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elni NEWS

elni Homepage

elni can soon be visited in the Internet. In addition to information on *elni* and *elni* membership, you will find an index of all Newsletter articles dated back to 1991. A news section will keep you updated with information on forthcoming environmental conferences, etc. News from the Environmental Impact Assessment (EIA) working group, which was established after the *elni* conference in Milan in 1996, will also be offered. You are invited to provide news on your activities or to let us know your ideas or suggestions.

elni can be reached via a link with the Öko-Institut: *http://www.oeko.de*

elni Conference

Originally, it has been planned to organise the 1998 *elni* conference in Frankfurt. As we are still waiting for the European Commission's decision on financial support of our conference, we cannot provide you more details on the exact date at the moment. We will keep you informed in our *elni* website.

New *elni* Volume on Voluntary Agreements

1995 a group of *elni* members discussed the idea of a research project about voluntary agreements. This instrument has become very popular in the 1990s and the group intended to examine the contribution of the instrument to sustainable development. A project proposal was elaborated and the project was partly funded by the European Union research funds. The project was coordinated by the Öko-Institut. In cooperation with European partners from the *elni* network, the concrete situation in the use of environmental agreements was described and analysed in nine countries (Belgium, Denmark, France, Germany, Italy, the Netherlands, the United Kingdom, Poland and the United States). Furthermore, an EC report was prepared that considers EC legal issues relevant to the use of environmental agreements. On the basis of eight case studies in four different countries (Belgium, Germany, the Netherlands and the US), the research evaluated the success of environmental agreements.

The final report including the eight case studies of this project will be published by Cameron May, London, in summer 1998. For further information contact Cameron May LTD under
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http://www.cameronmay.com

Concerted Action on Voluntary Approaches (CAVA) The European Research Network

The **CAVA** project is aimed at developing a research network for voluntary approaches in the field of the environment. It is coordinated by **CERNA**, the Centre for Industrial Economics at the Ecole des Mines de Paris (France) and funded by DGXII of the European Commission. Associated research institutes are **University College Dublin** (Ireland), **University of Gent** (Belgium), **Öko-Institut** (Germany), **Fundazione Eni Enrico Mattei** (Italy) and the Institute of Local Government Studies (**AKF**) (Denmark).

Objectives

The objectives of CAVA are:

- to pool research on voluntary approaches in the field of the environment, exchange research results and promote further research on the topic, and
- to foster communication between researchers and policy makers in order to improve the quality of research and decision making relating to the use of voluntary approaches in environmental policy.

Rationale

With the use of more than 300 voluntary approaches across the EU, this instrument has become a massive reality in environmental policies. The 5th European Programme of Actions adopted in 1992 encouraged a new approach to environmental policy and, namely, promoted the use of market-based instruments and voluntary approaches. However, compared to the widespread use of voluntary ap-

proaches, research remains relatively under developed. Unlike environmental taxes and tradable permits, *fora* of discussion between researchers, policymakers and industrialists, academic networks grouping specialists from different areas, and handbooks surveying the state of the art are lacking in the field of voluntary approaches. The CAVA project is aimed at filling the gap.

Workprogramme

The project is structured around 5 themes including the central economic and law questions on voluntary approaches (institutional aspects, efficiency, empirical evidence, competition and legal aspects). For each of the themes a survey of the literature is elaborated and two workshops are held. One workshop brings together specialised researchers, the other workshop researchers and specialist practitioners. The major results of these workshops will then be presented in synthesised form at an international conference composed of high-level policy makers and industrialists. This final conference forms the basis for a handbook including a theoretical overview and practical guidelines for the application of this policy instrument. The first workshop is scheduled for the end of 1998.

Integration of environmental agreements into existing legal systems

One theme of the CAVA project focuses on the integration of environmental agreements into existing legal systems. This theme is organised by the Öko-Institut, *elni* members and other legal researchers who are specifically invited to take part in the CAVA research network. Participation is possible through the deliverance of papers and presentations at legally orientated international workshops that are held within the CAVA network.

Contents of the legal theme

Environmental agreements are relatively new instruments of environmental policy that have been introduced into existing legal systems. The instruments often do not seem to fit into the existing legal framework. For this reason a number of legal questions arises. These problems and uncertainties might lead to obstacles for the effective use of the instrument or to unwanted side effects (e.g. lack of legitimacy, transparency). Therefore, how to adjust the existing legal framework should be reflected upon. This will be done by using the example of environmental agreements, with a possibility to include other instruments as well.

As a contribution to the CAVA project it is suggested to

- identify legal implications of the use of environmental agreements (voluntary approaches) in several countries.
- discuss possible strategies for the integration of environmental agreements in existing legal systems.

Legal character of the agreement itself

From the legal viewpoint, environmental agreements usually show a number of characteristics that are similar to contracts under civil law. This applies especially to the negotiation phase, the two sided agreement and the chosen formulation. However, there is a significant difference between the legal implications of a civil contract, and the legal implications of an environmental agreement between public and private parties. For civil contracts the civil codes of the different countries offer a specific legal framework, with a number of sanctions and legal remedies. A preliminary study shows that the civil codes that are in practice are not applied to agreements. Environmental agreements can also show the characteristics of public contracts. The CAVA project should therefore address the following aspects

- Legal character of agreements
- Possibilities of enforcement and sanctions
- Possibilities of application of civil law provisions (sanctions, court enforcement)
- Consequences for design of agreements
- Possible needs for specific legal provisions.

Constitutional questions

The European Constitutions provide for a division of power between the executive, legislative and judicial branch. Legislation has to be passed by parliament, although it is usually proposed and elaborated by the executive. The executive also often has the power to pass ordinances by itself. Environmental agreements are in almost all countries - that have been subject to research - entered into by the administration without confirmation or even participation of the parliament. An increased use of the instrument will eventually lead to a shift in the balance of power between the legislative and executive branches if agreements are used regularly - especially when they are used instead of legislation. For this reason it will be interesting to examine the instrument under the following aspects:

- Agreements and possible shift of power
- Approaches for an improvement of the legitimation of the instrument

Rights of third parties

Third parties (that are not party to the agreement) can be affected by an Environmental agreement. A number of "constellations" can be thought of in this

respect. Some examples might illustrate the variety of questions that can arise

- What kind of legal action can be taken by a customer if an old vehicle is not taken back by manufacturers, in breach of the environmental agreement?
- A neighbour of a plant wants to have access to monitoring data. This information is held by a private institution that serves as a secretariat to the agreement. Does the citizen have right of access to information according to the EU Directive?
- A competitor feels that the agreement might infringe competition law requirements and takes action against the agreement.

The influence of voluntary approaches on competition will be examined in the framework of another theme within CAVA. However, the group of legal researchers will address the European and national competition law requirements for environmental agreements as well.

Public control

Another point of interest is the question: how can the public control the agreements and the performance of the parties? The following aspects can be examined in this respect:

- Public participation in the negotiation process
- Need for actively informing the public
- Public access to documents
- Participation in the monitoring and review process

Conclusions will be drawn from practical experience. It will be asked whether an adjustment of existing provisions on access to information and public participation could be useful.

Combination with other environmental policy instruments

Research has shown that combinations with other instruments of environmental policy can lead to effective agreements. In this respect the Netherlands seem to have the most elaborated approach.

The experience of integration and combination with other instruments will be examined. Conclusions with regard to existing and other options will be drawn.

Procedural rules for environmental agreements?

A solution to a number of the current deficiencies might be the establishment of procedural laws for environmental agreements. Flanders and Denmark have passed legislative frameworks for environmental agreements; the Netherlands have drawn up guidelines. These experiences to date will be examined. Possible reasons for failure or success will be discussed. It will also be discussed whether the results can be transferred to other countries as well.

Call for papers

Researchers, who are interested to contribute to any of the legal research topics addressed above are asked to send in their paper or a research outline to:

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ARTICLES

Monitoring and Verification under the Kyoto Protocol[1]

By Ralf Jülich and Anke Herold

Monitoring of greenhouse gas emissions and verification of reduction commitments are fundamental to the successful implementation and the integrity of the Kyoto Protocol. An effective monitoring and verification system has to be installed to assess compliance with the commitments of the Protocol, to ensure mutual confidence among the Parties and to meet the environmental goals of the Protocol and the Framework Convention on Climate Change (FCCC).

The design of the monitoring and verification regime needs to meet contradictory requirements. It shall reliably assess progress in emissions reductions and violations by Parties without expanding bureaucracy and transaction costs, while ensuring acceptance of all Parties to the Protocol.

The Protocol contains only part of the monitoring and verification procedure, many issues concerning estimation, reporting, verification and assessment of compliance are left to be decided by the meeting of the Parties to the Protocol.

1 Estimation and Reporting

Each Annex I Party has to establish a national system for the estimation of anthropogenic emissions. Previous text proposals for a Protocol demanded national "systems for the measurement" of greenhouse gases. This formulation was replaced by "systems for estimation". This change in wording points to the unwillingness of the Parties to establish additional, costly measurement systems and stricter recording systems. Negotiating texts of the Ad hoc Working Group on the Berlin Mandate (AGBM) contained more details on reporting requirements compared to the final Protocol. The need for annual reporting on emissions transfers under flexibility provisions of the Protocol was omitted although these provisions especially depend on transparent monitoring and verification of national inventories.

The reports of the in-depth review teams, responsible for verification of national communications under the FCCC, revealed deficiencies regarding the reporting of all Parties to the FCCC. The in-depth review teams missed notable progress from the first to the second national communication. Especially transition countries need further improvement of data quality and reporting standards. These problems have to be solved in further negotiations especially regarding their participation in emissions trading or other flexibility provisions of the Protocol. In this context further investigation is needed to assess the influence of estimation and reporting quality in the transformation countries on the elaboration of an international emissions trading scheme.

2 Verification

The expert review teams are the most important institutions for the verification laid down in the Protocol. The teams shall review the information submitted by the Parties and provide a thorough and comprehensive technical assessment of the implementation by the Parties. The consolidated negotiating text put forward by the Chairman[2] not only included the technical assessment but assessment of *"all aspects of a Party's implementation of this Protocol, including the likelihood that a Party will achieve its commitments under Article 3"*. Further clarification is needed on the detailed tasks as well as the authority of the expert review teams as their work affects sensitive issues of national sovereignty.

In further steps of the verification procedure the Convention Secretariat lists questions of implementation indicated in the reports of the expert review teams for further consideration of the meeting of the Parties to the Protocol. The meeting of the Parties considers the reports of the expert review teams as well as the questions of implementation listed by the Secretariat and questions raised by Parties. In this process environmental NGOs will not be directly involved. Considering the numerous problems with the first and second national communications under the FCCC and the problems in comparing national estimation systems of greenhouse gas emissions, environmental NGOs should gain further importance and a well defined role in the verification process.

3 Non-Compliance

Non-compliance in international environmental law regimes is generally regarded as the failure of a party

[1] This article summarises an exploration of the key elements that need to be considered in the elaboration and implementation of the verification regime of the Kyoto Protocol. The study was commissioned by the UBA (German Environmental Protection Agency).

[2] FCCC/AGBM/1997/7, Article 8.

to meet its obligations under a treaty due to administrative, economic or technical reasons and not as an intentional disregard of obligations. Therefore, the investigation of non-compliance does not primarily focus on identifying a Party's illegal behaviour in the sense of a breach of a treaty which leads to sanctions. Instead it reveals implementation deficits of a Party with regard to its obligations as a precondition to apply co-operative strategies aiming to achieve full compliance of a Party. Sanctions are only considered to be adequate and possible as *ultima ratio*.

The verification procedure functions as the routine review mechanism of all aspects of the implementation by a Party of the Protocol. A non-compliance procedure is different. It has a supplemental function, that is to investigate and elucidate in detail the facts of a case if there is an indication of non-compliance by a Party. Such a procedure is crucial for ensuring proper implementation control and thus for the effectiveness of an international environmental agreement.

The Parties to the FCCC did not elaborate details of a non-compliance regime during the Kyoto Conference. According to Article 19 of the Kyoto Protocol it is left to the first meeting of the Parties to create such a system. The wording of Article 19 implies parallels to the non-compliance provision in the Montreal Protocol (Article 8). This is no surprise, as the non-compliance regime of the Montreal Protocol is regarded as both successful and a perfect example for the creation of other multilateral environmental agreements. It has widely ensured a proper monitoring of the implementation of the Protocol requirements and avoided disputes among Parties on a state's observance of obligations.

Experience with the non-compliance system of the Montreal Protocol shows that the procedure worked well when there was a chance to achieve compliance by the use of co-operative, supporting measures. In particular, the Implementation Committee under the Montreal Protocol has operated effectively with regard to the achievement of compliance.

The Committee mainly has preventive functions to avoid cases of non-compliance and resulting disputes between Parties in an early stage. During the first years of its work the Committee pointed out deficiencies of the Parties' national communications and thus led to a substantial qualitative and quantitative improvement of submitted data.

The first function of a non-compliance procedure is the factual evaluation of a situation that is claimed to be not in full compliance with the requirements. The procedure establishes those rights for information access and information assessment that are deemed necessary for a comprehensive investigation of the facts of a case. Access to additional information sources is of high relevance if inconsistencies of information remain. Supplemental rules on the burden of proof may help to get Parties informed in advance whether they have to provide additional information or otherwise risk being called non-compliant. The expert review teams under the Kyoto Protocol should be involved in such a fact finding since they will have the technical expertise needed for the analysis of data.

