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/SUSTAINABLE FISHERIES: THE LINKAGE WITH TRADE AND ENVIRONMENT

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Introduction

There is a growing concern in the world community about the state of fish stocks, ocean habitats and marine biological diversity. This concern centers not least on the issue of overfishing. This apprehension is understandable in the light of the importance of the oceans for the world community. Indeed, the living resources of the oceans are the single most important source of food for humankind, they provide for the livelihood of millions of people in coastal communities and even of whole nations, and they are of critical importance to the world's biological diversity. Hence the crucial importance that these resources be conserved and used sustainably for the benefit of both present and future generations.

The common approach to overfishing is to attribute the cause to ineffective fisheries management. Fisheries management is certainly a necessary condition for sustainable fisheries but it is not the only condition. Overfishing is as much an economic problem as the fault of bad ecological management. More specifically it is increasingly recognized that overcapacity of the world's fishing fleet is the driving force behind the overfishing in many regions of the world.²

As soon as the problem of overfishing is approached from this broader perspective, a linkage is made between fisheries, trade, the environment and sustainable development. The following paper offers a look at this linkage through the experience of one country, notably Iceland. First we will review briefly the development of the trade and environment issue, then we will address sustainable fisheries in the context of global market conditions.

Trade and Environment

It is a while since the world community recognized the importance of the link between trade and environment.³ The issue emerged in relation to the growing environmental awareness leading up to the Stockholm Conference on the Human Environment in

1972. At first, the concern was primarily from trade experts who were concerned that environmental policies and conventions would lead to new barriers to trade. A special group on Environmental Measures and International Trade (EMIT) was established in 1971 under the auspices of GATT. However, for a variety of reasons this group remained inactive.

The trade and environment nexus received renewed attention in the period leading up to the UN Conference on Environment and Development, held in Rio de Janeiro in 1992. A new paradigm had emerged under the name of sustainable development. The new direction stressed the need for integrating environmental concerns into all sectors of society. One aspect of this new thinking was the demand that trade and environment policies should be made mutually supportive.

In this climate, the EFTA countries (the countries of the European Free Trade Association) pressed in 1990 for the revival of the 1971 GATT Group. Subsequently the EMIT group met from November 1991 to January 1994. The discussions in the group helped moving the issue forward in the sense of making governments more comfortable with this important issue, which by now was also being addressed in other international fora such as UNEP, UNCTAD, CSD and OECD. Valuable analytical work was conducted, but practical results were beyond the group's reach.

Building on the group's work and recognizing the need to move beyond the analytical dimension, the Marrakesh Ministerial Conference in April 1994 decided to take the discussions one step further and directed the first meeting of the General Council of the WTO to establish a Committee on Trade and Environment (CTE). The task given to the Committee was to continue the analytical work, but with a more proactive intention, or as it is put in the decision "(a) to identify the relationship between trade measures and environmental measures, in order to promote sustainable development; (b) to make appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required, compatible with the open, equitable and non-discriminatory nature of the system..."⁴

The Committee on Trade and Environment has met regularly since February 1995. Cognizant of the fact that the WTO is not mandated to carry out work in the field of the environment, the Committee has sought to focus on those aspects of the trade and environment nexus that fall under the competence of the organization. In other words, the task is to resolve concrete trade policy issues that would offer what have been called "win-win" or even "win-win-win" solutions for trade, the environment and sustainable development alike. This approach allows for specific issues to be addressed in a more concrete manner with a view to making the multilateral trading sys-

1. Iceland Ministry for Foreign Affairs, Department of Natural Resources and Environmental Affairs. The views expressed in this article are those of the author.
2. Ragnar Arnason, "Fisheries Subsidies, Overcapitalization and Economic Losses", Proceedings of Workshop on Overcapacity, Overcapitalization and Subsidies in European Fisheries, CEMARE, Portsmouth 28-30 October 1998 [forthcoming].

3. For historical review consult WTO Trade and Environment Division "High Level Symposium on Trade and Environment, Geneva 15-16 March 1999, Background document", and IISD Linkages: Trade & Sustainable Development www.iisd.ca/linkages/trade.
4. Decision on Trade and Environment, 14. April 1994, Marrakesh Ministerial Conference.

tem more supportive of sustainable development, both in general and what matters more, with respect to specific economic sectors.

There seems now to be an emerging consensus within the Committee that there is no inherent contradiction between trade liberalization on the one hand and environmental protection on the other. The two can and should proceed in unison to maximize the benefits of the respective policies pursued in favor of sustainable development. All available evidence suggests that policies to liberalize trade and investment have a positive impact on the environment, when environmental policies are set at appropriate levels.

The Economics of Sustainable Fisheries

Fisheries management is of crucial importance to the promotion of sustainable fisheries. Such a system must be based on sound scientific knowledge and rigid surveillance and enforcement. Yet while fisheries management is a necessary condition for sustainable fisheries it is not sufficient all by itself. For the system to be effective it must be accepted and supported by the fishing industry and fishermen alike. An important way to build that support is to raise awareness through consultation between public authorities and the fishing community. But a more effective way is to give those who live from fisheries an economic stake in conserving the stocks and using them in a sustainable manner. For that to happen the fisheries sector must be made economically efficient. In short, economic efficiency is required to ensure ecological efficiency.

To offer an example, the Government of Iceland devoted some fifteen years to developing an effective sustainable fisheries management system. Total Allowable Catch (TAC) was introduced for all the most important commercial fish species, based on sound scientific observations and assessments. Also, to ensure that catch levels were not surpassed, a rigid enforcement and compliance system was established to monitor the fishing of every fishing vessel in the country with the help of a state-of-the-art computer system that links all ports of landings to the Directorate of Fisheries.

Yet despite the ever more stringent system, there was always pressure from the industry to increase the TAC and to allow for more fishing capacity. The underlying reason was that the system lacked the economic incentive granting the industry and fishermen a more direct stake in the conservation and sustainable use of the stocks. The one factor standing in the way of generating this incentive was the overcapacity of the fleet. In other words, there were too many boats fishing the limited amount of fish to allow for sufficient economic return for the operations. The fleet had to be rationalized. Towards this end Individual Transferable Quotas (ITQs) were introduced.

The advantage of ITQs is the efficiency and flexibility offered. Fishing operations can increase or reduce their harvesting rights and change their composition in accordance with what they feel is cost-effective. This they can do by trading in catch quotas through a public auction market, the Quota Exchange. The price is determined by supply and demand and payment for harvest rights is either made in monetary form or by exchanging rights.

The cost-effectiveness of fishing in Iceland has increased substantially due to the quota system. Many enterprises have merged to

allow for increased efficiency and to spread operating risks. Both management and ownership of enterprises have also changed and presently most of the country's larger fishery enterprises are listed on the stock market. This, coupled with the flexibility of the system, has led to results in line with the generally positive experience from the application of ITQs in other countries,⁵ which broadly speaking means,

- there has been a decline in fishing efforts;
- the growth of the fishing fleet has stopped and in some cases contracted;
- economically important fish stocks have recovered;
- the quality of landed catch has increased;
- profitability has increased; and
- total employment in the industry has not contracted significantly owing to the increased emphasis on product value and quality.

The fisheries management system in Iceland is still under development. But the experience to date has shown that the success of sustainable fisheries management depends not only on rigid ecological requirements with respect to science and catch levels and on active participation of stakeholders, but also and perhaps more importantly on the fisheries sector being economically efficient.

The Global Context - How WTO can help

It is difficult for any country to maintain a sustainable fisheries management regime in a world market characterized by overcapacity. Such circumstances provide for constant pressure on the domestic fisheries sector and through it on the government to increase supply, notably by allowing more fishing, to the detriment of fish stocks and marine biological diversity. This is in particular relevant for countries that depend heavily on export of fish products, such as Iceland where fish products constitute more than 70% of the export value of goods. Global overcapacity creates supply distortions that place downward pressures on world seafood prices. This situation reduces revenue which each fishing operation seeks to meet by increasing their individual supply by intensifying fishing with subsequent negative effects on fish stocks.

According to FAO statistics the overcapacity of the global fishing fleet was 30% in 1989.⁶ Others believe this figure to have been an underestimation and assess the current overcapacity as high as 150%.⁷ Government subsidies are a major cause of this overcapacity.⁸ A recent study made by Matteo Milazzo and published by the World Bank estimates that a total of US\$14 to 20 billion of environmentally harmful subsidies are being granted to the global fisheries

5. Ragnar Arnason, "Rational Sustainable Exploitation of Marine Resources", Paper Presented at a meeting of European Council Committee on Agriculture and Rural Development, Paris February 27, 1998, pp. 6, 11-12.

6. Matteo Milazzo, *Subsidies in World Fisheries: A reexamination*, World Bank Technical Paper No. 406, Fisheries Series, (Washington D.C., World Bank, 1998), p. 5.

7. Gareth Porter, *Too Much Fishing Fleet, Too Few Fish. A Proposal for Eliminating Global Fishing Overcapacity*, World Wildlife Fund, 1998, pp. 8 and 12.

8. Gareth Porter, *op. cit.*, Ragnar Arnason (Oct. 1998), *op. cit.*

sector, which amounts to 20 to 25% of world fisheries first-sale revenues. According to the study, the OECD countries and China may be responsible for up to 75% of these subsidies.⁹

Government subsidies encourage both excessive fishing effort and overinvestment in fishing capacity. Gareth Porter offers a useful summation of the effects of subsidies:

State subsidies to the fishing industry contribute to overcapacity in three ways: First, by reducing costs and increasing profits per unit of effort, state subsidies have attracted more entrants into the fishing industry. Second, by reducing the cost of adopting new technologies, subsidies have induced more of the industry to adopt those technologies than would have been the case in an undistorted market. And, third, subsidies have encouraged producers who would have disinvested partially or completely to remain in the industry, in spite of serious financial difficulties caused by overfishing. Subsidies to the fishing sector have prevented the market signals from influencing the fishing industry to stop investing in already overcapitalized fisheries.¹⁰

The single most effective way to resolve the overfishing problem would be the removal of subsidies. It needs examining to what extent this could be accomplished within the framework of the existing WTO Subsidies Agreement. Certainly, many of the subsidies being granted to fisheries operations can be deemed actionable under its provisions. However, there are numerous subsidies that clearly do not fall under the Subsidies Agreement and coverage is questionable with regard to others.¹¹ It is for this reason that Iceland, Australia, New Zealand, the Philippines and the United States have taken the initiative to encourage WTO Members to address in the next round of negotiations the issue of fisheries subsidies with a view to their removal. At the High Level Symposium on Trade and Environment held by the WTO in Geneva last March 15 and 16, these countries presented a joint statement where they urged "Governments to make an early commitment to progressively eliminate fisheries subsidies that contribute to fisheries overcapacity, in view of their environmentally damaging and trade distorting effects, and to pursue work in the WTO aimed at achieving the reduction and elimination of such subsidies. Progress in this area would represent a clear "win-win" achievement in the area of trade, environment and sustainable development."¹²

9. Matteo Milazzo, *op. cit.* pp. 73-74, 77.

10. Gareth Porter, *op. cit.* p. 14.

11. David Schorr, *Towards Rational Disciplines on Subsidies to the Fisheries Sector: A Call for New International Rules and Mechanisms*. A WWF Discussion paper, September 1998.

In general, the statement was favorably received by other participants at the symposium. In the words of one commentator, "this is the first time any serious effort has been made to give priority to a topic for negotiation here [read: WTO] based largely on a concern with sustainability, rather than a concern with the kind of traditional commercial interests that otherwise drive the WTO agenda."¹³ There is also a growing interest in this matter as evidenced by the increased attention fisheries subsidies have received in recent years in fora such as the CSD, the OECD and the APEC, as well as within WTO and FAO. Indeed, in February of this year Governments adopted in FAO an International Plan of Action for the Management of Fishing Capacity which calls on States to "reduce and progressively eliminate all factors, including subsidies and economic incentives and other factors which contribute, directly or indirectly, to the build-up of excessive fishing capacity thereby undermining the sustainability of marine living resources, giving due regard to the needs of artisanal fisheries."¹⁴

Concluding Remarks

Experience has shown that in the best of all circumstances, the management of natural resources is best entrusted to those living from those resources. In the case of fisheries, the best of all circumstances include effective and ecologically sound fisheries management systems, economically efficient fisheries sectors and global market conditions conducive to sustainable fisheries.

At present, sustainable fisheries are being practiced in a number of countries and regions. But the ability of the countries concerned to maintain sustainability in their fisheries and the possibilities for others to move towards sustainable fisheries is being seriously undermined by a global market characterized by subsidized overcapacity and other market distortions affecting fisheries and fish products. The good news, however, is that this fact is being widely recognized and a window of opportunity stands open to the WTO to address this problem in substantive and comprehensive fashion in the upcoming round of trade negotiations.

12. "Promote Sustainable Development by Eliminating Trade Distorting and Environmentally Damaging Fisheries Subsidies", a joint statement of Australia, Iceland, New Zealand, the Philippines and the United States presented to the WTO High Level Symposium on Trade and Environment, Geneva 15-16 March, 1999.

13. Statement of David Schorr, World Wildlife Fund (WWF - US), WTO High Level Symposium on Trade and Environment 15-16 March 1999, Panel 2 -- Synergies.

14. FAO Committee on Fisheries, *International Plan of Action for the Management of Fishing Capacity*, 15-19 February 1999



TOPIC

/THE KEY TO THE SUCCESS OF THE KYOTO PROTOCOL: INTEGRITY, ACCOUNTABILITY, AND COMPLIANCE

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Enforcing compliance among sovereign nations is the fundamental challenge of any international treaty. Essential to the success of the Kyoto Protocol will be mechanisms that invite sovereign nations to report their emissions performance with integrity, that provide incentives for sovereigns to comply with their emissions limitation obligations, and that hold sovereigns accountable for any failures to comply.

At the Workshop on the Kyoto Protocol Mechanisms, held in Bonn in April 1999, which drew a number of experts from governments, academic institutions, and environmental and business NGOs, all participating in their individual capacity, experts from Switzerland and from the Environmental Defense Fund (EDF) put forward proposals to address compliance. The EDF proposal focused on using a staged set of progressively stringent accountability and compliance consequences to encourage compliance, through a blend of “buyer” and “seller” liability. The EDF proposal is described in “Cooperative Mechanisms and The Kyoto Protocol: The Path Forward,” available at www.edf.org. Proposals on the same topic have been advanced by the World Wildlife Fund (WWF) (contact nmabey@wwfnet.org) and by other organizations, including Greenpeace. The proposal by the expert from Switzerland, which was referred to in the Workshop and will be referred to here as “the Swiss proposal,” focused on leveraging compliance through rigorous annual reporting coupled with automatic restrictions on exports of emissions units. The Swiss proposal is described below.

Following these presentations, a number of experts at the Workshop recommended a fusion of the two proposals. After summarizing the Swiss proposal, this article proposes a set of eight rules that fuse the Swiss and EDF proposals.

The Swiss Proposal. The Swiss expert proposed that no Annex B Party should be allowed to sell or “export” assigned amount units (AAUs) under Kyoto Protocol Articles 3.11 and 17, emissions reduction units (ERUs) under Articles 3.11 and 6, or certified emissions reduction units (CERs) acquired by it under Article 12 (collectively, “emissions units”), unless it could show, on an annualized basis, that the emissions units it sought to sell were “extra,”

i.e., that the Party would not need those units to comply with its emissions limitations during that year. The determination of whether the units were “extra” would be made by comparing the Party’s actual emissions for each budget year with the amount of allowable emissions units it held in its emissions budget account for that year. The Swiss proposal assumed that each Party’s total allowable emissions would be divided by five (the number of years in the budget).

For the first year, it would be impossible to tell whether any emissions units were “extra” in relation to actual emissions until the end of the year, when the first year’s actual emissions were counted. Accordingly, under the Swiss proposal, no sales or exports of AAUs/ERUs/CERs could take place during the first year of the five-year emissions budget. For each year after the first year, an Annex B Party could only export “extra” AAUs, ERUs, or CERs, i.e., units “left over” from the preceding year. For example, if in the first year of the five-year emissions budget, an Annex B Party’s actual emissions were less than one-fifth of its assigned amount, then, in the second year, the Annex B Party could sell or export those extra or left over units. If, in the second year of the five-year budget, the Annex B Party’s actual emissions were less than one-fifth of its assigned amount plus any purchases/imports minus any sales/exports, then, in the third year, the Party could sell or export those left over units. And so on for each year of the budget.

Discussion of the Swiss Proposal At the Bonn Workshop. At the Bonn Workshop, experts noted in particular two key features of the Swiss proposal: the requirement of annual reporting of actual emissions and transactions; and the automaticity of the mechanisms for accountability.

Experts identified two advantages of the Swiss proposal. First, by requiring annual reporting of emissions and transactions, the Swiss proposal communicates to all Parties important information about how each Party is doing in limiting its emissions in relation to its overall target. Second, by limiting transactions to only those units which are truly surplus, the proposal essentially would ensure that all transactions occurred in, effectively, “insured” tons that the sovereign had deemed to be truly surplus for purposes of meeting its overall target. No “overselling” could occur, although the problem of encouraging sovereigns to limit actual emissions to allowable levels would still exist. The Swiss proposal would provide strong compliance incentives that take effect during the budget period.

Experts also identified four concerns with the Swiss proposal. First, it was noted that the determination of whether tons were truly “surplus” could be cumbersome, given that information about actual emissions will always lag behind information about transactions. Countries indicated that data on actual emissions for any particular year could take as long as two years to compile, effectively preventing any transactions for as much as three years. But some countries also acknowledged that if the market placed value on early reporting, emissions reports could be reported much sooner, perhaps as early as six months after the close of the reporting year.

Second, by restricting the determination of “surplus” emissions units to those that are surplus on an annual basis, the Swiss proposal would essentially transform the five-year emissions budgets approach of the Kyoto Protocol into five one-year emissions budgets,

eliminating the “temporal” or “when” flexibility of the emissions budget approach. This could raise problems for countries whose actual emissions depend to some extent on activities and events beyond their sovereign control. For example, for countries in electricity grids where there is a mix of fossil and hydropower, an unexpected drought in the hydro portions of the grid area - including, potentially, in other nations - could necessitate short-term increases in fossil generation in order to meet demand. Under the Swiss rule, transactions in emissions units would be unavailable to those countries during drought years.

Third, it was noted that the Swiss proposal would discriminate against poorer countries in Annex B. A wealthy Annex B Party might have the capital on hand to finance new technologies that would enable it to reduce emissions domestically or purchase emissions units from other nations and thereby end up with “extra” or left over emissions units. But a poorer Annex B nation might need to sell some emissions units early in the budget period in order to finance the new technologies that will enable it to reduce emissions. The Swiss proposal would deprive poorer nations of the opportunity to leverage emissions units for financing technology transfer.

Fourth, it was noted that the Swiss proposal fundamentally did not address the compliance issue in full. The fact that a country yearly has extra or left-over emissions units, does not by itself mean that the country will be in compliance after the commitment period. It is possible that, because of high economic growth or sectoral problems, a country might encounter significant emissions rises in year 4 or year 5, in total resulting in non-compliance. In that case, some of the already sold emissions units would then, in effect, be 'over-sold,' and some further provision would need to be made - e.g., automatic true-up, mandatory deduction, or devaluation of already transferred emissions units - in order to make the atmosphere whole and to provide a compliance pressure on Parties.

In light of these concerns, experts then inquired whether it would be possible to fuse the annual accountability and information-provision features of the Swiss proposal together with the compliance aspects of the EDF proposal? On that basis, the following “fused approach” is offered.

A Fused Approach: Eight Rules for Accountability And Compliance

One key element of the Swiss proposal that could greatly enhance the transparency, accountability, and compliance component of the Kyoto Protocol is its requirement that, *on an annual basis, actual emissions must be compared with emissions units available following transfers*. A second key element of the Swiss proposal is its *automaticity*. That is, the Swiss proposal provides a set of accounting consequences that apply automatically, without the need for the political process associated with compliance systems in international legal instruments.

Building on these sound features, it is possible to match the flexibility of the five-year budget approach with a set of automatic, progressively stringent consequences that encourage sovereign compliance, and that leverage compliance through the transparency of rigorous annual reporting. The elements of the fused approach would comprise a set of eight rules, as follows.

Rule #1: Annual Monitoring and Reporting of Actual Emissions. The Kyoto Protocol already requires transparent annual reporting of emissions of all gases, from all sources, and uptake by all sinks. (Kyoto Protocol, Articles 5 and 7.) While reporting in terms of carbon dioxide equivalence is already implied (Article 5.3), *the Parties should adopt a rule clarifying that all annual emissions reporting should be stated in terms of tonnes of carbon dioxide-equivalence.*

Rule #2: Real-Time Tracking and Reporting of Emissions Units, Including Transfers. Articles 3.10-3.12 require the Parties to utilize specific accounting rules to ensure that all transactions in AAUs, ERUs, and CERs are recorded as additions to and subtractions from Parties' emissions accounts. As the Swiss proposal makes clear, real-time reporting of transactions and account balances can be a critical element in fostering accountability and compliance. Building on the Swiss proposal, *the Parties should adopt a rule requiring real-time reporting by all Parties, to all Parties, directly, or through the Secretariat, or through a website with appropriate paper back-up, of all AAU, ERU, and CER transactions in serialized units, as well as real-time reporting of account balances.*

Rule #3: Failure To Report The Parties should also adopt a rule specifying that failure to report actual emissions, transactions, or account balances within specified time periods will place a Party in non-compliance. The rule should specify that one automatic consequence of this type of non-compliance should be that a Party that fails to report within the specified time period is precluded from undertaking transfers until the reporting violation is cured.

Rule #4: Defining Non-Compliance With Emissions Limitations. The key principle on which accounting rules for compliance should be based is, at the end of the commitment period, are a Party's actual net emissions less than the assigned amount units it holds, as adjusted for transfers? The Parties should adopt a rule stating this fundamental point: ***If, at the end of the commitment period, a Party's actual emissions exceed its assigned amount units adjusted for transfers (including AAUs, ERUs, and CERs), then the Party is in non-compliance, and is subject to the compliance measures of Article 18 in addition to the automatic consequences described below.***

Building from that fundamental proposition, a progressively stringent set of consequences can be fashioned, using the rigorous annual reporting requirements of the Swiss proposal, and pairing those with accounting rules that provide compliance incentives both during the budget period and at the end of the budget period.

Compliance Incentives During The Budget Period

The Parties could adopt rules establishing two progressively stringent compliance consequences that would be applied automatically during the budget period.

Rule #5: Automatic Discount of Transferred Emissions Units If Emissions Exceed Trigger Level During the Budget Period. *The Parties should adopt a rule specifying that if actual net emissions during the budget period exceed a pre-specified trigger point, e.g., 110% of total allowable emissions during the budget period, then an automatic discount will be applied to all AAUs/ERUs/CERs trans-*

ferred by that Party within the past year that have not yet been tendered for compliance purposes. The discount could be set equal to the amount by which the Party's actual emissions exceed assigned amounts. For example, if a Party's actual emissions are 110% of assigned amounts, then any AAUs/ERUs/CERs transferred by that Party in the past year would be discounted by 10%.

The effect of this automatic discount would be to create market pressure in favor of compliance among purchasers, sellers, and private entities. Purchasers of AAUs/ERUs will seek to purchase from Parties whose actual emissions are well below this trigger point, since purchasers will not want to see the value of their investments diminished if the seller's emissions go past the trigger point. Selling nations will compete to try to keep their emissions below the trigger point, in order to be able to sell "high-quality" or full-value tons in a competitive marketplace.

Private entities in seller nations that have worked hard to reduce emissions and thereby generate ERUs or extra AAUs, will not wish to see the value of their investment diminished if their country's emissions hit the trigger point - so they will urge their national authorities to do a better job on national compliance, in order to preserve the value of their investments. In fact, any government that wishes, as a matter of its sovereign choice, to adopt the full Swiss proposal, could offer "insured" emissions units for sale. Such "insured" units, in which the selling sovereign nation effectively guarantees that it will ensure that the units are not affected by the automatic discount, would command a premium in the marketplace.

Concerns have been raised that such "buyer liability" would weaken market liquidity, since buyers would be hesitant to purchase emissions units if they knew those units would be subject to the automatic discount. However, the time-limited approach described above would maintain market liquidity, since the discount would apply only to AAUs/ERUs transferred in the past one year, and only to those AAUs/ERUs which had not yet been tendered for compliance purposes. In fact, the operation of such a rule would encourage early tenders for compliance - providing yet another example of the potential of this approach to foster sovereign compliance.

Rule #6: Automatic Prohibition on Sales When Emissions Exceed Specified Levels. The Parties should adopt a rule specifying that if actual net emissions during the budget period exceed a later pre-specified trigger point, e.g., 120% of total allowable emissions during the budget period, then an automatic prohibition on further transfers by that Party will be applied. The effect of this rule would be to prevent cascading non-compliance, whereby a Party effectively floats atmospheric debt in order to buy its way back into compliance.

Compliance Incentives At End of Budget Period.

The fundamental rule that Parties need to agree on is that if at the end of the budget period, a Party's net emissions exceed the assigned amounts it holds as adjusted by transfers, then the Party is in non-compliance, and subject to compliance consequences under Article 18.

Rule #7: Limited True-Up Period. For Parties facing Article 18 sanctions, a "True-Up" period (e.g., of 6 months) would give sovereigns the opportunity to cure their non-compliance. Economic fluctuations, weather shifts, and changes in oil prices that occur late in the emissions budget period could cause unexpected non-compliance at the end of the budget period, even among Parties that have otherwise taken great efforts, in good faith, to comply with the Protocol. A Party that is acting in good faith will want to move quickly to cure this non-compliance, and should be given the opportunity to do so. Accordingly, *the Parties should adopt a rule specifying a limited True-Up period at the end of the compliance period.*

Rule #8: Making The Atmosphere Whole. However, a Party may fail to "True-Up" its emissions account. In that case, the atmosphere will be burdened by that Party's non-compliance, and it will be burdened by increased concentrations of long-lived greenhouse gases, whose atmospheric lifetime exceeds the duration of the next budget period. Accordingly, simply deducting the excess emissions from the Party's next-period assigned amount is not enough to "make the atmosphere whole." Therefore, in addition to the compliance consequences the Party may face under Article 18, *the Parties should adopt a rule specifying that if, after the True-Up period, a Party's actual emissions still exceed its assigned amount, then the excess must automatically be deducted from the Party's next emissions budget, with an Atmospheric Penalty (e.g., the deduction could be done at a ratio of 1.2:1.0).*

Together, this blend of the rigorous annual reporting and automaticity of the Swiss proposal, and the system of progressively stringent compliance consequences of the EDF proposal, could provide a framework that would provide powerful incentives favoring sovereign compliance.

A "structural" element that would be needed to make this system work would be an agreement by the Parties that traded emissions units - AAUs, ERUs, and CERs - will be identified by country and year of origin, and in the case of ERUs and CERs, by project of origin. This identification would enable the market to provide feedback to each nation, delivering a powerful incentive for nations to improve their environmental performance. With such a rule, emissions units from high-performing nations will be able to command higher market prices, and will also earn better ratings from the private, non-governmental carbon quality "rating" services that are likely to develop. Therefore, the requirement of identification of traded emissions units in a standardized, serialized format is a key element of Reporting under Rule #2 above.

EIGHT RULES FOR ACCOUNTABILITY AND COMPLIANCE

Rule #1	Annual Monitoring and Reporting of Emissions: All annual emissions reporting should be stated in terms of tonnes of carbon dioxide-equivalence.
Rule #2	Real-Time Tracking and Reporting of Emissions Units, Including Transfers: All Parties should be required to report, in real time, to all other Parties, directly, through the Secretariat, or through a website with appropriate paper back-up, all AAU, ERU, and CER transactions. Parties should be required to report, in real time, their emissions account balances. All transactions should be reported in standardized serialized units that identify the units traded by country and year of origin, and in the case of ERUs and CERs, by project of origin.
Rule #3	Failure To Report: A Party's failure to report actual emissions, transactions, or account balances within specified time periods will place a Party in non-compliance. The Party may not undertake any further transfers until the reporting violation is cured.
Rule #4	Non-Compliance With Emissions Limitations: If, at the end of the commitment period, a Party's actual emissions exceed its assigned amount units adjusted for transfers (including AAUs, ERUs, and CERs), then the Party is in non-compliance, and is subject to the compliance measures of Article 18 in addition to the automatic consequences established by the other Rules.
Rule #5	During the Budget Period Automatic Discount of Transferred Emissions Units If Emissions Exceed Trigger Level: If, during a budget period, a Party's actual net emissions equal 110% or more of its total allowable emissions (net of transfers) during the budget period, then any AAUs/ERUs/CERs that the Party has transferred within the past year that have not yet been tendered by another Party for compliance purposes will be automatically discounted by the percentage of the excursion.
Rule #6	During the Budget Period Automatic Prohibition on Sales When Emissions Exceed Specified Levels: If during the budget period a Party's actual net emissions exceed 120% of total allowable emissions (net of transfers), then the Party is prohibited from selling/exporting any further AAUs/ERUs/CERs.
Rule #7	End of Budget Limited True-Up Period: At the end of the budget period, a Party whose actual emissions exceed its assigned amount (net of transfers) faces compliance consequences under Article 18. In addition, the Party must bring its emissions account into balance within six months.
Rule #8	End of Budget Period Responsibility To Make The Atmosphere Whole: If a Party fails to balance its emissions account within six months, then, in addition to the compliance consequences the Party faces under Article 18, the difference between its actual emissions and its assigned amount (net of transfers) shall be deducted from the Party's next emissions budget at a ratio of 1.2:1.0.

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/BIODIVERSITY AND INTELLECTUAL PROPERTY RIGHTS: CAN THE TWO CO-EXIST?

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Introduction

The last few years have seen a range of significant developments related to intellectual property rights (IPRs) and biodiversity. At least two major international agreements, both legally binding, deal with this issue: the Convention on Biological Diversity (CBD) and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) of the World Trade Organization (WTO). In addition, the World Intellectual Property Organization (WIPO) and other international institutions are increasingly becoming active on the subject.

At national levels, too, there is considerable activity. Several countries (Costa Rica, Eritrea, Fiji, India, Mexico, Peru, Philippines) are coming up with legislation, or other measures, which respond to the above treaties or in other ways deal with the relationship between IPRs and biodiversity (Glowka 1998). Of particular interest to many countries, especially in the 'developing' world, are the following:

- Protecting indigenous knowledge (traditional and modern) from being "pirated" and used in IPR claims by industrial/commercial interests;
- Regulating access to biological resources so that historical "theft" of these resources by the more powerful sections of the global society can be stopped, and communities/countries are able to gain control and benefits from their use.

