP), the status of signature and ratification of the Convention, the location of the Secretariat and issues arising out of the Conference of Plenipotentiaries, including support for implementation, dispute settlement, illicit trafficking, and responsibility and liability.

The resolution on interim procedures, adopted along with the Convention at the Conference of the Plenipotentiaries, allowed the INC to continue work on the modalities of operating the COP and has positioned the Convention for a "fast start." The success of INC-6 should provide a strong foundation for bringing the voluntary PIC procedure in line with the procedure as set out in the Convention and for encouraging ratification of the Convention. The complete Earth Negotiations Bulletin report can be found at: <http://www.iisd.ca/linkages/vol15/>.

**UNITAR/IFCS/IOMC THEMATIC WORKSHOP ON DEVELOPING AND STRENGTHENING NATIONAL LEGISLATION AND POLICIES FOR THE SOUND MANAGEMENT OF CHEMICALS:** The UNITAR/IFCS/IOMC Thematic Workshop on Developing and Strengthening National Legislation and Policies for the Sound Management of Chemicals took place in Geneva from 22 - 25 June 1999. Close to 100 representatives from developing and developed countries, countries with economies in transition, international organizations and non-governmental groups convened in Geneva, Switzerland to discuss main challenges and opportunities in developing and implementing chemicals legislation and policies for the sound management of chemicals. The event was the third in a series of workshops on selected priority topics of chemicals management capacity building and was organized in response to recommendations issued by the Intergovernmental Forum on Chemical Safety (IFCS) calling for enhanced capacity building in the area of chemical legislation and policies.

The workshop underlined that, although countries have made considerable progress in developing legislative schemes for chemicals, especially for pesticides, considerable challenges remain. These include: existing legislative schemes that are fragmented and sectoral in nature, often reflecting sectoral approaches taken at the international level; gaps, overlaps and inconsistencies among existing laws and regulations; insufficient information exchange and co-ordination among responsible ministries/agencies; lack of implementation and enforcement of existing laws; low levels of awareness among relevant officials, the regulated community and the public; and lack of the human and other resources needed for effective legislative development and implementation.

The workshop encouraged countries to strengthen their legal and policy frameworks for chemicals management in a manner that meets national needs and circumstances while at the same time taking into account relevant international policy initiatives, as well as lessons learned in other countries. Creating simple and flexible laws that allow for adaptation as circumstances change was a key recommendation in this regard. The group also discussed the types of policies that countries might consider when strengthening their national regulatory schemes and the processes through which countries seek to improve their laws and policies. For additional information contact: Achim Halpaap, Senior Programme Coordinator, UNITAR; e-mail: [achim.halpaap@unitar.org](mailto:achim.halpaap@unitar.org); tel: + (41 22) 917 8525; fax: + (41 22) 917 8047; Internet: <http://www.unitar.org/cwm/>.

**SECOND SESSION OF THE CRITERIA EXPERT GROUP FOR PERSISTENT ORGANIC POLLUTANTS:** The second session of the Criteria Expert Group (CEG-2) for persistent organic pollutants (POPs) met from 14 - 18 June 1999 at the Vienna International Center. Approximately 140 participants representing 60 countries attended the meeting to build upon the work of CEG-1 in the development of scientific criteria and a procedural process for adding other POPs to the initial list of 12 identified for global action. Delegates to CEG-2 succeeded in completing their work in two rather than three sessions, well ahead of their deadline, as agreement was quickly reached on many key issues. The final report was forwarded to the third session of the Intergovernmental Negotiating Committee for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants (INC-3), which met from 6 - 11 September 1999 in Geneva. The complete Earth Negotiations Bulletin report can be found at: <http://www.iisd.ca/linkages/vol15/>.

## /INTERNATIONAL ORGANIZATIONS

**INTERNATIONAL CONFERENCE ON SYNERGIES AND COORDINATION BETWEEN MULTILATERAL ENVIRONMENTAL AGREEMENTS:** "Inter-Linkages -- the International Conference on Synergies and Coordination between Multilateral Environmental Agreements" (MEAs) took place from 14 - 16 July 1999 at the United Nations University (UNU) Centre in Tokyo, Japan. The conference, organized by UNU in cooperation with the Global Environment Information Centre (GEIC), the UNU Institute of Advanced Studies (UNU/IAS) and the United Nations Environment Programme (UNEP), was attended by approximately 300 participants, including representatives of MEA secretariats, governments, the academic and scientific community, and intergovernmental and non-governmental organizations.

The UNU and its partners convened the conference to assist in the development of a synergistic and coordinated approach to environmental policy making that takes into account existing inter-linkages between environmental issues. The objectives of the conference were to: create awareness at the public, governmental and intergovernmental levels of the importance of synergies and coordination between MEAs; survey existing initiatives; foster discussion and interaction among international institutions, scholars and other relevant stakeholders who can cooperate to identify and examine opportunities; and identify concrete mechanisms, next steps and feasible win-win paths forward on this important issue. The conference's main outcome was a series of recommendations on the promotion of inter-linkages between MEAs in the areas of harmonization of information systems and information exchanges, finance, issue management, scientific mechanisms, and synergies for sustainable development. The complete Sustainable Developments report can be found at: <http://www.iisd.ca/sd/interlinkages/>.

**WORLD BANK FORUM ON ENVIRONMENTALLY AND SOCIALLY SUSTAINABLE DEVELOPMENT: A CONVERSATION WITH EUROPEAN GOVERNMENT PARTNERS:** Thirty-eight representatives from European government agencies concerned with the environment, international development cooperation and finance met informally on 8 June 1999 with the vice president and senior managers of the Environmentally and Socially Sustainable Development (ESSD) Network of the World Bank to discuss sustainable development issues. The forum's objective was to initiate an informal dialogue between the World Bank and interested European government partners on the Bank's work programs and strategic planning efforts related to sustainable development. The day-long forum, the first of its kind, took place at the Bank's European Office in Paris. Ian Johnson, Vice President and Head of the Bank's ESSD Network, organized and chaired the meeting, which was attended by senior government officials from Austria, Belgium, Denmark, Finland, France, Germany, Italy, Luxembourg, Switzerland, the United Kingdom and the Organization for Economic Cooperation and Development.

Participants met in plenary and heard four presentations by senior representatives of the World Bank's ESSD Network, which encompasses rural and social development and the environment. Wide-ranging discussions following each presentation identified numerous areas of mutual concern. Participants emphasized the need to improve linkages between the Bank's country-level work and the political side of development, especially in the context of UN fora. Although their deliberations on environment and biodiversity were not conclusive, participants noted the importance of tackling the

linkages between effective natural resource management and macroeconomic management. Bank organizers and European invitees left the meeting with plans to meet annually to advance common agendas in an informal setting. The Bank plans to host another senior-level forum on sustainable development in Europe in June 2000. The complete Sustainable Developments report can be found at: <http://www.iisd.ca/sd/essd/>.

**INTERNATIONAL LABOR ORGANIZATION:** The 87th ILO General Conference met from 1 - 17 June 1999 in Geneva, Switzerland. The Conference unanimously adopted the Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour. The Conference also adopted a Resolution against Myanmar for consistent violations of the Forced Labour Convention and failure to respond to repeated rulings by supervisory bodies to put an end to forced labor, a practice which an ILO Commission of Inquiry found to be widespread in the country. Regarding migrant workers, the Conference concluded that it was necessary to review existing international labor standards, and possibly revise them, to provide adequate protection in this area. The Conference also approved as general conclusions, with a view to the consultation of Governments, proposals to revise the Maternity Protection Convention and Maternity Recommendation. These revisions will be on the agenda of the next ordinary session for a second discussion, with a view to their adoption. The proposed changes address issues such as scope of application, maternity leave and additional leave in case of illness due to complications in connection with pregnancy or confinement, and medical benefits. For information contact: Official Relations Branch, ILO; tel: + (41 22) 799-7732; fax: + (41 22) 799 8944; e-mail: [RELOFF@ilo.org](mailto:RELOFF@ilo.org); Internet: <http://www.ilo.org/public/english/10ilc/ilc87/index.htm>.

## /POPULATION

**THE 21ST SPECIAL SESSION OF THE GENERAL ASSEMBLY FOR THE REVIEW AND APPRAISAL OF IMPLEMENTATION OF THE PROGRAMME FOR ACTION OF THE CONFERENCE ON POPULATION AND DEVELOPMENT (ICPD+5):** The 21st Special Session of the UN General Assembly took place at UN headquarters in New York from 30 June to 2 July 1999, five years after the historic International Conference on Population and Development (ICPD) in Cairo. Delegates at the 21st Special Session undertook an overall review and appraisal of implementation of the Programme of Action (POA) of the ICPD.

During the course of the three-day Special Session, 159 high-level government officials delivered statements on the review and appraisal of POA implementation in Plenary sessions in the General Assembly Hall. An *Ad Hoc Committee of the Whole* (COW) was established to hear statements from UN specialized agencies and intergovernmental and non-governmental organizations (NGOs) and to complete negotiations on the document containing key actions for the further implementation of the ICPD POA. This document, "Key Actions for the Further Implementation of the ICPD," sets out a series of recommendations on population and development concerns, gender equality, equity and empowerment of women, reproductive rights and reproductive health, partnerships and collaborations, and mobilizing resources. The complete Earth Negotiations report can be found at: <http://www.iisd.ca/linkages/vol06/>.