External Parties, e.g. NGOs, should be authorised to initiate a non-compliance procedure. Such an initiative right helps to avoid situations in which a non-compliance procedure is not initiated when Parties to an agreement fear to be exposed publicly as non-compliant and therefore refuse to start the procedure.

The second important function is the finding of a legal judgement on the facts of the case. A quasi judicial statement is necessary for the eventual determination of how to react adequately and effectively to a specific case of non-compliance. It is useful to assign this evaluation to a political institution of an environmental regime because, in fact, it is a political determination how to judge a case of non-compliance with legal requirements. An Implementation Committee could be the suitable institution for such an assessment which should form the basis for final decisions most likely to be made by the meeting of the Parties to the Protocol.

It is crucial to exactly define non-compliance with regard to the multitude of obligations of state Parties established by the Protocol to find out if a specific fact of non-compliance shall lead to supporting measures or requires measures with sanction character. The meeting of the Parties should attempt to create a most distinct and precise link between certain cases of non-compliance and the consequences entailed, whether they are preventive or reactive, co-operative or authoritative.

Normative lack of clarity of commitments is a major reason causing non-compliance situations because Parties do not know whether their behaviour fulfils an obligation or not. Therefore, it very important to limit the room for interpretation of ambiguous legal provisions by negatively determining what is to be viewed as non-compliance.

With regard to the provisions of the Kyoto Protocol the following actions could be defined as being a case of non-compliance:

- No full or overdue compliance with emission reduction obligations
- Violation of obligations to establish inventories of anthropogenic greenhouse gas emissions
- Violation of information obligations

- No full compliance with verification requirements
- No full compliance with emissions trading rules
- No full compliance with joint implementation and clean development provisions
- Unsatisfactory (or lacking) co-operation
- Non-observance of financial obligations
- Non-observance of technology transfer obligations
- Non-observance of decisions of the Conference of the Parties to the FCCC and the Meeting of the Parties to the Kyoto Protocol

Co-operative measures might prove to be too "soft" to enforce the observance of environmental obligations if a non-compliant state is not willing to abide by its obligations. Therefore, it is necessary to provide a mixture of "carrots and sticks" that can be used in instances of non-compliance. However, the integration into multilateral agreements of authoritative mechanisms that aim at an enforcement of a Parties' obligation by means of compulsory measures always means an intrusion upon states' sovereignty rights. Because of that the integration will be politically difficult and at best achievable in lengthy negotiation processes.

Issuing cautions should be a reasonable option because a state can be warned by this comparably moderate means about sanctions that will be imposed if the state does not immediately eliminate or solve the causes of its performance deficits.

Other means with sanction character that should be considered are:

- international disapproval,
- tightening of reduction obligations for subsequent reduction periods,
- withdrawal of emissions trading options (loss of the right to sell emissions reductions),
- withdrawal of rights to take part in projects granting certified emissions reductions within the framework of the clean development mechanism or according to Article 6,
- trade sanctions,
- financial penalties.

All procedures and mechanisms on non-compliance entailing binding consequences shall be adopted by means of an amendment to the Protocol (Article 17). Since the adoption of an amendment to the Protocol usually requires the states' signature and ratification to enter into force, this is a lengthy process.

4 Key Challenges for Monitoring and Verification under the Kyoto Protocol

The multitude of greenhouse gases and sources causes specific problems for monitoring and verification. Especially the flexibility provisions (e.g. emissions trading or the newly established clean development mechanism) require a transparent and reliable monitoring and verification scheme to ensure environmental effectiveness of the Protocol. Detailed analysis is needed because of the novelty of the flexible instruments in international law.

4.1 Types of gases and sources

The requirements of a monitoring scheme depend on the accountability and the possibilities to measure and record the verification subject. The accuracy of estimation depends on the type of gas and on the emission source. The reduction commitment refers to aggregate anthropogenic carbon dioxide equivalent emissions of greenhouse gases and includes six greenhouse gases listed in Annex A. The estimation of CH_4 and N_2O is associated with considerable uncertainties of recording. These uncertainties could possibly undermine the goals of the Protocol, if estimates with large uncertainties are corrected and reduced during the commitment period. Such corrections will have to be reported in the national communications. It will have to be apparent whether they are caused by changed emission factors or estimation methods.

A rough estimation of the potential influence of such a "cheating" with greenhouse gases with large uncertainties reveals that it would play a minor role for compliance and the environmental effectiveness of the Protocol as a whole. Only for some Parties with high shares of CH_4 and N_2O in their total emissions (Australia, New Zealand, Ireland) could underestimation of these emissions result in considerable reductions of paper tons that do not reflect real reduction efforts.

4.2 Monitoring and verification of sinks

To meet the commitments under the Protocol, the net changes in greenhouse gas emissions by sources and removals by sinks resulting from land-use change and forestry activities (limited to afforestation, reforestation and deforestation since 1990) shall be used (Article 3.3). Additional human-induced activities related to changes in emissions by sources and removals by sinks in the agricultural soils, land-use change and forestry categories can possibly be included in the reduction commitments after a decision of the meeting of the Parties upon modalities, rules and guidelines as to how and which human-induced activities will be added. Methodologies for measuring and monitoring of carbon flows in ecosystems are highly uncertain.

Especially for Annex B Parties with a high relative importance of sinks in their national inventories, the quantitative deviations caused by inherent uncertainties in estimation of emissions and removals can exceed the reduction commitments of the Parties.

This could be the case for Finland, Latvia, New Zealand, Sweden and the Russian Federation. These Parties should place special emphasis on transparent and accurate measurement, monitoring and reporting of emissions and removals by sinks.

Key problems of the estimation and reporting of sinks are:

1. availability of data on human-induced activities in the land-use change and forestry categories,
2. large uncertainties on sequestration rates for sink categories,
3. comparability of national methodologies and approaches for estimation of sources and sinks in the land-use change and forestry categories (technical issues for calculating removal of greenhouse gases have yet to be resolved by the IPCC – therefore reliable methodologies have not yet been prepared),
4. classification of forests and activities (e.g. fires) into anthropogenic (human-induced) or natural,
5. inconsistent methodologies on classification of long-lived wood products in the national inventories and inconsistent assumptions on decay of wood products.

The Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories do not include satisfactory methods and default information for calculation of emissions and removals in the land-use change and sink categories. Estimates of CO_2 emissions due to land-use change vary considerably because of the inherent heterogeneity of terrestrial ecosystems, because of numerous natural factors influencing carbon storage and carbon flows and because humans interact with the ecosystems in a myriad of ways. These inherent uncertainties of nature cannot be completely resolved with the further development of IPCC methodologies. The use of satellites and remote sensing for monitoring of forests and land-use changes is a technical option to enhance reliability of data but this improvement will be expensive.

The Protocol mentions carbon changes in agricultural soils as activities that shall be added to the commitments of the Parties after further methodological work of the IPCC. The dynamics of the soil carbon fraction are very hard to assess and to monitor. Fundamental and precise scientific knowledge on CO_2 emissions and uptake by soils from land-use change and management is lacking. Therefore carbon changes in agricultural soils should not be included in reduction commitments (Article 3) under the Protocol. The inclusion of agricultural soils risks severely undermining the integrity and reliability of national inventories. Further human-induced activities should be seen together with the need for ensuring compliance with the reduction commitments of the Protocol. Reliable and integral reporting is a key element for the functioning of a flexibility mechanism such as emissions trading. Therefore, to guarantee the functioning of emissions trading, problems with accounting of sinks should be avoided and not enlarged by additional sink categories.

Before further decisions of the meeting of the Parties will be taken, key principles have to be recognised and detailed analysis and methodological work should be prepared on the following issues:

1. The debates in Kyoto limited the inclusion of sink categories to those activities that can be accounted in a more reliable way than other human-induced activities in the land-use category. This procedure could be a model for upcoming negotiations. Therefore all possible additional human-induced activities that emit or remove greenhouse gas emissions should be investigated closely and separately regarding the suitability to be added to the assigned amounts of emissions of the Parties. National and European concepts and ideas need to be developed because existing IPCC methodologies in the land-use change and forestry categories (especially for soils) fit poorly to the German and European standards and methods.
2. Most experts and Parties assume that national methodologies for estimation and reporting of sinks lack comparability. These assumptions are not founded by detailed investigations that analyse the key differences and inconsistencies. Regarding the future work of the expert review teams further investigation is necessary to provide them with basic information. A comprehensive overview of the present standards and problems of estimation of sink categories should be elaborated soon to work out common measures to improve data and methodologies.
3. In the Working Groups of the IPCC that provide further methodological standards and guidelines it should be stressed that differences in land-use and soil classification in the United States and Europe should be considered in the methodologies.
4. The addition of human-induced activities related to changes in greenhouse gas emissions should be closely linked to the elaboration of reliable and credible accounting methodologies. The addition should only be accepted if transparent, reliable and comparable procedures for estimation are provided and if no additional problems for verification are introduced.
5. It would be vital to develop linkages between sink enhancement and international forestry pol-

icy initiatives to ensure that encouragement of forestry activities is consistent with current efforts to develop sustainable forest management and the protection of old growth forests. The integration of climate and forest policies will take time. The history of international negotiations on forestry has not been one of dynamic progress since Rio.

4.3 Monitoring and verification of emissions trading

To provide flexibility to the Parties, the Protocol establishes emissions trading in a general way. The relevant principles, modalities, rules and guidelines have to be defined by the Conference of the Parties in future negotiations. Nevertheless the general provisions of the Protocol imply numerous key principles regarding the framework of emissions trading.

The Protocol establishes an emissions budget system on the international level. The agreement fixes an emissions budget for each Party that imposes a limitation on its cumulative emissions during the commitment period. If a Party's emissions for any commitment period were less than the budgeted amount, savings would be generated that could be traded. Although tradable emissions reductions accrue on the savings that exceed the budget for the Party at the end of the commitment period, trading in an emissions budget system can start long before the end of the commitment period. Trading could start directly after the definition of relevant principles, modalities, rules and guidelines by the Conference of the Parties. At the end of the commitment period the traded and certified emissions reductions would be added or subtracted from the aggregate anthropogenic carbon dioxide equivalent emissions of greenhouse gases reported in the inventories of the Parties and compliance with reduction commitments for the Parties would be assessed.

It is to be expected that key principles and rules as well as institutional responsibilities generally laid down in the Protocol would be transferred to the emissions trading scheme. Such general principles could comprise:

- estimation and reporting of greenhouse gas emissions and removals,
- verification of national emissions inventories,
- functions of the Secretariat and the Subsidiary Bodies,
- the multilateral consultative process and procedures and mechanisms in cases of non-compliance,
- co-operation with international organisations and institutions and co-operation with NGOs.

In Kyoto emissions trading was controversially discussed because of the problem of "hot air". "Hot air" is a result of the large emissions reductions achieved in the Russian Federation and Ukraine by the economic distortions in the former socialist countries. The weak commitment for these Parties in the Protocol only demands stabilisation of greenhouse gas emissions in the commitment period. The actual emissions in Russia and the Ukraine are already 32 % lower than in 1990 and will not rise to this level in the period up to 2008-2012. These reductions in the commitment period compared to the baseline in 1990 (that do not reflect real reduction efforts) could be sold to other Parties to ensure their compliance with the reduction commitments.

Article 17 states that such trading shall be supplemental to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments. From this Article it could be derived that only a certain amount of the reduction commitment can be met through acquisition of emissions reductions on the international markets while the main share of reduction commitment should be met through domestic action. Some Parties and NGOs demand that further negotiations fix a specific share of reduction commitments that can be fufiled through trading. Such a fixed share for domestic action could cause disputes in the further negotiations because other flexibility provisions of the Protocol do not fix specific shares for domestic action. Especially the joint action of Article 4 that allows any Parties to reach an agreement to fulfil their commitments jointly, is not linked to a similar demand for domestic measures. The burden-sharing in the EU bubble, agreed before COP 3, intended real emissions increases for some EU Member States accompanied by larger reductions in other EU Member States. This concept will possibly raise objections against the fixing of shares for trading volumes relative to national commitments. In theory, the best solution to deal with the problem of "hot air" would be the establishment of stricter reduction commitments for Russia and the Ukraine, an option that hardly appears realistic after the Kyoto Conference.

Regarding the participation in emissions trading, numerous proposals ask for participation of any private and legal person and entity. Further clarification regarding participants is needed.

The decision on the relevant principles, modalities, rules and guidelines for emissions trading is the only decision that will not be taken by the meeting of the Parties but by the Conference of the Parties. This provision could be seen as intention to include a broad participation in trading beyond Annex B Parties. Moreover, this responsibility for decision on a trading regime allows the start of trading before ratification of the Protocol.

Emissions trading is especially dependent on reliable monitoring procedures. Compliance with estimation and reporting obligations of the protocol is

an indispensable prerequisite for a trading system. The assessment reports of the in-depth review teams of national communications and greenhouse gas inventories show that the Parties to the Protocol need to achieve considerable progress and improvement to achieve these requirements in the next years. Special attention should be paid to the quality of estimation and reporting of transition economies. The in-depth review as well as scientific investigation of national inventories reveal considerable problems and deficiencies in the reporting of the Russian Federation. Participation in emissions trading should be limited to those Parties that comply in all aspects with the international reporting standards and guidelines. This compliance has to be assessed before the start of a trading scheme.