These issues relate not just to IPR regimes but also to the new provisions of Access and Benefit-sharing which the CBD contains, and which are being followed up by several countries with appropriate domestic legislation.

Propelling the spurt in activity on this front are the IPR-related scandals that periodically shock the world¹⁵, such as:

- The patenting of ancient herbal remedies, e.g. the US Patent (No. 5,401,504) given to the healing properties of turmeric, known for centuries to Indians; or the US plant patent (No. 5,751) on the 'ayahuasca' plant, considered sacred and used for medicinal purposes by Amazon's indigenous peoples;
- The patenting of crop varieties which are similar to those

15. These are well exposed by the series of *Communiqués* and other papers brought out by the Rural Agricultural Foundation International (RAFI), a Canada-based NGO.

grown for centuries in certain geographical areas, e.g. for varieties of Basmati rice by Rice-Tec Corporation in the US (Patent No. 5,663,484); Rice-Tec even uses the term Basmati, long used to refer to aromatic rice grown in northern India and Pakistan, to describe its rice varieties;

- The patenting of human genetic material, e.g. on the human cell line of a Hagahai tribesman from Papua New Guinea (US Patent No. 5,397,696)
- Plant breeders' rights or patents on entire taxa rather than specific varieties or breeds, e.g. on all transgenic cotton or soybean granted to the company Agracetus; and
- Patents on technologies that threaten farming systems worldwide, such as US Patent No. 5,723,765 granted to Delta and Pine Land Co., nick-named the Terminator Technology for its potential of stopping plant regeneration after the first generation.

All countries are now required to respond to this issue, especially given the following specific decisions taken at international forums:

- Decisions (II/12, III/17, and IV/15) at successive Conferences of the Parties to the CBD, asking for more in-depth understanding, case studies, and other follow-up on the relationship between IPRs and biodiversity in general, and TRIPs and CBD in particular;
- The upcoming review of the relevant clause (27(3b)) of the TRIPs agreement, in late 1999 or early 2000;
- Decisions (III/17 and IV/9) at the Conferences of Parties to the CBD, and at other forums, to work towards the protection of indigenous and local community knowledge, if need be through alternative IPR regimes.

This article attempts to do the following:

- Give a brief history of IPRs related to biodiversity;
- Explore the precise relationship between IPRs and biodiversity;
- Point out the contradictions between TRIPs and the CBD;
- Examine the spaces available in existing regimes for appropriate national action; and
- Point to possible alternative regimes and actions which would help to resolve the conflicts between IPRs and biodiversity.

A Brief History of IPRs and Biodiversity

IPRs, as the term suggests, are meant to be rights to ideas and information, which are used in new inventions or processes. These rights enable the holder to exclude imitators from marketing such inventions or processes for a specified time; in exchange, the holder is required to disclose the formula or idea behind the product/process. The effect of IPRs is therefore monopoly over commercial exploitation of the idea/information, for a limited period. The stated purpose of IPRs is to stimulate innovation, by offering higher monetary returns than the market otherwise might provide.

While IPRs such as copyrights, patents, and trademarks are centuries old, the extension of IPRs to living beings and knowledge/technologies related to them is relatively recent. In 1930, the U.S. Plant Patent Act was passed, which gave IPRs to asexually reproduced plant varieties. Several other countries subsequently extended such or other forms of protection to plant varieties, until in 1961, an International Convention for the Protection of New Varieties of Plants was signed. Most signatories were industrialized coun-

tries, who had also formed a Union for the Protection of New Varieties of Plants (UPOV). This treaty came into force in 1968.

Plant varieties or breeders' rights (PVRs/PBRs), give the right-holder limited regulatory powers over the marketing of 'their' varieties. Till recently, most countries allowed farmers and other breeders to be exempted from the provisions of such rights, as long as they did not indulge in branded commercial transactions of the varieties. Now, however, after an amendment in 1991, UPOV itself has tightened the monopolistic nature of PVRs/PBRs, and some countries have substantially removed the exemptions to farmers and breeders.

In addition, in many countries, patents with full monopolistic restrictions are now applicable to plant varieties, micro-organisms, and genetically modified animals. In 1972, the U.S. Supreme Court ruled that microbiologist Ananda Chakrabarty's patent claim for a genetically engineered bacterial strain, was permissible. This legitimized the view that anything made by humans and not found in nature was patentable. Genetically altered animals, such as the infamous 'onco-mouse' of Harvard University (bred for cancer research), were also soon given patents. Finally, several patent claims have been made, and some granted, on human genetic material, including on material that has hardly been altered from its natural state.

Till very recently, these trends were restricted to some countries, which could not impose them on others. However, with the signing of the TRIPs agreement, this has changed. TRIPs requires that all signatory countries accept:

- Patenting of micro-organisms and "microbiological processes"; and
- Some "effective" form of IPRs on plant varieties, either patents or some *sui generis* (new) version.

TRIPs allows countries to exclude animals and plants *per se* from patentability. However, the provisions above have serious enough implications, for no longer are countries allowed to exclude patenting of life forms altogether (micro-organisms have to be open for patenting). Nor is there likely to be a great amount of flexibility in evolving *sui generis* systems of plant variety protection, for the term "effective" may well be interpreted by industrial countries to mean a UPOV-like model. Indeed, a series of events in 1999, such as meetings in Africa (February 1999) and Asia (March 1999) hosted by UPOV, WTO or other agencies, have shown that this interpretation is already being imposed on 'developing' countries. The African Intellectual Property Organization (OAPI), representing 15 Franco-phone countries, has decided to join UPOV 1991.

The history of IPRs shows that the monopolistic hold of governments, corporations and some individuals over biological resources and related knowledge is continuously increasing. As the examples noted in the Introduction shows, a substantial amount of this monopolization is built upon, and through the appropriation of, the resources conserved and knowledge generated by indigenous and local communities.

IPRs vs. Biodiversity

The CBD has two interesting provisions relating to IPRs. One (Article 16.5) states that Contracting Parties shall cooperate to ensure that IPRs are "supportive of and do not run counter to its (the CBD's) objectives". However, this is "subject to national legislation and international law". Another (Article 22) states that the CBD's

provisions will not affect rights and obligations of countries to other "existing international agreements, except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity". Read together and in the spirit of the CBD, many people have said there is a basis for countering the runaway march of the IPR regimes described above.

But in order for this argument to hold, the actual impacts of IPRs on biodiversity need to be examined. This is a difficult subject, for direct impacts are hard to perceive. However, the following aspects must be considered (Kothari and Anuradha 1997):

- Current IPR regimes have allowed industrial and commercial interests to appropriate the resources and knowledge of resource-rich but economically poor countries and communities, further 'impoverishing' them or excluding them from technological improvements;
- IPRs are likely to greatly intensify the trend to homogenize agricultural production and medicinal plant use systems. In agriculture, for instance, any corporation which has spent enormous amounts of money obtaining an IPR, would want to push its varieties in as large an area as possible. The result would be serious displacement of local diversity of crops (though of course IPRs would not be the only factor in this);
- Increasingly species-wide IPRs (such as those on transgenic cotton and soybean) could stifle even public sector and small-scale private sector crop variety development;
- Having to pay substantial royalties to industrial countries and corporations could greatly increase the debt burdens of many countries. This could further intensify the environmental and social disruption that is caused when debt repayment measures are taken up, such as the export of natural products;
- Farmers who innovate on seeds through re-use, exchange with other farmers, and other means, would be increasingly discouraged from doing so if the tighter regimes that UPOV 1991 sanctifies are imposed on their countries; these regimes would also increase the economic burden on farmers, further discouraging innovation;
- ***The ethical aspects of IPRs are serious, and to many communities and people the most important reasons for opposing current IPR regimes:*** the patenting of life forms (abhorrent to many traditional societies and modern conservationists because of its assumption that nature exists apart from, and for the interest of, humans); the privatisation of knowledge (repugnant to many societies which held knowledge to largely, though by no means only, in the public domain); and others.

TRIPs vs. CBD

The TRIPs agreement is only likely to greatly intensify the impacts outlined above. In particular, its attempt to homogenize IPR regimes militates against a country's or community's freedom to choose the way in which it wants to deal with the use and protection of knowledge. Equally important, it contains no provision for the protection of indigenous and local community knowledge. Such knowledge, because of its nature, may not be amenable to protection under current IPR regimes. Finally, it has no recognition of the need to equitably share in the benefits of knowledge related to biodiversity. Indeed, it legitimizes the conventional inequities that have characterized the interactions between the industrial-commercial use of

biodiversity-related knowledge, and the community/citizen use of such knowledge.

The negative impacts of TRIPs on the three objectives of the CBD are already beginning to be felt, or threatened, in some countries (see national reviews by Dhar 1999 and Anuradha 1999; see also box below). There is an urgent need to explore whatever spaces are available within existing regimes, to counter these threats, and to examine alternative regimes which have conservation, sustainable use, and equitable benefit-sharing built into them.

TRIPs vs. CBD in India

India is currently considering two laws to follow up TRIPs and CBD: the Plant Varieties and Farmers' Rights Bill (PVFRB) and the Biological Diversity Act (BDA), respectively. The PVFRB is supposed to be India's *sui generis* plant variety protection regime (as per Article 27(3)b of TRIPs). However, in several ways these two are not in harmony:

- Whereas the BDA provides for the protection of local community rights in a broad sense, the PVFRB contains only a narrow definition of farmers' rights (the right to reuse, exchange, and sell (except as branded product) protected plant varieties; it does not provide for the protection of farmers' own varieties (which are unlikely to pass the stringent tests of novelty, distinctiveness, etc.) but rather focuses on benefiting formal sector plant breeders;
- Whereas the BDA explicitly provides for benefit-sharing measures with local communities, the PVFRB has no such provision;
- Whereas the BDA attempts to include local community representatives at various levels of decision-making, the PVFRB almost completely excludes them, giving decision-making powers largely to bureaucracies;
- Whereas the BDA requires impact assessments to ensure that all developmental activities are in harmony with biodiversity conservation and sustainable use, the PVFRB does not require any such assessments for plant variety protection applications;

The contradictions between the two proposed laws are yet to be resolved, though they have been pointed out by NGOs and activists (Kothari 1999).

Interestingly, India is not even required to go in immediately for a plant variety protection law; the haste with which the PVFRB has been drafted, points to the influence of the increasingly powerful seed industry (domestic and foreign).

Space within Existing Regimes

Space within TRIPs: Though essentially favoring the further expansion of current IPR regimes, there are some provisions in TRIPs that can be exploited by communities and countries interested in protecting their interests against those of dominant industrial-commercial forces:

- Article 8 allows for legal measures to protect public health/nutrition, and public interest; though environmental protection is not explicitly built into this, it could be justified as being in "public interest". Unfortunately, this clause is subject to "the provisions of TRIPs", which leaves wide open the interpretation of its applicability;
- Article 27(2) allows for exclusion, from patentability, inven-

tions whose commercial use needs to be prevented to safeguard against "serious prejudice" to the environment. This is somewhat convoluted, because a country will first need to determine such serious prejudice, justify the prevention of commercial use, and then only be able to justify non-granting of patents;

- Article 27(3) allows countries to exclude plants and animals from patentability, and also plant varieties, so long as there is some other "effective" form of IPR to such varieties. As mentioned above, what is "effective" is likely to be determined by powerful countries, in which case the almost patent-like regime being advocated by UPOV could well be pushed. However, an exceptionally bold country could well experiment with completely different *sui generis* systems (see alternatives, below), and face up to any charges that are brought against it at WTO.
- Article 22 allows for the protection of products which are geographically defined through "geographical indications". This could help protect some products which are known by the specific locations in which they have originated (as has been done, for instance, with champagne). It is debatable whether, for instance, Basmati rice could have been protected in this manner (the name does not derive from any location, but the variety is known to come from a particular geographical area). Countries like India are already considering domestic legislation on this.

Space within CBD: As mentioned above, both Article 16(5) and Article 22 provide countries with some maneuverability with regard to IPRs. If indeed a country can establish that IPRs run counter to conservation, sustainable use, and/or equitable benefit-sharing, it should be justified in excluding such IPRs. However, the caveat "subject to national legislation and international law" may well make this difficult, since TRIPs is also "international law". Between TRIPs and the CBD, which holds legal priority? Legal opinion would perhaps be that TRIPs, being the later treaty, would supercede CBD in case of a conflict. However, given that CBD deals much more with the protection of public interest and morality, which TRIPs acknowledges as valid grounds for any measures that countries want to take, it could be argued that CBD's provisions should supercede those of TRIPs. This interface has not yet been tested in any active case in the international arena; only when it does, will we know what interpretation is likely to hold. The CBD, unfortunately, is at a serious disadvantage as it does not yet have a dispute resolution mechanism of its own, unlike the WTO.

Perhaps the most crucial provision within CBD may be Article 8j, which requires countries to respect and protect indigenous and local community knowledge, ensure that such communities are asked before using their knowledge for wider society, and further ensure the equitable sharing of benefits arising from such use. Built into this provision are the seeds of a radically different vision of protecting knowledge and generating and sharing benefits from it. Discussions within the CBD forums, including at successive Conferences of Parties, have demonstrated this potential, especially since a wide range of indigenous and local community groups have used the forums to push their case.

In this connection, an interesting question would be: *can a country challenge another country's IPR regime on the ground that it fails to give adequate protection to informal innovations of indigenous or local communities, and therefore violates Article 8j of the*

CBD? Can India challenge the US patent regime as a whole, citing examples such as the turmeric patent? The Indian delegation to WTO's Committee on Trade and Environment posed this question in a June 1995 meeting, but reportedly got no specific response. It would be interesting to see how the CBD forums would deal with a charge like this, if brought by one country against another.

Changing IPR Regimes: A combination of the relevant clauses in TRIPs and the CBD, can be used to argue for modifications in existing IPR regimes which can help to safeguard public interest. Many people have argued, for instance, that apart from the usual criteria of novelty, etc. that are required of an IPR applicant, the following should also be sought as part of the application:

- Source (country/community/person) of the material or information that has gone into the produce/process for which an IPR is claimed;
- Proof of prior informed consent from the country and community of origin (as per Articles 15(5) and 8j of the CBD);
- Details of the benefit-sharing arrangements entered into with the community of origin, wherever applicable (as per Article 8j of the CBD).

Countries like India have also suggested that all IPR applications, which are related to biodiversity and biodiversity-related knowledge, should be posted on the Clearing House Mechanism (set up under the CBD), giving concerned countries and communities/persons an opportunity to object if they feel that their rights have been violated. These suggestions have, of course, not yet been accepted at an international level, but are being built into some domestic legislation.

Other Spaces: Some other forms of IPRs could be used for protecting indigenous and local community knowledge. These include copyright, and know-how licences (see, for instance, the use of such licences in the case of the Aguaruna people of Peru, Tobin 1997). In addition, a number of other international treaties (though not legally binding) could well be used for countering the threat of current IPR regimes. These include the FAO Undertaking on Plant Genetic Resources, the ILO Convention 169 on indigenous peoples, the International Covenant on Economic, Social and Cultural Rights, the UNESCO/WIPO Model Provisions for National Laws on Protection of Expressions of Folklore, the Universal Declaration of Human Rights, the UN Draft Declaration on the Rights of Indigenous Peoples, and others (for a useful review, see Posey 1996).

Perhaps what is most important is to push the **precautionary principle** at all international levels. Principle 15 of the Rio Declaration provides that, "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation". The Preamble to the CBD also recognizes this, in similar words. No serious thought has, however, yet gone into what this could mean under the CBD. What it requires is determination of whether IPRs, even in theory, pose significant threats or not. From the discussion above, it would appear that they do. In any case, countries and communities could assert that those who want to impose IPR regimes of a certain nature, should be burdened with proving that they do *not* pose such threats.

Alternative regimes

Given the extreme uncertainties about how far the spaces within existing IPR/trade regimes can be stretched, there is a clear need for alternative regimes and measures that safeguard the interests of con-

servation, sustainable use, and equity in the use of biodiversity. These could include:

Community-based IPR and resource rights regimes: A number of NGOs and individuals have advocated various forms of intellectual rights regimes which recognize the essentially community-based nature of a lot of biodiversity-related knowledge. At an international level, for instance, an alternative to UPOV has been suggested by Indian NGOs Gene Campaign (1998); this proposed regime gives focuses equally on farmers' and breeders' rights. At national level, groups like the Third World Network, GRAIN, and the Research Foundation for Science, Technology and Ecology, have advocated Community IPR regimes (Nijar 1996; GRAIN 1995; Shiva et.al. 1997); Posey and Dutfield (1996) have argued for a system of Traditional Resource Rights which encompass not just intellectual but also physical resource and cultural rights. Countries like the Philippines are attempting to try such regimes, though the experience is far too short to make any judgements of their efficacy.

In addition, WIPO and other international agencies are also studying the possibilities of protecting indigenous and local community knowledge through alternative regimes.

Defensive IPRs: An idea worth pursuing is a regime of essentially 'defensive' rights. Such a regime would not allow the right holder to monopolies knowledge or its use, but would guarantee him/her the ability to stop others from appropriating or misusing their knowledge or resources. In other words, no-one would be able to monopolies any resource or knowledge over which such a right has been granted. A country could pass legislation stating that its resources were accessible to all, provided they signed a legally binding agreement that they would not in any way apply restrictive IPRs on these resources, or allow such application by third parties. In addition, appropriate benefit-sharing arrangements could also be worked out in Material or Information Transfer Agreements. Of course, for a country to introduce such a system on its own would not make much sense; this would have to be pushed as an acceptable regime at an international level.

There would then be a valid question: what incentives for innovation would such a regime provide? This is dealt with in the Section 7 below.

Civil society resistance and challenges to dominant IPR regimes: One final strategy for countering the inequitable and destructive trend of current IPR regimes, is the mobilization of civil society to resist and challenge them. In a number of countries, notably Thailand and India, farmers' groups, NGOs, and scientists have led the struggle against the "piracy" of indigenous and local community knowledge, and the imposition of IPRs on life forms and related knowledge. Legal challenges have been taken to the U.S. and European patent offices (e.g. in the case of turmeric, by the Indian government; in the case of neem tree products, by several NGOs; and in the case of the and sacred "ayahuasca" plant, by a combination of North and South American groups). Farmers in many countries have warned corporations and governments not to bring in IPRs on crop varieties, and have decided to openly violate any such IPRs even if it means being jailed. Indigenous peoples everywhere are acquiring a deeper understanding of IPR regimes, and ways of challenging them when they impinge on their human or resource rights. Though not of the same nature, the Dutch challenge to the recent European Directive on Legal Protection of Biotechnological Inventions (which attempts to make patents on life forms uniformly possible in Europe), is also noteworthy.

Another form of resistance is the revival of farming and medicinal systems that allow communities and citizens to be largely self-reliant. This would reduce the dependence on corporate and State-controlled seeds and drugs, amongst other things, and therefore escape the IPR trap altogether. Of course, given existing economic and social structures, and the increasing incursion of the global economy into the everyday lives of even 'remote' communities, this form of resistance is getting more difficult. But there are significant movements that have kept alive its possibilities, e.g. the widespread revival of agro-biodiverse farming systems in India and other parts of South and South-east Asia.

Who Will Provide the Incentives for Innovation?

One question that is frequently posed to those opposing the global imposition of current IPR regimes is: how will incentives for continuous innovation be provided if IPRs are not provided? This question assumes that the monetary benefits derived from IPRs (by monopolizing the market for a period) are the only, or major incentive for innovation. This assumption has not been proven over a long term and in a wide variety of circumstances; a recent study evaluating 65 years of the U.S. Plant Patents Act concluded that the Act has neither helped breeding as a profession nor stimulated species, genetic, or even market diversification (RAFI 1995).

For the majority of humanity's existence on earth, innovation has been born of motives other than personal monetary profit: sheer survival, goodwill, social recognition, even power. The fact that Asian farmers could develop, out of one species of rice, hundreds of thousands of varieties to suit a diversity of ecological and social situations, is proof of this. Public sector crop breeding in a number of countries has progressed enormously on the motivation of public welfare. *Though by no means universal, the spirit of public welfare and sharing that motivates traditional healers, farmers, and others, is still very much alive in many countries. Detailed studies of community involvement in biodiversity conservation and sustainable use have, indeed, shown that more than money, tenurial security, social recognition and rewards, and other non-monetized incentives are what drives such involvement. To displace this spirit by forcing upon countries and communities a uni-dimensional view of innovation, which is based on the profit motive alone, is to do a grave injustice to humanity.*

What is the Way Forward?

The arguments made above lead to the following steps, which communities and countries could consider:

- Pushing for the use of the maximum space allowed in existing IPR regimes, including by widening the definitions of "public interest" to its logical limits, attempting bold *sui generis* systems of plant variety protection, advocating the use of the precautionary principle in all trade and other transactions, etc.
- Advocating that, in the upcoming review of Article 27.3(b) of TRIPs, maximum flexibility be built in, allowing countries the option of fully excluding life forms from patents, and the possibility of developing *sui generis* systems of plant variety protection which are "effective" from a national or community point of view;
- Studying, in-depth, the relationship between IPRs and biodiversity (and biodiversity-related knowledge), and providing to international forums the results of these studies;
- Challenging, at international forums, countries and corpora-

tions that are known to be violating Article 8j and other relevant provisions of the CBD; and using Article 16(5) and 22 of the CBD to the maximum extent possible;

- Developing an international agreement (or protocol under the CBD) on the protection of indigenous and local community knowledge, and related access/benefit-sharing measures;
- Steering the revision of the FAO Undertaking on Plant Genetic Resources, the WIPO initiative on "new beneficiaries", and other processes (including proposed ones like the Database Treaty) into directions which ensure conservation, sustainable use, and equity in benefit-sharing;
- Developing and implementing domestic legislation which protects the interests of biodiversity conservation and local community livelihood security.

Some of these steps were also advocated at a recent international Workshop on Biodiversity Conservation and Intellectual Property Rights, organized by the Research and Information System on Non-aligned and Developing Countries (RIS), and Kalpavriksh - Environmental Action Group, under the sponsorship of IUCN - The World Conservation Union. While largely arising from the experiences of South Asian countries, the recommendations of this workshop have much wider validity. The recommendations relating to international processes are therefore reproduced as an attachment to this article.

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WORKSHOP ON BIODIVERSITY CONSERVATION AND INTELLECTUAL PROPERTY RIGHTS

New Delhi, 29-31 January, 1999

Organized by Research and Information System for Non-Aligned and Other Developing Countries, Kalpavriksh, and IUCN - The World Conservation Union

STATEMENT AND RECOMMENDATIONS¹⁶

PREAMBULAR STATEMENT

A Workshop on Biodiversity Conservation and Intellectual Property Rights was organized in New Delhi, on 29-31 January 1999, by the Research and Information System on Non-Aligned and Developing Countries (RIS), Kalpavriksh, and IUCN - The World Conservation Union. More than 60 academics, activists, researchers, NGO representatives, government officials, and representatives of industry from India, together with a number of participants from other South Asian countries, Europe and the USA, participated in the Workshop.

The major issue that was deliberated upon in the Workshop was the conflicts and complementarities between the Convention on Biological Diversity (CBD) on the one hand, and the elements of the international intellectual property regime, underlined by the World Trade Organization (WTO) in the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPs), on the other. The participants identified specific action points that are required to be taken up in the multilateral forums of CBD or WTO, and in the national context within India and other developing countries, that would further the objectives of the CBD through full use of spaces within existing IPR regimes, through further development and adaptation of these using the review process in-built in the Agreement on TRIPs or, where necessary, through creation of new regimes.

The statement and recommended actions below are intended to reflect the range of views expressed at the workshop and to offer a sense of the meeting.

16. This is a reproduction of only that part of the full statement dealing with recommendations for international actions; the rest deals with recommendations for national action in South Asia.

There was strong support for the three objectives of the CBD: conservation of biological diversity, sustainable use of its components, and the fair and equitable sharing of the benefits arising from such use. In addition, participants also recognized the immense contribution of traditional knowledge and practices of local and indigenous communities for conservation, and re-affirmed the need for the effective maintenance of such knowledge systems. In relation to the TRIPs Agreement, participants recognized that the objectives of the Agreement, i.e., the protection of IPRs, should provide benefits to both producers and users of technological knowledge in a manner conducive to social and economic welfare in reality. However, concern was expressed that the current IPR regimes, in particular the Agreement on TRIPs, fail to adequately address a number of concerns central to the achievement of the objectives of the CBD. They appear to pose a significant threat to conservation of biodiversity, they do not address a range of equity issues including intergenerational equity, and they render difficult both access to genetic resources and the fair sharing of benefits arising from their use. Perhaps more seriously they fail to recognize and protect traditional systems of knowledge that are needed to meet the objectives of the CBD fully, especially the local and community knowledge and the knowledge systems of indigenous peoples. There is therefore a need to achieve necessary amendments to existing regimes, and/or develop alternative regimes to address these concerns.

The workshop identified the following actions as steps to address some of these concerns:

RECOMMENDATIONS FOR ACTION

1. Recommendations Relating to International Regimes

Current international regimes which have relevance to IPR and biodiversity issues need to be substantially reviewed, and attempts made both to use the spaces available within them and create new spaces and alternative regimes which can help to conserve biodiversity and protect the rights of indigenous and local communities. In particular, actions are needed in the World Trade Organization (WTO), concerning specifically the Agreement on (TRIPs), the Convention on Biological Diversity (CBD), and the other relevant international processes, including those that have been initiated by the World Intellectual Property Organization (WIPO). Besides, the search for alternative international regimes is also important.

A. WORLD TRADE ORGANISATION (SPECIFICALLY, TRIPs)

At the level of the WTO, and specifically the TRIPs agreement, the following actions should be taken:

- An open and transparent process, involving civil society, of reviewing article 27.3(b) in 1999 and the review in 2000 of the TRIPs Agreement overall;
- A full consideration of the relevant provisions of the CBD, the FAO Undertaking on Plant Genetic Resources, the ILO Convention 169, the UNESCO/WIPO Guidelines for Protection of Folklore, the UN Draft Declaration on the Rights of Indigenous Peoples, international human rights declarations, and other relevant international treaties and processes, while undertaking the above-mentioned reviews;
- An independent and transparent assessment of the environmental and equity implications of WTO in general and TRIPs in particular, with the involvement of civil society and of relevant international bodies relating to the CBD, the FAO and WIPO, and taking in particular the "precautionary principle" enshrined in Agenda 21;
- A review of Article 31 of TRIPs to ensure its conformity with

the preamble, and articles 7 and 8 of TRIPs, as well as article 16 of the CBD. The aspects of authorization for commercial and non-commercial activity under Article 31 should be clarified during such review;

- Expansion of, or at the very least maintenance of, the exceptions in Article 27.3(b) of TRIPs, for patenting of life forms; the expansion should ideally exclude micro-organisms, products and processes thereof, from patentability;
 - The definition of the term 'micro-organism' should not be expanded to cover tissues, cells or cell lines or DNA obtained from higher organisms, including human beings;
 - Expansion or at the very least maintenance of the sui generis clause relating to plant variety protection, in order to:
 - (i) ensure implementation of article 8(j) of the CBD relating to indigenous and local communities;
 - (ii) ensure that full consideration of environmental and ethical concerns about IPRs on life forms are addressed; and
 - (iii) allow the completion of a biosafety protocol that establishes minimum international standards for the environmental safety of releases of genetically modified organisms.
 - Amending the provisions of Article 27.3(b) by either deleting the term "effective" in the context of sui generis systems of plant variety protection, or defining it such that national priority is paramount in the interpretation of the term, including the following:
 - (i) Conservation and sustainable use of biodiversity;
 - (ii) Promotion of traditional lifestyles;
 - (iii) Promotion of food security and health security;
 - (iv) Ensuring equitable benefit sharing;
 - (v) Invoking the precautionary principle;
 - (vi) Respect of the principles of equity and ethics;
1. Exploring ways of interpreting and implementing TRIPs that help achieve the objectives of the CBD;
 2. Measures to prevent the unilateral pressure by some members to coerce other members to strengthen IPR regimes beyond the TRIPs requirements;
 3. Enhancing the scope of Article 23 of TRIPs to strengthen protection of geographical indications for goods other than wine and spirits, such as Darjeeling tea;
 4. The scope of Article 22 of the TRIPs should be expanded to protect denominations relating to geographic origin, and characteristics associated with a specific region;
 5. Inclusion of requirements (in Article 29 of TRIPs) for disclosure of the genetic resources and the traditional knowledge used in inventions for which IPRs are claimed, the country and community of origin of these resources and knowledge, and proof of consent having been sought of the relevant community and equitable benefit-sharing arrangements having been entered into with them, as required by the CBD;
 6. Steps to ensure that TRIPs implementation and elaboration fulfils all the objectives stated in Article 7. This should include striking a balance between rights and obligations, a balance that should take into account the objectives of the CBD as well as the principles enunciated at the Earth Summit;

B. CONVENTION ON BIOLOGICAL DIVERSITY (CBD)

The CBD process should take the following measures:

1. Assess the relationship of IPRs to access and benefit-sharing provisions, including in the development of guidelines or best practices for achieving equitable benefit-sharing from use of genetic resources. In particular, there should be consideration of mechanisms such as certificates of origin, evidence of prior consent for access to genetic resource, evidence of prior approval of indigenous and local communities for access to traditional knowledge, and disclosure of this evidence in patent applications;
2. Evaluation of the impacts of international processes relating to IPRs, including TRIPs, on the objectives of Article 8(j) of the CBD;
3. Development of a protocol on the protection of indigenous and local community knowledge and resource rights;
4. Providing inputs into the ongoing WIPO processes on "new beneficiaries" which are assessing issues relating to protection of traditional knowledge; and
5. Development of a code of conduct, or a protocol, on access and benefit-sharing, especially in relation to the resources and knowledge of indigenous and local communities, and of 'developing' countries;

These steps could be taken up as concrete points for the inter-sessional process relating to the implementation of Article 8(j), which the CBD COP4 initiated; and of other processes relating to the Biosafety Protocol and the inter-sessional work on access and benefit-sharing.

C. OTHER PROCESSES

Other international processes relevant to IPRs and biodiversity need to take the following steps:

1. Development of the FAO Undertaking on Plant Genetic Resources, either in itself or as a protocol under the CBD, should incorporate comprehensive protection of indigenous and local community knowledge, along with provisions to conserve biodiversity and sustainably use biological resources;
2. Cooperation at the SAARC level to jointly conserve biodiversity, achieve sustainable use, and promote equitable benefit-sharing, especially through appropriate regional agreements;
3. Ensuring that any agreement on databases (e.g. the proposed Database Treaty) ensures effective control by communities of their knowledge, mechanisms that ensure effective and equitable sharing of benefits with and within communities, and space for communities define the terms by which they control access and require benefit-sharing;
4. At all international forums, setting up of "intercultural panels" to evaluate the terms of "cross-cultural transactions" by which knowledge relating to biodiversity from one knowledge system is used in another system, including in dispute-resolution processes.