## /WOMEN

**CEDAW:** The 21th Session of the Committee on the Elimination of Discrimination Against Women (CEDAW) met from 7 - 25 June 1999 in New York, US. Comprised of 23 experts serving in their individual capacities, the Committee monitors implementation of the Convention on the Elimination of All Forms of Discrimination against Women. The Committee evaluated progress made by seven States parties to the treaty. Initial reports of Georgia and Nepal were considered, as well as the combined initial and second reports of Belize. The second and third periodic reports of Chile, the combined second and third periodic reports of Ireland, and the third and fourth periodic reports of Spain and the UK were also reviewed. In addition, the Committee heard country-specific information from non-governmental organizations (NGOs). In addition to the country reports, the Committee considered a note from the Secretary-General on reports from specialized agencies on the implementation of the Convention in areas falling within the scope of their activities and reports of the Food and Agriculture Organization (FAO), the World Health Organization (WHO), and the United Nations Educational, Scientific and Cultural Organization (UNESCO). It also considered a report of the Secretariat on ways and means of improving its work. Links to the country reports and CEDAW's proceedings can be found at: <http://www.un.org/womenwatch/daw/cedaw/21sess.htm>.

For more information contact: Women's Rights Unit, DAW, Room DC2-1226, UN, New York, NY 10017, USA; fax: +1 (212) 963-3463; e-mail: [connorsj@un.org](mailto:connorsj@un.org); Internet: <http://www.un.org/womenwatch/daw/cedaw/committ.htm>.

## /SOCIAL DEVELOPMENT

**COPENHAGEN + 5:** The Preparatory Committee for the Special Session of the General Assembly on the Implementation of the Outcome of the WSSD and Further Initiatives held its first substantive session in New York from 17 - 28 May 1999. Representatives from UN Member countries, observers and international and non-governmental organizations attended the session. Participants discussed draft decisions on the role of the United Nations System, further preparations and arrangements for the Special Session, and accreditation of non-governmental organizations and their participation in the Special Session. They also considered a proposed outcome that the Chair of the Preparatory Committee presented. This proposal contained three parts: a reaffirmation of Copenhagen, which could form the basis for the text to be adopted at the Special Session; a review and assessment of implementation, which was considered by the May 1999 meeting, recognizing that a comprehensive review would only be possible when national reports had been received; and further initiatives for inclusion in the outcome of the Special Session, which could be elaborated by the second substantive Prep Com in April 2000. Documents from this Prep Com can be found at <http://www.un.org/esa/socdev/prep1int.htm#IS1>. The Chair's proposed outcome is annotated with revisions that participants proposed. The second session will be held from 3 - 14 April 2000. For more information contact: Secretariat of the UN Commission for Social Development; tel: +1 (212) 963-6763; fax: +1 (212) 963-3062; e-mail: [ngoran@un.org](mailto:ngoran@un.org); Internet: <http://www.un.org/esa/socdev/wssd.htm>.

# /linkages/journal/



## /UPCOMING

## /SUSTAINABLE DEVELOPMENT

**LEADERSHIP CONFERENCE - BIOMEDICAL RESEARCH AND THE ENVIRONMENT:** This Conference will meet from 1 - 2 November 1999 at the National Institutes of Health, Bethesda, Maryland, US. The meeting will be convened by the National Association of Physicians for the Environment, Association of Higher Education Facilities Officers, National Institute of Environmental Health Sciences, and the Environmental Protection Agency. For more information contact: NAPE; tel: +1 (301) 571-9790; fax: +1 (301) 530-8910; e-mail: [nape@napanet.org](mailto:nape@napanet.org); Internet: <http://www.napanet.org/>.

**GREENING 99:** The eighth international conference of the Greening of Industry Network will convene in Chapel Hill, North Carolina, US from 14 - 17 November 1999. "Sustainability: Ways of Knowing/Ways of Acting" will be hosted by the Kenan-Flagler Business School, University of North Carolina. For information contact: Kurt Fischer, Clark University; tel: +1 (508) 751-4607; fax: +1 (508) 751-4600; e-mail: [greening99@unc.edu](mailto:greening99@unc.edu); Internet: <http://greening99.bschool.unc.edu>.

**SUSTAINABLE COMMUNITIES AND LOCAL AGENDA 21:** This meeting will convene from 14 - 19 November 1999 in Nottingham, UK. For information contact: International Seminars, 1Beaumont Place, Oxford OX1 2PJ, UK; tel: +44-1865-316-636; fax: +44-1865-557-368; e-mail: [rachel.lippe@britcoun.org](mailto:rachel.lippe@britcoun.org); Internet: <http://www.britcoun.org/seminars/>.

**FIRST INTERNATIONAL ENVIRONMENTAL TECHNOLOGY CONFERENCE FOR SUSTAINABLE DEVELOPMENT OF THE EU ACCESSION COUNTRIES:** This meeting will be held in Budapest, Hungary, on 18 November 1999. The subject of the first Conference will be "Water and Waste Management: A New Boost for the Eco-Industries in Central Europe" For information contact: G. Edward Someus, TDT-3R; tel: + (36-20) 980 6996; fax: + (36-1) 228 6045; e-mail: [edward@mail.inext.hu](mailto:edward@mail.inext.hu).

**ENVIRONMENT AND TOURISM: THE BLACK SEA INTERNATIONAL CONFERENCE ON NATURE PROTECTION AND TOURISM - STRATEGIES FOR SUSTAINABLE DEVELOPMENT:** This meeting will convene from 20 - 27 November 1999 in Foros, Sevastopol, Ukraine. For information e-mail: [shadrm@fossil.ukrcom.sebastopol.ua](mailto:shadrm@fossil.ukrcom.sebastopol.ua).

**WORLD COMMISSION ON DAMS:** The third WCD Consultation for Africa and the Middle East is tentatively scheduled to be held in Cairo, Egypt on 8 - 9 December 1999. This Consultation will be supported by UNEP as part of a broader partnership on a range of issues of mutual interest. For information contact: Ms. Saneeya Hussain; World Commission on Dams, 5<sup>th</sup> Floor Hycastle House, 58, Loop Street, PO Box 16002, Vlaeberg, Cape Town 8018, South Africa; tel: +27 21 426 4000; e-mail: [shussain@dams.org](mailto:shussain@dams.org); Internet: <http://www.dams.org/>.

**AD HOC OPEN-ENDED GROUP OF EXPERTS ON ENERGY AND SUSTAINABLE DEVELOPMENT:** The Ad-Hoc Open-Ended Group of Experts on Energy and Sustainable Development will meet from 6-10 March in New York. For more information contact: Leticia Silverio, Coordinator, 2 UN Plaza - Rm. DC2-2202, New York, N.Y. 10017, USA; tel: +1 212-963-4670; fax: +1-212-963-4260; e-mail: silveriol@un.org

**INTERNATIONAL LANDCARE CONFERENCE:** The International Landcare Conference will meet in March 2000 in Melbourne, Australia. For information contact: Joanne Safstrom; tel: +61-3-9412-4382; fax: +61-3-9412-4442; e-mail: j.safstrom@dce.vic.gov.au

**SECOND WATER FORUM AND MINISTERIAL CONFERENCE:** The World Water Council's Second World Water Forum, hosted by the Netherlands in the Hague, will meet from 17 - 22 March 2000. For information contact: Ministry of Foreign Affairs, P.O Box 20061, 2500 EB the Hague, the Netherlands; tel: +31-70-348-5402; fax: +31-70-348-6792; e-mail: hans.van.zijst@dml.minbuza.nl; Internet: <http://www.worldwaterforum.org>.

**EIGHTH SESSION OF THE COMMISSION ON SUSTAINABLE DEVELOPMENT:** CSD-8 will meet in New York, US from 24 April to 5 May 2000 to consider integrated planning and management of land resources, agriculture, and financial resources/trade and investment/economic growth. The CSD *Ad Hoc* Intersessional Working Groups will meet in New York from 22 February to 3 March 2000. For information contact: Andrey Vasilyev, Division for Sustainable Development; tel: +1-212-963-5949; fax: +1-212-963-4260; e-mail: vasilyev@un.org; Internet: <http://www.un.org/esa/sustdev/>. For major group information, contact Zehra Aydin-Sidos, Division for Sustainable Development; tel: +1-212-963-8811; fax: +1-212-963- 1267; e-mail: aydin@un.org.

**URBAN 21:** This Global Conference, to be held in July 2000, is one of the key elements of the Global Initiative on Sustainable Development sponsored by Brazil, Germany, Singapore and South Africa. For information contact: Federal Office for Building and Regional Planning, Am Michaelshof 8, D - 53177 Bonn, Germany; fax: +49-228-82 63 15; e-mail: info@urban21.de; Internet: <http://www.urban21.de>.