Beside accurate and reliable monitoring, emissions trading also depends on independent and transparent verification of national monitoring programmes. Independent assessment of national monitoring activities is recommended. The Parties should provide detailed descriptions of their basic statistics on activity data that were used to calculate inventories. Extrapolation of fundamental statistical data in years without surveys also should be set out in national reports. Moreover, deviations of emission factors from default data of IPCC Guidelines and the basic research from which emission factors have been derived should be provided to the expert review teams. Only with this information are the expert review teams able to assess the quality and reliability of national inventories in a efficient way. At the same time these activities affect sensitive aspects of national sovereignty of Parties. Therefore the procedures, requirements and methods of the review teams should be laid down in a detailed form to prevent conflicts and misunderstanding.

Regardless of the precise institutional elements established for verification of emissions trading, the expert review teams should be composed of scientific and technical experts. NGOs that contribute for numerous Parties to the elaboration of national inventories should be included in the verification process.

Some Parties would like to establish national emissions trading regimes (e.g. USA, United Kingdom, New Zealand or Norway). Because of this interest these Parties probably will play a key role in the design of the international trading regime.

In their proposals to AGBM they already outlined that in their view the Protocol need only agree a framework for trading with key permissive building blocks. In their opinion detailed elements of a trading scheme should be worked out subsequently by Parties who wish to trade and need not be the concern of the Conference of the Parties or included into the Protocol. Moreover, they want permission to devolve the organisation of the trading system to domestic firms, individuals or private non-governmental agencies that already have experience with establishing new markets. In this model, verification, too, would be the responsibility of private professional organisations that are registered and certified by national entities (comparable to certification of environmental auditing in Europe).

The United States demand the rapid establishment of an emissions trading regime. Therefore it is necessary that national and European proposals regarding the framework are swiftly developed. All proposals should be carefully assessed regarding their implications for monitoring and verification. A detailed investigation of national projections on greenhouse gas emissions over the commitment period for all Annex B Parties would provide interesting information to estimate possible emissions transfers and the key buyers and sellers in a trading scheme. It should be clarified in further investigation what decisions are required at different levels and these decisions should be clearly delineated. The consequences of different trading models on the national implementation of the Protocol in Germany should be assessed.

4.4 Monitoring and verification of emissions transfers from individual projects (Joint Implementation)

The Protocol provides for the possibility of transferring or acquiring emissions reduction units resulting from projects between Annex I Parties and the transfer of certified emissions reductions accruing from project activities between Annex I Parties and Non-Annex I Parties. During the AIJ pilot phase numerous experiences with Joint Implementation projects have already been collected.

For AIJ-projects the contradiction between accurate estimation of emission reductions and implementation without additional costs is particularly severe. On the one hand pilot projects and simulation projects indicate considerable problems and uncertainties regarding estimation of emissions reductions and project implementation. Therefore a comprehensive and precise monitoring and verification regime should be established for emissions reduction projects. On the other hand the incentives for investment in reduction projects would be reduced if transaction costs for monitoring and verification increase. In summary the following key aspects and procedures should be considered in further elaboration of modalities and procedures for emissions reduction credits or certified emissions reduction of projects:

- The meeting of the Parties should develop criteria and procedures to define additionality of projects. This is especially relevant for no-regret measures related to efficient energy use.

Investors and project developers would benefit from such criteria and principles because their assessment of chances for project approval would be improved.

- The crediting of certified emissions reductions will be possible from the year 2000 onwards. Until 2000 further work and standardisation is needed to simplify calculation of emissions reductions for project developers and to guarantee international comparability of calculations. Without country-specific standards for baseline calculation and calculation of emission reductions, verification institutions can only believe but can not assess project calculations. In the past, different data bases and models have been developed that could be used for baseline calculation. The advantages and disadvantages of the international use of such models should be subject to further investigation and existing tools should continue to be developed.
- The future elaboration of modalities and procedures regarding transfers of certified emissions reductions should take into account specific uncertainties of project risks. Different models have been developed to operationalize uncertainties. The proposals comprise the ideas of discounting (or graduated credits related to the quality of monitoring and verification), of insurances for reduction projects and the pooling of projects by an international organisation. These proposals should be considered and assessed more closely before being laid down as national or international principles.

5 Option for a burden sharing agreement of the European Union

The Parties to the Protocol agreed in Kyoto to allow all Parties included in Annex I to jointly fulfil their emissions reduction commitments under Article 3 by entering into an agreement thereon. States party to such an agreement may decide on a burden sharing that differs from the emissions limitation and reduction commitments established in Annex B to the Protocol. The respective emissions level allocated to a party to the agreement is binding for the party under international law in place of the emissions limitation set out in Annex B.

If EU Member States enter into an agreement according to Article 4.1 they will be liable twice: firstly for observance of the EC commitment under Article 3.1 and, secondly, for fulfilment of their own national emission reduction limit according to the agreed burden sharing. In this respect the Protocol provides for a direct and equal responsibility of the EC and its Member States under international law. The accession of new members to the EU before the end of the first commitment period (2008 - 2012) shall not effect existing commitments of the EC under the Protocol.

Agreements creating binding international obligations, such as the Kyoto Protocol, can only be entered into by the EC and not by the EU. The European Community is a supra-national organisation that must be distinguished from other international organisations because of its unique competence and internal structure. The main differences are that

- the EC has the power to create rules that are binding upon its Member States,
- the EC may legally bind a Member State even against that state's will,
- EC regulations reach through into the internal legal sphere of a Member State.

Moreover, the EC institutions have extensive implementation control and sanction mechanisms by which they can ensure the observance of a joint emissions reduction commitment.

US Environmental Protection Agency's 33/50 Program

By Sanford Lewis, Heather Clish, Karen Kieffer

1 Description of the Agreement

1.1 Political background of the agreement

In the early 1990's, the US Environmental Protection Agency sought to encourage pollution prevention as an industry practice and to explore ways of streamlining government programs to achieve faster, more cost-efficient environmental progress. One of the results of this reassessment was the 33/50 Program. The program occurred in the context of a mandatory toxic release *reporting* law which had been enacted in 1986 as part of the Emergency Planning and Community Right to Know Act.[1] The law was the result of a groundswell of "Right to Know" activism in communities throughout the US. As a result of this statute and the regulations thereunder, the American public had gained access to data on individual facilities' estimated emissions of 316 substances, disaggregated according to discharges to various environmental media (air, water, land, etc.). Beginning with the 1988 reporting year, the data showed 1.4 billion pounds of toxic substances being emitted into the environment. As a result of amendments to the law in the Pollution Prevention Act of 1990[2], industrial dischargers were also required to report off-site transfer of materials (e.g., for incineration or recycling) beginning with the 1991 reporting year, as well as brief descriptions of source reduction activities.

The data generated under the program was published on a readily accessible public computer database, and also in reports published by the EPA and of environmental NGOs. Although the data from the first reporting year, 1988, took two years to assemble into a report, the results had a high impact. When the information was made public in 1990, the New York Times ran a full page story with maps and lists of the largest polluters[3] The public thus became more aware of toxic emissions and of the relative contributions by individual industries.

Most of the reported emissions were legally permissible - emissions of toxic substances that were either largely unregulated, or regulated in grouped "generic" categories such as "volatile organic compounds" rather than individual chemical types.

There was a lack of stringent regulation to prevent the emissions that were being reported, despite the long-standing presence of toxic substance regulatory authority under most of the federal environmental laws. For instance, in the Clean Air Act and Clean Water Act, each have had provisions since the 1970's calling for the USEPA to regulate toxic pollutants.[4] In addition, the US Toxic Substances Control Act, also enacted in the 1970's, provides an overarching (or gap-filling) mechanism to regulate the production and use of toxic substances regardless of media. Despite the authority and mandates presented by these regulatory laws, rulemaking has proceeded slowly, as the mostly lawful emission of the toxic substances identified under the Toxic Release Inventory attested. The process of substance-by-substance and medium-by-medium regulation by the US Environmental Protection Agency had proceeded slowly due to the need to develop complex technical and economic justifications for each new rule.

Judicial interpretations of the Toxic Substances Control Act (TSCA), 15 U.S.C. §2601 et seq., exemplified and amplified the challenges against aggressive regulatory intervention. TSCA authorizes the EPA to engage in a wide range of chemical restrictions under 15 U.S.C. §2605(a). However, in *Corrosion Proof Fittings v. EPA*, 947 F.2d 1201 (5th Cir. 1991) the Fifth Circuit Court of Appeals struck down the EPA's sweeping ban on asbestos products under the law, because of assertions that the agency had neither fully evaluated and rejected less burdensome regulatory measures, nor fully evaluated the relative safety of known alternatives to asbestos.[5] Under the ruling interpreting "less burdensome

1 42 USC 11001 et seq.

2 42 USC 13101 et seq.

3 United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, *DRAFT: 33/50 Beyond the Numbers*, 1996, p.4.

4 See for instance, Clean Air Act, 42 USC 7412 (on hazardous air pollutants) and Federal Water Pollution Control Act, 33 USC 1311, 1317 (toxic water pollutants).

5 The law provides that chemical restrictions are limited as follows:

(A) the effects of such substance or mixture on health and the magnitude of the exposure of human beings to such substance or mixture.

(B) the effects of such substance or mixture on the environment and the magnitude of the exposure of the environment to such substance or mixture.

(C) the benefits of such substance or mixture for various uses and availability of substitutes for such uses, and

(D) the reasonably ascertainable economic consequences of the rule, after consideration of the effect on the national economy, small business, technological innovation, the environment, and public health.

If the Administrator determines that a risk or injury to health or the environment could be eliminated or reduced to a sufficient extent by actions taken under another Federal law (or laws) administered in whole or in part by the Administrator, the Administrator may not promulgate a rule under subsection, (a) of this section to protect against such risk of injury unless the Administrator finds, in the Administrator's discre-

alternatives" the agency could be required to compare, for instance, any health and environmental benefits of a ban with the benefits of requiring increased worker protection equipment and product labeling. Even though it is widely acknowledged that banning a substance may encourage technological innovation toward new materials to be used in substitution, the court held that EPA erred in failing to evaluate hazards suggested by the asbestos industry regarding substitutes to asbestos such as PVC pipe, and the safety of automotive brakes made without asbestos. These two criteria - least burdensome regulatory alternative and analysis of risks of substitutes - may now be utilized by industries in judicial challenges against undesired regulatory action under TSCA.

1.2 Characteristics of the agreement

Given the combination of dramatic publicity of toxicity emissions and statutory authority that yields slow progress in regulating toxic pollutants, the 33/50 Program was an experiment to achieve reductions in toxic emissions while bypassing arduous rulemaking processes. The EPA's Industrial Toxics Program, commonly known as the "33/50 Program", was launched by EPA in 1991. The program sought a 50% reduction in the releases and transfers of seventeen industrial chemicals, with a remarkably low starting budget of $50,000 and five staff members.[6]

The program goals were to reduce the releases and transfers of 17 chemicals on a nationwide basis by 33% by 1992 and 50% by 1995, using the 1988 Toxics Release Inventory (TRI) as a baseline. Although the program was flexible in regard to how such reductions were achieved, another stated goal of the program was that firms use pollution prevention to achieve reductions.

The priority chemicals were chosen based on three criteria:

- They posed broad risks to health and the environment, including carcinogenicity, destruction of the ozone, layer, and developmental effects which threatened environment and health;
- They were used as high-volume industrial chemicals;
- Releases and transfers could be reduced through pollution prevention.[7]

The 17 priority chemicals and compounds were:

Benzene
Cadmium
Carbon tetrachloride
Chloroform
Chromium
Cyanide
Dichloromethane
Lead
Mercury
Methyl ethyl ketone
Methyl isobutyl ketone
Nickel
Tetrachloroethylene
Toluene
1,1,1-Trichloroethane
Trichloroethylene
Xylenes

Firms who wished to participate in the program were asked to file a letter with the EPA stating their participation in the program and setting forth their goals for pollution reduction. It was not necessary to set forth a goal of any particular percentage of reduction in order to participate (e.g. a firm did not have to set a goal of 50% or higher, or target all of the 33/50 substances). The submittal of such a letter qualified the firm to be listed as one of the 1300 participating companies.

2 Environmental Effectiveness

2.1 The ambitiousness of the environmental target

In several regards the Environmental Targets may not have been as ambitious as they could have been.

First, in contrast to the 316 substances listed on the Toxic Release Inventory, the EPA set a relatively narrow group of substances to target. Many other substances on the list were of comparable toxicity. And other toxicity concerns - e.g, persistent toxins - might have been appropriate targets as well.

Second, it appears that companies working on their own, without federal guidance, had often set more ambitious reduction goals. A 1994 survey of 150 33/50 program participant companies conducted by a consumer organization, Citizen's Fund, found that many of the companies had - prior to the program being established in 1991 - set higher reduction goals than the 50% target set by the USEPA. The Citizen's Fund survey found that in 47 instances,

tion, that it is in the public interest to protect against such risk under this chapter. In making such a finding the Administrator shall consider (i) all relevant aspects of the risk, as determined by the Administrator in the Administrator's discretion, (ii) a comparison of the estimated costs of complying with actions taken under this chapter and under such law (or laws), and (iii) the relative efficiency of actions under this chapter and under such law (or laws) to protect against such risk of injury.