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/TOPIC

/GLOBALIZATION AND THE DEVELOPING COUNTRIES: THE INEQUALITY RISK

*by Nancy Birdsall, Senior Associate
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This statement was delivered at the Overseas Development Council's (ODC) conference "Making Development Work," held on 18 March 1999 in Washington, DC.

Introduction

My task is to talk about globalization and inequality in developing countries, with emphasis on Latin America. I have a simple point to make: globalization puts developing countries at risk of increasing income inequality. The increase in inequality in the United States over the last 25 years (during which the income of the poorest 20 percent of households has fallen in real terms by about 15 percent) has been blamed, rightly or wrongly, on changes in trade, technology and migration patterns associated with increasing economic integration with other countries. For developing countries, any risk of increasing inequality associated with active participation in the global economy is even greater, if only because of the greater inherent institutional weaknesses associated with being poor. Latin America has a special disadvantage: its historical legacy of already high inequality. Inequality that is already high complicates the task of effective conflict management, which Dani Rodrik has just reminded us is a critical input to managing open economies. In the past, for example, high inequality combined with the politics of redistribution led to periodic bouts of populism in Latin America – ineffective and counterproductive efforts to manage the conflicts provoked by the dangerous combination of high inequality and hard times.

Let me start with two prefatory remarks. First, globalization – that is the trend of increasing integration of economies in terms not only of goods and services, but of ideas, information and technology – has tremendous potential benefits for developing countries. Nothing I say should suggest otherwise. The challenge is to realize the potential benefits without undertaking huge offsetting costs. Second, not all inequality is a bad thing. Some inequality represents the healthy outcome of differences across individuals in ambition, motivation and willingness to work. This *constructive* inequality provides incentives for mobility and rewards high productivity. Some would say constructive inequality is the hallmark of the equal opportunity society the U.S. symbolizes. Increases in this constructive inequality may simply reflect faster growth in income for the rich than the poor – but with all sharing in some growth. But of course it can also be true that inequality is *destructive*, when for example it reflects deep and persistent differences across individuals or groups in access to the assets that generate income – including not only land (which is extremely unequally distributed in Latin America) but, most impor-

tant in today's global information age, the asset of education. Obviously this destructive inequality undermines economic growth and efficiency, by reducing the incentives for individuals to work, to save, to innovate and to invest. And it often results in the perception if not the reality of injustice and unfairness – with the political risk in the short term of a backlash against the market reforms and market institutions that in the long term are the critical ingredients of shared and sustainable growth.

I have three parts to my remarks: first, on inequality and market reforms; second, on inequality and the recent financial crisis; third, on what to do, or more grandly on policy implications.

On inequality and market reform

Consider some examples of how the market reforms associated with globalization can affect inequality in developing countries.

First, trade liberalization. On the one hand, trade liberalization makes economies more competitive and thus is likely to reduce disqualifying rents to insiders. The end of import substitution programs and associated rationing of access to foreign exchange has probably been the greatest single factor in reducing the corrosive effects of corruption and rent-seeking in Latin America. Trade liberalization can also generate new labor-intensive jobs in agriculture and manufacturing – raising the incomes for example of the rural poor. And trade liberalization implies cheaper imports, reducing the real costs of consumption for the urban poor – who after all unlike the rich use most of their income for consumption.

On the other hand, recent evidence shows that trade liberalization leads to growing wage gaps between the educated and uneducated, not only in the OECD countries but in the developing countries. Between 1991 and 1995 wage gaps increased for six of seven countries of Latin America for which we have good wage data. The exception is Costa Rica, where education levels are relatively high. Apparently the combination of technology change with the globalization of markets is raising the demand for and the wage premium to skilled labor faster than the educational system is supplying skilled and trainable workers. In Latin America education levels have been increasing, but painfully slowly – with for example only 1.5 years of additional education added to the average education of the labor force in three decades (in contrast to twice that increase in Southeast Asia). And the distribution of education, though improving slowly, is still highly unequal, meaning that many of today's workers have even less than the current average of about 4.8 years of completed schooling.

In short, the effect of trade liberalization on inequality depends – including on the extent to which a country's comparative advantage lies in job-using agriculture or manufactured exports, and on the extent to which education has been increasing and is already broadly shared. In Costa Rica, with good education and a high proportion of the relatively poor engaged in smallholder coffee production, trade liberalization has had equalizing effects. But in Mexico, where the rural poor are concentrated in food production and education levels are still low and unequally shared, income declined between 1986 and 1996 for every decile of the income distribution except the richest, where it increased by 15 percent. Unfortunately Mexico is probably more typical than Costa Rica. For the region as a whole, though trade liberalization is likely to increase average incomes, it is also

likely to increase inequality, at least in the near future, because education efforts have lagged and because the region's comparative advantage (other than in Costa Rica and Uruguay) is in capital-intensive rather than job-creating natural resource-based production.

A second example is privatization. Privatization of utilities (power, water, telecommunications) has been good news for the lower deciles of the income distribution all over the developing world. Why? Because it has dramatically increased access to services. Prior to privatization, publicly managed utilities were chronically insolvent financially and thus their services were highly rationed. The rich had access to water to fill their swimming pools (and often at artificially low prices meant to protect the poor!) while the poor paid 20 times the unit cost to purchase water from private trucks.

On the other hand, it is increasingly obvious that privatization poses grave risks of concentrating wealth unless done well and with the full complement of regulation. In small economies with limited competition and high concentrations of political and economic power, even privatization of firms that in larger settings with more arms-length and transparent market rules would face the discipline of competition, can end up locking in rather than eliminating private privileges. In a recent poll in Latin America, respondents agreed by three to one to the general statement that "a market is best". But in Argentina, Peru, Colombia, Uruguay and Panama, fewer than half supported the idea that privatization had been beneficial – apparently because of the widespread perception that the high costs of newly privatized services reflect lack of real competition. Russia is of course the most extreme example of the danger that corruption will infect the privatization process. Those of you familiar with the saga of the privatization of banks in Mexico in the early 1990s, and the subsequent political fallout in 1998 (when a sound proposal from the technical point of view was nearly derailed by the political effects of the 1995 rescue of many insider bank owners and borrowers) will recognize the political risks associated with a privatization process that ends up reinforcing rather than diffusing initial inequality of wealth and privileges.

The risks of privatization arise because developing and transitional economies, almost by definition, are handicapped by relatively weak institutions, less well-established rules of transparency, and often, not only high concentrations of economic and political power but a high correlation between those two areas of power. These conditions combine to make it difficult indeed to manage the privatization process in a manner that is not disqualifying.

Third: financial liberalization. On the one hand, there is little doubt that low- and middle-income consumers and small and medium businesses were the biggest losers in the 1980s with the repressed banking systems of Latin America. Controls on interest rates reduced their access to any credit at all, and government-run credit allocation favored small enterprises only on paper. Similar arrangements almost surely penalized the middle class and the poor in Africa. In the medium term, elimination of financial repression and the increased competition of a modern and liberalized financial sector will increase access to credit for small enterprises and raise the return to the banking deposits which are the principal vehicle for small savers. The advantages for small business in turn is likely to generate more good jobs and raise wages for the working poor.

However in the short run at least, financial liberalization tends to help those most who already have assets, increasing the concentration of wealth which undergirds in the medium term a high concentration of income. For one thing, liberalization increases the potential returns to new and more risky instruments for those who can afford a diversified portfolio and therefore more risk, and who have access to information and the relatively lower transacting costs that education and well-informed colleagues provide. In Latin America, with repeated bouts of inflation and currency devaluations in the last several decades, the ability of those with more financial assets to move them abroad (often while accumulating corporate and bank debt that has been socialized and thus eventually repaid by taxpayers) has been particularly disequalizing. In Mexico between 1986 and 1996 small savers who kept their assets in bank savings accounts lost about 50 percent, while those able to invest in equity instruments realized modest gains. Those who moved their assets into dollars or dollar-indexed instruments before the 1994-95 devaluation did best of all in terms of local purchasing power.

On inequality and the financial crisis

The recent financial crisis has highlighted how volatility associated with global capital markets can compound the problem of destructive inequality in developing countries. For example, high inflows of capital generate inflationary pressure and hurt labor-intensive agriculture and manufactured exports, especially but not only under fixed exchange rate regimes. In Asia and Latin America, Gini coefficients of inequality increased during the boom years of high capital inflows in the mid-1990s, as portfolio inflows and high bank lending fueled demand for short-term inelastic assets such as land and stocks, favoring the rich. In both regions the poor gained less during the boom, and then lost more with the bust. During the bust, with capital fleeing, the high interest rates countries are forced to impose to protect their currencies (again, whether the exchange rate is fixed or floating), hurt small capital-starved enterprises and their low-wage employees most, and of course reduce employment in general. In Latin America, a high-interest environment also tends to benefit net savers and hurt small debtors, with a regressive impact; this has certainly been the effect in Mexico and Brazil. Helmut Reisen has recently pointed out the additional regressive impact of the fiscal cost of bank bailouts in developing countries, simply because the redistributive impact of public debt tends to be negative. He recalls Keynes' Tract on Monetary Reform, where Keynes reminds us that public debt implies a transfer from taxpayers to rentiers. Worst of all in Latin America's historically inflation-plagued economies (though this is notably much less the case today), the poor hold cash, the non-interest bearing part of the debt which has been subject to considerable inflation tax.

The problem emerging markets face is a broader one. Because global market players doubt their commitment to fiscal rectitude at the time of any shock, they are forced into tight fiscal and monetary policy, to re-establish market confidence, at precisely the moment when in the face of recession they would ideally implement counter-cyclical fiscal and monetary measures in order to stimulate their economies. The austerity policies that the global capital market demands of emerging markets are precisely the opposite of what the OECD economies can afford to implement – such relatively automatic Keynesian stabilizers as unemployment insurance, increased availability of food stamps, and public works employment programs, the ingredients of a modern and effective social safety net.

Furthermore we know now that the effects of unemployment and bankruptcy on the poorer half of the population can be permanent; in Mexico increases in child labor force participation and reduced enrollment in school during the 1995 downturn have not been reversed. Similarly a collapse in employment opportunities for labor force entrants can have lifetime effects on job possibility and income-earning potential for the affected cohorts.

On what to do: Are there policy implications?

There are implications for domestic policy, and for international economic policy as well.

On the domestic policy side, one obvious implication of the vulnerability of emerging market economies to volatility in global capital availability is to reduce reliance on foreign capital. Dani Rodrik emphasizes the centrality of a locally financed investment push to the success of small open developing economies, implying the need to increase private and/or public savings. The recent crisis highlights, for a different reason, the importance of public savings. If public spending in developing countries is to play a socially and economically efficient countercyclical role during a downturn, public savings in the form of a prior and precautionary fiscal surplus has to have already created the necessary fiscal space to finance safety net programs. Today Brazil has virtually no such fiscal flexibility, and is paying a price in increasing inequality. Chile does have space, and any increase in inequality will be lower. Of course, maintaining and insulating politically a fiscal surplus is no easy task – as the current politics-of-the-surplus debate in the U.S. shows.

In addition, the developing countries face the same problem as the OECD countries: raising revenue to finance a social safety net requires taxing the public. In a global economy, there is some evidence that it is increasingly difficult to tax footloose capital (and even to tax the income of highly educated and internationally mobile labor). David Hale noted this morning that Singapore and South Africa have recently reduced corporate taxes. So countries ironically need to tax most in good times those who are most vulnerable in bad times – and to the extent these are the innocent bystanders to the excesses of the boom and bust cycles, the impression if not the reality of unfair burden sharing is heightened.

Assured revenue for an effective safety net minimizes the welfare and human capital losses the poor otherwise suffer with economic or other shocks. But in the medium run, the best vaccine against inequality is widespread access to good education. In today's global information age, education is the people's asset; the more there is of it, the lower the inequality of real total wealth in the long run. It is still unfortunately the case that in many countries of Latin America, education is a vehicle for reinforcing rather than compensating for initial differences across households in income and wealth. I have written and spoken elsewhere about the need for aggressively targeted public programs to bring good education to the poor. Unfortunately in a vicious circle, education for the poor is a political and technical task made all the more difficult where high current income inequality, as in Latin America, constrains effective demand of poor households and generates resistance of rich households to use of the public fisc to finance effective basic schooling.

A third key ingredient of domestic policy to counter inequality is what might be called an aggressive EOF bias, i.e. constant and vigorous Equal-Opportunity Fine-tuning of economic policies. For example, if macroeconomic equilibrium requires high interest rates, temporary measures to ensure equal access to credit for small and micro enterprises may be warranted. If a major restructuring of the financial sector is required, distributional considerations demand that bank shareholders assume their share of losses; not all the costs should be passed to depositors and taxpayers. Privatization schemes can make special provisions under which small investors can buy small lots of shares, and can borrow at reasonable rates to purchase available shares – as has been tried in Peru; or can be arranged to generate widely distributed benefits for all citizens in the form of future pension assets, as in Bolivia.

What about international economic programs and policies? First, the international financial institutions could pay much more attention to the political reality of inequality of assets and income in developing countries. Conditionality associated with international lending and grants could be much more explicitly focussed on slashing subsidies that benefit the rich, on encouraging and financing market-consistent land reform, and most important, on ensuring that there is effective public education, on which the poor so heavily depend if they are to join in the benefits of a market economy.

Second, the OECD countries could revisit their trade stance as it affects the poor in developing countries. Protection of agriculture and of textiles discriminates against the poor within countries. The head of the World Trade Organization has proposed elimination of tariffs on all imports of the world's 50 poorest countries. This would reduce income inequality not only across but within poor countries.

Third, the poor and vulnerable in developing countries might well benefit from some international financing of countercyclical safety net programs in emerging market economies that are hit by global liquidity crises. Max Corden has set out the conditions that would make such financing appropriate, which include a solid record of sound fiscal policy in recipient countries; the political capacity to mount such programs without corruption and to unwind them when the crisis recedes; and the long-run fiscal capacity to service any resultant external debt. These are stringent conditions, but the fact is that Mexico in 1995 and Korea in 1998 could have qualified, and could thus have reduced the tremendous and terrible costs to human welfare and the permanent losses of human capital associated with the impact of financial crises on those Joe Stiglitz has called the innocent bystanders. International financing is now used during liquidity crises to build reserves (and thus market confidence) and to finance imports. Why do we know so little about the potential costs (e.g. effects on inflation) and benefits of external financing earmarked for temporary increases in spending on social insurance and safety net programs?

In conclusion, the developing countries face special risks that globalization and the market reforms that reflect and reinforce their integration into the global economy, will exacerbate inequality, at least in the short run, and raise the political costs of inequality and the social tensions associated with it. The risks are likely to be greatest in the next decade or so, as they undergo the difficult transition

to more competitive, transparent and rule-based economic systems with more widespread access to the assets, especially education, which ensure equal access to market opportunities. During that transition, more emphasis on minimizing and managing inequality, on making the market game as nearly as possible a fair one, even in the short run, would minimize the real risks of a protectionist and populist backlash. A backlash would be a shame, as in a perverse twist, it would undermine the benefits that more open and more globally integrated economies and polities can deliver to all the people of the developing world.

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TOPIC

AFRICA: AN AGENDA FOR THE 21ST CENTURY

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Introduction. At the dawn of the twenty-first century, Africa must quickly select the path it wishes to follow. On the one hand, it could allow the forces of implosion and ethnic warfare to become the masters of its fate, to the advantage of a few potentates lacking in vision or warlords with transient alliances. Thus, history would repeat itself, with all the suffering that this entails, and this old continent would be at the mercy of all types of corruption. Africa would be stripped of the wealth of its soil and the promise of its youth and left marginalized, adrift in the wake of history.

On the other hand, it could say no to marginalization and fully integrate itself into the great global village that the world has become in this internet era. This would mean that its youth could build a future brimming with hope and every man and woman could participate in developing their nations, thereby ensuring both transparency in the management of public affairs and a sense of a common destiny. These are the foundations of a stable, inclusive, and predictable environment.

Since the early 1990s, many countries in sub-Saharan Africa, the region on which this article is principally focused, have been implementing sound macroeconomic policies and structural reforms to raise real per capita incomes, reduce inflation, and narrow financial imbalances, thereby changing the economic landscape dramatically. But despite these reforms, poverty remains widespread, private investment is subdued, and most African countries continue to depend heavily on external assistance. Moreover, macroeconomic imbalances are still sizable, and most countries remain highly vulnerable to changes in external conditions.

Today there is a widespread consensus, both within Africa and among its international partners, that intensified efforts are required to increase growth by fostering private investment through more open markets and trade and by ensuring a more secure environment through economic, political, and judicial reforms.

Africa's economic recovery. Sub-Saharan Africa has made substantial progress toward macroeconomic stability during the current decade through sound financial policies and market-friendly structural reforms. The IMF has often supported these efforts by providing technical assistance and making financial assistance available under various facilities, most prominently under its highly concessional Enhanced Structural Adjustment Facility (ESAF).

After years of stagnation, average real economic growth in sub-Saharan Africa has increased from an average of 1.0 percent during 1992–94 to about 5 percent during 1995–98. Strong growth has been seen in an increasing number of countries, and real per capita GDP has started to rise. Forty out of 47 countries are now showing increases in their annual per capita incomes. There has also been considerable success in bringing down inflation and reducing internal and external financial imbalances. For the region as a whole, average inflation (as measured by the consumer price index) declined from a peak of more than 60 percent in 1994 to some 10 percent in 1998. The region's external current account deficit, including grants, fell from an average of 7.0 percent of GDP in 1992 to 5.5 percent in 1998, while the overall fiscal deficit was cut from about 8 percent of GDP to 5.5 percent over the same period.

Meanwhile, the restructuring of many African economies has been gaining momentum. Government intervention in economic activity is on the wane. Administrative price controls are being removed, and agricultural marketing has been widely liberalized. Most countries have made considerable strides in opening their economies to world trade by eliminating multiple exchange rate practices and nontariff barriers and also lowering the degree of tariff protection. In most countries, the process of restructuring and privatizing state enterprises has been under way for some time, though it has proceeded with varying speeds and has enjoyed varying degrees of success. Labor markets are also progressively being liberalized.

Fiscal reform is gaining ground: African countries are taking steps to rationalize their tax systems, reduce exemptions, and enhance their administrative efficiency while reorienting expenditures away from wasteful outlays and toward improved public investment and spending on key social services, particularly health care and primary education. On the monetary front, most countries have made progress in establishing market-determined interest rates, eliminating selective credit controls, and introducing indirect instruments of monetary policy, such as reserve requirements and open market operations. Greater attention is also being paid to rehabilitating weak banks and promoting healthy and competitive banking sectors. Moreover, the IMF and the World Bank have recently launched a joint initiative to help heavily indebted poor countries (HIPC) that pursue sound policies to tackle their external debt burdens, including their large multilateral debts. So far, five African countries—Burkina Faso, Côte d'Ivoire, Mali, Mozambique, and Uganda—have become eligible under the HIPC Initiative.

Need for faster growth. The recent achievements in Africa are undoubtedly encouraging, but are they sufficient to make a real dent in poverty? African countries would need to achieve sustained real per capita annual growth of 8–9 percent to attain one-half of today's real per capita income levels in industrial countries within a generation, and growth rates of 6–7 percent would be needed just to keep up with the expected increase in Africa's labor force. The remarkable fact about such numbers is not that they are high, but that they fall within a range that an increasing number of policymakers would consider feasible. If Africa is to sustain such growth rates, however, it urgently needs to become a better place to save and invest, first and foremost for Africans themselves but also for foreign investors.

Toward economic security. The basic objective of the "second generation" of reforms before us, in IMF Managing Director Michel

Camdessus's words, is "to expand the scope for private investment by promoting greater openness in domestic and external trade and creating a more secure environment." Meanwhile, it is essential that the progress made to date in maintaining macroeconomic stability be consolidated and extended. Let me spell out this agenda before discussing how it may be advanced.

Appropriate regulations and their evenhanded implementation are necessary to support free trade, which is critical for a better allocation of resources and the spread of know-how and innovation. This requires the following actions:

- A redefinition of the role of government away from direct involvement in production and toward the provision of essential public services is critical.
- A faster and more transparent privatization process is needed to create scope for the private sector. In support of these efforts, a comprehensive and well-defined privatization strategy—covering not only management responsibilities but also ownership, and involving local as well as foreign investors—should be developed and implemented. The establishment of an appropriate legal framework, along with effective regulatory policies and institutions, is another essential step in promoting a transparent and predictable environment for investors, reducing the fear of expropriation, and fostering healthy competition.
- Financial sector reform that would strengthen savings mobilization and intermediation and promote the soundness of banking systems, together with the correct sequencing of reforms, is vital, as the Asian crisis has amply demonstrated. Sub-Saharan African countries will have to move decisively to deepen and broaden their relatively weak financial markets, establish independent and efficient banking supervision agencies, open their banking sectors to healthy international competition, apply best practices in bank management, and improve the legal framework for banking activities and contract enforcement. At the same time, they need to develop institutions and instruments dedicated to long-term savings mobilization—stock exchanges, pension funds, insurance, and other contractual savings systems—and make domestic financing facilities accessible to small investors, including farmers.
- Notwithstanding the substantial progress in trade liberalization sub-Saharan countries have made since the mid-1980s, their trade regimes remain complex and restrictive compared with those of most other countries. They therefore need to speed up trade liberalization and tariff reform to enhance the efficiency and competitiveness of their domestic producers and help them become more fully integrated into the world economy. These efforts should include the elimination of all significant nontariff barriers; a substantial, phased reduction of tariff levels; and the reduction or elimination of export taxes. The benefit of trade liberalization would be enhanced if the process were supported by properly sequenced and paced liberalization of capital flows, in order to create scope for an increased contribution of foreign direct and portfolio investment. Moreover, trade liberalization and tariff reform

should be well publicized and undertaken as part of a comprehensive medium-term tax reform program. The industrial countries could also make an important contribution to achieving this goal by eliminating the barriers that limit the access of African producers to their markets.

Ensuring economic security is critical for eliciting the participation of each and every individual in developing the nation. The steps needed to achieve this goal include the following:

- The transparency, predictability, and impartiality of the regulatory and legal systems must be guaranteed. This should go well beyond ensuring respect for private property rights and the enforcement of contracts to include the elimination of arbitrariness, special privileges, and distortionary ad hoc exemptions.
- Achieving good governance is very important, and national authorities should spare no effort in tackling corruption and inefficiency and in enhancing accountability. In July 1997, the IMF's Executive Board, recognizing the importance of good governance for macroeconomic stability and sustainable growth, adopted guidelines to ensure that the IMF pays greater attention to these issues.
- Well-defined property rights are a key element of economic security for small landholders and informal entrepreneurs; they are also a key requirement for deepening the financial system. Meeting this need requires imagination and a close coordination with stakeholders—simply duplicating the legal instruments of advanced economies in developing countries with diverse cultural and administrative backgrounds will not work.

A variety of instruments is available to support free trade and advance economic security, including the following:

- A capable and efficient civil service is a key ingredient of sound public administration. In many countries, however, limited skills, overstaffing, and deteriorating remuneration in real terms have contributed to low morale, weak incentives to improve performance, and illicit activities in the civil service. For many African countries, a key step will be overhauling their civil services. The substantial progress already made in reducing internal and external financial imbalances has resulted from fiscal consolidation, which has come primarily from compressing public expenditure, while in many countries the revenue base remains inadequate. Revenue efforts should focus on broadening the tax base and strengthening tax administration—there is little room for higher rates. A comprehensive medium-term approach to tax reform is needed to optimize the composition of revenue and take into account the impact of the tax structure on investment incentives and income distribution. Expenditure levels will continue to be constrained by available resources. The efficiency of outlays thus remains the key to successful fiscal adjustment in the short term. Making further improvements in the composition of expenditure by reducing unproductive expenditures and increasing the shares of education, health, and infrastructure will also be essential.

Forging a partnership with civil society to build a consensus on reforms, as well as to provide checks and balances, is essential. To succeed, African governments need to actively encourage the participation of all segments of civil society in economic policy debates and do a much better job of explaining the short-term costs, as well as the medium- and long-term benefits, of policy options.

- With closer economic integration, each African country has an interest in ensuring that its partner countries follow appropriate policies. Virtually all African countries are now members of regional organizations. Increased regional cooperation and coordination of national policies would allow African countries to overcome the disadvantages of their relatively small economies and geographic limitations and, by providing access to larger markets, make it possible for them to realize economies of scale. Enhancing trade links among African countries naturally also strengthens their ability to participate in trade on a global scale and could lead them to make further progress toward nondiscriminatory multilateral trade liberalization. The challenge of the future will be to ensure that these regional organizations establish common regional objectives and are perceived as effective vehicles for the integration of African countries into the world economy, providing mutual support to their members in their reform efforts. The pace of progress toward this end should be what is feasible, not what is comfortable for the slowest member.

Conclusion. Economic security, good governance, and a better dialogue with civil society to build a social consensus for reforms should be the key concerns of African policymakers in the future, in addition to implementing sound macroeconomic policies and bold structural reforms.

As I consider Africa's agenda for the twenty-first century, I am struck above all by its hopeful character. All approaches converge on the single objective of building institutions to release and support the initiative of each and every African. But I am also all too aware that African news headlines often tell a different tale, one of terrifying ethnic strife, cynical corruption, and widespread misery and disease. How can this hopeful agenda be reconciled with these stark realities? The answer lies in the power of human creativity, once it is released in a secure environment.

An African renaissance is unfolding before our eyes. Most countries, through most of their years of independence, have been ruled by autocratic leaders—autocratic because, whether enlightened or not, they stood above the law. Today, the rule of law is asserting itself. More than ever before, Africans are demanding accountability and honesty from their leaders, freedom from repressive governance, and the right to participate in influencing and formulating public policy. The growing demands for more participatory systems of political representation are overdue and will enable African governments to build popular consensus behind their economic and social policies. Ethnic strife and widespread misery can be resolved only under the rule of law, which is the foundation of peace and prosperity—initiative, investment, and saving cannot flourish without it.

A new partnership is needed to support sustainable growth and development in Africa. International support should be—and is—focused on those African countries that have the will to break clearly with the past and that are ready to implement far-reaching economic and political reforms. It is in the interest of the international community for democracies to spread and market economies to develop in Africa. Let there be no mistake: the fight for economic security is political. It is a fight for the substance of power. A new basis of power exists in Africa today in all the men and women who are struggling to establish a new order. In their hopes lies my hope for a more humane Africa.

An earlier, expanded version of this article was published in the Winter/Spring 1998 issue of the Brown Journal of World Affairs.

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/TOPIC

/SIX EASY PIECES: FIVE THINGS THE WTO SHOULD DO—AND ONE IT SHOULD NOT

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Introduction

The High-Level Meeting on Trade and Environment (15-16 March) is a response to widespread frustration in many countries and in civil society at the WTO's failure to come to grips with the environmental dimension of trade liberalization. There is growing evidence that this failure is turning important segments of society, particularly in industrialized countries, against the trading system as currently organized, raising a serious obstacle in the road of further liberalization and posing questions that could stall or dim prospects for the so-called Millennium Round.

The High-Level Meeting on Trade and Development (17-18 March) is the result of a conviction, principally among developing countries, that political priority is systematically accorded to concerns that may well be of priority in rich countries, but which are lower on their list of concerns, though still present. It reflects the frustration felt by most developing countries that their chief concerns are routinely set aside to deal with issues closer to the hearts of Northern electorates. It also reflects disillusionment at the multilateral trading system's failure to promote equity within and among societies, and thereby to help ensure that growth genuinely leads to development.

IISD is a Canadian-based international policy institute dedicated to the achievement of sustainable development. As such it is concerned both with the agenda of environment and of development in the WTO. On the occasion of these two historic meetings, IISD offers six ideas for consideration: five things to do—and one not to do.

1. Focus on Sustainable Development

The WTO Agreement opens with a ringing statement:

“Recognising that [the Member States’] relations in the field of trade and economic endeavor should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world’s resources *in accordance with the objective of sustainable development, seeking both to protect and preserve the environment*¹⁷ and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development ...”

While preambular language is weaker than the legally binding text that follows it in the agreements establishing the WTO, it nevertheless sets forth the vision and aspirations of the founders in establishing the “new and improved” successor to GATT in the wake of the Earth Summit in Rio. Unfortunately, the WTO has done little in its first four years to ensure that its actions match these aspirations, to ensure that trade liberalization leads not just to enrichment for some but to sustainable development for all.

The original mandate for the Committee on Trade and Environment (CTE) asked the Committee to

“...make appropriate recommendations on whether any modifications of the provisions of the multilateral trading system are required, compatible with the open, equitable and non-discriminatory nature of the system, as regards, in particular:

1) the need for rules to enhance the positive interaction between trade and environmental measures, for the promotion of sustainable development...”

Establishing a Committee to debate the relationship between trade and environment shows that the WTO has accepted environmental concerns as a legitimate facet of the trade debate. But the limited technical nature of the Committee’s *de facto* mandate (examining only the impact of environmental regulation on trade, and not the reverse), and the near-total lack of progress in its four years of existence, suggest that the CTE in isolation is fundamentally incapable of adequately advancing the mandate for sustainable development in the WTO.

To make matters worse, the limited and inconclusive debate in the CTE is the only formal examination of any aspect of sustainability that has so far taken place within the regular work program of the WTO, and this has been confined to addressing environment rather than sustainable development. As IISD’s Winnipeg Principles for trade and sustainable development make clear, the distinction is important: sustainable development does seek environmental integrity, but holds as equally important the objectives of development and economic growth.

Sustainable development, not the easing of environment-related trade impacts, is the WTO’s preambular goal, and trade should represent an essential component of any move toward greater sustainability — to promote the rapid dissemination of more sustainable innovations, to avoid the support of unsustainable practices through protectionism, and to generate the resources needed to finance the transition to greater sustainability. But this requires a wider treatment of sustainable development concerns in many WTO bodies outside the CTE.

As argued in IISD’s 1996 WTO Assessment Report, sustainable development touches upon most organs of the WTO. The Organization’s work will, however, only promote sustainable development when the General Council regularly addresses the issue, requiring all subsidiary organs to submit reports on steps taken toward that goal.