**WORLD CONGRESS ON MANAGING AND MEASURING SUSTAINABLE DEVELOPMENT:** From August 17 to 22 in Kananaskis Village, Canada. Contact: The Society for World SustainableDevelopment, Germain Dufour; Tel: +1-403-265-3404; E-mail: gdufour@globalcommunitywebnet.com

**2ND ENVIRONMENTAL CONFERENCE ON INDUSTRY AND ENVIRONMENTAL PERFORMANCE, EURO ENVIRONMENT 2000:** To be held in Aalborg, Denmark, 18 - 20 October 2000. The 1st announcement is available on the Internet at <http://www.akkc.dk/environment>. For further information please contact the EURO ENVIRONMENT 2000 secretariat at: Aalborg Congress & Culture Centre, Mrs. Else Herfort or Mr. Steffen L. Thomsen, EURO ENVIRONMENT secretariat P.O.Box 149 DK-9100 Aalborg. Phone: +45 99 35 55 55 Fax: +45 99 35 55 80. E-mail: euro@akkc.dk; Internet: <http://www.akkc.dk/environment>

## **/TRADE AND ENVIRONMENT**

**COUNCIL FOR TRIPS:** This meeting will convene from 23 - 24 November 1999 in Geneva, Switzerland. For information con-

tact: WTO; tel: +41-22-739-5111; fax: +41-22-739-5458; Internet: <http://www.wto.org/wto/about/yearmt.htm>.

**GLOBALIZATION, ECOLOGY AND ECONOMY: BRIDGING WORLDS:** This meeting will be held from 24 - 25 November 1999 in Tilburg, the Netherlands. For information contact: ECNC and Globus/IUCN; tel: +31-13-466-3240; fax: +31-13-466-3250; e-mail: ecnc@ecn.nl; Internet: <http://www.ecnc.nl/doc/enc/meetings.html>.

**WTO THIRD MINISTERIAL MEETING:** The Third WTO Ministerial Meeting will be held from 30 November to 3 December 1999 in Seattle, Washington, US. For information contact: Claude Trolliet, WTO; tel: + (41-22) 739-5589; Internet: <http://www.wto.org/>.

## **/CLIMATE AND ATMOSPHERE**

**MONTREAL PROTOCOL MEETING OF THE PARTIES:** The 11th Meeting of the Parties to the Montreal Protocol will be held in Beijing, China from 29 November to 3 December 1999. For information contact: Secretariat; tel: + (254-2) 62-1234; fax: + (254-2) 62-3601; e-mail: ozoneinfo@unep.org; Internet: <http://www.unep.org/ozone/>.

**WORLD CLEAN ENERGY CONFERENCE (WCEC 2000):** WCEC 2000 will be held at the Geneva International Conference Center from 24 - 28 January 2000. For information contact: WCEC Conference Secretariat, POB 928, CH-8055 Zurich; tel: +41-463-9252, fax +41-463-0252, e-mail: icecag@zirk.ch.

**12TH REGIONAL CENTRAL EUROPEAN CONFERENCE IUAPPA (INTERNATIONAL UNION OF AIR POLLUTION PREVENTION AND ENVIRONMENTAL PROTECTION ASSOCIATIONS) AND 4TH INTERNATIONAL CONFERENCE ON "ENVIRONMENTAL IMPACT ASSESSMENT"** will take place on 11-14 September 2000 in Prague, Czech Republic. The web address of the Conference is: <http://congress.cls.cz/iuappa2000/> and address of the Conference Secretariat: Czech Medical Association J. E. Purkyne, P.O.Box 88, Sokolska 31, 120 26 Prague 2, Czech Republic; tel: +420-2-297271, 2421 6836, fax: +420-2-294610, 2421 6836 e-mail: senderova@cls.cz

## **/BIODIVERSITY**

**WORLD INTELLECTUAL PROPERTY ORGANIZATION MEETING ON BIODIVERSITY AND THE CONVENTION ON BIOLOGICAL DIVERSITY:** This meeting will convene from 8 - 10 November 1999 in Geneva, Switzerland. For information see <http://www.wipo.org>.

**3RD ANNUAL EUROPEAN BIOTECHNOLOGY BUSINESS CONGRESS-BIOTECHNOLOGY FOR ECONOMIC GROWTH AND IMPROVED QUALITY OF LIFE:** This meeting will convene from 16 - 19 November 1999 in Munich, Germany. For information contact: EuropaBio '99; tel: +32-2-735-0313; fax: +32-2-735-4960; e-mail: mail@europa-bio.be; Internet: <http://www.europa-bio.be>.

**NORTHERN DIMENSION TO BIODIVERSITY: FROM ARTIC TO BOREAL SYSTEMS:** This meeting will convene in Ivalo, Finland from 20 - 23 November 1999. For information contact: Kerstin Stendahl-Rechardt, Academy of Finland, PO Box 99, Dept. of Biology, Fin-00501, Helsinki, Finland; tel:

+358-9-774-881; e-mail: ksl@aka.fi; Internet:  
<http://www.ettnet.se/~ewgrb/north.html>.

**RECOMBINANT GENE PRODUCTS: EXPRESSION TECHNOLOGIES:** This meeting will convene from November 22 to December 3 1999 in New Dehli, India. For information contact: ICGEB; tel: +91-11-616-7356; fax: +91-11-616-2316; e-mail: chatterj@icgeb.res.in.

**OECD CONFERENCE ON THE AGRICULTURAL KNOWLEDGE SYSTEM (AKS):** The OECD Directorate for Food, Agriculture and Fisheries will hold the Second Joint Conference of Directors and Representatives of Agricultural Research, Extension, and Higher Education in Paris from 10 - 13 January 2000. The second conference will discuss ways and means by which the AKS could further increase its efficiency and effectiveness in addressing emerging new and more complex tasks through coordinated actions. For information contact: Secretariat; fax: + 33 (1) 44-30-61-16; e-mail: Ferdinand.Kuba@oecd.org; Internet: <http://www.oecd.org/agr/aks/index.htm>.

**BIOSAFETY NEGOTIATIONS AND RESUMED EX-COP:** The Informal Consultations on a Biosafety Protocol will be held in Montreal, Canada from 20-22 January 2000. The Resumed Session on the First Extraordinary Meeting of the COP to Finalize and Adopt a Protocol on Biosafety will be held from 24-28 January 2000. For information contact: CBD Secretariat; World Trade Center, 393 Jacques St., Suite 300, Montreal, Quebec, Canada H2Y 1N9; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: secretariat@biodiv.org; Internet: <http://www.biodiv.org>.

**AD HOC WORKING GROUP ON ARTICLE 8(J):** The Ad Hoc Working Group on Article 8(j) will meet in Montreal, Canada from 21-25 February 2000 in Sevilla, Spain. For information contact: CBD Secretariat; World Trade Center, 393 Jacques St., Suite 300, Montreal, Quebec, Canada H2Y 1N9; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: secretariat@biodiv.org; Internet: <http://www.biodiv.org>.

**FIFTH MEETING OF SBSTTA:** SBSTTA-5 will meet Montreal, Canada from 31 January to 4 February 2000. For information contact: CBD Secretariat; World Trade Center, 393 St. Jacques Street, Suite 300, Montreal, Quebec, Canada H2Y 1N9; tel: +1 (514) 288-2220; fax: +1 (514) 288-6588; e-mail: chm@biodiv.org; Internet: <http://www.biodiv.org>.

**INTERNATIONAL CONFERENCE ON THE CONSERVATION OF BIODIVERSITY IN ARID REGIONS:** This Conference will meet from 27 - 29 March 2000 in Kuwait. For information contact: Mohammad Al-Sarawi, Chairman, PO Box 24395, Safat, Kuwait 13104; tel: +965-565-0554; fax: +965-565-3328; e-mail: muna@epa.org.kw.

**FIFTH MEETING OF THE COP:** The Fifth Meeting of the Conference of the Parties (COP-5) will be held in Nairobi, Kenya from 15 - 26 May 2000. For information contact: CBD Secretariat; World Trade Center, 393 St. Jacques Street, Suite 300, Montreal, Quebec, Canada H2Y 1N9; tel: +1-514-288-2220; fax: +1-514-288-6588; e-mail: chm@biodiv.org; Internet: <http://www.biodiv.org>.

**WORLD BOTANIC GARDENS CONGRESS 6TH INTERNATIONAL BOTANIC GARDENS CONSERVATION CONGRESS:** To be held in Asheville, NC, USA, on June 26 - 30. Contact: Nan Guthrie, Congress Coordinator, 100 Frederick Law Olmsted Way, Asheville, NC28806-9315, USA; tel: +1-828-665 2492; fax: +1-828-665-2371.

**BIOTECHNOLOGY 2000- 11TH INTERNATIONAL BIOTECHNOLOGY SYMPOSIUM:** This meeting will be held from 3-8 September in Berlin, Germany. For more information contact: USDA; Internet: <http://www.agnic.org/mtg/2000.html>

**PARTNERSHIPS FOR PEOPLE & PLANTS 1ST EUROPEAN BOTANIC GARDEN EDUCATION CONGRESS:** Birmingham, UK, October 13 - 17. Contact: BGCI, Descanso House, 199 Kew Road, Richmond, Surrey TW9 3BW, UK; Tel: + 44 (020) 8332 5953/4; fax: +44 (020) 8322 5956; e-mail: bgci@rbgkew.org.uk

## /FORESTS

**COSTA RICA-CANADIAN INITIATIVE:** The final meeting of the Initiative will be held 6 - 10 December 1999 in Ottawa, Canada. For information contact: Guido Chaves, MINAE-SINAC, Apdo. 10104- 1000, San José, Costa Rica; tel: +506-283-7654; fax: +506-283- 7118; e-mail: guidocha@ns.minae.go.cr; or Michael Fullerton, Policy, Planning and International Affairs Branch, Canadian Forest Service, Department of Natural Resources, 580 Booth Street, 8th Floor, Ottawa, Ontario, Canada K1A 0E4; tel: +1-613-943-5258; fax: +1-613-947-9033; e-mail: mfullert@nrcan.gc.ca; Internet: <http://www.nrcan.gc.ca/cfs/crc>.