[6] United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, DRAFT: 33/50 Beyond the Numbers, 1996.

[7] EnviroSen$e, Companies Participating in EPA's 33/50 Program as of Summer 1994, United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, A Progress Report: Reducing Toxic Risks Through Voluntary Action, July 1991, p.5.

firms had targeted chemicals for 100% reduction. In another 64 instances, firms had set targets of 80 percent or more. However, it should be noted that these goals were not all necessarily consistent with the 33/50 program - in many instances they reflected either single media goals or goals for chemicals not on the 33/50 list.[8]

A third critique of the program goals and ambitions of the 33/50 program is that the program failed to address the *means* of emissions reduction. As such, it left substantial risk factors in place - especially workforce exposures. The goal of 50% reduction over five years had undoubtedly been derived in part from one of the best-known works in this field - a report of the Congressional Office of Technology Assessment which had indicated that a 50% reduction in waste was possible over the course of five years.[9] However, this contrasted with the EPA program because the OTA suggested goal was for achieving *waste reduction* for all forms of waste through source-based (pollution prevention) strategies. In contrast, the EPA 33/50 program allowed the goals to be achieved through any means, including treatment. EPA's objective is to encourage these reductions through prevention, defined to include source reduction and in-process recycling. Companies will be encouraged to participate, however, even if some fraction of reductions are achieved through treatment."[10]

2.2 *The effectiveness of the program at reaching the target goals*

EPA reported that the program's goals were achieved ahead of schedule, achieving reductions of 50.7% by 1994, and ultimately cutting releases and transfers of the 17 substances from 1.494 billion pounds in 1988 to 664 million pounds in 1995,[11] a total reduction of 55.6%, or 831,059,489 pounds. The critical questions, however, are (1) whether the program was responsible for the results, and (2) whether other factors limit the value of the results.

To what extent was the program responsible for the results?

There is a strong argument to be made that only a fraction of the success in reducing the target substances can really be attributed to the 33/50 program. The following are elements of this argument.

Reductions by firms that were not part of the program

Of the total reduction of 831 million pounds in targeted substances, about 500 million pounds (or 60%) was directly attributable to firms participating in the 33/50 program. If the EPA had solely counted participants in the program in determining the level of reduction of the target substances, the agency and its participants would not have achieved the 50% reduction goal. Should the attainment of the goals then be attributed to the program?

While 1,300 companies participated, 6,000 eligible companies were contacted and most did not participate by the baseline requirement of submitting a letter to the EPA noting their participation. Most of the larger companies that emitted any of the target substances did participate. Although the 33/50 Program implemented a targeted outreach campaign, many smaller businesses never signed up. According to David Sarokin, Director of the 33/50 Program, there were three main reasons why companies chose not to participate.[12]

- Many companies were hesitant to set their own reduction goals, even though the commitments were not enforceable.
- For some companies, the transaction costs were still too high. Although the only additional requirement was a letter stating the company s goals and a plan for reducing them, the effort required the time of an Environmental Manager to put the plan together. Particularly for smaller companies, this was a cost they could not absorb.
- Some companies still prefer to stay fairly invisible and not intentionally draw attention to any amount of pollution they contribute to the surrounding environment (for instance, they may not have been sure if the net public relations benefit would be positive or negative, or whether the attention might lead to potential liability).

EPA's position in support of the success of the 33/50 program is that many of the nonparticipants were also influenced by the 33/50 program, and had confided in the agency that they preferred to reduce their emissions more privately. The 33/50 program honored their preferences.

Why did participants in the program achieve more of the reduction than nonparticipants? Several possibly hypotheses may be advanced:

- The existence of the program may have had a spill-over effect, inducing "private" reductions by nonparticipants.

[8] Citizens Fund, op cit.

[9] Hirschorn, J. et al, Serious Reduction of Waste, US Office of Technology Assessment, 1986.

[10] United States Environmental Protection Agency, Questions and Answers on EPA's 33/50 Program, July 1, 1991, p. 2.

[11] USEPA, *Beyond the Numbers,* op cit. p. 7.

[12] Personal Communication of Heather Clish with David Sarokin, Nov. 8, 1996.

- Firms who chose to participate in the program may have been better able to achieve reductions in the targeted substances (e.g. a group for whom there were strong economic incentives for reducing waste volumes so as to recapture lost materials) or may have been self-selecting as those who were already most aggressively conducting pollution reductions generally. (Data showing that these firms also achieved more reduction than nonparticipants of *non-33/50* substances supports this theory. Releases and transfers of NON-33/50 substances reduced 42.6% in participating firms during 1988-1994, versus approx. 28% by firms that did not participate in the program.)[13]
- The 34% reduction by nonparticipants could be taken as a "background" level of reduction which would have been achievable in the absence of the program. By this view, there was nearly a doubled effectiveness in reduction by program participation. See additional discussion below regarding cost-effectiveness for a theory to explain the incentives involved in the increased reductions.

One important study conducted on the 33/50 program is as yet unpublished. The Hampshire Research Institute received a grant from the USEPA to study the 33/50 and TRI programs. HRI contacted a diverse group of 55 facilities who together accounted for 53% of the volume of reduction of 33/50 chemicals. (The fact that such a small group actually accounted for such a large percentage reduction in volume raises several issues in itself, among them the pragmatic reality that this group may in many ways not be representative of industry beyond this high-reducing group, presumably of larger or more waste conscious firms).[14] The HRI analysis shows that of the 127 million pounds of decrease in the 33/50 program pollutants that they studied, 83% of that reduction was from 33/50 program participants and 17% was from nonparticipants.

Selection of substances helps to determine outcome

Because the 33/50 substances were selected based on their potential for pollution prevention, the success in reducing those substances more than other substances on the TRI list may have been predictable from the outset. In contrast to the 55.6% reduction of 33/50 substances, the TRI's overall 43.8% decrease might be explicable as the background level of economically achievable reduction for the group of substances rather than as a result of 33/50's targeted approach.

Some of the 17 substances were subjected to legal mandates

Two of the targeted substances, 1,1,1 trichloroethane and carbon tetrachloride were subjected to mandatory phase-outs in their manufacture as a result of the Montreal Protocol and implementing amendments through the Clean Air Act and EPA regulations.[15] One might presume that the anticipation of this ban may have prompted source reductions that wouldn't t have occurred otherwise. Does it make a difference in the success of the 33/50 Program? If the two chemicals are removed from the calculations, there has still been a 50% overall reduction of the releases and transfers of the remaining fifteen- -from 1,288 million pounds in 1988 to 650 million pounds in 1995.

Other of the substances under the program were also subject to regulatory pressures outside of the voluntary 33/50 context. For instance, benzene is one of the few chemicals regulated by USEPA as a hazardous air pollutant. In an explanation of its large reductions in benzene between 1988 and 1991, Aristech Chemical of Clairton, PA, noted that reductions were needed to comply with Clean Air Act regulations.[16] Similarly a Whirlpool Facility in Marion Ohio noted that strict Clean Water Act requirements for nickel led to their nickel discharge requirements.[17]

Source reduction versus pollution control and off-site recycling and incineration

Data for 1991-1994 - the years of data available to us for this study - show that when one takes account of recycling and energy recovery - i.e. the off-site recycling or incineration of the 33/50 substances, the percentage reduction of releases and transfers from 1991 to 1994 for 33/50 substances is a mere 3.2%. (There was no reporting of off-site recycling and energy recovery prior to the 1991 reporting year).

In other words, a very substantial portion of the "success" claimed by the program appears to be due to the decision to ignore and discount the portion of these waste streams which were recycled or burned. This decision to ignore these processes was made based on a controversial idea - that recycling and energy recovery should be treated as a beneficial reuse process, despite the transportation and workplace hazards associated with these methods of disposition of the materials.

Looking at some of the individual substances in the program it is apparent that a portion of the success claimed in reduction was indeed a result of increased

[13] 1988-1994 data provided by Katherine Miller of Hampshire Research Institute.

[14] All references to the HRI study are based on personal communication by Sanford Lewis with Tom Natan, July 7, 1997.

[15] 42 USC 7671c.

[16] Citizens' Fund, op cit., p. 26.

[17] Ibid.

incineration or off-site recycling. For instance, in the period 1993-1996 releases of trichloroethylene declined by about 5 million pounds, but an increase in off-site recycling accounted for 1 million pounds of that release reduction.

It is only once off-site recycling and energy recovery are eliminated from the review that the 33/50 program asserts success in attaining its goals. The EPA and HRI study look at 33/50 reductions in releases and transfers without considering those two modes of disposition. For instance, HRI, uses the 33/50 definition of reductions in releases and transfers - i.e. excluding energy recovery and off-site recycling - to finds that the amount in their study that was source reduced constituted 74 million pounds of the 127 million pounds in reduction in releases and transfers studied. Of this 91% of the source reduction came from 33/50 program participants. From this and other similar data, the HRI research is concluding that 33/50 program participants were more likely than other firms to engage in source reduction or in process recovery.

Further, although some amount of pollution prevention was carried out by 33/50 companies, some of the companies achieved reductions only through pollution control actions, indicating that the program was not successful in promoting pollution prevention as the primary method of meeting the reduction goals.

The Program may not be responsible for achievement of prior commitments and companies' broader programs

Many of the reductions credited to the program were based on company commitments, programs and goals made prior to the 33/50 program being put in place. Nearly one third of the 754 parent companies who made a numerical reduction pledge early in the program had already achieved the amount of their pledge before the 33/50 program began.[18]

Goal setting was a matter for individual firms to decide

To participate in the 33/50 program, individual firms had to file a statement of their commitment to goals and to the program; however, it was up to the individual firm to decide exactly what goals to set. As noted earlier, there was no requirement, for instance, to target all of the 17 substances or to achieve 33% or 50% goals at the firm level. In the July 1991 report on early commitments, ninety two of the 140 numerical commitments were for 50% reduction, some were for less than 50% and some were as high as 100%.[19]

Lack of tracking of chemical substitution

The USEPA did not specifically track or quantify important potential counter-indicators of program success. One of the most important issues not tracked was the potential for firms to achieve the program goals by substitutions of one toxic substance for another. While overall the firms participating in the program reduced their emissions of toxic substances more than nonparticipating firms, at least a few of the firms substituted the usage of toxic substances that were not on the list of 17 target substances (either on the broader list of TRI substances, or other unlisted toxic substances.) For example, Aladdin Industries substituted 1,1,1-trichloroethane for methyl isobutyl ketone and Printed Circuit Corp. eliminated its use of 1,1,1-trichloroethane by using dichloromethane instead.[20] Westvaco Corp., attempting to reduce chloroform emissions, added chlorine dioxide to a process to substitute for hypochlorite and chlorine, while White Consolidated Industries replaced methyl ethyl ketone with isopropyl alcohol (a TRI chemical) and ethyl acetate (non-TRI).[21] However, based on 1994 data (the last year available to us broken down according to 33/50 program participants) reductions in emissions of non-33/50 TRI substances were also achieved more successfully by 33/50 participant companies than by nonparticipants.

See attached tables for compilations of the data comparing program and nonprogram companies, and for profiles of individual company participants.

"Paper" reductions

Early in the program the majority of reported "reductions" were actually due to paper changes by the individual firms participating in the program. In the early 1990's numerous firms reported reduced emission levels compared with prior years, but the reduced levels were attributable to changes in categorization of emissions or in refined methods of estimating emissions. Firms changed their estimates or recategorized waste streams based on an evolving understanding of the Toxic Release Inventory's categories. For instance, waste streams were often recategorized from off-site recycling to in-house recycling. Since in-house recycling is not counted in TRI totals, the amount of emissions would decline. Such firms did not always then also turn around and change prior years' estimates - creating a false impression of reductions. In addition to some serious reporting errors, several striking examples of such

18 INFORM, Toxics Watch 1995, Hampshire Research Institute and INFORM, Inc., NY, p. 504.

19 United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, „A Progress Report: Reducing Toxic Risks Through Voluntary Action," July 1991.

20 United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, 33/50 Program Company Profiles: Reduction Highlights. EPA 745-K-94-017. October, 1994, p. 2-8.

21 United States Environmental Protection Agency, Office of Pollution Prevention and Toxics, EPA's 33/50 Program Company Profile: Reduction Highlights, Volume III, EPA 745-K-96-010, September, 1996, p. 3-8.

paper changes were found by INFORM and published in the 1995 *Toxics Watch*. "Overall, *Toxics Watch* research found that two of the top five waste decreases and four of the top five waste increases were 'not as they appeared.' These represented reporting errors and three changes in waste-calculation methods. Depending on the type of analysis sought, this makes verification of data with reporting facilities most important."[22] However, this 1995 report was based on the 1992 Toxic Release Inventory; later research by HRI found that subsequent efforts resulted in a much greater portion of "real" rather than "paper" reductions. HRI's Tom Natan indicates that he believes only five percent of the 33/50 program's release reductions from 1991 to 1994 were due to paper changes, errors, or other inexplicable factors.[23]

Failure to reach reduction goals for some of the target substances

The program showed mixed results with nonmetals showing greater reductions than metals. Every nonmetal decreased by at least 44%, while metals decreased an average of about 20%. Cadmium and cadmium compounds increased emissions by 15%, due to the increase in off-site transfer of this substance (i.e. treatment or disposal off site or other off-site means of disposition).