The General Council of the WTO should commission the preparation of a “Sustainable Development Agenda” for the WTO. As a first step, the Council should authorize the Director General to establish a special high-level group of independent experts, modeled on the group of “14 wise men and women” that produced the Report of the High-level Advisory Group on the Environment to the Secretary General of OECD—“Guiding the Transition to Sustainable Development”—in November 1997. Such an independent group should prepare a report on the steps needed to achieve sustainable development in the multilateral trading system. An independent standing inspection panel (fashioned after the World Bank model) should be established with a mandate to produce a regular public report card that monitors progress toward this goal.

2. Focus on Sustainable Development in the South

The WTO’s most important contribution to sustainable development must come on the side of development and poverty alleviation. For this to occur, we must begin with the basic truth that economic liberalization, while necessary for sustainable development, is not sufficient.

Small developing economies in particular may be hamstrung by geographical, sectoral or institutional inflexibilities that cause liberalization to produce painful and protracted periods of transition. In these economies, experience has shown that economic openness must be properly staged, and accompanied by deliberate domestic policies to facilitate restructuring. Without such staging and accompanying measures liberalization may, at least in the short and medium term, actually work against growth, employment, poverty alleviation, and other components of sustainable development.

The measures traditionally invoked by trade negotiators to address such problems are either too blunt (simple transition periods for developing and least-developed countries) or rely on action from institutions which are not bound by WTO-negotiated promises of special and differential treatment.

The World Bank and the WTO should collaborate to design effective mechanisms of special and differential treatment, based on the clear lessons of five decades of development efforts. Such mechanisms, to be embedded in future negotiated commitments, should be flexible enough to take into account domestic realities such as levels of institutional and economic development, industrial structure and geography, and the resulting need for staging of trade obligations. And they should, where appropriate, involve inter-agency collaboration, and the participation of major private actors.

17. emphasis added

Even where trade liberalization succeeds in creating growth, the benefits of that growth are often poorly distributed. The structure of international product chains—the complex regimes which go from producers and processors through to point of sale—is such that larger rents are available to those who control the higher-value portion of chains, with gains from trade liberalization distributed accordingly. Product chains link countries in complex economic regimes, which reach deep into their social structure. Some countries are experiencing difficulty in drawing continuing benefit from their participation in open trade. It is time to reconsider the position of developing countries in global product chains, and how sustainable development might be promoted.

The WTO has traditionally argued that this is a matter best left to member states. But in the age of globalization, an organization responsible for trade can no longer escape responsibility for what occurs in international product chains. Escalating tariffs and a range of non-tariff barriers have long created impediments to the entry of developing country actors into high-value portions of these regimes. Such entry requires both innovation originating in developing countries and the reassessment of commodity markets.

Least developed countries are often heavily dependent on commodity production, but commodity prices have continued to decline and terms of trade have deteriorated markedly over the history of the GATT and WTO. Moreover, the price of commodities taken from the natural environment is usually subsidized at the expense of the environment itself. It is hard to conceive of sustainable development in these countries without stable commodity prices. These points were all made forcefully in UNEP's recent Environment and Trade Report on global product chains.

The WTO, alone or in concert with UNCTAD, should undertake an assessment of the position of developing countries in global product chains, with particular attention to the least developed countries and commodity production. The WTO must recognize its responsibility for ensuring that trade-driven economic growth leads to sustainable development in all countries, and that it benefits both poor people and the environment.

3.A Standing Conference on Trade and Environment

The WTO—and indeed the other relevant intergovernmental organizations such as UNCTAD and UNEP—has been hindered by an insufficiently clear and forceful articulation of the environmental agenda with respect to the trade regime. This is attributable at least in part to the complex structure of international environmental management, involving a large number of regimes at many different levels of governance. The creation of a Standing Conference on Trade and Environment (SCTE), proposed by IUCN and IISD, would establish a forum in which the environmental interests in international trade might be articulated clearly and some initial priorities for action set. The SCTE is conceived as a light institutional structure—perhaps modeled on the Antarctic Treaty or the G7—not as a new international organization. It would gather the key environmental actors from government, convention secretariats, civil society and the private sector with an interest in trade policy, review policy objectives and proposals, and seek to formulate practical recommendations to be introduced to the WTO, to regimes for environmental management, and to other policy forums.

The SCTE would help fill the critical gaps in the WTO's efforts to advance sustainable development. The issues that the CTE is addressing from a trade policy perspective, it would address from an environmental policy perspective, seeking to formulate realistic policy options which, if implemented, would contribute to greater harmony between trade and environment policy and help ensure that both contribute to sustainable development. Early issues on which SCTE efforts might help break the logjam in the CTE include the relation between the Multilateral Environmental Agreements (MEAs) and the trade regime, agreed criteria for application of Article XX exceptions, and many others.

There is no appetite at the international level for new bureaucracies, and even proposals for new forums for discussion are resisted. At the same time, without such an initiative it is difficult to imagine how environmental policy in respect of trade—currently dispersed among tens if not hundreds of organizations and processes—can gain the coherence necessary to influence trade policy positively, and to fully address the environmental concerns of the developing countries.

A Standing Committee on Trade and Environment should be convened. A short paper describing the SCTE and how it might work is available from IISD (see <http://iisd.ca/trade/scte03.htm>).

4.A WTO Agreement on Environment

Many of the conflicts that have emerged in the trade and environment debate concern environmental distinctions between otherwise "like" products in trade. Despite the unpopularity of the notion in trade policy circles, achieving sustainable development will nevertheless require a fair means of distinguishing between environmentally sound and environmentally destructive products in the marketplace, including on the basis of how they were produced. The ability to discriminate between products in this way is fundamental to giving market-based incentives that favor environmentally responsible production and consumption. The principle behind this type of discrimination is unassailable; the challenge is to develop a system of rules within which it could work without protectionist abuse.

Although securing an agreement within the WTO on acceptable grounds for discriminating between products on the basis of their environmental "footprint" would not be easy and must be regarded as a long-term aim, the lack of such an agreement is already causing difficulties. For example, experience in the dispute-settlement bodies suggests that determining the acceptability of such distinctions case by case entails several significant risks. The dispute-settlement process is burdened by decisions that require significant levels of environmental expertise. Decisions taken on a case-by-case basis will tend to attract repeated attention and conflict to the dispute-settlement process, even when they are correct. Ultimately, they may contribute to a significant weakening of the dispute-settlement process and the trade regime itself.

Paradoxically, a case-by-case approach creates incentives to develop discriminatory distinctions because they may escape scrutiny, because the dispute settlement process itself is time-consuming, and because the disputed measures can stay in place while the dispute is proceeding. This can, of course work both ways, as recent debate on the Appellate Body's decision on the shrimp/turtle case has shown. Ultimately, though, the difficulty of an agreed structure of rules governing the use of environmental distinctions in trade may be outweighed by the risks of doing nothing.

The WTO General Council should consider the timeliness of a new WTO Agreement on Environment, and in preparation should invite the Secretariat to produce a paper examining options for such an agreement, possible contents of a negotiating text, and a timetable for negotiations, to be taken to the Ministerial Meeting in Seattle as a formal proposal. Such an agreement should aim to set out the rules governing discrimination among products on the basis of their environmental characteristics, as well as the rules needed to ensure that such measures do not constitute a hidden barrier to trade.

5. Continue Promoting Transparency and Participation

Since its establishment, and particularly in the last year or two, the WTO has taken significant and welcome steps to promote transparency and participation in its work, especially when compared with GATT, its predecessor. IISD urges that this process continue. There is still a long way to go before trade policy can be said to reflect a balanced compromise among the views of key stakeholders.

The WTO should look for appropriate ways to open its proceedings further. There is scope for creative professional input from civil society and other stakeholders, especially to the dispute-settlement process. And issues such as the 1999 review of Article 27.3 (b) of the TRIPs Agreement would benefit from input from organizations working on biodiversity, community knowledge and indigenous peoples' priorities. Establishing better access to WTO documents, making the Committee on Trade and Environment somewhat more accessible, and creating events and forums where civil society and trade policy may interact are all welcome but insufficient steps.

It is wrong, however, for all the attention to be directed at the WTO when the principal problem lies at the national level, in the opaque processes that too often characterize trade policy development. In too many countries, national trade policy well reflects the interests of the commercial sector, but fails to take into account the interests of other groups in society. Now that the trade regime has extended its reach far beyond trade in goods, and now that trade has become so essential as a motor for economic growth, the formulation of trade policy should be correspondingly extended. National trade policy—and national positions taken at the WTO—should represent a careful balance among the legitimate interests of stakeholders in society. This is rarely the case.

The WTO should take further steps to improve transparency in its work, and should develop simple criteria and guidelines for domestic-level openness in developing national trade policy and positions. A process for preparing a working draft of such criteria and guidelines should be led by the International Centre for Trade and Sustainable Development, and should be available at the forthcoming Ministerial meeting of the WTO.

6. Do NOT Include Investment in the WTO

Despite the failure of the effort to negotiate one in the OECD, there is a need for a multilateral agreement on investment. Current patterns of foreign direct investment (FDI) are flawed; they concentrate too heavily in a few countries, and underfund the type of innovation, infrastructure and productive facilities that sustainable development demands. Clearly, the risks associated with investment in many developing countries exact severe financial penalties, and deprive many of the benefits of new technologies. A properly structured investment regime is needed to ensure that these risks become more predictable, that investment fosters sustainable development in

a broader range of countries, and that it does not lead to undue environmental degradation.

The requirements of an investment regime are, however, structurally different from those for the liberalization of trade in goods or services. Productive investment has a long-term time horizon and can involve numerous changes over the lifetime of an investment, responding to new technologies, changing market opportunities and an evolving understanding of the consequences of an investment. A foreign investor acquires continuing rights in the host country, a kind of economic citizenship, and with these rights come obligations. The principles of most favored nation and national treatment are insufficient to ensure that investment is handled fairly and equitably.

Furthermore, FDI, which is arguably trade related, is only a small part of a vast and complex system of marginally trade-related international capital flows and practices. Any attempt to bring institutional arrangements to bear on international investment would have to also deal with portfolio and speculative investment, inter-bank practices, hedge funds, derivatives, offshore investment havens, possible clearing houses, the lender of last resort question, and so on. The GATT/WTO structure is unsuitable for the development of the needed international investment regime, and its current strengths will be put at risk by attempts to extend it into this dynamic and conflictual area.

The international community should find a forum other than the WTO in which to negotiate a multilateral framework of rules governing international investment. An IISD paper setting out the arguments behind this recommendation is available.

Summary of Recommendations

1. Focus on Sustainable Development: The General Council of the WTO should commission the preparation of a WTO "Sustainable Development Agenda". As a first step, the Council should authorize the Director General to establish a special high-level group of independent experts, modeled on the group of "14 wise men and women" who produced the Report of the High-level Advisory Group on the Environment to the Secretary General of OECD. Such an independent group should prepare a report on the steps needed to achieve sustainable development in the multilateral trading system. An independent standing inspection panel (fashioned after the World Bank model) should be established with a mandate to produce a regular public report card that monitors progress toward this goal.

2. Focus on Sustainable Development in the South: The World Bank and the WTO should collaborate to design effective mechanisms of special and differential treatment, based on the clear lessons of five decades of development efforts. Such mechanisms, to be embedded in future negotiated commitments, should be flexible enough to take into account levels of institutional and economic development, industrial structure and geography, and the resulting need for staging of trade obligations. And they should, where appropriate, involve inter-agency collaboration, and the participation of major private actors.

The WTO, alone or in concert with UNCTAD, should undertake an assessment of the position of developing countries in global product chains, with particular attention to the least developed countries and commodity production. The WTO must recognize its responsi-

bility for ensuring that trade-driven economic growth leads to sustainable development in all countries, and that it benefits both poor people and the environment.

3. A Standing Conference on Trade and Environment: A Standing Conference on Trade and Environment should be convened. A short paper describing the SCTE and how it might work is available from IISD (see <http://iisd.ca/trade/scte03.htm>).

4. A WTO Agreement on Environment: The WTO General Council should consider the timeliness of a WTO Agreement on Environment, and in preparation should invite the Secretariat to produce a paper examining options for such an agreement, possible contents of a negotiating text, and a timetable for negotiations, to be taken to the Ministerial in Seattle as a formal proposal. Such an agreement should set out rules governing discrimination among products on the basis of their environmental characteristics, as well as the rules needed to ensure that such measures do not constitute a hidden barrier to trade.

5. Continue Promoting Transparency and Participation: The WTO should take further steps to improve transparency in its work, and should develop simple criteria and guidelines for domestic-level openness in the development of national trade policy and positions. A process for preparing a working draft of such criteria and guidelines should be led by the International Centre for Trade and Sustainable Development, and should be available at the forthcoming Ministerial meeting of the WTO.

6. Do NOT Include Investment in the WTO: The international community should find a forum other than the WTO in which to negotiate a multilateral framework of rules governing international investment. An IISD paper setting out the arguments behind this recommendation is available.

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IISD's Trade and Sustainable Development Program seeks to help harness international trade and investment as forces for sustainable development. In keeping with IISD's focus on North-South issues, the program has a special emphasis on the problems and concerns of developing countries in the trade and sustainable development debates.

/linkages/journal/



/UPDATES

/SUSTAINABLE DEVELOPMENT

SEVENTH ANNUAL CONFERENCE OF THE NILE COUNCIL OF MINISTERS (NILE COM): Ten Nile River riparian states met from 13-14 May 1999 in Addis Ababa, Ethiopia. At the conference, ministers decided to bolster confidence-building measures to realize their shared vision for equitable utilization of the Nile waters for development and poverty alleviation. They also recognized the rights of each riparian state to use the resources of the Nile and its tributaries within its boundary for development and accepted this as their guiding principle. Ministers agreed on transitional institutional arrangements leading to a final "framework cooperation" for the equitable utilization of the Nile water resources. They further agreed to strengthen the Nile secretariat head office in Entebbe, Uganda, with the necessary manpower. The session instructed its Technical Advisory Committee (Nile Tac) "to proceed with the preparation of terms of reference for consultants and to come up with specific project proposals." The ministers also agreed on the process that will take them to the meeting of International Consortium for Cooperation on the Nile (ICCOM) within a few years. Development partners for the process are the World Bank, UNDP, and the Canadian International Development Agency. For more information contact: contact the World Bank; tel: +1 (202) 458-5454; fax: +1 (202) 522-1500; e-mail: pic@worldbank.org.

WORKSHOP ON INDICATORS: The Science and Policy Dialogue on Designing Effective Indicators for Sustainable Development took place in San Rafael de Heredia, Costa Rica from 7 to 9 May 1999. The workshop was organized by IISD and co-sponsored by the Bellagio Forum for Sustainable Development, the Deutsche Umweltstiftung, the Mistra Foundation and Deutsche Bank. The Dialogue brought together 40 participants from different geographical regions and backgrounds, including policy-makers, experts on various types of indicators, academics, and representatives from multi-lateral organizations and businesses. The Dialogue met in three Plenary sessions and four working groups that discussed case studies on: Community Level Sustainability Assessment in India; the European Environmental Pressure Indices Project; the work of Canada's Commissioner of the Environment and Sustainable Development; and corporate reporting of The Placer Dome Group. Keynote speakers presented each case study. Working group outcomes were subsequently considered by Plenary round-table discussions. Two break-out groups were tasked with synthesizing discussions on feeding back into decision-making processes and grouping indicators under clusters or themes. For more information see: <http://www.iisd.ca/linkages/sd/>

IMF DEVELOPMENT COMMITTEE: The 59th Meeting of the Development Committee was held in Washington, D.C. on 28 April 1999. Regarding the Debt Initiative for Heavily Indebted Poor Countries (HIPC), ministers expressed their continued strong support for the Initiative and reaffirmed its overarching objective of poverty reduction. They discussed ways to strengthen the Initiative

and welcomed the results of the extensive external consultation process in this regard. The Committee endorsed the current review of options designed to enable HIPC Initiative debt relief to be broader, deeper and faster. Ministers endorsed a set of principles that should be used in considering changes to the current HIPC framework. These guiding principles include recommendations that debt relief should: (i) reinforce the wider tools of the international community to promote sustainable development and poverty reduction; (ii) strengthen the incentives for debtor countries to adopt and implement economic and social reform programs; (iii) provide a clear exit from an unsustainable debt burden—taking into account external vulnerabilities of each eligible country; and (iv) be consistent with the need to preserve the financial integrity of the IFIs. Moreover, any changes should simplify implementation of the Initiative.

On the Comprehensive Development Framework (CDF), the Committee welcomed the holistic approach to sustainable development envisaged in the CDF. Ministers appreciated that the CDF emphasizes the ultimate importance of country ownership of decision-making as well as partnership and coordination between government, civil society, the private sector and other multilateral and bilateral actors. They underscored the importance, within the CDF, of each partner sharpening its focus. They noted that many governments had expressed interest in working as partners with the Bank in helping to develop the CDF. Ministers recognized that the ultimate test of the CDF would be in its implementation, and they called on the Executive Board to monitor and evaluate progress in the pilot country cases as they evolve over the next eighteen months. For information contact: the IMF; tel: +1 (202) 623-7300; fax: +1 (202) 623-6278; e-mail: publicaffairs@imf.org; Internet: <http://www.imf.org/>

WORLD BANK CULTURAL SITE MANAGEMENT WORKSHOP: The Cultural Site Management (CSM) Workshop, co-sponsored by the World Bank Institute and the World Bank's Culture and Development Anchor, took place from 26-30 April 1999 at World Bank headquarters in Washington, DC. The Workshop brought together nearly fifty participants, including cultural site management experts, professionals working on cultural heritage sites from the Bank's client countries, and World Bank staff involved in cultural heritage and development projects, to discuss issues, challenges and practical approaches to sustainable management of culturally valuable sites. The rationale for the Workshop was based on the World Bank's current work on implementing or preparing projects with CSM components in eight countries (Albania, Croatia, Eritrea, Ethiopia, Georgia, Jordan, Lebanon, and Turkey), and the growing demand for guidance on CSM planning from developing countries. The specific objectives of the Workshop were to: identify issues, challenges and problems associated with CSM; ascertain strategies for CSM; identify strategy implications for specific Bank-financed projects with CSM components; formulate an action plan for each CSM component of a Bank-financed project; draft an outline for a CSM educational program; identify financial issues in CSM in preparation for a working group at the upcoming conference on financing cultural heritage conservation in October 1999; and initiate an international network of CSM personnel. The Sustainable Developments report is available at: <http://www.iisd.ca/linkages/sd/culturalheritage/>

EXPERT MEETING ON INTERNATIONAL INVESTMENT AGREEMENTS: The UNCTAD "Expert Meeting on International Investment Agreements: Concepts Allowing for a Certain Flexibility in the Interest of Promoting Growth and Development"

was held from 24-26 March 1999. The Meeting was convened on the basis of a decision taken by the Commission on Investment, Technology and Related Financial Issues at its third session to examine "concepts — such as exceptions and other mechanisms — allowing for a certain flexibility, including in the field of technological capacity-building, in the interest of promoting growth and development — to allow countries in different stages of development to benefit from international investment agreements," in pursuance of paragraph 89(b) of "A Partnership for Growth and Development." The principal issue for the expert meeting was the identification of the features of international investment agreements (IIAs) that provide for flexibility in these agreements in the interest of promoting development while, at the same time, allowing them to serve other objectives. In reviewing the forms in which the concept of flexibility is found in existing IIAs, the meeting was able to evaluate, to some extent, the effectiveness of these forms in promoting development while encouraging investment. The Expert Meeting adopted agreed conclusions, circulated in TD/B/COM.2/EM.5/L.1. The Expert Meeting recommended also that the report submitted by the secretariat (circulated in TD/B/COM.2/EM.5/2) should be revised in light of the discussions during the Expert Meeting. The revised paper should be submitted to the next session of the Commission, with a view to informing it about the issues involved and policy options. For more information contact: Secretary of the Expert Meeting; tel: + (41 22) 907 57 97; fax: + (41 22) 907 00 56; e-mail: james.zhan@unctad.org

SEVENTH SESSION OF THE UN COMMISSION ON SUSTAINABLE DEVELOPMENT: The seventh session of the UN Commission on Sustainable Development (CSD-7) met at UN Headquarters in New York from 19-30 April 1999. Participants considered the economic theme of tourism, the sectoral theme of oceans and seas and the cross-sectoral theme of consumption and production patterns. They also prepared for the UN General Assembly's Special Session to review the Barbados Programme of Action for the Sustainable Development of Small Island Developing States (SIDS). Deliberations began with a four-session "Tourism Segment," during which representatives from local authorities, trade unions, industry and NGOs engaged in dialogue with government representatives on industry initiatives, consumer behavior, sustainable development and coastal impacts related to tourism. Participants then moved into a two-and-a-half day High-Level Segment, during which 89 ministers and high-level government officials offered statements and engaged in a dialogue led by CSD-7 Chair Simon Upton (New Zealand). Delegates deliberated on 13 draft decisions during the second week of the session, adopting 12 of them on 30 April. A motion of no action was carried on a draft resolution introduced by the Russian Federation on the crisis in the Balkans.

Delegates highlighted several aspects of their decision on oceans and seas as positive outcomes of their deliberations, particularly their decision recommending that the General Assembly establish an open-ended informal consultative process as a means to broaden and deepen its consideration of oceans and seas issues. Other decisions addressed reversing the downward trend in ODA, preparation for CSD-9's work on energy, and integrating consumption and production policies into the CSD's programme of work more effectively. On tourism, delegates identified the decisions on economic measures, sex tourism and the role of the tourism and travel industry as very useful for developed and developing countries. The ENB report is available at: <http://www.iisd.ca/linkages/csd/csd7/>

FIFTH EXPERT GROUP MEETING ON INDICATORS OF SUSTAINABLE DEVELOPMENT: The meeting, held from 7-8 April 1999 in New York: took stock of the implementation of the Work Programme on Indicators of Sustainable Development; discussed the interim results of the national testing of the working set of indicators; provided recommendations for the revision of the current framework, indicator set and related methodologies; provided guidance and recommended actions on how to further the national implementation of the testing; discussed the outcome of a study on linkages and aggregation; and provided recommendations for follow-up to initiatives on aggregation and linkages of sustainable development indicators in the context of the CSD work programme. For more information contact: Ms. Catherine Rubbens, Associate Expert, Socio-Economic Policies, Finance and Technology Branch, Division for Sustainable Development, Department of Economic and Social Affairs; tel.: +1 (212) 963-5243; fax: +1 (212) 963-4260; e-mail: rubbens@un.org

WORLD COMMISSION ON DAMS FORUM: The World Commission on Dams (WCD) Forum was held in Prague, Czech Republic from 25-26 March 1999. The 55-member Forum is an innovation in global public policy-making and includes representatives from the broad spectrum of perspectives around the dams debate. The WCD has been charged with moving the dams debate into a more constructive phase. It is doing this by carrying out a global review of dams and their effectiveness in delivering development benefits, plus devising internationally acceptable policies to guide future decision-making on dams and their alternatives. The Forum was created to act as a consultative body. In plenary sessions and in smaller work groups, the various parties highlighted the main issues they would like the Commission to address in its studies and report. Those include, among many others:

- in-depth analysis of the economics of dams, irrigation and power production
- resettlement and compensation for those displaced by dam reservoirs
- quantification of environmental and social impacts, to give them the same weight as economic issues when decisions are made whether to build dams or adopt their alternatives
- consideration of the costs and benefits of alternatives to dams, such as natural gas and coal generation of power and their impact on the environment;
- improved forecasting of river flows (with particular attention to climate change) and electricity consumption.
- issues of good governance that would ensure all parties affected by dams are included in decision-making about dams and their alternatives
- while the WCD was born out of widespread dissatisfaction with dams due to their negative impacts, that the positive impacts also receive ample consideration, particularly in terms of energy provision and ensuring food security

There was general agreement that the WCD needs a strategy to ensure its final report will be the global reference on dams issues for decision-makers in national governments, international agencies, the private sector and civil society. For more information contact: Kate Dunn, WCD, Cape Town; tel: +27 21 426 4000; fax: +27 21 426 0036; e-mail kdunn@dams.org; Internet: www.dams.org

WORKING GROUP ON FINANCING FOR DEVELOPMENT: The Ad Hoc Open Ended Working Group on Financing for Development held its first set of informal discussions on the "form, scope and agenda" for the high-level event on financing for devel-

opment to be held in 2001. The focus of attention during these informal discussions was on the first four "key elements": mobilizing domestic resources for development (16 March); mobilizing international private financial flows for development (17 March); international financial cooperation for development (18 March); and external debt (bilateral, multilateral and commercial) (19 March). The day preceding the informal intergovernmental consultations, there was an NGO/Business panel on the same four themes and an NGO consultation with the Vice-Chairpersons. From 12-14 May, the Working Group held informal meetings. For this set of meetings the Vice-Chairpersons circulated to missions a letter attaching the draft of the final report to the General Assembly. The Vice-Chairs then asked the representative from the Philippines to facilitate negotiations on the agenda and scope sections of the draft report to the General Assembly. On 20, 21 and 25 May, the facilitator convened working sessions on the possible agenda and scope of the 2001 consultation. A web site, located at <http://www.un.org/esa/analysis/ffd/>, includes all statements provided by delegations during the informals, the statements by the Second Committee panelists that preceded the informals, a summary of views presented at an NGO consultation on 15 March as well as a new homepage for each of the eight "key elements."

MINISTERIAL CONFERENCE ON SMALL ISLAND DEVELOPING STATES: Countries attending the Special Ministerial Conference on Agriculture in Small Island Developing States (SIDS), convened by the FAO on 12 March, adopted a declaration pledging "to support the sustainable development in small island developing states" and to address their particular needs." The declaration said, "Reaffirming our common determination and strong commitment, expressed during the World Food Summit, we pledge to pursue our efforts towards the achievement of food security and to implement development policies and programmes which secure the sustainability of agriculture, forestry and fishery sectors in small island developing states." The Conference considered a draft Plan of Action on Agriculture in Small Island Developing States, which is an umbrella program aimed at helping SIDS countries and four low-lying coastal states, "as the basis for further consideration by appropriate bodies of FAO and other relevant bodies of the United Nations system." The draft Plan of Action would help implement programs focusing on five major areas: agricultural trade; intensification and diversification of agriculture; meeting fisheries needs; sustainable management of land, water and forestry resources and environmental protection; and, strengthening national institutions. The Special Ministerial Conference called on FAO to finalize the draft Plan of Action in consultation with its member countries and submit it to the FAO Council, the Organization's interim-governing body, in June. The Conference also requested FAO to submit the plan, once adopted, as FAO's contribution to the UN General Assembly Special Session on SIDS, meeting in New York in September 1999. For more information contact: John Riddle, FAO; telephone: + (00 39) 06 5705 3259; e-mail: john.riddle@fao.org; Internet: <http://www.fao.org/sids>

INTERNATIONAL CONFERENCE ON CORPORATE SUSTAINABILITY REPORTING: This conference was held from 4-5 March 1999 in Oxford, UK at the Imperial College of Science, Technology and Medicine. The conference, which attracted more than 350 delegates, sought to develop a common framework for sustainability reporting by companies. The meeting brought stakeholders to: share information and take stock of progress to date; develop a common understanding of the need for standard, consistent, reliable, and comprehensive source of business performance in-

formation; officially launch and generate discussion of the first version of the Corporate Sustainability Reporting Guidelines for public comment and for testing by volunteer companies. The conference was organized in conjunction with UNEP-Paris, the Association of Chartered Certified Accountants (ACCA), the WBCSD, the Coalition for Environmentally Responsible Economies (CERES) and the Stockholm Environment Institute (SEI). For more information contact: Andrew J Blaza, Imperial College, tel: +0171 594 9326; fax: +0171 594 9304; e-mail: a.blaza@ic.ac.uk.

STEERING COMMITTEE OF THE MEDITERRANEAN COMMISSION ON SUSTAINABLE DEVELOPMENT (MCSD): The Steering Committee of the MCSD met in Tunis from 8-9 March 1999 and addressed issues of interest to the Fifth Meeting of the MCSD, scheduled to be held in Rome, Italy from 1-3 July 1999. Topics discussed included: method of work and follow-up of recommendations; new theme for the next three biennium and relevant selection criteria; preparation of the strategic review for the year 2000; and cooperation with the UN as well as National CSDs. All MCSD related issues will be addressed and discussed in detail during the Fifth MCSD meeting together with the Progress Report of the MCSD Thematic Groups. For more information contact: Mr. Lucien Chabason, UNEP/MEDU; tel: + 0030 (1) 72-73-100; fax: + 0030 (1) 72-53-196/7; e-mail. unepmedu@unepmap.gr.

CONFERENCE ON SUSTAINABLE PRODUCTION AND CONSUMPTION: The conference "From Consumer Society to Sustainable Society: Towards Sustainable Production and Consumption" was held in Soesterberg, the Netherlands from 31 January and 1 February 1999. The conference was organized by the Northern Alliance for Sustainability (ANPED), in partnership with Alternatieve Konsumenten Bond (AKB), and the Center for Respect of Life and Environment (CRLE). This conference brought together 67 representatives of NGOs from 23 countries. Its objectives were to prepare NGOs for CSD-7 in April 1999, and to strengthen NGO cooperation in the field of changing production and consumption patterns. Participants examined sustainable production and consumption (SPAC) from both conceptual and strategic approaches, the ethical dimension of global production and consumption, as well as the national policy frameworks being developed since Rio. Other agenda items include the revision of the UN Consumer Guidelines and the SPAC Watch proposal being developed by NGOs following CSD-7. This is a 3-year project to monitor the progress of governments towards sustainable policies. Its goal is to compile national profiles for the ten-year review of Agenda 21 and provide a way to link together the work of all the NGOs. The workshops considered three major strategies focusing on the responsibilities of governments, producers (industry) and civil society (consumers). For more information contact: ANPED; tel: +31-(0) 30-2310300; fax: +31-(0) 30-2340878; e-mail: anped@antenna.nl; Internet: <http://antenna.nl/anped/>

OECD CONFERENCE ON FOREIGN DIRECT INVESTMENT AND THE ENVIRONMENT: This conference, held in the Hague, Netherlands from 28-29 January 1999 brought together government officials, business persons, trade union representatives, NGOs and academics from OECD and non-OECD countries. In total, 146 people participated in the meeting: 107 from OECD Member countries; 19 from non-member countries; 11 from international organizations. The Environment Directorate and the Directorate for Fiscal, Financial and Enterprise Affairs jointly organized the conference. The objectives of the conference were two-fold: to deepen understanding and analysis of the key issues in the FDI and

environment relationship within the context of a globalizing economy; and to examine ways in which this relationship might be improved to mutually reinforce environmental and FDI policy goals.