**27TH SESSION OF THE INTERNATIONAL TROPICAL TIMBER COUNCIL (ITTC):** This meeting will take place from 1 - 6 November 1999 in Yokohama, Japan. For information contact: International Tropical Timber Organization; e-mail: info@itto.or.jp; Internet: <http://www.transport.com/~leje/itto.html>.

**EXPERT CONSULTATION ON TROPICAL FORESTRY RESEARCH:** The Expert Consultation on Tropical Forestry Research is scheduled to be held in Curitiba, Brazil on 30 November 1999. For information contact: Oudara Souvannavong; e-mail: oudara.souvannavong@fao.org.

**SEMINAR ON PRACTICAL TRADE-RELATED ASPECTS OF SFM:** This seminar, sponsored by Brazil in cooperation with UNCTAD and ITTO, will take place in Geneva at a date to be determined. For information contact: David Elliot, UNCTAD; e-mail: david.elliott@unctad.org; or Maria Nazareth Farani Azevedo, Brazilian Mission to the United Nations, Geneva; tel: +41-22-929-0913; fax: +41-22-78-2506; e-mail: lele@itu.ch.

**INTERGOVERNMENTAL FORUM ON FORESTS:** IFF-4 is scheduled to meet from 31 January to 11 February 2000 in New York. For information contact: IFF Secretariat, Two United Nations Plaza, 12th Floor, New York, NY 10017, US; tel: +1-212-963-6208; fax: +1-212-963-3463; Internet: <http://www.un.org/esa/sustdev/iff.htm>.

**28TH SESSION OF THE INTERNATIONAL TROPICAL TIMBER COUNCIL:** This meeting will take place from 24 - 30 May 2000 in Lima, Peru. For information contact: International Tropical Timber Organization; e-mail: info@itto.or.jp; Internet: <http://www.transport.com/~leje/itto.html>.

**FOREST PRODUCTS SOCIETY:** The 54<sup>th</sup> Annual Meeting of the Forest Products Society will convene from 18 - 21 June 2000 at Harveys Resort Hotel and Casino, Lake Tahoe, Nevada, US. For information contact: Forest Products Society; tel: +1 (608) 231-1361; fax: +1 (608) 231-2152; e-mail: info@forestprod.org; Internet: <http://www.forestprod.org/conf.html> or <http://www.ucfpl.ucop.edu/fps2000.htm>.

**XXI IUFRO WORLD CONGRESS:** The IUFRO World Congress will be held in Kuala Lumpur, Malaysia from 7 - 12 August 2000. For information see <http://iufro.boku.ac.at/iufro/congress/>

## /DESERTIFICATION

For more information on the following meetings contact: the CCD Secretariat, P.O. Box 260129, D-53153 Bonn, Germany; tel: (+49-228) 8152800; fax: (+49-228) 8152899; e-mail: [secretariat@unccd.de](mailto:secretariat@unccd.de); Internet: <http://www.unccd.de>.

**THIRD SESSION OF THE CONFERENCE OF THE PARTIES TO THE CCD:** COP-3 will convene in Recife, Brazil from 15 - 26 November 1999.

**THIRD CONFERENCE ON DESERTIFICATION AND ENVIRONMENTAL STUDIES:** This Conference will convene in Saudi Arabia from 30 November to 4 December 1999.

**THIRD AFRO-ASIAN FORUM ON INTERREGIONAL CO-OPERATION FOR THE IMPLEMENTATION OF THE CCD:** This Forum is scheduled to convene in January 2000.

**SECOND AFRICAN – LATIN AMERICAN AND CARIBBEAN FORUM ON IMPLEMENTATION OF THE CCD:** This Forum is scheduled to meet in February 2000 in Bamako, Mali.

**COMBATING DESERTIFICATION WITH PLANTS:** This meeting will convene from 1 - 5 November 1999 in Beer Sheva, Israel. For information contact: Arnie Schlissel, IPALAC - International Program for Arid Land Crops, c/o Ben-Gurion University of the Negev, PO Box 653, Beer Sheva, Israel 84105; tel: +972-7-646-1905; fax: +972-7-647-2984; e-mail: [ipalac@bgu-mail.bgu.ac](mailto:ipalac@bgu-mail.bgu.ac).

**DESERT FISHES COUNCIL MEETING:** This meeting will convene from 14 - 18 November 1999 in Ciudad Victoria, Tamaulipas, Mexico. For information see <http://www.utexas.edu/depts/tnhc/www/fish/dfc/>.

**INTERNATIONAL SYMPOSIUM ON SUSTAINABLE DEVELOPMENT IN SEMI-ARID REGIONS (WORLD SEMI-ARID'99):** This Symposium will meet in João Pessoa, Paraíba, Brazil from 29 November to 2 December 1999. For information contact: Dorival C. Bruni, President of BIOSFERA; Brazilian Society for the Environment (BIOSFERA), P.O. Box 2432, Rio de Janeiro, RJ, CEP, 20001-970; tel/fax: (+55 21) 221-0155/ 2217626; tel: (+55 21) 252-1631; e-mail: [biosfera@biosfera.com.br](mailto:biosfera@biosfera.com.br); Internet: [www.biosfera.com.br](http://www.biosfera.com.br).

**CONFERENCE ON LAND STEWARDSHIP IN THE 21<sup>ST</sup> CENTURY- CONTRIBUTIONS OF WATERSHED MANAGEMENT:** This Conference will meet from 13 - 16 March 2000 in Tucson, Arizona, US. For information see <http://www.agnic.org/mtg/2000.html>.

**INTERNATIONAL CONFERENCE ON THE CONSERVATION OF BIODIVERSITY IN ARID REGIONS:** This meeting will be held from 27-29 March 2000, Kuwait. Contact: Mohammad Al-Sarawi, Chairman, PO Box 24395, Safat, Kuwait 13104; Tel: +965-565-0554; Fax: +965-565-3328; E-mail: [muna@epa.org.kw](mailto:muna@epa.org.kw).

## /WETLANDS

**4TH INTERNATIONAL CONFERENCE ON MEDITERRANEAN COASTAL ENVIRONMENT:** This meeting will be held from 2 - 6 November 1999 in Antalya, Turkey. For information

contact: Ramsar Convention Bureau; tel: +41 22 999 0170; fax: +41 22 999 0169; e-mail: [ramsar@ramsar.org](mailto:ramsar@ramsar.org); Internet: [www.iucn.org/themes/ramsar/meetings.htm](http://www.iucn.org/themes/ramsar/meetings.htm).

**WETLANDS FOR WASTEWATER RECYCLING:** This meeting will convene from 3 - 5 November 1999 in Baltimore, MD, US. For information contact: Environmental Concern Inc., PO Box P, St. Michaels, MD 21663, US; tel: +1 410 745 9620; fax: +1 410 745 4066; e-mail: [educate@wetland.org](mailto:educate@wetland.org); Internet: <http://www.wetland.org/conference.htm>.

**WETLANDS AND REMEDIATION:** This International Conference will be held in Salt Lake City, Utah, US, from 16 - 17 November 1999. For information contact: Karl Nehring, Battelle, +1 (614) 424-6510; e-mail: [nehringk@battelle.org](mailto:nehringk@battelle.org); Internet: [http://www.wetlands.agro.nl/news/wetl\\_news\\_1999feb8a.html](http://www.wetlands.agro.nl/news/wetl_news_1999feb8a.html)

**MILLENIUM WETLAND EVENT:** The Millennium Wetland Event will consist of meetings by four associations from 6 - 12 August 2000 in Quebec, Canada. The 9th International Mire Conservation Group (IMCG) Field Symposium, Congress and Conference will gather under the theme "Implementing the Ramsar Global Action Plan for Peatlands (GAPP)." The International Association of Ecology's (INTECOL) 6th International Wetland Symposium has selected the theme of "Global Wetlands at the Millennium." The Society of Wetland Scientists (SWS) will hold its 21st Annual Conference and the International Peat Society will discuss "Sustaining our Peatlands." For information contact: Elizabeth MacKay, c/o CQVB; tel: +1 (418) 657-3853; fax: +1 (418) 657-7934; e-mail: [cqvb@cqvb.qc.ca](mailto:cqvb@cqvb.qc.ca); Internet: [www.cqvb.qc.ca/wetland2000](http://www.cqvb.qc.ca/wetland2000).

**RAMSAR CONVENTION ON WETLANDS:** COP-8 is scheduled to convene in Spain in 2002. For information contact: Ramsar Secretariat, Rue Mauverney 28, CH-1196, Gland, Switzerland; tel: +41-22-999-0170; fax: +41-22-999-0169; e-mail: [ramsar@ramsar.org](mailto:ramsar@ramsar.org); Internet: <http://www.ramsar.org>.