Emission increases of nontargeted substances

The substances experiencing the largest increases in the US economy increased by a total of 44 million pounds from 1988 to 1995.

2.3 Comparison with Early Reduction Program

Another voluntary program, established under the Clean Air Act, however, demonstrated that a substantially *more stringent* goal and program appears to have deterred participants. Under the Clean Air Act's "Early Reduction Program" firms were encouraged to voluntarily reduce their toxic air emissions voluntarily establish a 90-95% reduction of hazardous pollutants (90% for most hazardous pollutants, 95% for hazardous particulate pollutants.) The firms were required to commit to these goals prior to the date that the USEPA proposed Maximum Achievable Control Technology standards (MACT) for their industrial sector pursuant to the 1990 Clean Air Act Amendments.[24] Unlike the 33/50 program, this program provided a specific form a regulatory relief for firms who opted in. Companies who participated would receive a 6-year extension for complying with any new standards if they met the program's targets.

So, in a sense, the incentives provided here were more substantial than under 33/50. Yet as of September, 1994, only 40 companies had applied and 12 were accepted pending demonstration of the actual emission reductions. Though the total number of potentially eligible facilities was unknown, it was on the order of 10,000. Of the 40 applications, 20 were from synthetic organic chemical manufacturers who will have to comply with the Organic Chemical Industry Standards.[25]

Several factors were believed to explain the low participation in the program, according to a study by the US General Accounting Office:

- The program required a participant company to develop additional historical emissions data which required significant time and personnel. (That may be contrasted with a pre-existing TRI reporting mandate under the 33/50 program).
- Companies were uncertain about states possibly requiring stricter controls than the eventual federal MACT and wanted to wait and see.
- Because of delays in the promulgation of standards, industry saw little benefit in getting a 6-year extension. Why reduce now if they have plenty of time before EPA standards would apply?
- Industry cited the costs of pollution control equipment. Given the uncertainty of whether control requirements would be imposed, it did not make sense to invest at a high level.[26]

The low level of response to the Early Reductions program may be taken as a contrast to the 33/50 program. The imposition of a legal framework, with added accounting requirements and legal implications and more advanced goals, appeared to be a deterrent to firms joining the program. However, to some extent this program might also have been a victim of the 33/50 program - a far easier EPA pollution prevention program for companies to enlist in if they were "shopping" for a program to sign up for.

Another alternative program to compare is the Massachusetts Toxics Use Reduction Act, under which industries were required by law to prepare Toxics Use Reduction Plans.[27] In that program waste generation was found to decline by 30% and toxic chemical usage by 20% between 1990 and 1995. These figures, however, were normalized for production increases. Without normalizing the figures, the actual outcome is 19% and 8.2% respectively. These figures are not easily comparable with the 33/50

[22] INFORM, Toxics Watch 1995, Hampshire Research Institute and INFORM, Inc., NY, p. 241.

[23] Personal Communication with Tom Natan.

[24] 42 USC 7412 (i)(4).

[25] US General Accounting Office, Report to the Chairman, Environment, Energy, and Natural Resources Subcommittee, Committee on Government Operations, House of Representatives, „Toxic Substances: Status of EPA's Efforts to Reduce Toxic Releases," GAO/RCED-94-207, September, 1994.

[26] USGAO, op cit.

[27] Massachusetts General Laws Chapter 21F.

program figures however, because this represents a larger universe of materials targeted, and a more stringent definition of reduction which would have ruled out many of the activities which were counted as "reductions" under the 33/50 program. Beliefs regarding toxics use reduction among Massachusetts industries were surveyed.[28] These beliefs are likely to be shared by 33/50 companies and reflect some of the reasons why all of the companies did not put more of an emphasis on pollution prevention (P2). For example, 71% believe that P2 "jeopardizes product quality" and 52% state that P2 is "too expensive." Even though 67% believe that P2 "generates cost savings," 66% believe that P2 "improved worker health and safety" and 27% believe that P2 "increased marketing advantages," the negative beliefs seem to constitute an obstacle for industry to take increased action in pollution prevention.

2.4 Conclusions

The program was environmentally effective in that it set industry-wide goals and largely achieved them. It seems probable that a portion of the difference in levels of reduction between 33/50 program substances excluding ozone depleters (50% reduction) and other TRI substances (approximately 40% reduction) was due to the presence of the program. It is difficult to quantify the extent of the impact on this spread, but the targeting and publicity process might reasonably be projected to have been an inducement to a quarter to half of the difference in spread between levels of program and nonprogram substances - e.g. perhaps 10-15% of the total reductions achieved for the 33/50 target substances, or about 100 million pounds of the 800 million pounds of reduction in releases and transfers of the target substances.

[28] R. A. Parlow, ed., „State Finds TURA Is Cost-Effective, Reduces Waste and Use," Massachusetts EnviroManagement Report, May 1997, p. 2.

However, examination of the program at the micro-level also revealed:

- a likelihood that higher goals may have been possible and for more substances, and that a greater focus on source reduction could have yielded more beneficial action;
- a lack of accountability of individual firms to achieve their stated goals may have both induced participation and limited the outcomes for some firms;
- the reduction goals were not achieved for all of the individual substances, some of which actually increased in releases or transfers.

Pollution prevention proponent, Joel Hirschhorn, cites the following actions, among others, that end up "disarming and misdirecting" pollution prevention (P2):[29]

- replacing regulated toxic chemicals with unregulated and taking credit for P2;
- removing water from wastes and taking credit for huge waste reductions;
- using TRI data to demonstrate P2, even though much of the data reflect pollution control actions;
- concealing changes in production volumes that accounted for waste reductions;
- taking P2 credits for outsourcing or subcontracting their most waste-intensive operations.

These criticisms are apt, at varying degrees, for the 33/50 program. Without a uniform method for quantifying the results of source reduction or pollution prevention efforts, any program will be subject to similar criticisms of ineffectiveness.

[29] R. A. Parlow, ed. „To Jumpstart P2, Hirschorn Declares It's 'Failed'," Massachusetts EnviroManagement Report, May 1997, p. 2-3.

Public Participation in the Legislation of the Russian Federation

By Stephen Stec

1 The Context of Public Participation in the Russian Federation

In the past six years, there has been a marked improvement in official recognition of the public's right to be heard in the formulation of environmental policy and decisions in the Russian Federation.

In a rather chaotic political context, it is interesting to note that the development of environmental protection law and practice has proceeded almost linearly. This article gives an overview of the recent legal development with regard to public participation in Russia. A framework Environmental Law (No. 2060-1) was passed in 1991 and a Law on Ecological Expertise (No. 4556) in 1995. These laws, taken together, provide the basis for public participation in the Russian Federation, although a number of other laws provide supplementary opportunities for public participation. These latter laws involve primarily mechanisms for access to information, and include the Law on Sanitary-Epidemiological Well-Being of the Population[1], the Law on Information, and applicable governmental decrees. Meanwhile substantive environmental laws have been promulgated, which feature infrequent references to public participation.

2 Legal Structure and Legislative Process

2.1 Constitution

The Constitution of the Russian Federation was ratified on 12 December 1993. There have been no major revisions to date.

2.1.1 Basic Rights and Obligations

Right to Healthy Environment. Article 42 of the Constitution of the Russian Federation provides:

> *Each individual has the right to a liveable environment, reliable information on its condition and the right to compensation for damages caused to his health or property by offenses against environmental law.*

The right to a healthy environment is also set forth in the Law on Environmental Protection of 19 December 1991 as follows:

> *Every citizen has a right to the protection of his or her health from adverse environmental effects caused by commercial or other activities, accidents and manmade or natural disasters (Article 11).*

Further provisions describe the means for safeguarding of the right, including environmental protection measures, insurance, "granting of real opportunities" to live in a healthy environment, compensation for damages through judicial or administrative decisions, and state monitoring.

Right of Expression. The Constitution guarantees freedom of thought and speech (Article 29(1)). The use of violence to intimidate investigative journalists and anti-corruption crusaders has had a chilling effect on the exercise of this right in practice.

Right to Information. Citizens have the right to receive, transmit, produce and disseminate information (Constitution, Article 29(4)). Furthermore, citizens are guaranteed the right to seek and receive reliable information about the condition of the environment under Article 42. The right to obtain information concerning one's basic rights and freedoms is found in Articles 24 and 29 of the Constitution. Relevant non-constitutional legal provisions on right to information are discussed in a subsequent section of this country report.

Right of Free Assembly. This right is guaranteed in Article 31 of the Constitution. Under a Soviet-era law that is still in force, groups wishing to demonstrate must apply for a permit at least ten days in advance. This provision was previously interpreted as an application for permission, but is now regarded as a notice provision. Besides the ten-day notice requirement, the rules also specify that at least three persons over the age of eighteen years who assume responsibility for "organizing" the demonstration must register their full vita with the authorities.

Right of Association. The right of association and the freedom of activity of public associations is guaranteed in Article 30 of the Constitution. A 1995 decree requiring public organizations to reregister created a bureaucratic nightmare for many non-governmental organizations, but reports of incidents of abuse by authorities were rare.

Right of Petition. Article 33 of the Constitution provides that citizens of the Russian Federation have the right to petition personally and to send individual and collective requests to state organs and organs of local self-government.

Government's Relationship to the Citizens. The Constitution specifies that the "repository of

[1] *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, No. 20/641 (19 April 1991).

sovereignty and the sole source of power" is the multinational citizenry of the Russian Federation (Article 3). "Recognition, observance, and protection of human and civil rights and freedoms is the obligation of the state" (Article 2).

2.1.2 Right to Petition Constitutional Court for Review

Article 125 of the Constitution governs the Constitutional Court of the Russian Federation. The Law on the Constitutional Court[2], adopted on 12 July 1991, was superseded by the Law on the Constitutional Court of 24 June 1994.

Review of a law or rule. The Constitutional Court of the Russian Federation hears individual complaints regarding violations of rights arising out of the application of laws (Constitution, Article 125(4); see also 1991 Law on the Constitutional Court, Article 59). In the Russian Federation, the term "law" means any enactment adopted by the legislature, a definition which excludes other pronouncements, such as executive decrees, orders, and regulations. The Constitution provides for Constitutional Court review of matters which do not arise strictly under "law", but, in such cases, the action must be initiated by an organ of state power. It is currently disputed whether such pronouncements may also be challenged on the basis of procedural irregularities in their promulgation. Once a law is declared unconstitutional, further cases arising under the law can be decided through normal administrative channels, per the 1994 Law on the Constitutional Court.

In a case of major significance, the plenum of the Supreme Court of the Russian Federation (the highest ordinary court of appeal) issued a declaratory ruling explaining that constitutional norms regarding human rights are *direct* and must be applied by the courts.[3] This decision opens the door for individuals to take complaints about breaches of basic rights to the ordinary courts.

Review of the action of an official. The Constitution does not contain a specific provision for review of rights violations by state actors, but Article 125(4) should apply to most instances of unconstitutionality of actions of state officials, so long as they can be characterized as applications of laws. Cases may be brought before the regular courts based on Article 46 of the Constitution and the Law on Complaints Against Actions/Inactions and Decisions Violating the Rights and Liberties of Citizens (27 April 1993) ("Law on Complaints"). Under the Law on Complaints, such matters may be brought before administrative bodies as well.

2.1.3 Other Remedies

Article 45(2) of the Constitution states that an individual "can protect his rights and freedoms by all means not prohibited by law". Article 46 of the Constitution provides that citizens may use the legal system for defending rights and freedoms. Also notable is Article 18 which enunciates the principle that individual rights determine the meaning, content and application of laws and the activity of government, and that they guarantee justice.

At the end of 1996, the Duma passed a bill on "the human rights ombudsman (plenipotentiary)", which establishes a type of federation-wide human rights ombudsman system. The Law was approved by the Federation Council on 12 February 1997 and signed by the President on 26 February. The human rights ombudsmen are not envisaged under the Constitution. But the current Law is not the first law of its kind. The previous occupant of the position of federal human rights commissioner was dismissed by the Duma in March 1995. The new Law further elaborates the powers and duties of the federal human rights ombudsman, and in addition establishes human rights ombudsmen as well. Another extra-constitutional mechanism for defense of citizens' constitutional rights is the General Department for Constitutional Guarantees of Citizens' Rights, established by presidential edict on 7 March 1996 (No. 35/3129).

2.2 Legislation and Rule-Making

2.2.1 Constitutional Provisions

Article 32 of the Constitution: "Citizens of the Russian Federation have the right to participate in managing state affairs both directly and through their representatives." Federal laws, pursuant to the Constitution, are adopted solely by the State Duma, a chamber of the Federal Assembly, in accordance with the provisions regarding legislative initiative mentioned in the next section. The second chamber of the legislature, the Federation Council, examines the proposed legislation and, if it does not approve, it remands the draft to the Duma, where a two-thirds majority on a repeat vote is required for the proposal to become law.

The President and constituent organs of the executive branch (*i.e.* the "Government of the Russian Federation") have the authority to enact rules and directives which regulate a variety of federal issues. The President may issue edicts or directives regarding any aspect of domestic or foreign policy, provided that such enactments do not contravene the Constitution or federal law.

[2] *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR* 1991, No. 19/621.

[3] No. 8, 31 Oct 1995.