Discussions in the two plenary sessions and three parallel workshops focused on: empirical evidence on the role of FDI in raising or lowering environmental standards or performance; the policy and institutional frameworks needed to manage the environmental effects of FDI, including the role of EIA; and private and public sector initiatives to promote "best environmental practice" in FDI activities, including the role of corporate and industry codes of conduct, environmental reporting, information disclosure and investment standards. The discussions were frank and a constructive dialogue was established. Participants considered that the meeting was successful in moving the debate beyond polemics and in contributing directly to relevant work underway in OECD: the review of the OECD Guidelines for Multinational Enterprises; discussions about developing a multilateral framework for investment; a three-year project on sustainable development, launched in 1998; and development of an environmental outlook to 2020 and associated policy strategy. For more information see the OECD web site: Internet: <http://www.oecd.org/daf/env/>

/TRADE

SIXTH APEC FINANCE MINISTERS MEETING: The Finance Ministers of the Asia Pacific Economic Cooperation (APEC) met for the sixth time in Langkawi, Malaysia from 15-16 May 1999. The welcomed the inaugural participation of the Finance Ministers from Peru, Russia and Vietnam and had productive discussions with the Managing Director of the IMF, the President of the World Bank and the President of the Asian Development Bank (ADB). In their joint declaration, they noted that since their last meeting in Kananaskis, Canada, the financial crisis in the region has abated and there are signs of a return in investor confidence. As a result, the economic outlook in the region has improved. There are, however, significant risks to the outlook. Moreover, serious challenges remain, particularly in restructuring the financial and corporate sectors, and in dealing with the effects of the crisis on the poor and the vulnerable. They stated that this meeting accorded them the opportunity to review the economic and financial situation in the region, explore ways to strengthen economic fundamentals to accelerate the recovery process, and to look towards meeting longer-term challenges. Given the increasingly integrated global environment, they underscored the individual and collective roles of economies in contributing to regional and global stability. They resolved to work together to further sustain the recovery now underway in the region and reiterated their commitment to persevere with macroeconomic and structural reforms. They also underscored our commitment to cooperate within APEC and to contribute in other fora to strengthen the international financial architecture. For more information contact the APEC secretariat; e-mail: VN@mail.apecsec.org.sg

TRADE KNOWLEDGE NETWORK WORKSHOP: The Sustainable Development Policy Institute (SDPI), World Conservation Union (IUCN) and IISD held a trade and development workshop from 12-14 April 1999 in Islamabad, Pakistan. Workshop sessions focused on various North-South trade issues. Experts shared their country experiences in countering non-tariff barriers to trade to block imports. Also discussed were: various new guises of controls that being used to block imports from poorer countries; green production and environment management systems; the cotton

commodity chain; and, the mechanisms of the Kyoto Protocol. The meeting resulted in a seven-point programme, including: developing an information focal point; networking; research; capacity building; institutional development; and regional cooperation. It was agreed that IUCN or SDPI will develop the networking involving the group attending the workshop. SDPI would continue its research programme and involve others and engage in information dissemination and training. For more information contact: IISD's Trade and Sustainable Development Program;

Internet: <http://iisd1.iisd.ca/trade/trdthom.htm>

WTO GENERAL COUNCIL MEETING: The WTO General Council met on 12 April 1999 to discuss concrete objectives for the Seattle Round of trade negotiations scheduled to begin early next year. Because most Members have been focused on the appointment of the new WTO Director-General, the meeting lasted only half a day instead of the scheduled two, and yielded a limited number of proposals on the implementation of existing WTO Agreements, as well as agriculture and services and textiles. On agriculture, papers were tabled by Australia and Pakistan. All of Australia's proposals, presented on behalf of the Cairns Group (Argentina, Australia, Brazil, Canada, Chile, Colombia, Fiji, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand and Uruguay) dealt with negotiation goals regarding further liberalization of the agricultural sector. The first of these (WT/GC/W/166) stated that 'the objective for the agriculture negotiations be, by a specified date, to put trade in agricultural goods on the same basis as trade in other goods and establish a fair and market oriented agricultural trading system which corrects and prevents restrictions and distortions.' The proposal drew opposition from the EU and Switzerland who argued that Article 20 of the Agreement on Agriculture expressly recognizes that non-trade concerns must be taken into account when further liberalizing agricultural trade, and thus implicitly acknowledges that agriculture is different from other sectors covered by WTO disciplines. In its paper on agriculture (WT/GC/W/161), Pakistan said that 'developing countries will look at mandated negotiations as an opportunity to minimize flexibility in domestic support by developed countries and providing more flexibility in this regard to developing and least-developed countries.' It proposed that the Agreement on Agriculture be clarified or amended so that developing countries "be excluded from the discipline of import control and domestic support in the food product sector." For more information contact: ICTSD; tel: + (41-22) 917-8492; fax: + (41-22) 917-8093; e-mail: ictsd@ictsd.ch; Internet: <http://www.ictsd.org>

WTO HIGH LEVEL SYMPOSIA ON TRADE AND ENVIRONMENT AND TRADE AND DEVELOPMENT: The World Trade Organization (WTO) High Level Symposium on Trade and Environment was held at the WTO in Geneva from 15-16 March 1999. The Symposium was divided into three panels to consider: linkages between trade and environment policies; synergies between trade liberalization, environmental protection, sustained economic growth and sustainable development; and interaction between trade and environment communities. The WTO High Level Symposium on Trade and Development was held from 17-18 March 1999. Participants met during three panel discussions to consider: linkages between trade and development policies; trade and development prospects of developing countries; and further integration of developing countries, including the least developed countries (LDCs) into the multilateral trading system. The ENB report is available at: <http://www.iisd.ca/linkages/sd/wtohls.html>. The report is also available on the WTO web site at: <http://www.wto.org/>

AFRICAN SEMINAR ON TRADE AND SUSTAINABLE DEVELOPMENT: About 60 representatives of governments, the private sector and civil society gathered in Grand Bassam, Côte d'Ivoire, from 6-8 April 1999 to discuss their perspectives on international trade, environment and development in Africa. While the seminar participants agreed on the importance of the issues, they noted that African expertise and analysis in this field were scarce. Furthermore, existing expertise is not coordinated, and thus does not assist African governments in developing effective negotiation positions that would take into account sustainable development concerns. The seminar addressed five broad areas concern: trade-related intellectual property rights; environmental norms, ecolabels and certification; the WTO Agreement on Agriculture; coherence between the objectives and policies of international financial and trade institutions; and the implications of the regional free trade areas with which the EU plans to replace the Lomé Convention within five or ten years. They agreed that if the next round of multilateral trade negotiations was to be more focused on rule-making than market access concessions, African countries would – in spite of their relative economic weakness – have an opportunity to make trade rules better reflect their priorities. For information contact: Stephan Gueneau, Solagral; tel: +(33) 4 99 23 22 80; e-mail: stephane.gueneau@ensam.inra.fr; Internet: <http://www.rio.net/solagral>

WTO COMMITTEE ON TRADE AND ENVIRONMENT: The WTO Committee on Trade and Environment (CTE) met from 18-19 February 1999 and addressed items on its work programme related to the theme of market access. Members made statements on environmental assessments of trade agreements, eco-labelling and certification, and the environmental benefits of removing trade restrictions and distortions. With respect to eco-labelling, Brazil contributed a new paper on its certification programmes for leather and forestry products. For discussion at this meeting, the Secretariat also prepared a new paper on technical barriers to the market access of developing countries. Under the item dealing with market access and the environmental benefits of trade liberalization, Members continued the sectoral discussions of agriculture, energy, fisheries, forestry and leather. New Zealand and Zimbabwe presented new papers on this item in general. Concerning the agricultural sector, Norway, Japan, and Brazil contributed national experience papers. A new paper on agricultural export subsidies, cosponsored by 14 countries, was also discussed. With respect to the fisheries sector, Iceland contributed a new paper on its fisheries management system. UNEP informed the CTE of its renewed mandate to address trade and environment issues, which had been agreed at the recent session of the Governing Council of UNEP. Observer status in the CTE was extended to the South Pacific Forum. The CTE's next meeting will be held on 28-29 June 1999 under the new chairmanship of Ambassador Major, Hungary's Ambassador to the WTO. The June meeting will address the items on the CTE's work programme related to the linkages between the multilateral environment and trade agendas, and include an Information Session with MEA Secretariats. For more information contact: Hans-Peter Werner, WTO; tel: + (41-22) 739-5286; Internet: <http://www.wto.org/>.

SEMINAR ON REVENUE IMPLICATIONS OF TRADE LIBERALIZATION: On 3 February 1999, the Executive Board of the International Monetary Fund (IMF) held a seminar on the revenue implications of trade liberalization. As background to their discussion, the staff prepared a study evaluating the tax revenue implications of liberalization, concentrating on developing countries where reliance on trade taxes for revenue can be significant. Although trade liberalization is presumed to reduce trade tax revenues,

the impact is in fact ambiguous, since it depends on the nature of a country's trade barriers and its strategy of trade reform. The study analyses the issue using three complementary approaches—case studies, examination of trends in a broad range of countries, and econometric analysis. It assesses both the fiscal consequences of trade liberalization and the manner in which these fiscal effects may have influenced the strategy for trade reform. Given the strong association between trade liberalization and economic growth, the study also highlights the importance of tax system reforms that would help generate the compensating revenues to support trade liberalization.

Noting that trade liberalization underpins enhanced economic efficiency and growth, Directors welcomed the progress that many countries had made in recent years in liberalizing their trade regimes. They observed, however, that despite the evident progress, trade liberalization remained a priority. Some Directors underscored the importance of an additional opening of industrial country markets to support growth in developing countries. It was also recognized that for trade reform to be successful, a strong political consensus was needed to allow for an appropriate sequencing of the needed trade liberalization measures. At the same time, trade reform would need to be supported by appropriate domestic tax reform and macroeconomic policies. Directors observed that the IMF, in close cooperation with the World Bank and the WTO, should strongly support trade liberalization among its members. Directors noted that a key conclusion of the paper was that trade liberalization need not necessarily be associated with lower trade tax revenues—or tax revenues more generally—because the impact of trade liberalization on revenues could depend on the nature of the trade barriers and the sequencing of reforms, as well as the effect on incomes and growth. For more information contact: the IMF; tel: +1 (202) 623-7300; fax: +1 (202) 623-6278; e-mail: publicaffairs@imf.org; Internet: <http://www.imf.org/>

/CLIMATE AND ATMOSPHERE

WORKSHOP FOR AFRICAN WORKSHOPS AND BUSINESS (DAKAR II): Building on a 1998 meeting, over 100 climate change experts including African Ministers, business leaders, environmental groups and government agencies met in Dakar, Senegal from 6-9 May 1999. Participants discussed measures to combat global warming and catalyze environmentally sound investments in the continent. The first two days of the meeting were dedicated to a dialogue between African governments and businesses on the Clean Development Mechanism (CDM). The final two days of the meeting were dedicated to closed-door government discussions as part of the African governmental preparations for the upcoming FCCC subsidiary bodies meeting. For more information contact: Bakary Kante, UNEP; e-mail: bakary.kante@unep.org.

IEA WORKSHOP ON POLICIES AND MEASURES: The International Energy Agency (IEA) held an international workshop from 15-16 April 1999 in Paris to exchange the experiences of Member countries in the design and implementation of policies and measures aimed at reducing greenhouse gas emissions from energy. Key messages of the workshop include:

- while policy responses may differ based on national circumstances, the challenges remain the same across countries, in particular in the energy sector. Countries can benefit from information exchange on policies and measures.
- the gap between the present situation and Kyoto objectives requires new domestic policies and measures in the energy

sector to achieve the agreed emissions reduction goals.

- the distinction between economic instruments and regulatory approaches is artificial. Both types of policies are needed.
- the implementation of economic instruments such as taxes requires accompanying measures to account for social and competitiveness concerns.
- CO₂ emissions from transport are growing rapidly and few policies seem to have had significant impacts on this trend so far. Policies to reduce emissions from transport should aim at changing behavior as well as changing technology.

IEA Member countries have adopted a wide range of policies that can reduce greenhouse gas emissions from energy: energy efficiency programmes (from technology development to end-use); restructuring and liberalization of energy markets; policies to foster renewable energy sources; negotiated agreements with industry, and economic instruments (taxes, tradable permits). The workshop participants shared information on, *inter alia*: best practice in energy efficiency management in industrial, commercial and residential sectors; government procurement policies to encourage the development and diffusion of cleaner and more efficient technologies; energy efficiency standards based on best marketed technology; demand-side management in the power sector; financial mechanisms to encourage investments in energy efficient processes; options in the transport sector; and taxation of energy and/or CO₂ emissions. For more information contact: IEA; tel: +33-1 40 57 65 54; fax: +33-1 40 57 65 59; e-mail: info@iea.org; Internet: <http://www.iea.org/workshop/p&magend.htm>.

TECHNICAL WORKSHOP ON MECHANISMS UNDER ARTICLES 6, 12 AND 17 OF THE KYOTO PROTOCOL: The United Nations Framework Convention on Climate Change (UNFCCC) Technical Workshop on Mechanisms under Articles 6, 12 and 17 of the Kyoto Protocol was held from 9-15 April 1999 at La Redoute in Bonn-Bad Godesberg, Germany. The workshop was designed to advance the discussion on technological and methodological aspects of Article 6 (joint implementation), Article 12 (clean development mechanism) and Article 17 (emissions trading) so that the Conference of the Parties can take decisions on all three mechanisms at its sixth session. The workshop was attended by approximately 100 invited participants, which included experts from Parties and representatives from governments, UN agencies, and intergovernmental and non-governmental organizations. Core topics at the workshop included reference case/baseline methodologies, additionality, verification and reporting in relation to the clean development mechanism (CDM) and Article 6 projects. Further issues addressed included the validation and funding of projects under the CDM and the adaptation component, and reporting, verification and accountability issues related to emissions trading. Participants also exchanged views on capacity building for developing country Parties. The ENB report is available at: <http://www.iisd.ca/climate/techwork/>

INTER-AGENCY TASK FORCE ON ENERGY: In response to the nineteenth special session of the UN General Assembly, the Inter-Agency Committee on Sustainable Development (IACSD), at its twelfth meeting in September 1998, decided to establish an Ad Hoc Inter-Agency Task Force on Energy with a view to ensuring a collaborative contribution of all relevant organizations of the UN system to the CSD process on energy and sustainable development. A preliminary report on the UN system-wide work plan on energy for the ninth session of CSD was reviewed by the IACSD at its thirteenth session and subsequently, requested the Task Force to finalize the preparation of a system-wide work plan on energy, atmosphere

and transport for the period up to 2001. The first meeting of the Task Force took place on 8 April 1999 at New York, in conjunction with the first meeting of the Committee on Energy and Natural Resources for Development (CENRD). Members of the Task Force agreed that activities to be undertaken are complementary and mutually supportive and that duplication of work, such as that undertaken by the UNFCCC should be avoided. Coordination and information sharing is a prerequisite for the system. Members agreed that the advantages and disadvantages of energy options, the impact of energy from a social, economic and environment perspective and due consideration of the role of stakeholders, including the scientific and academic communities, should be made as an integral part of the common approach. Task Force members reviewed activities currently underway and/or planned by them in preparation for the ninth session of the CSD (CSD-9). To enhance coordination and promote synergies among these activities and to better prepare for CSD-9, it was decided to establish an electronic network. Task Force members agreed to provide updated information on ongoing and envisioned work so that a matrix of UN activities geared towards CSD-9 could be established. The information will also be used for reports of the Secretary-General to be prepared in support of the preparatory process for CSD-9 and submitted for consideration by the Open-ended Intergovernmental Group of Experts. The Task Force will meet again in September/October 1999 to follow-up on preparations for CSD-9. For more information contact: Kyaw Kyaw Shane; tel: +1 (212) 963 3264; fax: +1 (212) 963-1795; e-mail: shane@un.org.

REPORT OF THE GEF/IIED WORKSHOP ON CLARIFYING AND SIMPLIFYING INCREMENTAL COSTS: The Secretariat, in partnership with the International Institute for Environment and Development, brought GEF stakeholders together to consider ways of improving the application of the incremental cost concept. The workshop was held in London from 25-26 March 1999. The aims of the workshop were to: develop a framework for guidelines for negotiating agreed incremental costs; and develop a framework for simplified approaches to incremental cost determination for GEF focal areas. To focus the discussions, a series of workshop papers were commissioned falling into three main categories: country experience papers; focal area papers; and expert review papers. Discussion centered on three broad areas: process issues covering the characteristics of the negotiation involved in determining incremental cost as well as the relations with in-country stakeholders; challenges in applying incremental cost principles focusing on formulation of the baseline, estimation of baseline costs and approaches for simplifying incremental cost estimation; and education and outreach addressing the need for training and dissemination of the incremental cost concept. The discussions generated a number of recommendations for the GEF to consider. Some of these relate only indirectly to the workshop objectives, i.e. negotiating and simplifying incremental cost. However, the workshop participants felt strongly that many of the problems with incremental cost analysis could be avoided through improvements in other aspects of the project cycle. For more information contact: IIED; tel: + 171 388 2117; fax: + 171 388 2826. Also see the GEF web site: Internet: <http://www.gefweb.org/Media/iied.doc>

ANNEX I EXPERT GROUP MEETING: At its 15-16 March 1999 meeting in Paris, the Annex I Expert Group on the UNFCCC held a roundtable discussion where seven countries presented their recent experience as well as current thinking on this issue. A number of industrialized countries are moving forward to set up a domestic emissions trading/quota system in order to meet their commitments under the FCCC and the Kyoto Protocol. Most of these countries are

still at the initial stage of designing a national framework for emissions trading. The presentations are available on the Internet at: <http://www.oecd.org/env/cc/domestic.htm>. During the upcoming FCCC meetings in Bonn, the OECD and the IEA will hold a side event to highlight recent experience on Monday, 31 May. For more information contact: OECD; e-mail: climate.contact@oecd.org

WORKSHOP ON EMISSIONS TRADING: Canada's National Round Table on the Environment and the Economy (NRTEE) organized an international workshop entitled "Domestic Greenhouse Gas Emissions Trading Programs--A Comparison of Progress Around the World" from 1-3 March 1999 in Toronto, Canada. It examined emissions trading schemes under consideration by a number of countries. Speakers from government departments and research agencies in Australia, Canada, New Zealand, Norway and the US, among others, presented information on their national policy process and on the trading program designs being examined in their countries. Other topics discussed included allowance distribution and/or auction, emissions source coverage, use of credits from sources outside of the trading system, links to international flexibility mechanisms and pilot programs for greenhouse gas emissions trading. For more information contact: Elizabeth Atkinson, Senior Policy Advisor, NRTEE, 344 Slater Street, Suite 200, Ottawa, Ontario K1R 7Y3; fax: +1 (613) 992 73 85; e-mail: Atkinson@trnee.ca; Internet: <http://www.nrtee-trnee.ca/>

WORKSHOP ON INNOVATIVE FINANCING OF CLEAN COAL IN CHINA: The first of two workshops on financing advanced clean coal technologies in China was held in Berkeley, California from 27-28 February 1999. The workshop explored a proposed technology risk guarantee mechanism at the Global Environment Facility (GEF). The purpose of the mechanism is to aid in funding the transfer to China of promising advanced clean coal technologies. The mechanism is designed to use small amounts of public money to help leverage larger amounts of private and/or multilateral lender money for projects related to environmentally-friendly technologies that are not yet commercially viable. In the proposed mechanism, the GEF would fund the "incremental technological cost" (defined as the differential between the cost of a promising new technology and the cost of an older technology) of a project. The GEF would guarantee only this technological risk component of the total incremental cost of the project, not the whole project itself. As a practical application, the mechanism was discussed at the workshop in relation to a proposed Integrated Gasification Combined Cycle (IGCC) demonstration power plant to be built in the city of Yantai in Shandong Province in China. The Yantai IGCC demonstration plant would be the first IGCC power plant to be built in China. For more information contact: the Nautilus Organization; Internet: <http://www.nautilus.org/esena/abouty3.html>

/BIODIVERSITY

CONFERENCE ON BIOLOGICAL RESOURCE MANAGEMENT: This meeting was held from 29 - 31 March 1999 at OECD Headquarters, Paris, France. The Conference provided a forward-looking synthesis of the scientific basis of managing biological resources for sustainable agricultural systems. Governments, business, scientists, academics, representatives of consumer organizations and specialist journalists grappled with the difficult questions facing scientists today, from animal welfare to cloning, and environmental impacts of agriculture to GMOs. Participants looked at the possible contribution of molecular farming, animal cloning

and transgenic crops to sustainable development, and sought to determine whether or not the existing institutional framework allows governments to take scientific concerns sufficiently into account in their decision-making process. Presentations and panel discussions tackled such issues as the management of soil and water systems, the control of production systems and the supervision of organisms and ecosystems. On the third day, a final panel debated the question "Where do science, policy making and society meet?" and explored ways to bridge the gaps. The proceedings of the Conference, including its recommendations will be published in the Fall. For more information contact: OECD; e-mail: christine.clement@oecd.org

SIXTH SESSION OF THE OPEN-ENDED AD HOC WORKING GROUP ON BIOSAFETY: The sixth session of the Open-ended Ad Hoc Working Group on Biosafety (BSWG-6) was held from Sunday, 14 February, to Monday morning, 22 February 1999, in Cartagena de Indias, Colombia. The first Extraordinary Meeting of the Conference of the Parties (ExCOP) to the Convention on Biological Diversity was held from 22-23 February 1999. Over 600 participants representing 138 governments, business and environmental NGOs and the scientific community, attempted to finalize a protocol on biosafety during the BSWG for adoption by the ExCOP. Despite ten days of non-stop debate, including weekend, late night and early morning sessions, delegates were not able to agree on a protocol. The main areas of contention centered on trade issues, treatment of commodities and domestic vs. international regulatory regimes. Instead the ExCOP adopted a decision to suspend the meeting and request the ExCOP President and the COP-4 Bureau to decide when and where the session would resume, no later than the fifth meeting of the Conference of the Parties. Delegates also decided that the Protocol will be called the Cartagena Protocol on Biosafety to the Convention on Biological Diversity. The text of the draft Protocol, set out in Appendix I to the Report of BSWG- 6, as well as the statements by governments with respect to the text of the draft Protocol contained in that report, will be transmitted to the resumed ExCOP session for further debate. The ENB report is available at: <http://www.iisd.ca/linkages/biodiv/bswg6/>

REGIONAL WORKSHOP ON UNDERSTANDING BIODIVERSITY RELATED INTERNATIONAL INSTRUMENTS: SADC Plant Genetic Resources Centre and the Southern African Traditional Leaders' Council for the Management of Natural Resources organized a Regional Workshop on Understanding Biodiversity Related International Instruments in Lusaka, Zambia from 11- 15 January 1999. The workshop aimed at developing a common strategy for Africa's future participation in development and implementation of both biodiversity related international instruments and trade related international instruments. The workshop brought together: government officials responsible for implementing the Convention on Biological Diversity, the agreements of the WTO; the International Undertaking of Plant Genetic Resources for Food and Agriculture, and representatives of both Non-Governmental and Community Based Organizations. The workshop covered, *inter alia*: Agenda 21; the Convention on Biological Diversity; FAO's International Undertaking on Plant Genetic Resources; Intellectual Property Rights and Traditional Knowledge, Innovations and Practices; Agreements of the WTO and the Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS); and Community Rights, Traditional Resource Rights and Farmers Rights. For more information contact: Dr. Godwin Yindoli Mkamanga, SADC Plant Genetic Resources Centre; tel: + 260 1 230515; fax: + 260 1 611031; e-mail: spgrc@zamnet.zm

/FORESTS

THIRD SESSION OF THE INTERGOVERNMENTAL FORUM ON FORESTS: The third session of the Intergovernmental Forum on Forests (IFF-3) took place from 3-14 May 1999 in Geneva, Switzerland. Over the course of the two-week meeting, delegates conducted substantive discussion on monitoring progress in implementation of the IPF's proposals for action, financial resources and issues needing further clarification. These issues were: underlying causes of deforestation; traditional forest-related knowledge (TFRK); forest conservation and protected areas; forest research; valuation of forest goods and products; economic instruments, tax policies and land tenure; future supply of and demand for wood and non-wood forest products and services; and assessment, monitoring and rehabilitation of forest cover in environmentally critical areas. IFF-3 also held substantive discussion on international arrangements and mechanisms to promote the management, conservation and sustainable development of all types of forests. Update discussions were held on trade and environment and transfer of environmentally sound technologies (ESTs). Delegates also had before them documents on promoting and facilitating implementation and on forest-related work of international and regional organizations and under existing instruments, but did not discuss them. IFF-3 adopted Co-Chairs reports and compilation texts, which contain draft conclusions and proposals for action, to be forwarded to IFF-4 for further consideration. Reports and summaries on all programme elements remain open for discussion at IFF-4, which is tentatively scheduled for 31 January -11 February 2000 in New York. The ENB report can be found at: <http://www.iisd.ca/forestry/iff3/index.html>

WORKSHOP ON PROTECTED AREAS: The governments of Brazil and the US sponsored an international experts meeting on protected forest areas in San Juan, Puerto Rico from 15-19 March 1999. The 130 participants represented developing and developed nations, indigenous organizations, environment NGOs, industry and individual experts from universities and research institutions. The results from the meeting were intended to contribute to the work of the IFF under Category II.d, "Forest conservation and protected areas," by developing a better understanding of issues related to protected forest areas. The goal of the meeting was to distill the knowledge of experts worldwide into succinct conclusions and practical recommendations. More specifically, the objectives of the meeting included considering and formulating possible options for: developing consistent information globally on protected forest areas and their contributions to the sustainable management of all types of forests, taking into account the unique characteristics of each country, including public, private, and community ownership of forests and; effectively managing protected forest areas to meet designated objectives, including issues of participation and enforcement; enhancing economic viability of protected forest areas, including financial mechanisms and means for income generation; and, developing criteria for establishing protected forest areas. For more information contact: MMA Ministerios; tel: + 55-61-3171120; fax: + 55-61-3237936; e-mail: bfsdias@mma.gov.br.

YAOUNDÉ SUMMIT: A Ministerial meeting to prepare for the Summit was held on 14-16 March 1999 and attended by Ministers of Forests from Cameroon, Gabon, Equatorial Guinea, Congo Brazzaville and Central African Republic. The meeting, which WWF co-organized, worked on the draft Yaoundé Declaration to present to the Heads of State. The Yaoundé Summit was held on 17 March 1999 with Heads of State and international dignitaries. The result of

the summit was the final approved version of the Yaoundé Declaration, which the Heads of State discussed in closed session for several hours. In the closed session a number of forest conservation issues of relevance for the region were reviewed. The Yaoundé Declaration makes specific reference to the need to establish a transfrontier network of protected areas, as well as to improve the management of existing areas. It refers to the need to work with local communities to conserve forests, and expresses support for forest certification. There was also a clear recognition of the problems of the illegal bushmeat trade and illegal logging, and the need to crack down on these problems. The Declaration does not however include specific designations of new protected areas. For information contact:

Olivier van Bogaert, WWF International; tel.: +41 22 364 95 54, fax: +41 22 364 83 07, e-mail: ovanbogaert@wwfnet.org

MINISTERIAL MEETING ON SUSTAINABILITY ISSUES IN FORESTRY: The Ministerial Meeting on Sustainability Issues in Forestry, the National and International Challenges, was held in Rome from 8-9 March 1999. This Ministerial Meeting provided a forum for global decision on strategic and policy issues related to forestry. Based on technical documentation and recommendations provided by the FAO Committee on Forestry, 14th Session (1-5 March 1999), the Ministerial Meeting discussed, *inter alia*, the need for international instruments to support sustainable forest development; global action to address forest fires; and the proposed FAO Strategic Framework for the years 2000-2015. The Ministers adopted the Rome Declaration on forestry. The Ministers pledged they would bring their political will to bear on improving forest management in their respective countries and to promote effective international cooperation to achieve sustainable forest management worldwide. The also pledged: to work together towards a constructive and forward looking outcome on future arrangements for the global forest policy dialogue at the eighth session of the CSD; to better coordinate and strengthen their efforts to prevent, manage, monitor and suppress forest fires especially in anticipation of the next El Niño/La Niña events and to address the underlying causes of forest fires; and to work closely with their counterparts in other ministries to promote cross-sectoral policies and activities that support sustainable forest management. For information contact: FAO Forestry Department; tel: +39-06-57054778; fax: +39-06-57052151; e-mail: Forestry-www@fao.org

IUFRO CONFERENCE: The IUFRO conference on the contributions of science to the development of forest policies was held in Pretoria, South Africa from 7-15 January 1999. Delegates from 19 countries attended with a group of delegates from eight African countries. The conference was headlined with keynote talks from Tami Sokutu representing South African Minister of Water and Affairs Professor Kamal Asmal and Robert Lewis, Jr., Deputy Chief for Research of the United States Forest Service. Two major cases of science and policy development were highlighted from South Africa. Plenary papers were presented on: integrating science and policy development; environmental impact assessment in Europe; human values, institutional structure, and ecosystem sustainability; international forestry information through web links. In addition to the keynote, case study, and plenary presentations, numerous research presentation and round table discussion sessions were held. These sessions offered the opportunity for researchers to present their work on the topic and for them to share ideas about research needs, research approaches, and policy developments. For more information contact: Dr. Perry Brown, Director of the Montana Forest and Conservation Experiment Station at the University of Montana, Missoula, MT, US; e-mail: pbrown@forestry.umt.edu.