## /WILDLIFE

**CONVENTION ON MIGRATORY SPECIES:** The CMS Scientific Council will meet from 4 - 6 November 1999 and the CMS Conference of the Parties (COP-6) will be held from 10 - 16 November 1999 in Cape Town, South Africa. For information contact: UNEP/CMS Secretariat, Bonn, Germany; tel: (+49 228) 815 2401/2; fax: (+49 228) 815 2449; e-mail: [cms@unep.de](mailto:cms@unep.de); Internet: <http://www.wcmc.org.uk/cms/>.

**CITIES:** CITES COP-11 is scheduled for 10 - 20 April 2000 in Nairobi, Kenya. For information contact: CITES Secretariat; tel: + (41 22) 917 8139; fax: + (41 22) 797 3417; e-mail: [cites@unep.ch](mailto:cites@unep.ch); Internet: <http://www.wcmc.org.uk/CITES>.

## /OCEANS AND COASTS

**INTERNATIONAL CONFERENCE ON SUSTAINABLE MANAGEMENT OF COASTAL ECOSYSTEMS:** This meeting will convene from 3 - 5 November 1999 in Oporto, Portugal. For information see: <http://www.ufp.pt/units/geonucleo/coastal-ecosystems/>.

**PROPERTY RIGHTS AND FISHERIES:** The "Use of the Property Rights in Fisheries Management Conference" will convene in Perth, Western Australia from 15 - 17 November 1999. For information see <http://www.fishrights99.conf.au>.

**INTERNATIONAL WORKSHOP: STATUS OF THE FRESHWATER/COASTAL/MARINE LIVING RESOURCES WITH PARTICULAR EMPHASIS ON THREATS AND OPTIONS IN COASTAL AREAS:** This Workshop will convene from 15 - 18 November 1999 in Montpellier, France. For information contact: UNEP, Division of Environmental Information, Assessment & Early Warning/Institut de Recherche pour le Développement Nairobi, Kenya; Guy Vidy and Jean-Jacques Albaret; e-mail: Guy.Vidy@mpl.orstom.fr or J-Jacques.Albaret@mpl.ird.fr.

**CIRCUMPOLAR MARINE WORKSHOP:** This Workshop will meet from 28 November to 2 December 1999 in Montreal, Canada. For information contact: IUCN; tel: +4122 999 00 01; fax : +4122 999 00 02; e-mail : mail@hq.iucn.org; Internet: www.iucn.org.

**MEETING ON THE CARIBBEAN ACTION PLAN:** The Ninth Intergovernmental Meeting on the Action Plan for the Caribbean Environment Programme and Sixth Meeting of the Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region will be held in November/December 1999 in Kingston, Jamaica. For information contact: UNEP -- Caribbean Environment Programme; tel: +1 (876) 922 - 9267; fax: +1 (876) 922 - 9292; e-mail: uneprcuja@cwjamaica.com; Internet: http://www.cep.unep.org/.

**IOC EXECUTIVE COMMITTEE AND ASSEMBLY:** The IOC Executive Council is tentatively scheduled to commence its thirty-third session on 22 May 2000 at UNESCO in Paris, France. The Assembly is tentatively scheduled to meet for the two-week period commencing on 2 July 2001. For information see http://ioc.unesco.org/iocweb/.

**NINTH INTERNATIONAL CORAL REEF SYMPOSIUM:** This symposium will be held from 7 - 11 October 2000 in Denpasar, Bali, Indonesia. For information contact: Secretariat, 9th ICRS; e-mail: coremap@indosat.net.id; Internet: http://www.oceanology.lipi.go.id

## **/CHEMICAL MANAGEMENT**

**WMO/EMEP WORKSHOP ON MODELING OF ATMOSPHERIC TRANSPORT AND DEPOSITION OF POPS AND MERCURY:** This workshop will take place in November 1999 at WMO Headquarters in Geneva, Switzerland. For information contact: Marina Varygina, Meteorological Synthesizing Centre East, Kedrova Street 8, 117292 Moscow, Russian Federation; tel: +7 (95) 124 4758; fax: +7 (95) 310 7093; e-mail: msce@glasnet.ru.

**BASEL CONVENTION ON HAZARDOUS WASTES:** The Fifth Session of the Conference of the Parties (COP-5) to the Basel Convention will be held in Basel, Switzerland from 6 - 10 December 1999. For information contact: Secretariat of the Basel Convention; tel: + (41 22) 979 9111; fax: + (41 22) 797 3454; e-mail: bulskai@unep.ch; Internet: http://www.unep.ch/basel/index.html.

**FIRST SESSION OF THE CHEMICALS REVIEW COMMITTEE FOR THE ROTTERDAM CONVENTION:** The First Session of the Chemicals Review Committee for the Rotterdam Convention on PIC is tentatively scheduled for January or February 2000 in Geneva. For information contact: Gerold Wyrwal, FAO; tel: +39 (6) 5705 2753; fax: +39 (6) 5705 6347; e-mail: Gerold.Wyrwal@fao.org.

**PERSISTENT ORGANIC POLLUTANTS INC-4:** The fourth session of the Intergovernmental Negotiation Committee for an International Legally Binding Instrument for Implementing International Action on Certain Persistent Organic Pollutants (INC-4) will take place from 20 - 25 March 2000 in Bonn. For information contact: UNEP Chemicals (IRPTC); tel: +41 (22) 979-9111; fax: +41 (22) 797-3460; e-mail: dodgen@unep.ch; Internet: http://irptc.unep.ch/pops/.

**FIFTH CONSULTATION ON THE PREVENTION AND DISPOSAL OF OBSOLETE AND UNWANTED STOCKS OF PESTICIDES:** This meeting is scheduled for May 2000 in Rome, Italy to consider new provisions for the prevention and disposal of obsolete stocks and to update/prepare various technical guidelines in support of the FAO Code of Conduct. For information contact: Ale Wodageneh, FAO; tel: +39 (6) 5705 5192; fax: +39 (6) 5705 6347; e-mail: A.Wodageneh@fao.org.

**FAO GROUP ON REGISTRATION REQUIREMENTS:** The 16th session of the FAO Group on Registration Requirements will be held from 22 - 29 May 2000 in Grenada, Spain and will prepare FAO Specifications under the new procedure for a range of individual pesticides. The 17th session will be held from 26 - 30 June 2000 in Rome, Italy and will consult on the progress of the revision of the International Code of Conduct on the Distribution and Use of Pesticides and prepare recommendations on procedures for the preparation and revision of guidelines and for the revision of the Code. For information contact: Gero Vaagt, FAO; tel: +39 (6) 5705 5757; fax: +39 (6) 5705 6347; e-mail: Gero.Vaagt@fao.org.

**THIRD MEETING OF THE INTERNATIONAL FORUM ON CHEMICAL SAFETY:** The Third Meeting of International Forum on Chemical Safety (Forum III) will convene from 14 - 20 October 2000 in Salvador, Bahia, Brazil. For information contact: Executive Secretary, IFCS c/o World Health Organization; tel: +41 (22) 791 3650 / 4333; fax: +41 (22) 791 4875; e-mail: ifcs@who.ch; Internet: http://www.who.int/ifcsh.

**SEVENTH PIC INC MEETING:** The seventh session of the PIC INC is tentatively scheduled for September or October 2000 in Geneva to prepare the Conference of the Parties. For information contact: Niek Van der Graaf, FAO; tel: +39 (6) 5705 3441; fax: +39 (6) 5705 6347; e-mail: Niek.VanderGraaf@fao.org; Internet: http://www.pic.int/.

**25TH SESSION OF THE JOINT MEETING ON PESTICIDES RESIDUES:** The 25th Joint Meeting of the FAO Panel of Experts on Pesticides Residues in Food and the Environment and the WHO Expert Group on Pesticides Residues will be held from 11 - 29 September 2000 in Geneva, Switzerland. For information contact: Amelia Tejada, FAO; tel: +39 (6) 5705 4010; fax: +39 (6) 5705 6347; e-mail: Amelia.Tejada@fao.org.

**GOVERNMENT CONSULTATION ON THE REVISION OF THE FAO CODE OF CONDUCT:** This consultation is tentatively scheduled for 2 - 6 October 2000 in Rome, Italy and will consider the draft revised FAO Code of Conduct on Distribution and Use of Pesticides. For more information contact: Niek Van der Graaf, FAO; tel: +39 (6) 5705 3441; fax: +39 (6) 5705 6347; e-mail: Niek.VanderGraaf@fao.org.

## **/INTERNATIONAL ORGANIZATIONS**

**FAO COUNCIL:** The 117<sup>th</sup> Session will convene from 9 - 11 November 1999 in Rome, Italy. The 118<sup>th</sup> Session will convene on

24 November 1999. For information contact: FAO, J. Perez De Vega; Meeting code: CC - 702 117; tel: +39 6/57052753; fax: +39-6/57056347; Internet: <http://www.fao.org>.

**GEF MEETINGS:** The NGO Consultation will take place on 7 December 1999 at GEF headquarters in Washington, DC, US. The GEF Council will meet from 8 - 10 December 1999. For information contact: GEF Secretariat, 1818 H Street, NW, Washington DC, 20433, US; tel:+1 202 473 0508; fax: +1 202 522 3240 or 522 3245; Internet: <http://www.gefweb.org/>.