While Presidential enactments are solely intended to act interstitially with respect to federal law, legislative inaction and inartful drafting of laws often leave the President's orders as the primary source of law on a given subject.

2.2.2 Right of Referendum

The public's right to participate in petition drives and referenda is guaranteed by both the Constitution and the Law on Environmental Protection. Article 3(3) of the Constitution declares that the referendum is one of the supreme direct expressions of the power of the people. The procedure for referendum is governed by the Russian Federation Law on Referendum in the Russian Federation (No. 3921, 3 October 1995), which provides that a referendum on matters of national significance shall be held on the initiative of no fewer than two million Russian citizens with the right to vote, provided that no more than ten percent come from a single subject of the Russian Federation.

2.2.3 Public Participation Provisions in Laws

The legal procedure for preparing, passing and publishing laws in the Russian Federation is governed by the Law on the Legal Procedure for Publishing and Putting Federal Constitutional Laws, Federal Laws, and Acts of the Federal Assembly into Effect, No. 5 (14 June 1994). The legal procedure for preparing, passing and publishing presidential edicts and other executive pronouncements in the Russian Federation is governed by the Law on the Legal Procedure for Preparing, Passing and Publishing Presidential Edicts, Governmental Regulations and Acts of Other Executive Branch Bodies (10 July 1993, as amended 27 December 1996), and the Edict of the President of the Russian Federation on the Legal Procedure for Publishing and Putting into Effect Acts of the President of the Russian Federation, the Government of the Russian Federation and Normative Acts of Federal Executive Branch Bodies, No. 763 (No. 22/2663, 23 May 1996), as amended on 3 August 1996. Neither of these laws specifies a role for the public in lawmaking.

The Law on the Supreme Soviet[4] states:

> *Draft laws of the Russian Federation, and the most important issues of state life, can be sent out for the public's comments by a ruling of the Supreme Soviet initiated by either the Supreme Soviet itself or one of the members of the Federative Treaty.*

The Law on the Sanitary-Epidemiological Well-Being of the Population[5] provides in Article 5:

> *Citizens personally, through their representatives or through public organizations, have the right to participate in drafting and adopting rulings regarding the insurance of the sanitary-epidemiological well-being of the public.*

It is not clear whether the term "rulings" includes rule-making or is meant to apply only to decision-making.

2.3 Right-to-Know and Freedom of Information

2.3.1 Constitutional Provisions

Citizens have the right to freely seek, receive, transmit, produce and disseminate information *in any legal way* (Constitution, Article 29(4)). The emphasized language might serve to qualify the right through the introduction of legal restrictions on the manner of receiving, transmitting, producing and disseminating information. Additionally, citizens are guaranteed the right to seek and receive reliable information about the condition of the environment under Article 42 of the Constitution. The right to obtain information concerning one's basic rights and freedoms is found in Articles 24 and 29 of the Constitution.

2.3.2 Laws

There are numerous laws, regulations, and decrees which provide broad guarantees of the public's right to information. The Federal Law on Information, Informatization and Information Protection, No. 8/607 (20 February 1995), provides for general access to information. With respect to environmental information it states, in Article 10:

> *It is prohibited to classify information on ... emergency situations, environmental information, meteorological, demographic, sanitary-epidemiological, and other information, necessary to provide for the safe functioning of settlements, industrial objects, general citizens and population safety.*

As regards land use and environmental decision-making, the Law on Environmental Protection enumerates the basic procedural requirements and substantive contexts in which the public can obtain information. Articles 6 through 10 of that Law, for example, place an obligation on central authorities, constituent subjects of the Russian Federation, *oblasti* and local governments to provide "essential" environmental information to the public. Article 7 of the Law, listing the obligations of the Ministry of Environment,[6] does not use the qualifier,

[4] *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, 1990, No. 26/320 (1990, amended 1992).

[5] *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, 1991, No. 20/641 (19 April 1991).

[6] In late 1996, a Government reorganization abolished the Ministry of Environment and established the State Committee on Environment.

implying that this body's obligations to disseminate information are broader.

The substantive right of access to environmental information is found in the Law on Environmental Protection in Articles 12 and 13. Article 12 deals with the rights of citizens and includes the provision that citizens have the right

to demand that the appropriate organs provide without charge prompt, full and reliable information about the state of the environment and measures to protect it...

Although the Law on Environmental Protection does not allow citizens to request information directly from individual polluters, a part of this deficiency is compensated by the right of citizens to demand information directly from individual polluters under the Law on the Sanitary-Epidemiological Well-Being of the Population.

The Law on the Sanitary-Epidemiological Well-Being of the Population states, at Article 5, that citizens have the right to receive *directly from enterprises* complete and timely information on the state of the environment and public health, the "epidemiological status", measures taken for guaranteeing safety, and the quality of goods, including foodstuffs and drinking water. This provision probably cannot be used to get detailed information about industrial processes, but only general information about cumulative impacts of the facility on the environment. The Law also provides a mechanism for public organizations, but not individuals, to get information from the state on epidemiological and other matters, upon payment (Article 8). Laws delineating the powers and responsibilities of local and regional authorities also include provisions relating to environmental information.[7]

The 1995 Law on Ecological Expertise imposes duties upon various state bodies to provide information at various stages of ecological expertise proceedings. Subjects of the Russian Federation, for example, are obliged to inform the public about proposed and current ecological expertise procedures within their territories and the results thereof (Law on Ecological Expertise, Article 6). Yet, there is no provision in the Law that requires public notice of the instigation of a State Ecological Expertise, while the Law does provide that, in the case of a Public Ecological Expertise, the organization conducting the PEE must inform the public of the instigation of the procedure. Observers have noted that, in practice, the failure to specify the manner of notice and place time limits on the posting of notice for proposed and current ecological expertise procedures has caused difficulties for the public. The "special authority for ecological expertise" (either the State Committee of Environmental Protection of the Russian Federation or its regional bodies at the level of the subjects of the Russian Federation) has the duty to disclose to public organizations conducting a public ecological expertise the documentation upon which the ecological expertise is to be based, and is also required to provide to those members of the public who made comments during the course of the ecological expertise a response to their comments and information about the conclusion of the ecological expertise (Articles 7(3), 8(3)).

Furthermore, under Article 19 of the same Law, citizens and public organizations have the right to receive information about the *results* of a state ecological expertise from the special authorities in the field of ecological expertise who organized the procedure. Again, observers have complained that the provisions as to manner and timing are not as clear here as those in other laws, such as the regulations on licensing mineral use discussed in the following paragraph. Public organizations that carry out a public ecological expertise are also obliged to inform the public about its instigation and its results (Article 24).

Specific environmental laws may provide additional information rights. A typical example is the Regulations on Licensing Mineral Use[8], which require the publication in federal and local newspapers of proposals to grant mining licenses during an interval of three to six months prior to the granting of the license. Moreover, Article 11.12 of the Regulations provides:

The Committee on Geology of the Russian Federation and its local bodies must publish the following information: the list of the enterprises that were competing to get the licenses; the list of enterprises that got the licenses; terms of the licenses. This information must be published not later than thirty days after the decisions regarding issuance of the permits are made.

Access to information may be limited by the Law on State Secrets of 21 July 1993, which provides that classifying information as state secrets must be made by authorized persons according to an exhaustive list (Articles 5, 9). Further definition of such potential information was provided by the 1995 Edict of the President of the Russian Federation on

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7 Although it was unavailable at the time of writing, a recent law passed on the basic principles of self-government superseded the law "on the Krai and Oblast' Soviets of People's Deputies, and Krai and Oblast' Administration" of 5 March 1992 and the law "on Local Government in the RSFSR" of 6 July 1991. These laws placed a duty upon executive agencies at the *raion* level to inform the public about environmental conditions. It is unclear whether the new law retained such provisions.

8 *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, 1992, No. 33/1917 (15 July 1992).

Defining the List of Information that Should be Respected as Classified.[9] Those persons who can declare information to be a state secret include ministers and other high officials. Information which is excluded from being designated a state secret includes information on emergency situations, catastrophes threatening to the safety and health of the population, their consequences, and also natural disasters, their official prognosis and consequences, as well as information "on the state of environment, health, sanitary data, demography, education, culture, agriculture..." (Law on State Secrets, Article 7). In general, classification of secrecy terminates after thirty years (Article 13(4)). Determinations of secrecy are subject to appeal under Articles 7 and 15.

Rules on claiming commercial confidentiality also exclude certain important categories from its scope. Information on environmental pollution, worker safety, dangerous products, violations of laws or damages connected with any of the above cannot be declared a commercial secret (see Government Resolution on the List of Information Which Cannot be Deemed Commercial Secrets, Par. 2).

2.3.3 Reporting Requirements

The national system of unified environmental monitoring was established by Decree of the Government of the Russian Federation No. 1229 (24 November 1993). Various governmental bodies are authorized under this decree to require the disclosure of broad categories of information. In addition, the system of environmental permitting in place since 1990, State Standard N 17.0.0.04-90 ("Ecological Passport of the Industrial Enterprise"), requires enterprises to provide full and timely environmental information and evaluation of possible impacts to the relevant licensing agency. Furthermore, the Law on the Sanitary-Epidemiological Well-Being of the Population requires enterprises to report details regarding the impacts of their activities on health and the environment to officials. Some information may be directly accessible to the public through Article 5 of the Law, discussed above. Other, more specific information about a particular facility can be gotten indirectly from authorities through use of the provision that allows public organizations to get information from the state on epidemiological and other matters, upon payment.

2.3.4 Remedies

The primary forms of relief granted in proceedings predicated on the right to information tend to be injunctive or declaratory in nature. For example, the Law on Environmental Protection grants the public the right to seek repeal of any decision improperly reached; the Law on Complaints provides for the nullification of any acts or decisions in breach of an official's duty. Under the latter Law, the citizen bears the burden of proving a right or interest, but the official bears the burden of proving his actions were consistent with applicable law. Generally speaking, the Law on Environmental Protection requires, in order for compensatory damages to be awarded, a direct invasion of a property or health interest arising out of the withholding of information as claimed. However, this standard seems to be relaxed in case of the SEA requirement, where there is no mention of physical injury as a condition precedent to the reporter's liability for an inaccurate assessment.

The Law on the Sanitary-Epidemiological Well-Being of the Population requires enterprises to guarantee public access to information (Article 9). Administrative and judicial appeals are also available for organizations which seek to challenge the failure of state agencies to provide information (Article 10). This Law demonstrates, however, that administrative and other appeals do not always result in a stay of the underlying decision (see Article 10(3)).

Special considerations apply in cases of nuclear energy, environmental emergency, or imminent or substantial threat to health or public safety. The Law on Nuclear Energy (21 November 1995) provides for administrative or criminal liability for officials who refuse to disclose information or give false information concerning nuclear safety (Article 61). The Criminal Code (in force from 1 January 1997) has significantly broadened the scope of such provisions by applying general administrative and criminal liability to failure to disclose information or giving false information in any case resulting in significant harm.

3 Legal Process

3.1 Administrative and Civil Law and Procedure

3.1.1 Standing in Administrative Actions (Legal Interest)

The Russian Federation employs a system of administration of justice that distinguishes between individuals as state subjects and organizations which have access to a special set of procedures and institutions primarily for economic disputes under the Arbitration Procedure Code. Individuals must generally appeal directly to an administrative authority, which maintains a dossier on the case, or to a civil court. Individuals cannot participate in their individual capacity in Arbitration proceedings,

[9] No. 49/4775 (30 November 1995).

and if a case before the Arbitration Court comes to involve an individual as a party, it is generally transmitted to the civil courts. Public organizations may represent the interests of injured persons before the Arbitration Court, however. A recent letter of the Supreme Arbitration Court construing its judicial cognizance under the Law on Environmental Protection provides:

> *... the courts of arbitration shall dispose of disputes on the compensation of the harm inflicted by enterprises, institutions, organizations, and entrepreneurs... in suits by ecological and non-governmental associations for compensation of injury to the health and damage to the property of private citizens...*

By implication, other disputes, such as those involving injunctive relief or declarations of rights, might be subject to committee or ministerial review at the regional or federal level before such matters would be eligible, if at all, for court consideration. Such an obstacle presumably would be overcome by joinder of a compensatory claim to a primarily non-monetary cause of action. The conferral of open standing in Arbitration procedure does not prevent public organizations from pursuing remedies through ordinary administrative proceedings.

Initiating Administrative Actions. The Arbitration Procedure Code (Article 22.2), establishes open standing for public organizations whereby such organizations may initiate proceedings to invalidate acts of authorities which violate citizen rights and are not in compliance with applicable law. Regardless of whether complaints against the actions of officials are brought by individuals or by public organizations as representatives of public rights and interests, complaints which may be the basis of court proceedings under Article 46 of the Constitution may also be brought before administrative authorities.

3.1.2 Challenging Inaction of Officials (Failure of Duty)

Inaction of officials where a duty arises may be covered by provisions allowing for citizen complaints against wrongful actions of officials, such as those contemplated under Article 46 of the Constitution. The tradition of statutory and *de facto* immunity enjoyed by state actors during the Soviet era has clearly eroded, giving way to a wide array of possibilities for liability on the part of officials. The Constitution provides for appeal to the courts regarding the actions, decisions, or inaction of officials. Administrative responsibility is further elaborated in a Code on Administrative Violations. In 1995, the Law on Complaints was amended specifically to include omission or failure of duty among grounds for suit. In practice, however, the lawmakers and the courts still seem to prefer that there be an affirmative act or decision upon which liability may be hung, according to legal experts.