/WETLANDS

SEVENTH MEETING OF THE CONFERENCE OF CONTRACTING PARTIES TO THE RAMSAR CONVENTION ON WETLANDS: The Seventh Meeting of the Conference of the Contracting Parties (COP-7) to the Ramsar Convention on Wetlands took place from 10-18 May 1999 in San José, Costa Rica. COP-7 focused on the interrelations between human societies and wetland habitats, and the general theme of the Conference was "People and Wetlands – The Vital Link." Approximately 750 participants attended COP-7, including officials from 110 Contracting Parties (CPs) to the Convention and 15 observer States, numerous national and international NGOs, representatives of other convention secretariats and intergovernmental institutions, donor agencies and wetland scientists. The programme included five technical sessions, on Ramsar and Water, National Planning for Wetland Conservation and Wise Use, Involving People at All Levels in the Conservation and Wise Use of Wetlands, Tools for Assessing and Recognizing Wetland Values, and Frameworks for Regional and International Cooperation Regarding Wetlands. Delegates considered several substantive agenda items, including reviews of Convention implementation in each region, the Convention Work Plan and Ramsar budget for 2000-2002, and regional categorization of countries under the Convention. Delegates also considered and adopted 30 resolutions and four recommendations on policy, programme and budgetary issues to advance the work of the Convention into the next century. In addition, a Memorandum of Understanding (MOU) was signed between the Ramsar Secretariat and the World Heritage Center, two countries — Lebanon and Cuba — announced their accession to the Convention, and numerous Contracting Parties (CPs) announced the designation of new Ramsar sites in their countries. The ENB report is available at: <http://www.iisd.ca/ramsar/cop7/>

GLOBAL BIODIVERSITY FORUM-13: The 13th session of the Global Biodiversity Forum (GBF), which met on 7-9 May, 1999 in San José, Costa Rica, was the first Forum organized in response to the need to ensure effective implementation of the Joint Work Plan between the Convention on Wetlands and the Convention on Biological Diversity. Participants in GBF-13 discussed synergies between the Ramsar Convention and the FCCC on matters related to the conservation of biodiversity in inland water ecosystems and marine and coastal areas. Some 34 institutions were involved in the organization of the six workshops of the Forum, and more than 200 participants from 49 countries attended. They represented research, education, resource management, private sector, government, NGOs, and local and indigenous communities. Workshops were held on: wetlands and the private sector; mitigating the impact of invasive species in wetlands; implementation of an ecosystem approach to rehabilitation; global carbon; indigenous peoples' and local communities' participation in wetlands management; and water resources management and global change. For more information contact: IUCN; tel: + (41 22) 999 00 01; fax: + (41 22) 999 00 02; e-mail: mail@hq.iucn.org.

/OCEANS AND COASTS

EXPERT WORKSHOP ON LAND BASE SOURCES OF MARINE POLLUTION: Within the context of the LBS Protocol, a workshop for experts on compliance and enforcement of legislation in the Mediterranean for the control of pollution resulting from land-based sources and activities was convened in Athens from

16-18 March 1999. The overall objectives of the Workshop were to assess the existing situation on compliance and enforcement in the Mediterranean with particular emphasis on inspectorates, and to propose future measures for action. Eighteen experts, representatives of the Contracting Parties, five international experts, as well as representatives of the relevant RACs, IGOs and NGOs attended the workshop. The participants had prepared and presented Country Reports on Legislation Compliance and Enforcement that have been included in the Workshop report. Aiming at providing a rapid statistical assessment of the existing situation, questionnaires were completed by all participants for the collection of information on compliance monitoring activities, at the national level. The recommendations of the workshop were addressed to the Contracting Parties and to the Secretariat. Included in the recommendations to the Secretariat are the establishment of an informal, regional network for the exchange of information and ideas on the subject, capacity-building programmes for the strengthening of the national inspectorate systems, and upon request, assistance to countries for the improvement of enforcement activities. For more information contact: Mr. Lucien Chabason, UNEP/MEDU; tel: + 0030 (1) 72-73-100; fax: + 0030 (1) 72-53-196/7; e-mail. unepmedu@unepmap.gr.

FAO MINISTERIAL MEETING ON FISHERIES: Ministers and Senior Representatives from some 120 countries expressed their concern about "overfishing of the world's major marine fishery resources, destructive and wasteful fishing practices and excess capacity" during an international FAO conference in Rome from 11-12 March 1999. Governments said, that growing illegal, unregulated and unreported fishing, including fishing by vessels flying "flags of convenience," was also troubling. The meeting endorsed three new action plans for more sustainable fisheries. In a declaration adopted at the end of the meeting, it was stressed that highest priority should be given to achieving sustainability of both capture fisheries and aquaculture, bearing in mind the special circumstances and needs of developing countries. The countries declared that they would develop a "global plan of action to deal effectively with all forms of illegal, unregulated and unreported fishing including fishing vessels flying flags of convenience."

The ministers endorsed the new voluntary International Plans of Action for the Management of Fishing Capacity, for the Conservation and Management of Sharks and for Reducing Incidental Catch of Seabirds in Long-line Fisheries, recently adopted by the FAO Committee on Fisheries. The objective of the Plan of Action on Fishing Capacity is to achieve "an efficient, equitable and transparent management of fishing capacity." States should endeavor to limit initially at existing levels and progressively reduce the fishing capacity in affected fisheries. Between 2003 and 2005 each country supporting the International Plan of Action should develop a national Plan to manage fishing capacity and to reduce it, if necessary, in some fisheries. Subsidies and economic incentives, which contribute to excessive capacity, should be reduced and progressively eliminated. The Plan of Action on Incidental Catches of Seabirds in Longline Fisheries calls upon countries to assess and reduce the by-catch of birds through the implementation of national plans.

All three agreements should be implemented in the framework of the FAO Code of Conduct for Responsible Fisheries. This voluntary code provides principles and standards applicable to the conservation, management and development of all fisheries. It also covers the fish capture, processing and trade of fish and fishery products, aquaculture, management of fisheries within coastal areas and fishery research. The ministers called upon all producers, managers and

users of fisheries resources to apply the Code of Conduct. Developing countries should receive technical assistance and financial support for the implementation of the Code. For further information contact: Erwin Northhoff, FAO; tel: + 06.5705 3105; e-mail: Erwin.Northhoff@fao.org

FAO COMMITTEE ON FISHERIES: The Committee on Fisheries held its Twenty-third Session in Rome from 15-19 February 1999 in Rome. The Session was attended by 98 members of the Committee, by observers from 7 other FAO Member Nations, the Holy See, and one non-Member Nation of FAO, by representatives from two specialized agencies of the United Nations and by observers from 34 other intergovernmental and international non-governmental organizations. The Committee considered: integrated resource management for sustainable inland fish production; progress in the implementation of the code of conduct for responsible fisheries; review of FAO's programmes in the fisheries sector; major fisheries and aquaculture issues in small island developing states (SIDS); and the FAO strategic framework (2000-2015). Regarding the code of conduct, the Committee recognized that further assistance was required if meaningful progress was to be made towards implementing the Code. They also underlined the important role that the regional fishery management organizations can play in respect of the issues of fishing capacity and illegal fishing activities in high seas. They underlined the need to clarify and simplify national questionnaires to facilitate reporting on actions to implement the Code and particularly to provide for specific reporting on development of national plans. For more information contact: the FAO; e-mail: AnneMarie.DeFendi@fao.org.

/CHEMICAL MANAGEMENT

BASEL CONVENTION: A series of three preparatory meetings on the transboundary movement of hazardous wastes was held from 12-23 April 1999 in Geneva after making significant advances on all major items. These items will be finalized at the Fifth Session of the Conference of the Parties (COP-5) to the Basel Convention, to be held in Basel, Switzerland from 6-10 December 1999. The Ad Hoc Working Group moved forward on the core issues of the Draft Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal. The Group debated the Protocol's scope, the establishment of an Emergency Response and Compensation Mechanism, and other draft articles. The improved draft text will now go forward to the Committee for Implementation, which meets in June. The Working Group expressed optimism about the chances of adopting the Protocol at COP-5. This would make Basel the first global environmental agreement to include a liability and compensation regime.

The Technical Working Group agreed on draft guidelines for the management of both plastics and tires. Many developing countries urgently need technical guidelines for reducing risks from these important categories of wastes at the national level. Good progress was also made on the first draft of guidelines for biomedical and health wastes. The Group also advanced on "hazard characterization," which involves rigorously defining indicators such as "ecotoxicity" and "acute toxicity" for use in evaluating the content of wastes. In addition, delegates discussed the problem of dismantling old ships, which can contain large quantities of asbestos, PCBs, and other hazardous wastes. The Second Joint Meeting of the Technical Working Group with the Consultative Subgroup of Legal and Technical Experts discussed the problem of illegal traffic. It explored how to im-

prove the monitoring of traffic over international borders through cooperation with Interpol and the World Customs Organization and through other practical methods. The Joint Meeting also worked on developing a monitoring and compliance regime for the Basel Convention. This regime will be facilitative and non-confrontational, focusing on supporting and helping governments that are having difficulties complying with their obligations. Progress was also made on elaborating the practical aspects of an emergency mechanism, which would include a fund for rapid clean-ups in the event of an incident. For more information contact: Iwona Rummel-Bulska, Secretariat; tel: + (41 22) 917 8213; fax: + (41 22) 797 3454; Internet: www.unep.ch/basel/.

UNEP WORKSHOP ON MANAGING PERSISTENT ORGANIC POLLUTANTS: Representatives from Asian and Pacific countries participated in a regional workshop, held in Hanoi from 16-19 March 1999. The workshop was organized by UNEP in cooperation with the Viet Nam Government, the Ministry of Science, Technology and Environment, and the National Environment Agency. The workshop highlighted progress in moving towards a legally binding global agreement on POPs; alternatives to use of these highly toxic chemicals in industry, agriculture and disease vector control; and actions being taken at the national level on a range of issues. These included applying integrated pest management, managing unwanted stockpiles of pesticides, identifying and addressing releases of dioxins and furans, dealing with polychlorinated biphenyls (PCBs), and pursuing alternatives to DDT for malaria control while fully protecting public health. The overall objectives are to reduce and/or eliminate releases of POPs into the environment.

For POPs pesticides replacements, one of the main topics was the need to maintain the susceptibility of vectors and pests to pesticides and to make greater use of integrated pest management and integrated vector management strategies in agriculture and public health protection. Pursuing and coordinating such strategies, the workshop concluded, would reduce reliance on toxic chemicals that pose a risk to ecology and human health and would decrease the development of pesticide resistance in pests and vectors. It was recommended that Governments be encouraged to ensure consistency and coherence in addressing POPs problems and that impact on biodiversity be a key criterion in the selection of pest and vector control components.

For PCBs, major problems are associated with identification, management and environmentally sound disposal of PCBs and PCB-containing equipment. Workshop participants identified a need for baseline information on dioxin and furan contamination in the environment, foodstuffs and humans. Inventories should be established and updated, and a monitoring program should be established in selected areas to determine future trends of POPs contamination in the region. For more information contact: James B. Willis, Director, UNEP Chemicals, at tel: + (41-22) 917-8183; fax: + (41-22) 797-3460; e-mail: chemicals@unep.ch

/POPULATION

ICPD+5 PREPCOM AND RESUMED SESSION: The Commission on Population and Development acting as the Preparatory Committee (PrepCom) for the Special Session of the UN General Assembly for the review and appraisal of implementation of the Programme of Action of the International Conference on Population and Development took place from 24 March-1 April 1999 in New York. The task of the PrepCom was to negotiate proposals for key actions for the further implementation of the Programme of Action

in preparation for the Special Session. The PrepCom was unable to finish its work in the time allotted and had to extend its session by an additional day. However, even with this extra meeting, the PrepCom did not complete negotiations on the proposals for key actions for further implementation of the Programme of Action and will thus resume the PrepCom for an additional four days, either in mid-May or just prior to the Special Session in June. The ENB report is available at: <http://www.iisd.ca/population/cpd32/>

A resumed PrepCom met from 5-8 May 1999 for further informal consultations at UN headquarters in New York. Negotiations continued on proposals for key actions for further implementation of the Programme of Action (POA), as contained in the Chair's revised working paper (E/CN.9/1999/CRP.1/Rev.2). Delegates devoted most of their time to negotiating the background preambular section, reaching agreement ad referendum on a number of paragraphs, and discussed NGO accreditation for the Special Session and dates for a further meeting of the PrepCom before closing the meeting early on Saturday morning. While progress has been made in reaching agreement on much of the outstanding text, further work will be necessary at a Resumed Session of the PrepCom immediately prior to the UN-GASS. The Resumed Session is scheduled for 24-29 June 1999.

/WOMEN

43RD SESSION OF THE COMMISSION ON THE STATUS OF WOMEN: The Commission on the Status of Women (CSW) held its 43rd session in New York from 1-19 March 1999. The CSW met in two sessions: in the first session (1-12 March), the Commission followed up on the Fourth World Conference on Women (FWCW), and in the second session (15-19 March), the Commission acted as the Preparatory Committee (PrepCom) to the Beijing+5 process. The session, which was attended by approximately 1000 participants, including ministers and other high-level government officials, UN agency representatives, and international and non-governmental organizations (NGOs), had the following objectives:

- to follow-up on the FWCW, held in Beijing in 1995;
- to initiate a comprehensive review of the implementation of the Platform for Action (PFA) that was adopted at the FWCW by acting as the PrepCom for the UN Special Session to take place in June 2000 (Beijing+5); and
- to agree on the text for an optional protocol to the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW).

To achieve its first objective, the CSW devoted much of its time to negotiating the texts of two draft documents that address two of the 12 critical areas of concern set out in the PFA: women and health, and institutional mechanisms. The CSW's aim was to reach consensus on the wording of the draft agreed conclusions on these two key areas. These documents would then feed into the Beijing+5 process. Protracted informal negotiations – which were dominated by G-77/CHINA, JUSCANNZ and the EU – failed to reach full agreement on either, with discord centering on the emphasis to be placed in the texts on the need for adequate resources and on women's sexual and reproductive health. In terms of its second objective – to review and appraise the implementation of the PFA – the Commission was more successful. In its third week, the CSW, acting as the PrepCom for next year's Special Session, reached agreement on the draft text for a resolution on "Preparations for the Special Session of the General Assembly." The ENB report is available at: <http://www.iisd.ca/4wcw/43sess/index.html>

INTERGOVERNMENTAL ORGANIZATIONS

GEF COUNCIL MEETING: The GEF Council Meeting was held from 5-7 May 1999 in Washington, DC. Statements were made to the council by the Executive Secretary of the FCCC, the Acting Executive Secretary of the Convention On Biological Diversity (CBD). The Chair of STAP reported on STAP's work program including STAP's efforts to mobilize the scientific and technical community particularly in developing countries, and its work concerning land degradation, global taxonomy, persistent organic pollutants, indicators, targeted research and the roster of experts. The Council approved decisions on, *inter alia*: expanded opportunities for executing agencies; implementing agencies' action plans for integrating global environmental objectives; incremental costs; work program; strategic partnerships with GEF implementing agencies; corporate budget for FY00 and proposal for a fee-based system; constituencies and assistance for country level coordination; and elements of an operational program on carbon sequestration. Regarding incremental costs, the Council welcomed the progress that is being made in simplifying the application of the concept of incremental costs and requested the Secretariat to work towards real, measurable progress in this area. On the work programme, the Council expressed its disappointment at the lack of projects addressing the cross-cutting issue of land degradation in the current work program and urged the Implementing Agencies to accelerate preparation of land degradation projects and their inclusion in future work programs. In this regard, the Council welcomed the strategic partnership for interagency collaboration on land and freshwater degradation in Africa. For more information visit the GEF web site at: http://www.gefweb.org/meetings/GEF_C13/html/C13_Inf1.htm

20th SESSION OF THE UNEP GOVERNING COUNCIL: The 20th session of the UNEP Governing Council took place at UNEP headquarters in Nairobi, Kenya, from 1-5 February 1999. This session marked the first meeting of the Council since the adoption of the Nairobi Declaration on the Role and Mandate of UNEP, the UN General Assembly Special Session to review the implementation of Agenda 21, and the appointment of Dr. Klaus Töpfer as UNEP Executive Director. The session consisted of a three-day technical segment and a two-day high-level segment. Approximately 600 delegates, including ministers and senior government officials from over 100 countries, as well as representatives from environmental non-governmental organizations (NGOs), UN agencies, international organizations, business and industry, and youth organizations attended the week-long meeting.

The Governing Council took some 30 decisions on a range of topics including: the Environment Fund and administrative and other budgetary matters; policy issues, including the state of the environment, coordination and cooperation within and outside the UN, governance of UNEP and emerging policy issues; preparations for the seventh session of the Commission on Sustainable Development (CSD-7); the results of the UN General Assembly's consideration of the recommendations of the UN Task Force on Environment and Human Settlements; and linkages among and support to environmental and environment-related conventions. Throughout the week, delegates also participated in several special side-events, including panel discussions on sustainable tourism, chemicals and forests, as well as a roundtable on global telecommunications. The ENB report is available at: <http://www.iisd.ca/linkages/unepgc/20sess/>

/linkages/journal/



UPCOMING

SUSTAINABLE DEVELOPMENT

TWENTY-FIFTH SESSION OF THE COMMITTEE ON WORLD FOOD SECURITY: The Twenty-fifth Session of the Committee on World Food Security will be convened from 31 May - 3 June 1999 at FAO Headquarters in Rome. For more information contact: Barbara Huddleston, FAO; e-mail: Barbara.Huddleston@fao.org; Internet: <http://www.fao.org/events/default.htm>.

ECOSUD 99: The Second International Conference on Ecosystems and Sustainable Development will be held from 31 May - 2 June 1999 in Lemnos, Greece. For more information contact: the Conference Secretariat, ECOSUD 99, Wessex Institute of Technology, Ashurst Lodge, 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>.

FOURTH INTERNATIONAL CONFERENCE ON WASTE WATER: The conference "Managing the Wastewater Resource, Ecological Engineering for Wastewater Treatment" will be held in Norway from 7-11 June 1999. For more information contact: e-mail: Ecoeng99@jordforsk.nlh.no; Internet: <http://www.org.nlh.no/ecoeng99/>.

INTERNATIONAL SYMPOSIUM ON EFFICIENT WATER USE IN URBAN AREAS: UNEP IETC is holding an International Symposium "Efficient Water Use in Urban Areas - Innovative Ways of Finding Water for Cities" at the WHO Centre for Health and Development in Kobe, Japan from 8-10 June 1999. For more information contact: IETC; fax: +81-6-6915-0304; e-mail: ietc@unep.or.jp; Internet: <http://www.unep.or.jp/ietc/News-Events/Issue-28.html>

FOURTH MEETING OF THE ENVIRONMENT MINISTERS WITHIN THE FRAMEWORK OF THE BARENTS EURO-ARCTIC COUNCIL: This meeting will be held in Umeå, Sweden from 10-11 June 1999. For more information contact: Bertil Hagerhall, Nordic/Baltic Programme Coordinator; tel: +(46) 186-01-114; fax: +(46) 181-249-45; Internet: <http://www.grida.no>

INTERNATIONAL CONFERENCE ON "ENVIRONMENTAL CHALLENGES FOR THE NEXT MILLENNIUM": This meeting will be held from 13-18 June 1999 in Jerusalem. For more information contact: the Secretariat in Tel Aviv; fax: +(972 3) 517-5674; e-mail: ecology99@kenes.com

SUSTAINABLE DEVELOPMENT AND GLOBALIZATION IN THE 21st CENTURY: The Ministry of Science, Technology and the Environment of the Republic of Cuba and the Havana International Conference Center will convene the 2nd International Convention on Environment and Development, in Havana, from 14-18 June 1999. For information contact: Dr. Gisela Alonso Dominguez; e-mail: dpa@ceniai.inf.cu; tel: +(537) 57-0615/0598; fax: +(537) 33-8054.

EUROPEAN MINISTERIAL CONFERENCE ON ENVIRONMENT AND HEALTH: This meeting will be held from 16-18 June 1999 in London. For more information contact: Bjorg

Sandkjar, UNED-UK; fax: + (44 171) 930 5893; e-mail: 106655.1325@compuserve.com

INTERDISCIPLINARY CONFERENCE ON THE ENVIRONMENT: The Interdisciplinary Environmental Association (IEA) and Assumption College will hold the 5th International Interdisciplinary Conference on the Environment in Baltimore, Maryland, US from 23-26 June 1999. For more information contact: K.L. Hickey; tel: +1 (508) 767-7296; fax: +1 (508) 767-7382; e-mail: khickey@assumption.edu; Internet: <http://www.assumption.edu/HTML/Academic/conf/IICEcall.html>

FARN COLLOQUIUM - PUBLIC POLICIES FOR SUSTAINABLE DEVELOPMENT: FARN (La Fundación Ambiente y Recursos Naturales) is organizing, from 23-27 June 1999, the 2nd. Colloquium for the elaboration of Public Policies on Sustainable Development. It will be held in Villa Carlos Paz, Argentina. For more information contact: María López Dardaine - Collouquium Secretariat; tel: +5411 4787-5919; fax: +5411 4783-7032; e-mail: coloquios@farn-sustentar.org; Internet: <http://www.farn-sustentar.org/coloquios2.html>

1999 OPEN MEETING OF THE HUMAN DIMENSIONS OF GLOBAL ENVIRONMENTAL CHANGE RESEARCH COMMUNITY: This meeting will be held from 24-26 June 1999 in Shonan Village, Kanagawa, Japan. The 1999 Open Meeting aims to promote exchanges of information on current research and teaching and to encourage networking and community building in this emerging field. For more information contact IGES; fax: +81 468 55 3709; e-mail: hdgec@iges.or.jp; Internet: <http://www.iges.or.jp/>

MICROCREDIT SUMMIT MEETING OF COUNCILS: This meeting will be held from 24-26 June 1999 in Abidjan, Cote D'Ivoire. For more information contact: Summit Secretariat microcredit@igc.org; fax: + 1 (202) 637-3566; Internet: <http://www.microcreditsummit.org/meetings/intro.htm>

NINTH IOSTE SYMPOSIUM: "Science and Technology Education for Sustainable Development in Changing and Diverse Societies and Environments" will be held in Durban, South Africa from June 26, 1999 to July 2, 1999. For more information contact: Mr. Alan Pillay, Chairperson: IOSTE 9; tel: + (27-31) 204-4586; fax: + (27-31) 204-4866; e-mail: spillay@pixie.udw.ac.za; Internet: <http://its.udw.ac.za/~.EDU.DEPARTMENT.UDW/ioste/index~1.htm>

WORLD CONFERENCE ON SCIENCE: "Science for the Twenty-First Century: A New Commitment" will be held in Budapest from 26 June - 1 July 1999. 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; 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 MCSDD will be held in Rome, Italy from 1-3 July 1999. For more information contact: Mr. Lucien Chabason, UNEP/MEDU; tel: + 0030 (1) 72-73-100; fax: + 0030 (1) 72-53-196/7; e-mail. unepmedu@unepmap.gr.

AFRICAN INTERNATIONAL ENVIRONMENTAL PROTECTION SYMPOSIUM: This Symposium will be held in Pietermaritzburg, South Africa from 5-8 July 1999. For more information contact the Conference Secretariat; fax: +27 331 420246; e-mail: soil&pol@sprs.co.za; Internet: <http://www.sprs.co.za/>

INDEX 99: The Second Biennial International Conference on Indices and Indicators of Sustainable Development will be held from 11-15 July 1999 in St. Petersburg, Russia. For more information contact: Dr. Irina G. Malkina-Pykh; tel: +1 (812) 232-9772; fax: +1 (812) 272-4265; e-mail: malkina@mail.admiral.ru.

WORKSHOP ON ENFORCEMENT OF AND COMPLIANCE WITH MULTILATERAL ENVIRONMENTAL AGREEMENTS: This meeting will be held in Geneva from 12-14 July 1999. For information contact: Fay Goode, UNEP; tel: + (41 22) 917 82 90; fax: + (41 22) 917 80 24; e-mail: fgoode@unep.ch

VI INTERNATIONAL RANGELAND CONGRESS: The Congress will be held in Townsville, Australia from 17-23 July 1999. For information contact: the Secretariat in Townsville; tel: + 61-7-4771-5755; fax: + 61-7-4771-5455; e-mail: secretariat-irc@unsw.edu.au; Internet: <http://irc.web.unsw.edu.au/>

WORKSHOP ON MARKET-BASED INSTRUMENTS: The "Workshop on Market-Based Instruments for Environmental Protection" will be held in Cambridge, Massachusetts, United States from 18-20 July 1999. It will be hosted by Harvard University, and 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. For more information contact: Robert N. Stavins, tel: +(617) 495-1820; fax: +(617) 496-3783, e-mail: robert_stavins@harvard.edu; Internet: <http://www.ecu.edu/econ/aere>

JOINT FORUM FOR SUSTAINABLE DEVELOPMENT: The 1999 Joint World Business Council for Sustainable Development/Business Council of Australia (BCA) Forum on Sustainable Development will be held in Sydney, Australia on 19 July 1999. This year the Forum will analyze the values, motives and drivers of the international sustainable development agenda, and look to the future direction for Australian business. For more information contact: Karen Grady, BCA; e-mail: kareng@bca.com.au.

1999 STOCKHOLM WATER SYMPOSIUM: This meeting will be held in Stockholm, Sweden from 9-12 August 1999. For more information contact: Irene Schijvens; tel: + (3170) 348 5402; fax: + (3170) 348 6792; e-mail: irene.schijvens@dml.minbuza.nl

WORLD COMMISSION ON DAMS: WCD Regional Consultation (Latin America) will be held on 13 August 1999 and the Fifth WCD Commission Meeting will meet on 14 August in Sao Paulo, Brazil. The Sixth WCD Commission Meeting is tentatively scheduled for 13 November 1999. For more information contact: Ms. Saneeya Hussain; tel: +27 21 426 4000; e-mail: shussain@dams.org; Internet: <http://www.dams.org/>

NATURE, WEALTH AND THE HUMAN ECONOMY IN THE NEXT MILLENNIUM: This conference will be held from 27-29 August 1999 at the University Of Regina, Regina, Saskatchewan, Canada. It will be sponsored by the Canadian Society For Ecological Economics, International Center For Sustainable Global Development, Canadian Plains Research Center, and Saskatchewan Environment And Resource Management. For more information contact: Dr. 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.

FIFTH FINANCIAL INSTITUTION INITIATIVE ANNUAL ROUNDTABLE: This meeting will be held from 8-9 September 1999 in Chicago, Illinois, US; Mr. H. Abaza, Trade and Environment Unit, UNEP; tel: + (41 22) 979-9179; fax: + (41 22) 796-9240; e-mail: hussein.abaza@unep.ch.

CONFERENCE ON DISPLACEMENT, FORCED SETTLEMENT AND CONSERVATION: This meeting will be held from 9-11 September 1999 at the University of Oxford, U.K. For more information contact: Dr. Dawn Chatty, Refugee Studies Programme, University of Oxford; fax + 44 01865 270721; e-mail dawn.chatty@qeh.ox.ac.uk

FOURTH INTERNATIONAL CONGRESS ON ENERGY, ENVIRONMENT AND TECHNOLOGICAL INNOVATION: This meeting will be held in Rome, Italy from 20-24 September 1999. Applications are available at: <http://www.ing.ucv.ve/ceait/eeti.htm>. For information contact: EETI99, Università degli Studi de Roma "La Sapienza," Facolta di Ingegneria, Vía Eudossiana, 18-00184 Rome, Italy; tel: +39 6 44585764/44585524; fax: + 39 6 4883235; e-mail: eeti99@minerva.ing.uniroma1.it; Internet: <http://minerva.ing.uniroma1.it>

INTERNATIONAL CONFERENCE ON CONSUMPTION: "Down to Earth - An international Conference on Consumption and the Consumer" will be held in Hampshire, United Kingdom from 22-24 September 1999. It will be hosted by the Project Integra, and Hampshire, and supported by the UNED-UK Committee, Onyx Aurora - Integrated Waste Management, and Hampshire County Council. For more information contact: Conference Administration, Index Communications Meeting Services; tel: +44 (0) 1794 511331/2; e-mail: icms@dial.pipex.com

UNGA SPECIAL SESSION TO REVIEW IMPLEMENTATION OF THE PROGRAMME OF ACTION FOR THE SUSTAINABLE DEVELOPMENT OF SIDS: A two-day Special Session of the UN General Assembly to review and appraise implementation of the POA for the Sustainable Development of SIDS will convene in New York from 27-28 September 1999. A resumed two-day session of CSD-7 will be held prior to the Special Session, at a date to be announced. For more information, contact: Deonanan Oodit; tel: +1-212-963-4671; fax: +1-212-963-4260; e-mail: oodit@un.org; Internet: <http://www.un.org/esa/sustdev/sids.htm>.

CONFERENCE ON SUSTAINABLE LAND USE MANAGEMENT: The European Ecological Federation and the Ecology Center of the University Kiel, Germany, are organizing the Conference " Sustainable Land Use Management- The Challenge of Eco-system Protection" from 28 September -1 October 1999 in Salzwedel, Federal Cultural Center, Schleswig-Holstein, Germany. For more information contact: Uta Schauerte, Ecology Center, Schauenburgerstraße 112, D-24118 Kiel; tel.: +49-431-880-4022; fax: +49-431-880-4083; e-mail: Utas@pz-oekosys.uni-kiel.de; Internet: <http://www.ecology.uni-kiel.de/slm99>.

THE ROLE OF NGOS IN THE 21ST CENTURY: The 1999 Seoul International Conference on NGOs will meet in Seoul, Korea, from 10-16 October 1999. For more information, contact: Tripartite Steering Committee; tel: +82-346-570-7160; fax: +82-346-570-7156; e-mail: ngo99@gip.kyunghee.ac.kr; or tel: +1 (212) 986-8557; fax: +1 (212) 986-0821.

INTERNATIONAL BUSINESS FORUM ON SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS: The International Business Forum on Sustainable Consumption and Production Patterns will take place in Berlin, Germany, from 11-13 October 1999. The Forum is organized by the German Ministry for Economic Cooperation and Development (BMZ). For more information, contact: Dr. Luiz Ramalho, Bernhard Adam, and Maria de la Paz de Azevedo of the Carl Duisberg Gesellschaft; tel: +49-30-254-82-257; fax: +49-30-254-82-103; e-mail: gre11-gast@cdg.de.

"GLOBALIZATION, ECOLOGY AND ECONOMY - BRIDGING WORLDS": This meeting will be held in Tilburg, the Netherlands from 24-26 October 1999. For more information contact: ECNC, e-mail: ecnc@ecnc.nl.

WORLD HERITAGE CONVENTION: The General Assembly of States Parties to the WHC will take place from 28-29 October 1999 at UNESCO Headquarters in Paris. For information contact: UNESCO World Heritage Centre, 7 Place de Fontenoy, 75352, Paris 07 SP, France; tel: +33-1-45-681-889; fax: +33-1-45-685-570; e-mail: wh-info@unesco.org; Internet: www.unesco.org/whc.

LEADERSHIP CONFERENCE - BIOMEDICAL RESEARCH AND THE ENVIRONMENT: This meeting will be held 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@napenet.org; Internet: <http://www.napenet.org/>.

GREENING 99: The eighth international conference of the Greening of Industry Network will convene in Chapel Hill, North Carolina, USA 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; Internet: <http://greening99.bs.school.unc.edu>.

LEADERSHIP CONFERENCE: BIOMEDICAL RESEARCH AND THE ENVIRONMENT: This meeting will be held 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 (BAPE), Association of Higher Education Facilities Officers, National Institute of Environmental Health Sciences, and the Environmental Protection Agency. For more information contact: NAPE, +1 (301) 571-9790; fax: +1 (301) 530-8910, e-mail: nape@napenet.org; Internet: <http://www.napenet.org/>

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 more information contact: G. Edward Someus, TDT-3R; tel: + (36-20) 980 6996; fax: + (36-1) 228 6045; e-mail: edward@mail.inext.hu.