## /WOMEN

**EIGHTH INTERNATIONAL AWID FORUM:** This meeting will be organized by the Association for Women in Development (AWID) from 11 - 14 November 1999 in Washington DC, US. For information contact: AWID; tel: + 1 (202) 628-0440; e-mail: [awid@igc.apc.org](mailto:awid@igc.apc.org); Internet: <http://www.awid.org>.

**FORTY-FOURTH SESSION OF THE COMMISSION ON THE STATUS OF WOMEN:** This session will met from 6 - 24 March 2000 in New York, US. For information contact: DAW, Room DC2-1216, UN, New York, NY 10017, US; fax: + 1 (212) 963-3463; e-mail: [timothy@un.org](mailto:timothy@un.org); Internet: <http://www.un.org/womenwatch/daw>.

**WOMEN 2000: GENDER EQUALITY, DEVELOPMENT AND PEACE FOR THE TWENTY-FIRST CENTURY:** This Special Session of the General Assembly on Beijing+5 will convene from 5 - 9 June 2000 in New York, US. For information contact: DAW, Room DC2-1216, UN, New York, NY 10017, US; fax: + 1 (212) 963-3463; e-mail: [timothy@un.org](mailto:timothy@un.org); Internet: <http://www.un.org/womenwatch/daw>.

## /SOCIAL DEVELOPMENT

**COPENHAGEN + 5:** The Commission for Social Development will hold its 38<sup>th</sup> session from 7 - 18 February 2000. Delegates are expected to prepare proposals for the Special Session Preparatory Committee on an overview of Summit follow-up. The Preparatory Committee for the Special Session will hold its second substantive session from 3 - 14 April 2000. For information contact: the Secretariat of the UN Commission for Social Development; tel: + 1 (212) 963-6763; fax: + 1 (212) 963-3062; e-mail: [ngoran@un.org](mailto:ngoran@un.org); Internet: <http://www.un.org/esa/socdev/wssdcall1.htm>.

## /HABITAT

**HABITAT II+5:** The Preparatory Committee on follow-up to the Second UN Conference on Human Settlements will meet from 2 - 4 May 2000 in Nairobi, Kenya. For information contact: Information and External Relations, UN Centre for Human Settlements, UNCHS (Habitat); tel: +254-2-623067; fax: +254-2-624060; Internet: <http://www.unhabitat.org>.



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## /CLIMATE CHANGE

"Sizing the global GHG offset market." *Energy Policy*, 1999, Vol.27, No.3, pp.123-127. R.Hamwey and A.Baranzini (Switzerland) comment in this editorial on the plans for a GHG international trading system. They warn that if conditions for 'supplementarity' - the extent to which countries may use international mechanisms relative to domestic efforts - remain relaxed, market access and liquidity is expected to be high. The writers conduct a scoping exercise which aims to broadly assess market size and value. By comparing future allowances with varied economic growth-sensitive emissions projections for countries with emissions limitations commitments under the Kyoto Protocol, they estimate the annual size of the global offset market to be similar to 850-1500 MtC/yr during the 2008-2012 commitment period. They find no more than a third of market demand can be satisfied through so called 'hot air' trading. Variable costs for supply-side options in the global market, and uncertainty on how future supplementarity policies might limit free-market demand-side allocations render a precise estimation of market value difficult. They infer a total market value to be similar to 24-37 \$b/yr during the commitment period, of which 9-17 \$b/yr would take place through flexible mechanism transactions.

"Public perceptions of climate change: A 'willingness to pay' assessment." *Climatic Change*, 1999, Vol.41, No.3-4, pp.413-446. R.A.Berk and R.G.Fovell (US) use a sample of Los Angeles residents to examine willingness to pay to prevent significant climate change scenarios. The climate change scenario is presented as it would be experienced locally. Among the key findings are that climate change leading to warmer local temperatures is a greater worry for the residents concerned than climate change leading to colder local temperatures. Climate change leading to less precipitation locally is of more concern than that leading to more precipitation. Respondents showed, however, that they were not yet able to clearly distinguish between different climate change consequences.

"The Kyoto Protocol, CAFÉ standards, and gasoline taxes." *Contemporary Economic Policy*, 1999, Vol. 17, No.3, pp.296-308. J.Agras and D.Chapman (US) note that the Kyoto Protocol mandates the United States to reduce its GHG emissions to 93 per cent of their 1990 levels by the budget period 2008-2012. The paper explores the possibility of reducing carbon dioxide emissions in the transport sector using Corporate Average Fuel Efficiency standards and gasoline taxes together.

## /INTERNATIONAL ENVIRONMENTAL NEGOTIATIONS

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"Global environmental regulation: Instrument choice in legal context." Yale Law Journal, 1999, Vol.108, No.4, p.677. J.B.Wiener (US) notes that a central issue in environmental law has been the choice available among regulatory instruments. An emerging scholarly consensus in economics and law crowns taxes as the presumptive optimal instrument for controlling environmental externalities. But this debate, according to the author, has been largely confined to the context of national laws. Professor Wiener takes the choice of regulatory instruments to the global level. He contends that the choice of optimal regulatory instrument is contingent on the underlying legal system of the regulatory polity. He focuses on two salient dimensions of variation across legal systems: the voting rule for adoption of law, and the implementation structure for execution of law. Whereas national regulatory legislation is generally adopted under a majoritarian voting rule that can compel sources of externalities to and execute through a federalist structure that can impose constraints directly on sources, global regulatory treaties are generally adopted under a Voluntary Assent voting rule that requires source countries to choose to participate and execute through a jurisdictional structure that requires regulation to be implemented by nation-state intermediaries. Professor Wiener argues that the fundamental differences along these two dimensions between the national and global legal systems mean that tradable allowances, not taxes, are the presumptive optimal instrument for environmental protection at the global level. He shows that the Voluntary Assent voting rule for international treaty law necessitates side payments to engage reluctant sources of externalities - a "beneficiaries pay" rather than "polluters pay" approach - and that making such side payments is more "participant efficient" under tradable allowances.

## /KNOWLEDGE AND ENVIRONMENT

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"Knowledge and the environment." Ecological Economics, 1999, Vol.30, No.2, pp.267-284. P.R.Ehrlich et. al. (US) examine the view of some analysts that future increases in knowledge will, more or less automatically, alleviate or even eliminate future environmental problems. They firstly discuss whether a knowledge explosion is actually occurring, addressing some of the problems with assessing knowledge-growth. Next, they consider whether growth in knowledge will help the environment. They ask whether future advances in knowledge are likely to assure benign environmental outcomes and discuss physical constraints on reducing resource consumption. Finally, they outline policy interventions that may help produce useful knowledge and the results of environmentally useful knowledge. The authors are sceptical as to the ability of advances in knowledge to offset fully the adverse environmental impacts of continued population growth and increases in per capita consumption. They point out that the ongoing shift from a materials-based economy to one based on the delivery of services reduces but does not eliminate the significant environmental impacts associated with the increasing scale of economic output. In addition, the ability of the economy to replace certain key resource inputs with knowledge inputs must eventually encounter limits. They conclude that public policy has a crucial role in both discouraging environmentally damaging forms of consumption and in promoting the generation and diffusion of environmentally beneficial knowledge.

## /BIODIVERSITY

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"Selling nature to save it? Biodiversity and green developmentalism" Environment and Planning - Society and Space, 1999, Vol.17, No.2, pp.133-154. K.McAfee (US) argues that new supranational environmental institutions, including the Convention on Biological Diversity (CBD) and the 'green' World Bank, reflect attempts to regulate international flows of 'natural capital' by means of an approach he calls 'green developmentalism'. He writes that these institutions are sources of eco-development dollars and of a new 'global' discourse, a post-neoliberal environmental-economic paradigm. The logic of this paradigm constructs nature as a world currency and re-codes ecosystems as warehouses of genetic resources for biotechnology industries. Advocates believe that nature will earn its own right to survive through international trade in ecosystem services and permits to pollute, access to tourism and research sites, and exports of timber, minerals and intellectual property rights to traditional crop varieties and shamans' recipes. The author contends that green developmentalism, with its promise of market solutions to environmental problems, is blunting the North-South disputes that have embroiled international environmental institutions. However, by valuing local nature in relation to international markets - denominating diversity in dollars, Euros and yen - green developmentalism abstracts nature from its spatial and social contexts and reinforces the claims of global elites to the greatest share of the earth's biomass and all it contains. The CBD, meanwhile, has become a gathering ground for transnational coalitions of indigenous, peasant and NGO opponents of 'biopiracy' and the patenting of living things, and advocates of international environmental justice. They have begun to put forward counter-discourses and alternative practices to those of green developmentalism.

## /FORESTS

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"Japan's global environmentalism rhetoric and reality." Political Geography, 1999, Vol.18, No.5, pp.535-562. J.Taylor (US) notes that since the early 1990s Japan has attempted to position itself rhetorically as a global environmental leader. He argues that this rhetoric must be compared to Japan's international environmental impacts, which are considerable, especially in East and Southeast Asia. Possible motivations for Japan's use of global environmentalist rhetoric, including its domestic political environment, geopolitical goals, geo-economic motivations, and the increasing globalisation of the Japanese economy - are analysed. The spread of the Japanese model of development is linked to Asia's continuing environmental crisis.