3.1.3 Recourse for Aggrieved Parties

Article 84 of the Law on Environmental Protection makes provision for administrative liability of institutions, enterprises, officials, and individuals who commit one or more of the violations enumerated in that Article. The Article clearly states that the levying of a fine has no preclusive effect on any action for compensatory damages sought from the transgressing party.

Reconsideration. The Law on Environmental Protection makes no express stipulation for reconsideration by an administrative body of its decisions. The Law, in its provisions regarding appeals of administrative adjudication, focuses on the availability of judicial appeal. While no formal procedure for reconsideration is specified, the Law does not purport to curtail a citizen's right to informal request and petition for a rehearing. Given the rather short time frames for administrative and judicial appeals, however, the efficacy of requests for reconsideration must be questioned. This perhaps explains the relative scarcity of such requests in practice.

Administrative Appeal. As a general rule of administrative law, complaints to administrative agencies should be considered within ten days. Complaints which may be the basis of court proceedings under Article 46 of the Constitution may also be brought before higher administrative authorities, at the option of the citizen. The Law on Environmental Protection does not chart a concrete course for administrative appeals, but rather highlights the option of recourse to the courts. The conferral of open standing to public organizations in arbitration procedure also allows them to pursue remedies through administrative proceedings.

According to traditional notions of state administration, parties dissatisfied with the results of an administrative proceeding create a file by writing letters of complaint to higher governmental authorities. In such cases, the usual procedure is for documentation to be collected and for the file to pass from office to office, accumulating opinion letters from various authorities until a final consensus is reached.

Judicial Review of Final Administrative Decisions. Article 46 of the Constitution provides that "[e]ach person is entitled to judicial protection of his rights and freedoms" and further provides that decisions and actions or inactions of bodies of authorities *and public organizations* can be contested in court. Administrative action or inaction, including administrative appeals, can be reviewed in a civil

court, in the case of citizens, or an arbitration court, in the case of public organizations. In addition to final administrative decisions, acts or inactions of officials contravening the law may also be subject to judicial review. Complaints must be filed within three months of the time the person is aware of the agency action, or within one month of the final administrative decision on appeal. The court must examine the complaint within thirty days. Once the complaint is accepted, the complainant has the right to request a stay of the execution of the administrative act that is the subject of the complaint.

Under the Code of Civil Procedure (Article 24), a final court decision may be appealed by an aggrieved citizen within ten days. Courts do not have discretion to refuse an appeal. The Russian Federation has a three-tier court system. The Supreme Court, as described by the Constitution, is intended to serve as the highest instance for all civil, criminal, and administrative cases, except for cases in the system of arbitration courts, where ultimate appeal is to the High Arbitration Court.

3.2 Public Participation in Environmental Protection Laws

The framework environmental law in the Russian Federation is the Law on Environmental Protection of 19 December 1991. This Law includes provisions for the guarantee of the right to a liveable environment. Of equal importance is the Law on Sanitary and Epidemiological Well-Being of the Population, which actually predates the Law on Environmental Protection by eight months and often provides more detail concerning substantive guarantees for the right to a liveable environment.

3.2.1 Principle of Public Participation

The primary enunciation of the principle of public participation in environmental decision-making is found in the Law on Environmental Protection. The Law affords a wide array of opportunities for citizen action by making provision for, among other things, individual and NGO participation in monitoring and enforcement.

In Article 3, the Law states that one of the principles of environmental protection is:

> *openness about [environmental protection] and close ties to public organizations and the general public in regard to environmental protection tasks...*

Articles 12 through 14 address the rights of citizens and public environmental organizations and state guarantees of such rights. Among the rights of citizens are to establish public environmental protection associations, to take part in meetings and demonstrations, petition drives or referenda, to express their opinion, to write letters, complaints and statements, to demand "prompt, full and reliable" information about the environment and measures to protect it, to demand before courts and administrative bodies the rescission of a decision to *suspend or terminate activities*,[10] to appeal to procurators against criminal environmental violations, and to seek compensation for environmental damages (Article 12).

Public environmental organizations, which are environmental associations and other public associations which perform environmental functions, have the right, *inter alia*, to develop public participation programs, to nominate representatives for state ecological expertise procedures. State executive bodies are obliged to render assistance to the public in the exercise of their rights and duties and to take necessary steps to carry out the public's suggestions and demands (Article 14).

3.2.2 Biosphere Reflection

The Law on Environmental Protection requires what is called a State Ecological Expertise ("SEE") "...preceding the making of a commercial decision, whose implementation could have an adverse effect on the environment" (Article 36). While the Law directs that such studies "... *should* involve broad publicity and public input" (Article 35(2)), specific, irrefutable guarantees of the public's right to participate are entirely lacking. The statute envisions primarily two methods of public input into environmental decision-making: 1) through the right of public organizations to nominate representatives for participation in the official state expertise; and 2) through the right to conduct an independent public ecological expertise which may become legally binding following confirmation of its conclusions by the appropriate state organ (Article 39). The Law leaves many questions unresolved, however. First, it contains no provision as to how, if at all, recommendations and studies contributed by the public are to receive comprehensive consideration by the relevant state organs. Nor does the State Ecological Expertise (SEE) requirement found in the Law on Environmental Protection define the extent of access the public should have in the expertise process, or address the level of deference which must be given to citizen comment.

[10] Note that the language is somewhat different from that pertaining to the rights of environmental associations, see following paragraph, which may demand before courts and administrative bodies the rescission of decisions sanctioning environmentally harmful activities and to demand suspension or termination of those activities. There is some debate as to whether this difference was intentional, or due to a drafting error.

The President presented a Law on Ecological Expertise to the legislature in 1995. This law was accepted by the State Duma on 19 July 1995, approved by the Federation Council on 15 November of the same year, and was signed into law by the President on 30 November 1995. It applies retroactively to those projects that were initiated before the law came into force and that received a positive expert conclusion where there have been any deviations from the strict terms of the prior approval (Articles 11, 12).

As *lex specialis*, it prevails over the earlier, more general Law on Environmental Protection with respect to the conducting of the SEE.

Chapter IV of the Law on Ecological Expertise relates to the rights of citizens and public organizations (unions) in the area of ecological expertise and the public ecological expertise. Article 19 sets forth the rights of citizens and public organizations (unions) in the area of ecological expertise as follows:

Citizens and public organizations in the area of EE have the right:

- *to advance proposals about conducting a PEE in accordance with the present Federal Law concerning household and other activity, the realization of which can affect the environmental interests of the population that lives on the respective territory;*
- *to submit in written form to the specially authorized state bodies in the area of EE, argumented proposals by ecological experts on a proposed household or other activity;*
- *to get information about the results of state EE concerning the concrete objects of EE from the specially authorized state bodies in the area of EE which organized the conducting of the expertise;*
- *to perform other actions in the area of EE that do not contradict the legislation of the Russian Federation.*

The public ecological expertise is a full ecological expertise procedure undertaken parallel to the official state ecological expertise and may be carried out for all activities that may be the subject of a state ecological expertise except for those involving state, commercial or other secrets protected by law (Article 21). Expenses for a public ecological expertise are defrayed by the public organization that conducts it, with possible assistance from public ecological funds, voluntary donations, and local government funds (Article 29).

A public organization conducting a public ecological expertise gains the status of a participant through its representatives in the meetings of the expert commission of the state ecological expertise, and gains the right to receive complete documentation on the proposed activity and to examine the order of the authority establishing the terms of reference of the state ecological expertise (Article 22(3)).

In the unlikely event that a public organization musters the resources to conduct a full-scale parallel ecological expertise that is of a quality sufficient to be certified by the special authority for ecological expertise in lieu of its own state ecological expertise, the public ecological expertise has the legal effect of a negative decision on the proposed activity going forward (Article 25). This decision can be appealed by the project proponent (Article 26). Furthermore, those experts and organizers who took part in the public ecological expertise become exposed to civil, criminal or administrative liability as if they were state experts (see Articles 25(3), 30-34; Law on Environmental Protection, Article 39(2)).

Predating the Law on Ecological Expertise were regulations on "environmental impact assessment" (known by its Russian acronym, *OVOS*) issued by the Ministry of Environmental Protection and Natural Resources of the Russian Federation (now the State Committee for Environmental Protection and the Ministry of Natural Resources) on 18 July 1994 (Order No.222). This set of regulations requires public organizations to assist the proponent in conducting public hearings and discussions of proposed activities (Par.5). Through public hearings, the proponent is required to inform the public about the proposal, disclose all probable adverse effects of its implementation, and examine reasonable alternatives for prevention of adverse effects (Par.5.2). The existence of a rule on *OVOS* reflects a persisting contentious theoretical debate on the proper means to achieve biosphere reflection. While the legislators promote ecological expertise, some groups within the Ministry tend to favor *OVOS*. In practice, *OVOS* plays a substantial role in providing opportunities for public participation in Russia, notwithstanding the fact that its statutory basis is skimpier.

3.2.3 Environmental Permitting

Decisions for siting enterprises, installations and other facilities are made based on the findings of a state ecological expertise. However, the Law on Environmental Protection provides in addition that, "*if necessary*, decisions as to the siting of facilities which affect the public's environmental interests will be based on the outcome of a discussion or referendum" (Article 41(2) (emphasis supplied)). Similar provisions apply to the approval of projects during the "technical and economic justification" phase, at which time a public ecological expertise may be required (see Article 42(2)). Yet, no special provisions of this kind apply to permissions for

building, reconstruction, start-up or operation of enterprises, installations and other facilities (see Articles 43-45). Particular activities may also be governed by special laws, such as the Forest Code, Water Code, etc.

The sections of the Law on Environmental Protection concerning the issuance of permits for "comprehensive natural resource utilization" require that relevant licensing agreements specify the use intended, the environmental conditions under which use is permitted, and the consequences (*e.g.*, fines, damages, criminal liability, etc.) of failure to abide by those conditions. Such agreements are concluded between the user and the "duly authorized state organs of the Russian Federation", which set the maximum permissible resource use and pollution standards.

Other environment-related laws have provisions relating to public information during licensing procedures. The Regulations on Licensing Mineral Use[11], for example, require the publication in federal and local newspapers of proposals to grant mining licenses over an interval of three to six months prior to the granting of the license.

3.2.4 Citizen Enforcement, Monitoring and Inspection Rights

Article 12 of the Law on Environmental Protection provides that citizens have the right to appeal to the procuracy against any violation of environmental laws. Article 13 provides that environmental associations may complain against acts or omissions of public officials.

Under Article 72(1) of the Law on Environmental Protection:

> *Public environmental monitoring is performed by Russian Federation trade unions and other public associations, labor collectives and citizens, and has as its goal verification of compliance with the present Law by ministries and agencies, enterprises, institutions and organizations (regardless of their form of ownership or subordination), officials and private citizens.*

The institution of public control is currently being studied by the Ministry, which is considering bringing back this Soviet-era mechanism for use in various enforcement and protection contexts.

3.2.5 Liability

The Law on Ecological Expertise establishes a liability scheme for contraventions of its provisions. Persons may be administratively, civilly or criminally liable. The proponent of a project may be liable, *inter alia*, for "lapses in presenting the necessary materials, information and data to the ... public organizations which organize and conduct a public ecological expertise" (Article 30-I(5)). Authorities and commissioners may be liable, *inter alia*, for failure to adequately take into account public comments and the result of the public ecological expertise (Article 30-II(6)). Experts may be liable if they conceal from the public organization conducting an ecological expertise their conflict of interest with respect to the ecological expertise (Article 30-III(4)). Authorities may also be liable for approving a public ecological expertise applied for by an organization not entitled to do so (Article 30-IV(3)), and for illegally refusing to grant a proper application for a public ecological expertise (Article 30-IV(5)).

Violations normally entail administrative liability, but may entail criminal liability if they result in serious direct or indirect harm to the environment or other interests (Articles 31-32). In addition, persons damaged by the violations charged to authorities and experts can receive compensation under Article 33 and the Civil Code. Moreover, where a person is damaged through the manner of application of the Law on Ecological Expertise by authorities, project proponents or other interested persons, he may receive compensation from the state pursuant to Russian Federation legislation (Article 34).

The Law on Environmental Protection contains similar provisions (See Articles 81-91). Administrative fines, for example, may apply in a case of

> *provision of untimely or distorted information, or refusal to provide timely, full and reliable information regarding the state of the environment and the radiation situation (Article 84(1)).*

Compensation for general environmental damages is required under Article 86, and the following article allows arbitral tribunals to order restoration of the environment in addition to or in lieu of monetary damages, with the consent of the parties. Cases for compensation for damages to individuals shall be determined in a civil court proceeding (Article 89).

3.2.6 Remedies

The remedies available vary according to the source of impairment of the interest protected by federal law or the Constitution. The Constitution (Article 46(2)), provides that decisions and actions or inactions of bodies of authority *and public organizations* can be appealed in court. If the application of a local law violates a federal right, or if a federal law impinges on a constitutional right, the Constitutional Court, upon an individual's complaint, may limit the application of the law under consideration. If an

[11] *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, 1992, No. 33/1917 (15 July 1992).

official, organization, or individual violates an environmental or land-use statute, potential remedies, according to the Law on Environmental Protection, include compensatory and punitive damages, declaratory and injunctive relief, and criminal or administrative sanctions. Moreover, the Law on Complaints is available where the actions or decisions of an official have violated a citizen's rights. This Law provides for monetary damages, injunctive relief, and nullification of the violative decisions or activities.