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

EIGHTH SESSION OF THE CSD: CSD-8 is expected to meet in Spring 2000 to consider integrated planning and management of land resources, agriculture, and financial resources/trade and investment/economic growth. Intersessionals are expected prior to the session to consider the same topics. 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 Develop-

ment; tel: +1-212-963-8811; fax: +1-212-963- 1267; e-mail: aydin@un.org.

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 16-22 March 2000. For more 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.

EIGHTH SESSION OF THE COMMISSION ON SUSTAINABLE DEVELOPMENT: CSD-8 is expected to meet in Spring 2000 to consider integrated planning and management of land resources, agriculture, and financial resources/trade and investment/economic growth. 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-Sipos, 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 more 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>

/TRADE AND ENVIRONMENT

UNCTAD-ICDA NGO BRIEFING ON UNCTAD X: This briefing, which will be held on 10 June in Brussels is in preparation for UNCTAD X, which will take place from 12 to 20 February 2000. It is mainly for Central and Southern European NGOs, as briefings for Nordic and UK NGOs are also being planned; but all NGOs are welcome. 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>

FOURTH INTERNATIONAL CONFERENCE OF THE INSURANCE INDUSTRY INITIATIVE ROUNDTABLE: This meeting will be held from 10-11 June in Oslo, Norway. For more attention contact: Mr. H. Abaza, Trade and Environment Unit, UNEP; tel: + (41 22) 979-9179; fax: + (41 22) 796-9240; e-mail: husein.abaza@unep.ch

WORKSHOP ON AGRICULTURE, TRADE AND THE WTO: This meeting will be held from 21-23 June 1999 in Geneva and organized by the German Protestant Farmers' Association (Rudi Buntzel-Cano) and IATP (Sophia Murphy). For information contact Sophia Murphy, Institute for Agriculture and Trade Policy, 2105 First Avenue South, Suite 303, Minneapolis MN 55404, US; tel: + 1 (612) 870-0453; fax: + (612) 870-4846; e-mail: smurphy@iatp.org; Internet: <http://www.iatp.org>

WTO GENERAL COUNCIL SPECIAL SESSION: The WTO General Council will hold Special Sessions on 21-22 June, 9 July, and 28-29 July 1999 in Geneva. The final of these meetings will mark phase three of the preparatory process and the drafting of the Seattle Ministerial Declaration. For information contact

Hans-Peter Werner, WTO; tel: + (41-22) 739-5286; Internet: <http://www.wto.org/>.

WORKSHOP ON MANAGING TRANSACTIONS AND LEGAL RISK IN A GLOBAL ECONOMY: This meeting will be held from 21-25 June 1999 in Washington, DC, US and hosted by American University. For more information contact American University-Washington College of Law, Office of Special Programs and Advanced Legal Studies, 4801 Massachusetts Avenue, NW, Washington, DC 20016, USA, tel: (1-202) 274-4075, fax: 274-4079, e-mail: spals@wcl.american.edu, Internet: <http://www.wcl.american.edu/workshop>.

GLOBAL ISSUES FOR MINING DEVELOPMENT: This meeting will be held from 21-25 June 1999 in Dundee, Scotland and hosted by the Centre for Energy, Petroleum and Mineral Law and Policy, University of Dundee. For more information contact University of Dundee, DD1 4HN, Scotland, UK, tel: + (44-1382) 344300, fax: + (44-1382) 322578; e-mail: cpmlp@dundee.ac.uk

APEC TRADE MINISTERS MEETING: The APEC Trade Ministers Meeting will be held from 28-30 June 1999 in Auckland, New Zealand. 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 will be held from 28-29 June 1999 in Banff, Alberta, Canada. For more information contact: Julie-Anne Bellefleur; tel: + (514) 350-4310; e-mail: jabellef@cceintl.org.

OECD CONFERENCE ON TRADE AND COMPETITION: The OECD Conference on Trade and Competition, which will be organized by the Directorate for Financial, Fiscal and Enterprise Affairs and the Trade Directorate, will be held from 29-30 June 1999. For more information contact the Trade Directorate; e-mail: ech.contact@oecd.org; Internet: <http://www.oecd.org/ech/>.

WTO COMMITTEE ON TRADE AND ENVIRONMENT: The CTE will meet from 29-30 June 1999 in Geneva. For information contact Hans-Peter Werner, WTO; tel: + (41-22) 739-5286; Internet: <http://www.wto.org/>.

FIFTH FINANCIAL INSTITUTION INITIATIVE ANNUAL ROUNDTABLE: This meeting will be held from 8-9 September 1999 in Chicago, Illinois, US; Mr. H. Abaza, Trade and Environment Unit, UNEP; tel: + (41 22) 979-9179; fax: + (41 22) 796-9240; e-mail: husein.abaza@unep.ch.

APEC MINISTERIAL MEETING: The 11th APEC Ministerial Meeting will be held from 9-10 September 1999 in Auckland, New Zealand. 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/>

UNCTAD TRADE AND DEVELOPMENT BOARD: UNCTAD Trade and Development Board will hold its Forty-sixth session (Preparatory process for UNCTAD X) from 18-29 October 1999. For more information contact: Office of the Secretary of the Board; tel: + (4122) 907 56 36; fax: + (41 22) 907 00 56; e-mail: karma.tenzing@unctad.org

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

/CLIMATE AND ATMOSPHERE

FCCC SUBSIDIARY BODIES: The FCCC Subsidiary Bodies will meet from 31 May – 11 June 1999 in Bonn, Germany. Prior to COP-5, workshops on Article 4.8 and 4.9 (adverse impacts) and technology transfer will be held. COP-5 will be held in Bonn from 25 October – 5 November 1999. For more information contact: the FCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815- 1999; e-mail: secretariat@unfccc.de; Internet: <http://www.unfccc.de/>.

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 will be held in Geneva from 15 - 18 June 1999 in Geneva, Switzerland. The provisional agenda is available at http://www.unep.org/ozone/19oewg-prov_agenda.htm. For more information contact: the Secretariat; tel: + (254-2) 62-1234; fax: + (254-2) 62-3601; e-mail: ozoneinfo@unep.org; Internet: <http://www.unep.org/ozone/>

WORLD RENEWABLE ENERGY CONGRESS '99: World Renewable Energy Congress '99 will be held from 8-11 June 1999 in Kuala Lumpur, Malaysia. For more information, contact the Secretariat, WREC'99, 3rd Floor, 78 Jalan SS 22/21, Damansara Jaya, Selangor, Malaysia; phone: +6 03 7172612/13, fax: +6 03 7172616.

IMPLEMENTING THE KYOTO PROTOCOL: This meeting will be held from 14-15 June in London, UK and will be hosted by the Royal Institute of International Affairs. Registration fee: £934.13. For more information contact: Georgina Wright, RIIA Conference Unit, Chatham House, 10 St. James's Square, London SW1Y 4LE, UK, tel: + (44-171) 957-5700/957-5754; fax: + (44-171) 321-2045/957-5710; e-mail: gwright@riia.org; Internet: <http://www.riia.org/>

PROGRAM ON CLIMATE CHANGE AND DEVELOPMENT: This program, which will be held from 14 June - 25 June 1999 in Cambridge, Mass., US, is an intensive training in the key issues of global climate change and their implications for economic development. It is intended for climate change diplomats, policy-makers, business executives and NGO leaders. For more information contact: Dr. Theodore Panayotou, Harvard Institute for International Development; tel: +1 (617)495-5999; fax: +1 (617) 496-3956; e-mail: climate@hiid.harvard.edu; Internet: <http://www.hiid.harvard.edu/training/climate.html>

EMA THIRD ANNUAL SPRING MEETING: The Emissions Marketing Association 3rd Annual Spring Meeting and International Conference will be held from 14-16 June 1999 in San Diego, California, USA. For more information contact: EMA; tel: +1 (414) 276-3819; fax: +1 (414) 276-3349; e-mail: dbaumann@emissions.org; Internet: <http://www.emissions.org>.

INDUSTRY AND INNOVATION IN THE 21ST CENTURY: This meeting will be held in Saratoga Springs, New York, US from 15-18 June 1999 and will be sponsored by American Council for an Energy-Efficient Economy (ACEEE). Participants from around the world will gather for three days to discuss the technical, policy, and program issues related to increasing energy efficiency in industry. For more information contact: ACEEE; e-mail conf@aceee.org; Internet: <http://aceee.org/conf/99ss/about.htm>

RENEWABLE ENERGY FOR THE DEVELOPING WORLD: "Renewable Energy for the Developing World" will be held from 28 June - July 2, 1999 in Carbondale, Colorado, US. Organized by Solar Energy International, this workshop explores different applications for renewable energy technologies in developing

countries. Participants will learn how to successfully accomplish sustainable development projects with renewable energy. For more information contact: Solar Energy International; tel: +1 (970) 963-8855; fax: +1 (970) 963-8866; e-mail: sei@soalrenergy.org; Internet: <http://www.solarenergy.org/solarck.html>

ADVANCED STUDY COURSE - "LEGAL ASPECTS OF THE IMPLEMENTATION OF THE KYOTO PROTOCOL: MAINTAINING ACCOUNTABILITY WITHIN A FLEXIBLE REGIME": This course will be held in London, UK from 28 June-2 July 1999. Interested persons may request the application form from the Responsible Scientist, Foundation for International Environmental Law and Development, SOAS, University of London, 46-47 Russell Square, London, WC1B 4JP, UK; tel: + (44 171) 637-7950; fax: + (44 171) 637- 7951; e-mail: cd2@soas.ac.uk, Internet: <http://www.field.org.uk>.

MEETING ON PACIFIC ISLAND NATIONAL IMPLEMENTATION STRATEGIES AND AOSIS MEETING ON THE CDM: The meeting on Pacific Island national implementation strategies for climate change will be held from 12-13 July 1999 in Majuro, Marshall Islands. This will be followed, from 14-16 July, by the Alliance of Small Island States (AOSIS) meeting on the CDM. For more information contact: e-mail: rmiun@aol.com.

AIR POLLUTION CONFERENCE: The International Conference on Modelling, Monitoring and Management of Air Pollution will be held from 27-29 July 1999 in San Francisco, USA. 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/>.

20th ANNUAL NORTH AMERICAN CONFERENCE OF THE USAEE/IAEE: The Structure of the Energy Industry -- 20th Annual North American Conference will be held in Orlando, Florida, US from 29 August-1 September 1999. For more information contact Mary Lashley Barcella; +1 (202) 429-6670; Internet: <http://www.iaee.org/20nacin/20nacin.htm>

INTERNATIONAL SYMPOSIUM ON NON-CO2 GREENHOUSE GASES: The International Symposium on Non-CO2 Greenhouse Gases: Scientific Understanding, Control, and Implementation will be held in Noordwijkerhout, the Netherlands from 8-10 September 1999. Themes include: emission inventories, scenarios, and scientific understanding of sources, sinks, and atmospheric processes; technological options; and policy aspects. For more information contact: the Symposium Bureau; e-mail: j.vanham@plant.nl; Internet: <http://pubsys.wolters-kluwer.com/MWEB/deelnemers/100007514.html>

SECOND ANNUAL EARTH TECHNOLOGIES FORUM: The Second Annual Earth Technologies Forum will be held in Washington, DC, from 27-29 September 1999. Hosted by the International Climate Change Partnership and the Alliance for Responsible Atmospheric Policy, in cooperation with the US EPA and several other organizations, this event focuses on global climate change and ozone protection technologies and policies. For more information contact: Erika Fischer; tel: +1 (703) 807-4052; fax: +1 (703) 243-2874; Internet: <http://www.earthforum.com/>.

FOURTH INTERNATIONAL CONGRESS ON ENERGY, ENVIRONMENT & TECHNOLOGICAL INNOVATION: The 4th International Congress on Energy, Environment & Technological Innovation will be held from 20-24 October 1999 in Rome, Italy. Organized by "La Sapienza" and "Roma Tre" Universities and the Universidad Central de Venezuela, the Congress offers the opportu-

nity for high-level scientific debate and communication between participants on the problems related to regional and urban management. For more information contact: EETI99, Facolta di Ingegneria, Via Eudossiana 18, 00184 Rome, Italy; fax: +39-6-4883235; Internet: <http://www.ing.ucv.ve/ceait/eeti.htm>.

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- 3 December 1999. For more information contact: For more information contact: the 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 more information contact: WCEC Conference Secretariat, POB 928, CH-8055 Zurich; tel: +411-463-9252, fax +411-463-0252, e-mail: icecag@zik.ch.

/BIODIVERSITY

WORKSHOP ON LEGAL ASPECTS OF IMPLEMENTING BIODIVERSITY RELATED CONVENTIONS: This workshop will be held in Kokshetau, Kazakhstan from 7-11 June 1999. For more information contact: Sabine Hoefnagel, UNEP/ROE; fax: + (41 22) 797 3420; e-mail: sabine.hoefnagel@unep.ch.

AGRICULTURAL BIOTECHNOLOGY - FOOD, FEED AND FIBER: This meeting will be held from 15-17 June 1999 in San Diego, California, US. For more information contact: International Quality & Productivity Center; tel: 1 (800) 882-8684 or +1 (973) 256-0211; tel: +1 (973) 256-0205; e-mail: info@iqpc.com; Internet: <http://iqpc.com/0699abio.htm>

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" will host 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. For more information contact: Vittorio Santaniello; e-mail: v.santaniello@economia.uniroma2.it; Internet: <http://www.economia.uniroma2.it/conferenze/icabr/Program.htm>

GLOBAL BIODIVERSITY FORUM: GBF14 will be held in Montreal, Canada, from 18-20 June 1999. For more information, contact: Laurence Christen, IUCN; fax: +41-22-999-0025; e-mail: lac@hq.iucn.org; Internet: www.iucn.org/themes/gbf/14/english/index.html.

FOURTH MEETING OF SBSTTA FOR CBD: This meeting is scheduled from 21-25 June 1999 in Montreal. An Intersessional Meeting on the Operations of the Convention will be held from 28-30 June 1999. The Fifth Meeting of the SBSTTA will be held in Montreal from 31 January - 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>.

NINTH EUROPEAN CONGRESS ON BIOTECHNOLOGY: The European Congress on Biotechnology (ECB9) will be held from 11-15 July 1999. The programme includes four sectors of applied biotechnology and five mainstream fundamental sciences underpinning biotechnology. 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/>

INTERNATIONAL CONFERENCE ON BIOTECHNOLOGY IN THE GLOBAL ECONOMY: The Center for International Development at Harvard University is organizing an International Conference on Biotechnology in the Global Economy on 3-4 September 1999 at Harvard University in Cambridge, Massachusetts, US. The conference will address the implications of biotechnology for: (a) international trade; (b) intellectual property rights; (c) biodiversity prospecting; (d) developing countries; (e) human and environmental safety; and (f) social values. For more information contact: Calestous Juma, Harvard University; tel: +1 (617) 496-0433; e-mail: Calestous_Juma@Harvard.Edu

FAO/NETHERLANDS CONFERENCE ON THE MULTIFUNCTIONAL CHARACTER OF AGRICULTURE AND LAND: The overall objective of the conference, to be held from 13-17 September 1999 in Maastricht, the Netherlands, is to develop practical ways for society, at different scales, to promote sustainability by increasing the awareness of the multiple functions of agriculture. For more information contact: Lucas Janssen, FAO/SDRN; fax: + (39-6) 57053369; e-mail: agr99-conference@fao.org; Internet: <http://www.fao.org/waicent/faoinfo/sustdev/agr99/>

EXPERT PANEL ON ACCESS AND BENEFIT-SHARING: An Expert Panel on Access and Benefit-Sharing will be held from 4-8 October 1999 at a location to be determined. 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>.

CONSERVATION OF BIOLOGICAL DIVERSITY IN FENNOSCANDIA: This meeting will be held from 15-19 October 1999 in Petrozavodsk, Russia. For more information contact: the Organizing Committee, Russian Academy of Sciences; tel: +(7 814 2) 770059; fax: +(7 814 2) 779600; e-mail: biodiversity@post.krc.karelia.ru

IMPACT OF LOGGING ON BIODIVERSITY: This meeting will be held from 18-22 October 1999 in Hanoi, Vietnam. For more information contact: Rita Mustikasari, IUFRO Liaison Officer, Center for International Forestry Research (CIFOR), P.O. Box 6596 JK-PWB, Jakarta, Indonesia; tel.: +62-251-622 622 ext.209; fax: +62-251-622-100; e-mail: r.mustikasari@cgnet.com; Internet: <http://www.cgiar.org/cifor>

THIRD ANNUAL EUROPEAN BIOTECHNOLOGY BUSINESS CONGRESS (EUROPABIO'99): This meeting will be held in Munich from 16-19 October 1999. For more information contact: the Congress Secretariat EuropaBio'99 in Brussels; fax: + (32 2) 735 4960; e-mail: mail@europe-bio.be

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 more information contact: the Secretariat; fax: + 33 (1) 44-30-61-16; e-mail: Ferdinand.Kuba@oecd.org; Internet: <http://www.oecd.org/agr/aks/index.htm>

AD HOC WORKING GROUP ON ARTICLE 8(J): The Ad Hoc Working Group on Article 8(j) will be held in Montreal, Canada 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>.

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>.

/FORESTS

COSTA RICA-CANADIAN INITIATIVE: Regional consultations for the CRCI are tentatively scheduled for: June in Malaysia; July in Zimbabwe; September in Ecuador, Cameroon and Spain; and October in Argentina and Turkey. No date has yet been set for a regional meeting in Mexico. 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>.

CONFERENCE ON THE ROLE OF NATIONAL FOREST PROGRAMMES: The conference "Role of National Forest Programs to Ensure Sustainable Forest Management" will be held from 14-17 June 1999 in Joensuu, Finland. For more information contact: Ms. Brita Pajari, European Forest Institute; tel: +358 (0)13 252 0223; fax: +358 (0)13 124 393; e-mail: Brita.Pajari@efi.fi; Internet: <http://www.efi.fi/events/1999/nfp.html>

GENERAL ASSEMBLY OF THE FOREST STEWARDSHIP COUNCIL (FSC): The General Assembly of the FSC will be held from 23-28 June 1999 in Oaxaca, Mexico. For more information contact: FSC; e-mail: fscoax@fscoax.org; Internet: <http://www.fscoax.org/principal.htm>

FOREST PRODUCTS SOCIETY ANNUAL MEETING: The Forest Products Society 1999 Annual Meeting will be held from 27-30 June 1999 in Boise, Idaho, US. For more 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>

NEW OPPORTUNITIES FOR FOREST-RELATED RURAL DEVELOPMENT: The IUFRO Symposium "New Opportunities for Forest-Related Rural Development" will be held from 23-28 August 1999 in Aberdeen, Scotland, UK. For more information contact: Dr Bill Slee; e-mail: rwslee@abdn.ac.uk; tel: + (44) 12 24 274140; or Irene Wilson; e-mail: i.wilson@abdn.ac.uk; tel: + (44) 1224 274140; Internet: <http://www.abdn.ac.uk/iufro99/>

SIXTH ANNUAL CONFERENCE OF THE EUROPEAN FOREST INSTITUTE: The Sixth Annual Conference of the European Forest Institute will be held from 4-6 September 1999 in Char-

treuse Ittingen, Canton Thurgau, Switzerland. For more information contact: Andreas Zingg, WSL, CH-8903 Birmensdorf ZH, Switzerland; tel: + (41 1) 739 2335; fax + (41 1) 739 2215; e-mail: andreas.zingg@wsl.ch; Internet: http://www.efi.fi/events/1999/6th_Annual_Conference/

FORESTS FOR THE FUTURE-THE THEORY AND PRACTICE OF ECOFORESTRY: This meeting will be held from 24-26 September on Vancouver Island, British Columbia, Canada. For more information contact: the Conference Registrar; tel: +1 (250) 722-0099; e-mail: conf99@ecoforestry.ca; Internet: <http://ecoforestry.ca>

11TH SESSION OF THE FAO PANEL OF EXPERTS ON FOREST GENE RESOURCES: The 11th Session of the FAO Panel of Experts on Forest Gene Resources will be held in Rome, Italy, from 29 September-1 October 1999. For information contact: Christel Palmberg-Lerche; e-mail: christel.palmberg-lerche@fao.org.

INTERNATIONAL EXPERTS' MEETING ON LOW FOREST COVER COUNTRIES: An Open-ended International Experts Meeting on "Special Needs and Requirements of Developing Countries with Low Forest Cover and Unique Types of Forests" is tentatively scheduled for 4-8 October 1999 in Tehran, Iran. The meeting is being organized by the Government of Iran, in cooperation with other interested countries and international organizations. For more information contact: Mohsen Esperi, Permanent Mission of the Islamic Republic of Iran to the UN, 622 Third Avenue, 34th Floor, New York, NY 10017, USA; tel: +1 (212) 687-2020; fax +1 (212) 867-7086; e-mail: mesperi@un.int; or Shamse-din Shariat Nejad, Head of Iranian High Council on Forests, Ministry of Jihad Sazandegi (Rural Development), Tehran, Iran; tel: +98-21-244-6505/244-6537; fax: +98-21-244-6551; e-mail: Desert@Mavara.com.

IMPACT LOGGING ON BIODIVERSITY: "Impact Logging on Biodiversity" will be held in Hanoi, Vietnam from 18 - 22 October 1999. For more information contact: Titiek Setyawati, Center for International Forestry Research (CIFOR), P.O. Box 6596 JKPWB, Jakarta 10065, Indonesia; e-mail: t.setyawati@cgnnet.com; tel: + 62 251 622622; fax: +62 251 622100; Internet: <http://iufro.ffp.csiro.au/iufro/iufro/d8/wu80700/vietnm99.htm>

INTERNATIONAL WORKSHOP ON MODEL FORESTS FOR FIELD-LEVEL APPLICATION OF SUSTAINABLE FOREST MANAGEMENT: This workshop will be held from 19-23 October 1999 in Gumma Prefecture, Japan. The workshop will be the third in a series focusing on the role of model forests in achieving SFM, practical options for effectively promoting model forest projects, enhancement of international cooperation and mechanisms for feeding back the results of model forest projects to land use planning. The workshop based on case studies and a two-day field trip will produce recommendations on approaches towards model forest establishment. For information contact: Hiroshi Nakata, International Forestry Cooperation Office, Ministry of Agriculture, Forestry and Fisheries; tel: +81-3-3591-8449; fax: +81-3-3593-9565; e-mail: hiroshi_nakata@nm.maff.go.jp.

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 coopera-

tion with UNCTAD and ITTO, will take place in Geneva at a date to be determined. For more 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 be held 31 January –11 February 2000 in New York. For more information, contact the IFF Secretariat, Two United Nations Plaza, 12th Floor, New York, NY 10017, USA; tel: +1-212-963- 6208; fax: +1-212-963-3463; Internet: <http://www.un.org/esa/sustdev/iff.htm>.

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

/DESERTIFICATION

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

SECOND INTERNATIONAL FORUM OF MAYORS ON CITIES AND DESERTIFICATION: This forum will be held from 11-12 June 1999 in Bonn, Germany. The event is being co-organized by Bonn, the International Fund for Agricultural Development (IFAD), the CCD Secretariat, and the City of Rome (which hosted the First Forum in 1997 during COP-1).

EXPERT GROUP MEETING ON LAND DEGRADATION: This meeting will be held from 14-16 June 1999 in Bologna, Italy.

MEETING OF ANNEX IV COUNTRIES: The Meeting of Annex IV countries will be held in 16-17 June 1999 in Rome, Italy.

MINISTERIAL MEETING TO REVIEW THE SRAP: The Ministerial Meeting to review for adoption the Sub-regional Action Programme (SRAP) for Western Africa will be held in June 1999 in Lomé, Togo.

AD HOC PANEL ON TRADITIONAL KNOWLEDGE: The ad hoc panel on traditional knowledge will meet in Matera, Italy from 15-18 July 1999.

AFRICAN-ASIAN WORKSHOP: The African-Asian workshop, which is scheduled from 22-27 July 1999 in Beijing, China on early warning systems & land degradation; There will also be a Focal Points Meeting and the launching of TPN1 (desertification monitoring and assessment network).

SYMPOSIUM ON OCEANS AND ATMOSPHERE: The international symposium "Interaction between the ocean and the atmosphere: drought and desertification" will be held from 12-15 October 1999 in La Serena, Chile.

THIRD SESSION OF THE CONFERENCE OF THE PARTIES TO THE CCD: COP-3 is scheduled to be held in Recife, Brazil, from 15–26 November 1999. Preparatory meetings for COP-3 include: Bureau meetings, the intersessional meeting of the Bureau of the Committee on Science and Technology, and the meeting of the ad hoc panel on traditional knowledge.

RIOD GLOBAL MEETING: The RIOD Global Meeting will be held from 23-28 August 1999. For more information contact: ENDA, BP 3370, Dakar, Senegal; tel: + (221-8) 22.42.29 / 21.60.27; fax: + (221-8) 22.26.95; e-mail: masselo@enda.sn; Internet: <http://www.enda.sn/indexuk.htm>

CULTIVATING OUR FUTURES-THE MULTIFUNCTIONAL CHARACTER OF AGRICULTURE AND LAND:

The FAO/Netherlands meeting will be held in Rome, Italy, in September 1999. For further information, contact: Lucas Janssen, FAO/SDRN, Viale delle Terme di Caracalla 00100, Rome, Italy; tel: +39-6-57053369; fax: +39-6-5705246; e-mail: agr99-conference@fao.org; Internet: <http://www.fao.org/sd/agr99>.

/WETLANDS

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

MILLENNIUM WETLAND EVENT: This meeting will be held in Quebec, Canada from 6-12 August 2000. For more information contact: Elizabeth MacKay, c/o CQVB; tel: +1 (418) 657-3853; fax: +1 (418) 657-7934; e-mail: cqvb@cqvb.qc.ca; Internet: <http://www.cqvb.qc.ca/wetland2000/intro/introa.html>

INTERNATIONAL ASSOCIATION OF ECOLOGY (INTECOL): The 6th Wetlands Symposium of INTECOL will be held in Quebec City, Canada, from 6-12 August 2000. Its focus will be on Wetlands at the Millennium. For information, contact: Millennium Wetland Event Secretariat, Elizabeth MacKay, Bureau 620, 2875 Blvd Laurier Ste-Foy, Quebec G1V 2M2, Canada; tel: +1-418-657-3853; fax: +1-418-657-7934; e-mail: cqvb@cqvb.qc.ca; Internet: <http://www.cqvb.qc.ca/wetland2000/>.

RAMSAR CONVENTION ON WETLANDS: COP8 is scheduled to convene in Spain in 2002. For information, contact: the Ramsar Secretariat, Rue Mauverney 28, CH-1196, Gland, Switzerland; tel: +41-22-999-0170; fax: +41-22-999-0169; e-mail: ramsar@ramsar.org; Internet: <http://www.ramsar.org>.

/WILDLIFE

CITES: The ninth meeting of the Plants Committee will be held from 7-11 June 1999 in Darwin, Australia. The 15th meeting of the Animals Committee will be held from 5-9 July 1999 in Madagascar. The 42nd Meeting of the CITES Standing Committee will be held from 27 September – 1 October 1999 in Portugal. CITES COP-11 is scheduled for 10-20 April 2000 in Nairobi, Kenya. For more information contact the CITES Secretariat; tel: + (41 22) 917 8139; fax: + (41 22) 797 3417; e-mail: cites@unep.ch; Internet: <http://www.mwcmc.org.uk/CITES>

BIRDLIFE INTERNATIONAL WORLD CONFERENCE: Birdlife International will host its World Conference in Kuala Lumpur, Malaysia, from 13-17 October 1999. For information, contact: Birdlife International, Wellbrook Court, Girton Road, Cambridge, CB3 0NA, UK; fax: +44-1223-277-200; Internet: <http://www.wing-wbsj.or.jp/birdlife/conference>.

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 more information contact: the UNEP/CMS Secretariat, Bonn, Germany; tel: (+49 228) 815 2401/2; fax: (+49 228) 815 2449; e-mail: cms@unep.de; Internet: <http://www.wcmc.org.uk/cms/>

/OCEANS AND COASTS

FIFTH ENVIRONMENT NORTHERN SEAS CONFERENCE: This conference will be held from 8-10 June 1999 in Stavanger, Norway. For more information contact: ENS; fax: +(47) 5156-2756; e-mail: secretariat@ens.no.

COASTAL ZONE 99: The eleventh symposium in this series, Coastal Zone 99 (CZ99), will be held in San Diego, California, US from 24 - 30 July, 1999. For information contact: CZ99 Secretariat; University of Massachusetts; e-mail: CZ99@umb.edu; Internet: <http://omega.cc.umb.edu/~cz99>

TWENTIETH SESSION OF THE IOC ASSEMBLY: The 20th Session of the IOC Assembly (IOC-XX) will be held in Paris, France from 29 June- 9 July 1999. For more information see: <http://ioc.unesco.org/ioc20/>

FAO WORKING PARTY ON TRADE AND FISHERIES: The FAO Advisory Committee on Fisheries Research will convene its "Working Party on Implications of Globalization on Trade and Distribution of Benefits" in Rome, Italy in September 1999. For more information, see: <http://www.fao.org/WAICENT/FAOINFO/FISHERY/events/events.htm>

CONFERENCE OF PLENIPOTENTIARIES AND MEETING OF THE CONTRACTING PARTIES FOR THE PROTOCOL ON LAND-BASED SOURCES OF MARINE POLLUTION (LBSMP): This meeting is tentatively scheduled from 27 September to 6 October 1999 in Oranjestad, Aruba. Governments of Aruba and the US will co-host the meeting. For more information contact: UNEP -- Caribbean Environment Programme; tel: +1 (876) 922 - 9267; fax: +1 (876) 922 - 9292; e-mail: unepcruja@cwjamaica.com; Internet: <http://www.cep.unep.org/>

EXPERT CONSULTATION ON DEVELOPMENT TRENDS IN AQUACULTURE: The Expert Consultation on Development Trends in Aquaculture will be held in Bangkok, Thailand at the FAO Regional Office for Asia and the Pacific from 25-28 October 1999. For more information contact: Rohana Subasinghe and Uwe Barg, FIRI, FAO Headquarters, Rome, Italy; uwe.bar@fao.org; Internet: <http://www.fao.org/WAICENT/FAOINFO/FISHERY/events/events.htm>

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

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 more information contact: UNEP -- Caribbean Environment Programme; tel: +1 (876) 922 - 9267; fax: +1 (876) 922 - 9292; e-mail: unepcruja@cwjamaica.com; Internet: <http://www.cep.unep.org/>

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

/CHEMICAL MANAGEMENT

13TH SESSION OF THE FAO GROUP ON REGISTRATION REQUIREMENTS: This meeting will be held from 7-11 June 1999 in Rome and will produce recommendations on procedures for the preparation and revision of guidelines and increased transparency and recommendations for the revision of the International Code of Conduct on the Distribution and Use of Pesticides. For information contact: Gerold Wyrwal, FAO; tel: +39-6 / 5705 2753; fax: +39-6 / 5705 6347; e-mail: Gerold.Wyrwal@fao.org.