## /WORLD TRADE ORGANIZATION

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"Implementation of the WTO Agreement on Agriculture and developments for the next round of negotiations." European Review of Agricultural Economics, 1999, Vol.26, No.3, pp.371-388. T.Josling and S.Tangerman (Germany and US) note that the Uruguay Round Agreement on Agriculture has fundamentally changed the rules for international agricultural trade and established quantitative constraints for agricultural policies of all the WTO members. Although countries have tried to escape the new disciplines here and there, overall there has been substantial compliance and implementation of the Agreement has proceeded smoothly. On the 1999 round of WTO negotiations on agriculture, the author believes there will have to be

a strengthening and clarification of some of the rules agreed during the Uruguay Round.

"New global regulatory mechanisms and the environment - The emerging linkage between the WTO and the ISO." IDS Bulletin-Institute of Development Studies, 1999, Vol.30, No.3, p.8. M.Finger and L.Tamiotti (Switzerland and US) seek to highlight the emerging links between the World Trade Organisation and the Organisation for Standardisation (ISO). This relationship is seen against a background of liberalisation, and more generally one of profound changes in the structure of global governance. The authors believe that, having promoted deregulation on a massive scale, the time seems to be ripe for the reintroduction of regulation albeit in a new format. Standards, especially environmental standards, appear to be providing new forms of global regulation. As a result, we are witnessing the emergence of new forms of actor arrangements, dominated by private, as opposed to public actors.

"The WTO agenda for the new millennium." Economic Record, 1999, Vol.75, No.228, pp.77-88. K.Anderson (Australia) examines the main challenges confronting the WTO and assesses the organisation's potential to address these issues in the near term. The immediate challenges identified by the writer include the integration of agriculture and textiles and clothing into the mainstream of the GATT, and improving rules for the liberalisation of trade in services. Many new issues, which have arisen during the 1990s, are also identified. The paper assesses both the opportunities available to meet those challenges and the prospects for success in further market liberalisation.

"The role of multilateral institutions in international trade co-operation." American Economic Review, 1999, Vol.89, No.1, pp.190-214. G.Maggi (US) notes that the WTO lacks the power to directly enforce agreements and the importance, therefore, of understanding the role the WTO can play to facilitate international co-operation and whether a multilateral institution can offer distinct advantages over a web of bilateral agreements. The paper examines two potential benefits of a multilateral trade institution: first, verifying violations of the agreements and informing third parties, thus facilitating multilateral reputation mechanisms; second, promoting multilateral trade negotiations rather than a web of bilateral negotiations. The model suggests that a multilateral approach is particularly important when there are strong imbalances in bilateral trading relationships.

## /SUSTAINABLE DEVELOPMENT

"The maritime mystique: sustainable development, capital mobility and nostalgia in the world ocean." Environment and Planning D - Society and Space, 1999, Vol.17, No.4, pp.403-426. P.E. Steinberg (US) suggests that three images of ocean space are becoming increasingly prevalent in policy and planning circles: the image of the ocean as an empty void to be annihilated by hyper-mobile capital; as a resource-rich but fragile space requiring rational management for sustainable development; and as a source of consumable spectacles. In his paper the writer locates the emergence of these three apparently contradictory images of the ocean with structural contradictions in the spatiality of capitalism, which, in turn are precipitating a crisis in marine regulation. To analyse these contradictions he begins with

a historical study of industrial-era marine uses, regulations and representations.

"Coming to terms with 'Integrated coastal management': Problems of meaning and method in a new arena of resource regulation." Professional Geographer, 1999, Vol.51, No.3, pp.388-399. K.Nichols (US) traces the emergence of coastal management in the late 20<sup>th</sup> century and assesses the social and spatial implications of the new Integrated Coastal Management (ICM) philosophy that guides national regulatory programs world-wide. In a review of the epistemology of ICM the author reveals its link to: the United Nations marine regulatory regime (UNCLOS) and the sustainable development paradigm embraced at UNCED. The writer suggests that the resulting regulatory regime facilitates the opening of coastal zones world-wide to aggressive State and global capital investment. By promoting the overhaul of existing social and spatial organisation in coastal zones and by asserting the primacy of resource access for modern economic interests, ICM may introduce more rather than less social conflict and ecological degradation. To illustrate this argument the author examines the case of coral reef management with special reference to circumstances in Sri Lanka.

"Implementing Policies of Sustainable Development: Examining Actor Relationships and Negotiation Processes," International Negotiation: A Journal of Theory and Practice 4: 2, 1999. This special issue, guest edited by Brook Boyer, examines, among other issues, coalitions and negotiating processes in the UN Commission on Sustainable Development, internal Japanese and European Community negotiations on climate change, and non-state actor influence in the negotiations on the Convention to Combat Desertification.

## /POPULATION AND DEVELOPMENT

"Reproductive health policies and programs in eight countries: Progress since Cairo." International Family Planning Perspectives, 1999, Vol.25, No.5S, pp.S2-S9. K.Kardee, K.Agarwal et. al. (US) are interested in the details of country efforts to revise reproductive health policies and implement programs since the adoption of the Programme of Action drafted at the 1994 International Conference on Population and Development (ICPD). Using in-depth interviews with stakeholders in eight countries - three of them in Asia, three in the Middle East and Africa, and two in Latin America and the Caribbean - the authors found that all but two of the countries had adopted the ICPD definition of reproductive health and all had initiated policy reform to reflect a new focus. Less has been accomplished in implementing integrated programs. Common challenges include: improving knowledge and support among stakeholders, planning for integration and decentralised services; developing human resources; improving the quality of care; and maintaining a long-term perspective regarding the implementation of the Cairo agenda. The authors conclude that the next critical steps must include: help for countries in setting priorities for the establishment of integrated reproductive health interventions; an increase in financing for services; and development of delivery strategies.

"Making Cairo Work". Lancet, 1999, Vol.353, No.9149, pp.315-318. M.Potts and J.Walsh (US) note that the 1994 ICPD set broad new goals for family planning and reproductive health. The

resources available to fund these much needed programs, however, are much smaller than was originally calculated. They suggest that to divide the limited budgets for the maximum health impact, likely resource flows need to be set against the cost of various family planning and reproductive health interventions. Preliminary analysis suggests that selection of cost-effective delivery of family planning services would still meet much of the need for family planning and that some progress could be made towards improved control of sexually transmitted diseases.

## /WOMEN

"International data on women and gender: Resources, issues, critical use." Women's Studies International Forum, 1999, Vol.22, pp.249-259. M.Danner, L.Fort and G.Young (US), note that the official document of the UN Fourth World Conference on Women, the Platform for Action, calls for the collection and improvement of gender-disaggregated data because of their importance for planning, evaluation and the empowerment of women. In this article, the authors examine the resources available and discuss the persistent issues surrounding the definition, production, compilation and use of international data on women and gender. They also present an example of their critical use of problematic data i.e. the Social Indicators of Gender Inequality. They argue that only by using data critically, that is while noting the problematic assumptions and irregular collection practices, will the data be improved for the benefit of women.

"Empowering ourselves: The role of women's NGOs in the enforcement of the Women's Convention." Columbia Law Review, 1999, Vol.99, No.1, pp.129-172. A Afsharipour notes that since its adoption in 1979, one hundred and sixty countries have ratified the Convention on the Elimination of all Forms of Discrimination Against Women. However, due to a lack of effective enforcement mechanisms, the Convention's success in improving the lives of women has been limited. The Convention does not grant individuals a right of petition, and its requirements are not judicially enforceable. Instead, it has relied on governments to report to a United Nations committee of experts on their efforts to eradicate discrimination against women. In this paper, recent developments in Bangladesh are used to argue that women's non governmental organisations have the potential to fill the enforcement gap in the existing system. Leading up to and following the Fourth World Conference on Women in 1995 Bangladesh and international women's non governmental organisations were able to dramatically improve the Government's attitude towards the CEDAW's requirements, leading to substantive results.

"The evolution of the 'carbonisation index' in developing countries." Energy Policy, 1999, Vol.27, No.5, pp.307-308. O.Mielnik and J.Goldemberg (Brazil) note that the "carbonisation index" which measures the carbon/energy ratio, is a useful indicator to assess the evolution of emissions patterns of both industrialised and developing countries in the context of climate change. While UNFCCC Annex 1 Parties are currently adjusting to decarbonizing trajectories, data indicates that non-Annex 1 Parties are "carbonising". The indicator can be used to establish baselines for the certified emission credits to benefit from Joint Implementation projects or the Clean Development Mechanism.

## /NGOS AND INTERNATIONAL ENVIRONMENTAL GOVERNANCE

"Social movements and the globalisation of environmental governance." IDS Bulletin-Institute of Development Studies, 1999, Vol.30, No.3, p.68. L.H. Ford (UK/Switzerland) notes that environmental governance has become globalized as part of the wider agenda of global governance building within key institutions such as the World Trade Organisation. The perceived need for global solutions to global environmental problems and calls for sustainable development have put environmental issues onto the agenda of the institutions of global governance. She notes arguments that such institutions are becoming democratised through consultations with global civil society. Ford argues, however, that the sphere of global civil society is not unproblematic, hosting a diversity of actors such as social movements, business and industry. These actors are not on an equal footing. Ford focuses on social movements' attempts to influence the institutional trade agenda but also takes at look at radical grassroots resistance movements that do not fit easily within this sphere of global operators. The latter's calls for a structural transformation of the WTO highlight, for Ford, the lack of democracy and accountability in such institutions as the WTO, a lack that will not be remedied through mere consultation with global civil society.