SECOND SESSION OF THE CRITERIA EXPERT GROUP ON POPS: The Second Session of the Criteria Expert Group on POPs will be held in Vienna, Austria from 14-18 June 1999. For more information contact: Jim Willis, UNEP Chemicals; tel: + (41 22) 979-9111; fax: + (41 22) 797-3460; e-mail: jwillis@unep.ch

BASEL CONVENTION MEETINGS: The Committee for the Implementation of the Basel Convention will be held from 18-19 June 1999 in Geneva. The fourth session of the Open-Ended Committee for the Implementation of the Basel Convention will be held from 21-25 June 1999. For more information contact: the SBC; tel: + (41 22) 917 82 13; e-mail: iwona.rummel-bulska@unep.ch

UNITAR WORKSHOP ON NATIONAL CHEMICALS MANAGEMENT CAPACITY BUILDING: UNITAR, in cooperation with several IOMC Participating Organizations and IFCS, is planning a workshop on strengthening national legislation and policies for the sound management of chemicals from 22-25 June 1999 in Geneva, Switzerland. For more information contact: Achim Halpaap, UNITAR; + (41 22) 917 85 25; fax + (41 22) 917 80 47; e-mail: achim.halpaap@unitar.org

WORKSHOP ON DESTRUCTION TECHNOLOGIES FOR POPS: This workshop will be held in Moscow from 6-9 July 1999. For more information contact: UNEP Chemicals (IRPTC), tel: +41 (22) 979- 9111; fax: +41 (22) 797- 3460; e-mail: jwillis@unep.ch; Internet: <http://irptc.unep.ch/pic/>

SIXTH PIC INC MEETING: The Sixth Session of the PIC INC meeting will be held in Rome from 12-16 July 1999 at the FAO Headquarters to begin work during the interim period between the signing of the PIC Convention and its entry into force. For more information contact: UNEP Chemicals (IRPTC), tel: +41 (22) 979-9111; fax: +41 (22) 797- 3460; e-mail: jwillis@unep.ch; Internet: <http://irptc.unep.ch/pic/>. Or contact: FAO, tel: +39 (6) 5705 3441; fax: +39 (6) 5705 6347; e-mail: Niek.Vandergraaff@fao.org; Internet: <http://www.fao.org/ag/agp/agpp/pesticide/pic/pichome.htm>.

BASEL GROUP ON LIABILITY: The Ad-Hoc Working Group of Legal and Technical Experts to Consider a Protocol on Liability and Compensation for Damage under the Basel Convention will be held in Geneva on 30 August 1999. For more information contact: the SBC; tel: + (41 22) 917 82 13; e-mail: iwona.rummel-bulska@unep.ch

THIRD SESSION OF THE POPS INTERGOVERNMENTAL NEGOTIATING COMMITTEE (INC): The Third Session of the POPs Intergovernmental Negotiating Committee (INC) will be held from 6-11 September 1999 in Geneva, Switzerland. For more information contact: Jim Willis, UNEP Chemicals; tel: + (41 22) 979-9111; fax: + (41 22) 797-3460; e-mail: jwillis@unep.ch

WMO/EMEP WORKSHOP ON MODELING OF ATMOSPHERIC TRANSPORT AND DEPOSITION OF POPS AND MERCURY: This workshop will take place in November 1999 at the WMO Headquarters in Geneva. For more information contact:

Mrs. 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 more 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>

THIRD MEETING OF THE INTERNATIONAL FORUM ON CHEMICAL SAFETY: The Third Meeting of The International Forum on Chemical Safety (Forum III) is tentatively scheduled for September or October 2000, and will be held in Brazil with the city yet to be determined. For more 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>.

/INTERNATIONAL ORGANIZATIONS

UNCTAD:

- The Expert Meeting of the Commission on Enterprise, Business Facilitation and Development will meet from 2-4 June.
- The Intergovernmental Group of Experts on Competition Law and Policy will be held from 7-9 June.
- The Commission on Enterprise, Business Facilitation and Development will meet from 19-23 July.
- The Commission on Trade in Goods and Services, and Commodities will hold its fourth session from 20-24 September.
- The Commission on Investment, Technology And Related Financial Issues will meet from 4-8 October.
- The Trade and Development Board's Forty-sixth session (Preparatory process for UNCTAD-X) will be held from 18-29 October.

For more information contact: Office of the Secretary of the Board; tel: + (41 22) 907 56 36; fax: + (41 22) 907 00 56; e-mail: karma.tenzing@unctad.org.

UNESCO EXECUTIVE BOARD: The 156th session of the Executive Board will be held in Paris on 25 May 1999. The UNESCO General Conference will be held on 26 October. For more information contact: UNESCO; tel: +(33 1) 45 68 10 00; fax: +(33 1) 45 67 16 90; Internet: <http://www.unesco.org>

ECOSOC: The UN Economic and Social Council will meet from 5-30 July 1999 in Geneva. For more information contact: Kate Newell, UN/New York; fax: +1 (212) 963 5935; Internet: <http://www.un.org/esa/coordination/ecosoc.htm>

INTERNATIONAL MONETARY FUND/WORLD BANK MEETINGS: The IMF/World Bank Joint Annual Meeting of the Boards of Governors will meet from 28-30 September. For more information contact: Merrell Tuck; +1 (202) 473-9516; e-mail: Mtuckprimdahl@worldbank.org

INTERNATIONAL LABOR ORGANIZATION: The 87th ILO General Conference will be held from 1-17 June 1999 in Geneva. For information contact: the Official Relations Branch; tel: + (41 22) 799-7732; fax: + (41 22) 799 8944; e-mail: RELOFF@ilo.org; Internet: <http://www.ilo.org/public/english/10ilc/ilc87/index.htm>

/POPULATION

SPECIAL SESSION OF THE GENERAL ASSEMBLY ON THE INTERNATIONAL CONFERENCE ON POPULATION AND DEVELOPMENT: The Special Session of the General Assembly on the International Conference On Population And Development will be held from 30 June - 2 July 1999. For more information see: <http://www.undp.org/popin/icpd5.htm>

/WOMEN

CEDAW: The 21th Session of the Committee on the Elimination of Discrimination Against Women (CEDAW) will be held from 7-25 June 1999 in New York, US. A pre-session Working Group for the 22nd Session will be held from 28 June - 2 July 1999. 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; Internet: <http://www.un.org/womenwatch/daw/cedaw/committ>

WOMEN'S WORLDS 99: The Interdisciplinary Congress on Women will be held from 20 - 26 June 1999 in Tromsø, Norway. For information contact: Women's World; tel: + 47 77 64 58 99; fax: + 47 77 64 64 20; e-mail: womens.worlds.99@skk.uit.no; Internet: <http://www.skk.uit.no/ww99/ww99>.

GLOBAL RENAISSANCE BUSINESS WOMEN'S NETWORK (BWN): This meeting will be held from 18-19 October 1999 in Washington, DC, US. For information contact: BWN; tel: +1 (202) 466-8209; fax: +1 (202) 833-1808; e-mail: shrestha@tpag.com; Internet: <http://www.businesswomensnetwork.com>

EIGHTH INTERNATIONAL AWID FORUM: This meeting will be held 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; Internet: <http://www.awid.org>

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

WOMEN 2000: GENDER EQUALITY, DEVELOPMENT AND PEACE FOR THE TWENTY-FIRST CENTURY. GENERAL ASSEMBLY SPECIAL SESSION: This session will be held from 5 - 9 June 2000 in New York, US. For more information contact: DAW, Room DC2-1216, UN, New York, NY 10017, US; fax: + 1 (212) 963-3463; e-mail: timothy@un.org; Internet: <http://www.un.org/womenwatch/daw>

/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 will hold its first substantive session in New York from 17-28 May 1999. The second session will be held from 3-14 April 2000. For more 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; Internet: <http://www.un.org/esa/socdev/wssdcall1.htm>



/READINGS

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/FORESTS

“Carbon sequestration and conservation of tropical forests under uncertainty.” Journal of Agriculture and Forest Science, 1999, Vol.50, No.1, pp.17-35. S.R.C. Reddy and C.Price note that concern for global warming has focused attention on the role of tropical forests in the reduction of ambient CO₂ levels and mitigation of climate change. Deforestation is a major land use change in the tropics, with forest resources undergoing degradation through the influence of logging and conversion to other uses. Land use change is a product of varied local and regional resource use policies. Management of forest resources is one such major temporal factor, influencing resource stability and the carbon pool. Apart from regional level uncertainties like the nature of land use and the estimation of carbon storage in vegetation and soil, the carbon flux of tropical forests is greatly influenced by uncertainty in regenerative capacity of forests and in harvest and management policies. The authors use a case study from India to develop a transition matrix model of natural forest management, and to explore the economic implications of maintaining and expanding existing carbon sinks. The study further explores the significance of investments in additional carbon sinks in plantation forests, given continued uncertainty in natural forest management.

“Development, democracy and forest trends.” Global Environmental Change - Human and Policy Dimensions, 1999, Vol. 9, No.2, pp.105-118. A.S. Mather and C.L. Needle (Scotland) analyze global forest trends in relation to indicators of economic, social and political development. The richest and most democratic countries are characterized by stable or expanding forests while poor and despotic countries tend to experience rapid forest loss. The conclusion is that a high level of development is beneficial rather than detrimental to the sustainability of forest area. This conclusion is discussed briefly in relation to the relationship between the human and environmental dimensions of sustainable development.

“Forest management, conservation and global timber markets.” American Journal of Agricultural Economics, 1999, Vol. 81, No.1, pp.1-13. B. Sohngen, R. Mendelsohn, and R. Sedjo (US) develop a global timber market model which captures how timber supply reacts to future predicted increases in the demand for timber. High future demand is expected to increase prices, increase investments in regeneration, increase establishment of plantations, and expand output. Dynamic market responses imply a greatly reliance on plantations in productive regions, allowing large areas of natural forest in low, valued regions to remain largely intact. Sensitivity analysis

suggests that price, harvest, and management are most sensitive to the rate of demand increase, the interest rate, the cost of plantations, and access costs of natural forests. Two forest conservation strategies are examined which predict the system-wide implications of forest conservation in Europe and North America. The policies indicate that whereas set asides can induce net conservation, harvests increase elsewhere, particularly in natural forests.

“Moving forward in African community forestry: trading power not use rights.” Society and Natural Resources, 1999, Vol.12, No.1, pp.49-61. L. Wily (Kenya), provides new insights on community involvement in natural forest management. The examples used are two woodland reserves in Tanzania, both of which were visibly not being conserved under government management. In 1994/5 communities living on the edge of these forests secured the “return” of these woodlands to their own control. The article briefly describes the mechanisms they have since used to manage the forests and their success. The author has acted as the facilitator in these developments. Her argument is that modern strategies of joint forest management that shape the use of forests with communities, or that involve communities as partners in the work of management but retain ultimate control, cannot hope to obtain the level of local responsibility needed for self-reliant, cost effective and sustainable conservation management. Rather, it is when authority is vested in the community, and when the State acts as adviser only, that a meaningful transformation in forest protection and management occurs.

/UNITED NATIONS

“Brundtland’s World Health Organization: a test case for United Nations reform.” Public Health Reports, 1999, Vol.114, No.1, pp.30-39. A. Robbins writes that Gro Harlem Brundtland, who became Director General of the World Health Organization in July 1998, has created a small revolution at the WHO Headquarters in Geneva. She is in the process of changing how WHO works, how it interacts with other parts of the United Nations system, and how it enlists ministries, whole governments, universities and other private organizations to improve health in the world. Robbins describes the reorganization, the new people and resources, and prospects for setting a precedent in UN reform.

/BIODIVERSITY AND ECOTOURISM

“Ecotourism: towards congruence between theory and practice.” Tourism Management, 1999, Vol.20, No.1, pp.123-132. S. Ross and G. Wall (Canada) examine the gap between ecotourism theory as revealed in the literature and ecotourism practice as indicated by its on-site application. A framework is suggested which, if implemented through appropriate management, can help to achieve a balance between conservation and development through the promotion of synergistic relationships between natural areas, local populations and tourism. The framework can also be used to assess the status of ecotourism at particular sites.

“Linking ecotourism and biodiversity conservation: a case study of Doi Inthanon National Park, Thailand.” Singapore Journal of Tropical Geography, 1998, Vol.19, No.2, pp.193-211. G.T. Hvene-

gaard and P. Dearden (Canada) argue that ecotourism, or tourism that promotes conservation, does not occur in isolation but as part of an interdependent system. Based on a case study at Doi Inthanon National Park, Thailand, this study outlines a conceptual framework for such a system, placing biodiversity conservation in the context of other major tourism components, including tourists, ecotourism infrastructure, protected areas and local people. In an interactive way, each component affects the conservation of biodiversity. Based on a tourist survey and participant observation, the authors examine the interrelationships among the key tourism components and potential changes over time. Several environmental, social, economic and educational effects illustrate the complex nature of the ecotourism-conservation relationship. Recommendations on how to increase conservation benefits from ecotourism are provided.

/SUSTAINABLE DEVELOPMENT

“Environmental justice and the sustainable city.” Journal of Planning Education and Research, 1999, Vol.18, No.3, pp.233-243. G.Haughton (England) notes that as the debate on sustainable development and environmental justice has gathered momentum, considerable attention has been paid to identifying key principles. The author highlights a number of core principles and then moves on to examine differing styles of policy approach, which have gained favor among different sources, for moving towards the sustainable city, from market-based neoliberal reformism to deep green ecologically centered approaches. He highlights four broad categories of approach to sustainable urban development and begins linking those to the core principles of sustainable development.

“Introduction: The pursuit of sustainable development - concepts, policies and arenas.” International Political Science Review, 1999, Vol.20, No.2, pp.123-128. William Lafferty (Norway) introduces a number of articles on sustainable development in this issue of the IP-SR. In “Sustainable development: Exploring the ethics of Our Common Future”, O. Langhelle notes that the concept of sustainable development was placed on the international agenda with the release of the report, *Our Common Future*, by the World Commission on Environment and Development in 1987. Although considerable attention has since been devoted to the idea of sustainable development itself, the broader conceptual framework of the idea - whereby the Commission tried to integrate environmental policies and development strategies in order to create the foundation for a global partnership - has been neglected in much of the literature. The purpose of Langhelle’s article is to offer an interpretation of *Our Common Future*, where the concept of sustainable development is linked to the broader framework of normative preconditions and empirical assumptions. The structure of the argument is to demonstrate that the relationship between sustainable development and economic growth has been over-emphasized and that other vital aspects of the normative framework have been neglected. Social justice (both within and between generations), human solidarity, a concern for the world’s poor, and respect for the ecological limits to global development, constitute other aspects of sustainable development; aspects which are indeed relevant for the growing disparity between North and South.

In “The fate of sustainable development under neo-liberal regimes in developing countries”, M.S. Haque notes that in developing countries, the realization of the notion of sustainable

development has come under challenge due to the emergence of neo-liberal regimes and their pro-market policies. The article addresses: the origin, meaning and problems of sustainable development; the major features and policy orientations of neo-liberal regimes in developing countries; and the critical implications of neo-liberal policies for the environment and development. The article also offers some recommendations with a view to overcoming the contemporary challenges to sustainability and ensuring a more genuine and effective mode of sustainable development.

“Interpreting economics, rhetoric and sustainable development: some implications for policy determination.” Australian Geographer, 1999, No.1, pp.35-49. S. Lumley (Australia) notes that many of the controversies about environmental resource use relate to the perceived conflict between economics and conservation. This conflict might have been resolved with general acceptance of the concept of sustainable development, and with a more transparent and honest use of economics terminology. He argues that interpretation and application of this concept appear to have led to some further conflicts between perceptions of economics and the environment, partly because commerce and development are sometimes portrayed as having the same meaning.

“Consumption, sustainable welfare and human needs - with reference to UK expenditure patterns between 1954 and 1994.” Ecological Economics, 1999, Vol.28, No.3, pp.421-441. T. Jackson and N. Marks (England) explore the complex relationship between economic consumption and human welfare (or well being). Conventional economics suggests that increasing levels of economic consumption lead to increasing levels of well being. However, this view has been criticized on both environmental and social grounds. On the one hand, the material impacts of increasing consumption are environmentally unsustainable. On the other hand, material consumption can conflict with crucial social and psychological components of human welfare. The paper develops a perspective on human welfare, which is based on Max-Neef’s characterization of human needs. It discusses the implications of this alternative perspective for the conventional viewpoint and illustrates the importance of it with reference to patterns of consumer expenditure in the United Kingdom over the last 40 years. The authors suggest that - from this perspective - modern societies may be seriously adrift in their pursuit of human well being. However, they also point out that addressing this situation provides far more opportunity for ecologically sustainable development than is generally recognized.

“Institutions and environmental performance in seventeen western democracies.” British Journal of Political Science, 1999, Vol.29, No.Pt.1, pp.1-31. L.A. Scruggs (US) examines the relationship between national political and economic institutions and environmental performance since the early 1970s in seventeen OECD countries. After presenting hypotheses about some of the effects of the most important structural and institutional variables on performance, the author tests these hypotheses using a multiple regression analysis. He finds that neo-corporatist societies experience much better environmental outcomes than more pluralist systems. However, neither the degree of ‘consensual’ political democracy nor traditional political factors can explain much variation in environmental performance. These relationships hold even after controlling for other structural factors such as income and manufacturing intensity.

“Information networking as an instrument of sustainable development - connectivity, content and (co-) capacity building.” Social Science Computer Review, 1999, Vol.17, No.1, pp.107-114. K. Funk (US) reviews novel initiatives for improving the content of information on sustainable development and novel initiatives for increasing access to this information with an emphasis on outreach to rural areas. Improving information content and improving the outreach of the network are the two key elements of any successful communications project.

/CLIMATE CHANGE

“Problem solving through international environmental agreements: the issue of regime effectiveness.” International Political Science Review, 1999, Vol.20, No.2, pp.151-173. M.Hisschemoller and J.Gupta (Netherlands) note that regime analysts tend to assume that for environmental agreements to be effective the environmental problem at stake must be relatively simple or “benign”. This means, *inter alia*, that scientists should have reached consensus on causes and effects and that interests between and within countries are deemed to be not too conflicting. The implication of this assumption is, however, that international environmental regimes cannot effectively address more complex issues, such as the current global environmental issue of sustainability and climate change. The article outlines an alternative approach. Building upon a typology of policy problems developed in the policy sciences, it argues that, for addressing different kinds of environmental problems, we need different kinds of environmental regimes. It then goes on to develop a typology of environmental regimes which can deal with different types of environmental problems.

“Negotiations and leadership in Kyoto.” International Politik, 1999, Vol.57, No.1, p.35. K.Tangen sheds light on the role of various forms of political leadership in the negotiations of the Kyoto Protocol under the UNFCCC. During the negotiations several forms of leadership, the writer observes, several forms of leadership could be observed. For example, the EU was a kind of directional leader in establishing ambitious reduction targets. The US was on several occasions an instrumental leader, for instance in the work of getting the so-called flexible mechanisms in place. Power was, however, to a large extent a precondition for leadership. Structural power, power given by formal position and power rising from linking the climate change issue to other policy areas, for example development aid, are all likely to have played a role regarding the opportunities for actors to exercise leadership.

“The changing role of the European Union in international environmental politics: institution building and the politics of climate change.” Environment and Planning C - Government and Policy, 1999, Vol.17, No.1, pp.53-68. A.M. Sbragia (US) notes that in the last 25 years the European Union (EU) has gradually developed an international, albeit ambiguous, identity that has greatly enhanced its leadership role in the international environmental arena. The leadership offered by the EU has been largely shaped by its unique institutional structure, but also by such factors as the changing nature of international environmental issues. The authors contrast the traditional role of the US with that of the EU in global climate change negotiations and comment on the future role of both

actors in the international environmental arena. An understanding of the institutional structures of the EU and the changing nature of international environmental issues helps to explain the EU’s ascendant role as a leader in multilateral environmental politics.

“Intergenerational justice and climate change.” Political Studies, 1999, Vol.47, No.1, pp.53-66. E. Page (England) notes that global climate change has important implications for the way in which benefits and burdens will be distributed amongst present and future generations. As a result it raises important questions of intergenerational justice. The author shows that there is at least one serious problem for those who wish to approach these questions by utilizing familiar principles of justice. This is that such theories often pre-suppose harm-based accounts of injustice which are incompatible with the fact that the very social policies which climate experts and scientists claim will reduce the risks of climate change will also predictably, if indirectly, determine which individuals will live in the future. One proposed solution to this problem is outlined, grounded in terms of the notion of collective interests.

/NEW BOOKS

INTERNATIONAL TRADE AND THE BASEL CONVENTION: International Trade and the Basel Convention, a new book from the Royal Institute of International Affairs, analyzes the international trade in hazardous waste, and the Basel Convention set up to control it. Author Jonathan Krueger examines the development, effectiveness and future of the Convention. In the run-up to the Millennium Round of trade negotiations, one issue is increasingly important: are the Basel provisions that allow restrictions on trade compatible with the rules of the World Trade Organization? Efforts to ban transfers of hazardous wastes from industrialized to developing countries have attracted most attention; but Krueger also analyzes the special concerns of developing countries, and the illegal trade in hazardous wastes. As the Convention approaches its tenth anniversary in December 1999, Krueger suggests ways forward, and draws lessons from the Basel experience for other international environmental agreements.

International Trade and the Basel Convention, by Jonathan Krueger, 153 pp., Paperback, ISBN 1 85383 621 4, priced £14.95. Published by the Royal Institute of International Affairs and Earthscan Publications. Distributed by Plymbridge Distributors Ltd. and the Brookings Institution. For review copies and details of the book launch at the Trade and Environment Workshop from 5-6 July 1999 contact: Nikki Kerrigan, Energy and Environmental Programme, RIIA; tel: +44 (0)171 314 3639; fax: +44 (0)171 957 5710; e-mail: nkerrigan@riia.org. For orders from the US and Canada contact: the Brookings Institution, 1775 Massachusetts Avenue, NW Washington, DC 20036; tel: +1 (202) 797 6258; +1 (800) 275 1447; fax: +1 (202) 707 6004. For orders from Europe and elsewhere contact: Plymbridge Distributors Ltd., Estover Road, Plymouth, Devon, PL6 7PZ; tel: +44 (0) 1752 202 301; fax: +44 (0) 1752 202 333. See EEP’s web site at <http://www.riia.org/Research/eep/eep.html> for Jonathan Krueger’s briefing paper on the Basel Convention and for other EEP information. Jonathan Krueger is completing his Ph.D. in International Relations at the London School of Economics and Political Science. He is currently an Affiliate Fellow with the Global Environmental Assessment Project at the Belfer Center for Science and International Affairs at Harvard University.

/FORESTS

WORLD COMMISSION ON FORESTS AND SUSTAINABLE DEVELOPMENT: The World Commission on Forests and Sustainable Development (<http://iisd.ca/wcfsd/>) released its report "Our Forests... Our Future." After holding hearings on five continents, the Commission concluded that changing the way we value and manage our forests both development and forests can be sustained. The Commission advocates "a set of global, national and local level arrangements to involve people in all decisions concerning their forests" called ForesTrust with four components:

Forest Watch - A network connecting ordinary citizens with decision makers. Forest Watch would also gather, analyze and disseminate information on forests.

Forest Management Council - An institution to standardize sustainable practices including eco-labeling and certification.

Forest Ombudsman - A network of officials to identify and pass objective non-advocacy judgements on corruption, inequity and abuse in forest operations.

Forest Award - A way to recognize and reward good performance in sustainable forest management.

The Report also challenges the countries with some 85% of the world's forests to exercise leadership through a Forest Security Council, modeled partly on the G8 summits but also involving the science, business and NGO communities. For more information or a copy of the report contact: Ajit Krishnaswamy, WCFSO Secretariat; tel: +1 (204) 958 7700; fax: +1 (204) 958 7756; e-mail: akrish@iisd.ca.

STATE OF THE WORLD'S FORESTS: The State of the World's Forests, available at <http://www.fao.org/WAICENT/faoinfo/forestry/sofo/sofo99/default.htm>, reports on the latest figures on global forest cover; current efforts to assess forest resources; the forest fires of 1997 and 1998; recent trends in forest management; the significance to forestry of the Kyoto Protocol of the Framework Convention on Climate Change; current and projected forest products production, consumption and trade; recent trends in forest policy, legislation and institutions; and the international dialogue and initiatives on forests, among other topics.

/CLIMATE CHANGE

EMISSION BASELINES UNDER THE AIJ PILOT PHASE: The new OECD information paper "Experience with emission baselines under the AIJ pilot phase" is available at <http://www.oecd.org/env/cc/freedocs.htm>. The concept of allowing countries to work together reach emission targets jointly was enshrined in the United Nations' Framework Convention on Climate Change (UNFCCC). The pilot phase for "Activities Implemented Jointly" (AIJ) was established in 1995 and is still ongoing. This paper assesses the emission baselines used in Activities Implemented

Jointly (AIJ) projects. It then draws out lessons that can be used when determining project-specific emission baselines for future AIJ projects and recommends ways to calculate and report these emission baselines so they can be made more consistent and transparent. The similarities between AIJ and the project-based mechanisms contained in Articles 6 and 12 of the Kyoto Protocol (Joint Implementation and the Clean Development Mechanism) means that these lessons from AIJ may also be applicable to JI and the CDM. For more information contact: Jane Ellis, OECD; e-mail: jane.ellis@oecd.org; fax: +(331) 45 24 78 76

/BIODIVERSITY

OECD AGRICULTURAL OUTLOOK 1999-2004: Information on the fifth edition of the OECD Agricultural Outlook, available at http://www.oecd.org/news_and_events/release/nw99-33a.htm, gives detailed projections up to the year 2004, and examines the factors that will shape markets for the main temperate zone agricultural products of cereals, oilseeds, meat and dairy products.

FRESHWATER BIODIVERSITY REPORT In a new report, UNEP and the World Conservation Monitoring Centre (WCMC) identify priority areas where conservation action is needed to retain the diversity of fish, mollusks and crustaceans-key sources of food to people world-wide. "Freshwater Biodiversity: A Preliminary Global Assessment" identifies the African Great Lakes, Madagascar, Tasmania, the Mississippi basin and Lake Titicaca amongst 23 "hotspots" of freshwater biodiversity. For more information contact: Laura Battlebury, WCMC; tel: +44 (0)1223 277314; fax: +44 (0)1223 277136; e-mail: laura.battlebury@wcmc.org.uk

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Selected Sustainable Development Meetings

June 1999

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	
		1	2	3	4	5 World Environment Day	
		UNFCCC Subsidiary Bodies - Bonn					
		ITTO 26th Session - Chang-Mai, Thailand					
		ECOSUD 99 - Lemnos, Greece					
6	7	8	9	10	11	12	
		Conf. on Efficient Water Use in Urban Areas - Kobe, Japan					
	Workshop on Legal Aspects of Implementing Biodiversity Related Conventions - Kokshetau, Kazakhstan						
	UNFCCC Subsidiary Bodies - Bonn						
13	14	15	16	17	18	19	
					Global Biodiversity Forum - Montreal		
		European Ministerial Conf on Env. and Health - London					
	19th Working Group of the Parties to the Montreal Protocol - Geneva						
	POPs 2nd Criteria Expert Group Meeting - Vienna						
	Implementing the Kyoto Protocol - London						
	Conference on the Role of National Forest Programmes - Joensuu, Finland						
Conference on Environmental Challenges for the Next Millenium - Jerusalem							
20	21	22	23	24	25	26	
			Forest Stewardship Council 2nd GA - Oaxaca, Mexico				
	Workshop on Agriculture, Trade and the WTO - Geneva						
	Convention on Biological Diversity SBSTTA-4 - Montreal						
GBF - Montreal							
27	28	29	30				
		ICPD+5 Review					
	WTO Ctte. on Trade and Env. - Geneva						
	20th IOC Assembly - Paris						
	Biodiversity Convention Intersessional Mtg - Montreal						
Forest Stewardship Council 2nd GA -							

Selected Sustainable Development Meetings

July 1999

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
				ICPD+5 Review UNGASS - New York		
				5th Meeting of the Mediterranean CSD - Rome		
				20th IOC Assembly - Paris		
4	5	6	7	8	9	10
	ECOSOC Substantive Session - Geneva					
	African Environmental Protection Symposium - Pietermaritzburg, South Africa					
	20th IOC Assembly - Paris					
11	12	13	14	15	16	17
				CCD Ad hoc Panel on Traditional Knowledge - Matera, Italy		
			Conf. on Synergies/Coordination between MEAs - Tokyo			
			AOSIS Mtg on the CDM - Majuro, Marshall Islands			
	Workshop on Enforcement/Compliance w/ MEAs - Geneva					
	Prior Informed Consent (Chemicals) INC-6 - Rome					
	Pacific Island Climate Change Mtg - Majuro					
	ECOSOC Substantive Session - Geneva					
18	19	20	21	22	23	24
CCD Panel	ECOSOC Substantive Session - Geneva					
25	26	27	28	29	30	31
	ECOSOC Substantive Session - Geneva					

Selected Sustainable Development Meetings

August 1999

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
						IUFRO
8	9	10	11	12	13	14
	Stockholm Water Symposium - Stockholm					
	IUFRO World Congress - Kuala Lumpur, Malaysia					
15	16	17	18	19	20	21
22	23	24	25	26	27	28
	IUFRO Symposium on Forest-Related Rural Development - Aberdeen, Scotland					
29	30	31				

Selected Sustainable Development Meetings

September 1999

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
			1	2	3	4
					Intl Conf on Biotechnology - Boston	
5	6	7	8	9	10	11
POPs Intergovernmental Negotiating Committee - 3rd session - Geneva						
12	13	14	15	16	17	18
FAO/Netherlands Conference on Agriculture and Land - Maastricht						
19	20	21	22	23	24	25
Intl Conference on Consumption - Hampshire, UK						
26	27	28	29	30		
SIDS Special Session - New York						