## /NEW PUBLICATIONS

1. *Paying for Agricultural Productivity*, (July 1999), an edited volume by Julian M. Alston, Philip G. Pardey, and Vincent H. Smith. Published by Johns Hopkins University Press for the International Food Policy Research Institute

Throughout the twentieth century improvements in agricultural productivity have been closely linked to investments in agricultural research and development (R&D), but since the 1970s many countries have made major changes in the way they fund and organize public agricultural R&D and in the incentives affecting private R&D. Worldwide, public institutions involved in agricultural R&D are under pressure to make economies. Yet the research agenda has broadened beyond conventional productivity improvements and now includes issues such as environmental impacts and food safety. This book examines these and other changes in the developed world as a step toward evaluating whether the new approaches are raising or lowering the efficiency and effectiveness of R&D. The authors lay out the principles for public-sector roles in financing agricultural R&D. Against those broad principles, they review recent developments in agricultural R&D institutions, policies, and investments in five developed countries: Australia, the Netherlands, New Zealand, the United Kingdom, and the United States. By comparing these countries' responses to similar impetuses for change, the authors seek to draw general lessons for countries seeking to improve their agricultural research systems in the face of tighter resources and changing public perceptions and expectations.

Contributors: Julian M. Alston, Jason E. Christian, Barbara J. Craig, Michael S. Harris, Veronica Jacobsen, John D. Mullen, Philip G. Pardey, Michael Phillips, Jenifer Piesse, Johannes Roseboom, Hans Rutten, Grant M. Scobie, Vincent H. Smith, and Colin Thirtle.

2. *The Kyoto Protocol International Climate Policy for the 21st Century* (1999), Hermann Ott, Wuppertal Institute ([her](#)

[mann.ott@wupperinst.org](mailto:mann.ott@wupperinst.org)), and Sebastian Oberthuer, Ecologic, Berlin.

This book provides a comprehensive scholarly analysis of the history and content of the Kyoto Protocol as well as of the economic, political and legal implications of its implementation. It also presents a perspective for the further development of the climate regime. The book's conclusions examine the lessons from the Kyoto Process, including an evaluation of the synergies and conflicts with other international institutions. The authors end with a survey of the landscape of international climate politics at the turn of the century.

Motivated by their research for the book the authors have set about envisioning some concrete proposals on how the European Union might proceed in order to breathe new life into the FCCC and the Kyoto Protocol process. With support from the Heinrich-Boell-Foundation in Germany they have published a policy paper and organised a few workshops with interested players. The second of these will take place in Bonn at COP 5, November 3 at 1 p.m. (please consult the FCCC website, <http://www.unfccc.de>, for the venue in the Hotel Maritim) and a third workshop will be held in Brussels at a date and venue still to be decided (contact Frieder Wolf-Buchert, [Wolf@Boell.De](mailto:Wolf@Boell.De)).

The policy paper entitled "Breaking the Impasse: Forging an EU Leadership Initiative on Climate Change" may be ordered from the Boell Foundation (contact Joerg Haas, [Haas@BOELL.DE](mailto:Haas@BOELL.DE)). It is also possible to download the paper from the website of the Wuppertal Institute (<http://www.wupperinst.org>). Copies will be available at COP 5.

3. The Christian Aid report, "CLIMATE DEBT EQUITY & SURVIVAL", published September 1999 is now available on their website: - <http://www.christian-aid.org.uk> The report calls for the full cancellation of external debts of developing countries citing the enormity of the environmental debt created by climate change.

4. *Climate Change and American Foreign Policy* (forthcoming), Edited by Paul Harris ([pharris@lgu.ac.uk](mailto:pharris@lgu.ac.uk)). To be published by St.Martin's Press.

## /linkages/journal/ /ON THE WEB

**WTO SECRETARIAT'S TRADE AND ENVIRONMENT REPORT:** A new WTO Secretariat report, which can be found at <http://www.wto.org/wto/new/press140.htm> argues that international economic integration and growth reinforce the need for sound environmental policies at the national and international level. The WTO Secretariat's Trade and Environment Report, released on 14 October 1999, addresses the economic and political economy dimensions of the interface between trade and environment. The report argues that there is no basis for the sweeping generalizations that are often heard

in the public debate, arguing that trade is either good for the environment, or bad for the environment. The real world linkages are a little bit of both, or a shade of grey. "Win-win" outcomes can be assured through well-designed policies in both the trade and environmental fields.

**NIPR TEAM REPORT ON "GREENING INDUSTRY":** The New Ideas in Pollution Regulation team has written a World Bank policy report on its six years of research on industrial pollution regulation and control issues entitled "Greening Industry: New Roles for Communities, Markets, and Governments." Greening Industry shows how recent economic and regulatory policy reforms are reducing industrial pollution in developing countries, without threatening economic growth. After many failed attempts to import regulatory models from the industrial countries, pioneers are developing a new model for pollution control. Greening Industry includes "Resources for Greening Industry" CD-ROM, which provides an electronic version of the report for easy reference as well as the full content of the current version of the New Ideas in Pollution Regulation website (<http://www.worldbank.org/nipr>). To order, use the order forms provided on the World Bank's website at: <http://www.worldbank.org/publications/ordform/greenord.htm>

**UNEP STUDY OF GLOBAL ENVIRONMENTAL CRISIS:** The United Nations Environment Programme (UNEP) has launched its Global Environment Outlook 2000 (GEO-2000) report. Based on contributions from UN agencies, 850 individuals and more than 30 environmental institutes, GEO-2000 outlines progress in tackling existing problems and points to serious new threats. According to GEO-2000, full-scale emergencies now exist in a number of fields. The world water cycle seems unlikely to be able to cope with demands in the coming decades, land degradation has negated many advances made by increased agricultural productivity, air pollution is at crisis point in many major cities and global warming now seems inevitable. In a survey conducted by the Scientific Committee on Problems of the Environment for GEO-2000, 200 scientists in 50 countries identified water shortage and global warming as the two most worrying problems for the new millennium. GEO-2000 is accessible at <http://www.unep.org/geo2000> or contact UNEP at [geo@unep.org](mailto:geo@unep.org).

## /linkages/journal/



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# Selected Sustainable Development Meetings

*November 1999*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
				Convention on Migratory Species Scientific Council - Cape Town		
			4th International Conf on the Mediterranean Coastal Environment - Anatalya, Turkey			
			UNFCCC COP-5 - Bonn			
			Combatting Desertification with Plants Meeting - Beer Sheva, Israel			
			27th Session International Tropical Timber Council -Yokohama, Japan			
7	8	9	10	11	12	13
				Expert Meeting on Coral Bleaching - Manila		
				Convention on Migratory Species COP-6 - Cape Town, S. Africa		
			WIPO Meeting on Biodiversity - Geneva			
			African-Eurasian Waterbird Agreement MOP-1 - Cape Town			
14	15	16	17	18	19	20
			CBD Scientific Assessment Meeting - Oslo			
			Convention to Combat Desertification COP-3 - Recife, Brazil			
			Desert Fishes Council Meeting - Cuidad Victoria, Mexico			
			Convention on Migratory Species COP-6 -			
21	22	23	24	25	26	27
			TRIPs Council Meeting - Geneva			
			Global Biodiv. Outlook Mtg - Geneva			
			Convention to Combat Desertification COP-3 - Recife, Brazil			
28	29	30				
			WTO - Seattle			
			A21 Finance -			
			11th Montreal Protocol MOP - Beijing			
			Circumpolar Marine Workshop - Montreal			

This calendar is based on information available as of 29 October 1999 and is subject to change. For updates and corrections, contact [kimo@iisd.org](mailto:kimo@iisd.org).

# Selected Sustainable Development Meetings

December 1999

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
			WTO Ministerial Meeting - Seattle Circumpolar Marine Workshop - Montreal 5th Expert Group Mtg on Financial Issues for Agenda 21 - Nairobi 11th Meeting of Parties to the Montreal Protocol - Beijing			
5	6	7	8	9	10	11
			World Commission on Dams - Cairo GEF Council Meeting - Washington, DC GEF NGO Mtg. Costa Rica - Canadian Initiative on Forests - Ottawa Basel Convention COP-5 - Basel, Switzerland			
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

# Selected Sustainable Development Meetings

*January 2000*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
		OECD Conference on Agriculture Knowledge System - Paris				
16	17	18	19	20	21	22
				Informal Consultations on a Biosafety Protocol - Montreal		
23	24	25	26	27	28	29
		Resumed Session of the Extraordinary COP to Adopt a Biosafety Protocol - Montreal				
30	31					
		IFF-4 - NY CDB SBSTTA				

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# Selected Sustainable Development Meetings

*February 2000*

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
			Intergovernmental Forum on Forests (IFF-4) - New York Convention on Biological Diversity - SBSTTA-5 - Montreal			
6	7	8	9	10	11	12
			38th Session of the Commission on Social Development - New York Intergovernmental Forum on Forests (IFF-4) - New York			
13	14	15	16	17	18	19
			38th Session of the Commission on Social Development - New York			
20	21	22	23	24	25	26
			CSD Intersessionals - New York CBD Ad Hoc Working Group on Article 8(j) - Sevilla, Spain			
27	28	29				
			CSD Intersessionals - New York			