Article 14 of the Law on Environmental Protection provides in pertinent part:

> *Officials and private citizens who hinder the exercise of the environmental rights and duties stemming from the RSFSR Constitution and the present law by public associations and individual citizens may be prosecuted in accordance with the laws of the Russian Federation and its constituent republics.*

Among the rights of the citizens and public organizations contained in Articles 12 and 13 of the Law on Environmental Protection are the rights to demand that

> *decisions permitting the siting, planning, construction, rebuilding or operation of environmentally harmful facilities be rescinded either by administrative means or by court order, and to demand restriction, suspension or termination of the operations of enterprises and other facilities which have a negative effect on the environment and on human health...*

Citizens pursue such claims through administrative and civil channels. Public organizations have the option of taking a case to the arbitration court system, which is available only to registered organizations. In addition to possibilities for securing compensation for environmental harm, citizens and organizations have a separate cause of action to demand cessation of environmentally harmful activities that are damaging the health and property of citizens, the economy and the environment (Article 91(1)).

Article 10 of the Law on the Sanitary-Epidemiological Well-Being of the Population provides that citizens may complain to higher authorities within one month after an environmental law violation occurs, with possibility for judicial appeal. This may be superseded by a general provision in the new Civil Code allowing for a three-month time period.

The Law on Complaints affords primarily declaratory and injunctive relief from unlawful actions and decisions of officials and government organizations (Article 1). Monetary damages are also potentially available (Article 7). The statute provides that the courts may examine any grievance relating to official actions or decisions, except where "...a different procedure is envisaged by legislation." Neither the Law on Environmental Protection nor other land-use laws place any direct restrictions on access to the courts for purposes of the Law on Complaints. Although there has been an almost 75% plaintiff-success rate in all matters arising under this statute, there is astonishingly little record of the statute's application to environmental matters.

3.3 *Public Participation through Other Laws*

The Land Code[12] provides in Article 28, in pertinent part:

> *Local administrations shall inform the public of the possibility of granting the rights to a certain piece of land to a facility if its activity concerns the public's interests. Local administration shall determine the public's opinion through local referenda, meetings, etc. ...*
>
> *Citizens, public organizations, associations and bodies of public self-government have the right to participate in discussing the issues of granting the rights to the land from the standpoint of the public's interests.*

4 Priorities for Development of Law and Practice

There is no shortage of legislation and rules applicable to public participation in environmental protection in the Russian Federation. The large number of applicable legal rules do occasion confusion and possible inconsistency, however. A major shortcoming of some laws is an overly theoretical tilt, reflected in a lack of depth in terms of specific provisions establishing regimes for implementation and enforcement. A typical example is the failure of the Law on Ecological Expertise to specify the manner and timing to be followed by subjects of the Russian Federation in notifying the public as to proposed and ongoing state ecological expertise proceedings. Some shortcomings of this type may be addressed by rules of a normative character adopted at the level of government, ministry, or below, but insofar as that this is the case the chances for inconsistency and confusion are multiplied.

This article is an edited, abbreviated version of the Russian country report in the forthcoming publication of Review of Central and East European Law, volume 23, no. 5-6. In addition to the complete Russian country report this special issue also contains country reports of Armenia, Belarus, Georgia,

[12] *Vedomosti S"ezda Narodnykh Deputatov RSFSR i Verkhovnogo Soveta RSFSR*, 1991, No. 22/768 (25 April 1995).

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CURRENT AFFAIRS

The "Seveso II" Directive and the Major Accident Hazards Bureau

By Neil Mitchison and Christian Kirchsteiger

Introduction

In December 1996 the Council of the European Union passed a Directive (Directive 96/82/EC[1]) on the control of major accident hazards, known as the "Seveso II" Directive. This represented a fundamental revision of the "Seveso" Directive (82/501/EEC on the major-accident hazards of certain industrial activities)[2] - now known as "Seveso I".

This article looks briefly at the reasons behind both Directives, and describes in more detail the activities of the Major Accident Hazards Bureau of the European Commission, a Bureau set up as part of the Commission's Joint Research Centre to offer the scientific and technical support needed for the formulation and implementation of EU policy for the control of major accident hazards.

Firstly, a note about the scope of the Directives: they deal only with major accident hazards arising from the presence of hazardous substances in fixed plants, and exclude hazards arising from nuclear, military, and mining activities. In other words, the Directives essentially cover chemical and petrochemical plants, along with certain large-scale users and distributors of their products. The activities of the Bureau are correspondingly primarily concentrated in these technical areas.

Why the Seveso Directives?

Seveso I

Major accidents in the chemical industry have occurred world-wide. Increasing industrialisation after the Second World War also led to a significant increase of accidents involving dangerous substances. During the four decades following the Second World War, there were over 100 reported major incidents world-wide, involving toxic clouds which led to the loss of some 360 lives and major physical and environmental damage.

In Europe, in the 1970s two major accidents in particular prompted the adoption of legislation aimed at the prevention and control of such accidents.

The *Flixborough* accident in the United Kingdom in 1974 was a particularly spectacular example. A huge vapour cloud explosion and fire resulted in 28 fatalities, many injuries both on and off-site, and the complete destruction of the industrial site. It also had a domino effect on other industrial activity in the area, causing the loss of coolant at a nearby steel works which could have led to a further serious accident.

The *Seveso accident* happened in 1976 at a chemical plant manufacturing pesticides and herbicides. A dense vapour cloud containing tetrachlorodibenzoparadioxin (TCDD) was released from a reactor used for the production of trichlorophenol. Commonly known as dioxin, this was a poisonous and carcinogenic by-product of an uncontrolled exothermic reaction. Although no immediate fatalities were reported, kilogram quantities of a substance lethal to man even in microgram doses were widely dispersed which resulted in an immediate contamination of some ten square miles of land and vegetation. More than 600 people had to be evacuated from their homes.

The reflection prompted by the Seveso accident led to a proposal for a Directive to ensure that public authorities in all the Member States were notified of operations which involved hazardous substances and which could lead to a major accident. After almost three years of negotiations in the Council and the European Parliament, the "Seveso" Directive (now "Seveso I") was adopted in 1982.

Seveso II

But accidents continued to happen - indeed to date over 300 major accidents have been reported to the EC's MARS database (see below). In the light of the severe accidents at the Union Carbide factory at Bhopal, India (1984) where a leak of methyl isocyanate caused more than 2500 deaths and at the Sandoz warehouse in Basel, Switzerland (1986) where fire-fighting water contaminated with mercury, organophosphate pesticides and other chemicals caused massive pollution of the Rhine and the death of half a million fish, the SEVESO I Directive was amended twice, in 1987 by Directive 87/216/EEC[3] and

in 1988 by Directive 88/610/EEC. Both amendments aimed at broadening the scope of the Directive, in particular to include the storage as well as processing of dangerous substances; the second amendment also ensured that information was supplied automatically to members of the public liable to be affected by an accident.

The original SEVESO I Directive called for a review of its scope by the Commission by 1986. Moreover, both the Member States and the European Parliament had called for a general review of the SEVESO I Directive to include, amongst others, a widening of its scope and better risk and accident management.

A review was therefore carried out and a proposal for a new Directive was presented to the Council and the European Parliament by the Commission in 1994 (COM 4 (94) final). It was this proposal which, after consideration and modification by Parliament and Council, became the Council Directive 96/82/EC.

Principal changes in Seveso II

In many technical areas, the Seveso II Directive takes a different approach from its predecessor. Among these, of particular importance are:

- the scope of the Directive is widened and simplified, with no distinction between production and storage;
- the list of named substances has been substantially shortened, with most substances now treated in terms of their classification;
- a safety management system is now required for the larger sites;
- emergency response plans must be tested;
- major accident hazards must be taken into account in Member States' land-use planning policies;
- there are formal requirements on Member States' inspection systems;
- there is a definition of what is a "major accident" to be reported to the Commission;
- safety reports and other information received under the Directive are available to the public (with certain exceptions for confidential matters).

Major Accident Hazards Bureau (MAHB)

As noted above, the MAHB's remit is to provide the technical and scientific support needed for the formulation and successful implementation of EU policy for the control of major hazards. This support is supplied in the first instance to DG XI of the European Commission (the policy branch responsible for the Seveso Directives), and through and by agreement with DG XI to the national authorities in the Member States.

Specific tasks of the MAHB include:

- managing the Major Accident Reporting System (MARS) database;
- managing the Community Documentation Centre on Industrial Risk (CDCIR);
- providing technical and scientific support for Technical Working Groups studying various aspects of the control of major accident hazards;
- undertaking specific tasks of information dissemination, including organising seminars with the National Authorities on relevant topics in the area of industrial risk.

In addition to books and papers available through the CDCIR, the MAHB has a WWW page - URL: http://mtrls1.jrc.it:80/mahb/ - where a lot of information is available, including copies of the Seveso II Directive for downloading in several languages, and contact points for more detailed information.

Major Accident Reporting System (MARS)

Under both Seveso Directives, Member State national authorities are required to notify major accidents to the Commission. They may also notify other accidents and incidents (whether or not these have occurred on "Seveso" sites) which are of interest and from which lessons can be learnt for the prevention of future accidents. These notifications (which, under the terms of the Seveso I Directive, are confidential to the Commission and the Member State authorities) are entered into the MARS database.

The database is used both to prepare regular summaries of accidents notified for the Committee of "Seveso" Directive Competent Authorities (CCA), and to prepare occasional specific studies of lessons learnt from accidents, both for the CCA and for the general public. These studies and analyses have provided the basis for several initiatives, such as the explicit inclusion of Safety Management Systems and the criteria for accident notification mentioned below in the new Seveso II Directive.

At the end of 1997, the system held information on 310 accidents and incidents. Fig. 1 shows the growth over time of the MARS database. All the accidents reported involve hazardous substances, and although they come from a wide range of industries, four of the 23 categories in the industrial classification used represent 80% of the accidents. These four are (in decreasing order): general chemicals; petrochemicals; pesticides and pharmaceuticals; and storage and distribution (including LPG).

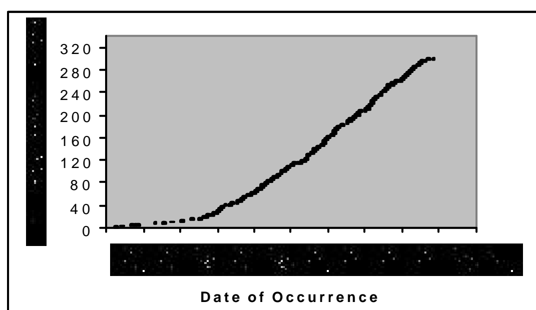

Fig.1: MARS database - number of accidents reported

The MAHB already makes available information drawn from MARS, both in the form of papers and books (the latest book being K. Rasmussen: ***The Experience with the Major Accident Reporting System from 1984 to 1993***, EUR 16341 EN, 1996), and on-line through the WWW (see above). However it is clear that the Seveso II Directive will bring in significant changes to the mode of operation of MARS. On the one hand, the changed attitude to public information will require significantly more information in MARS to be available to the public, and on the other hand the clear definition of what is a major accident can be expected to lead to a significant increase in the number of notifications. For these reasons, it was decided in 1996 to build a new information exchange system, "MARS 3.0".

MARS 3.0 consists of a distributed data logging system running on an MS-Windows platform (CA-specific local databases), supported by a central UNIX-based data management system (MAHB's central database), which reaches the required efficiency with the help of a relational database management system. This concept ensures the management of large and complex data sets, consisting of data of several different object classes. On this basis, complex queries, including hypertext retrieval and cluster analysis, are now possible.

During 1996 and early 1997, the new system was built, delivered and tested. It is now working both at the MAHB and in the Member State Authorities. A sample screen from the local CA version of MARS 3.0 is shown in Fig. 2.

Fig. 2: Sample Screen of the DOS-part of MARS 3.0

Further work is being carried out by developing and using advanced data analysis tools which will enable patterns and trends within MARS data to be identified and analysed. A forthcoming issue of the Journal of Loss Prevention (ed. C. Kirchsteiger) will describe much of this work in detail.

Community Documentation Centre on Industrial Risk (CDCIR)

The Community Documentation Centre on Industrial Risk (CDCIR) offers a bibliographic and scientific environment which facilitates exchange of information between Member State authorities and other interested parties on the control of major hazards.

At the end of 1997, the CDCIR contained over 2600 reviewed documents that were issued by governmental institutions, industry and research institutes. Many of these documents are not easily found elsewhere, because they were not published in the conventional manner, ("grey literature": this can include company reports, accident descriptions, codes of practice, safety reports, methodologies, etc.). The CDCIR's bibliographic data include document-related data fields, e.g. title, original title, year of publication, source, availability, keywords, and abstract.

For several years now, the CDCIR has been publishing Bulletins (no. 12 was published in late 1997) holding the bibliographic data on recent acquisitions. At the end of 1997 a CD-ROM holding a consolidated set of bibliographic data, along with a search engine to facilitate enquiries, was prepared and put on sale. Those interested in receiving the Bulletin (free of charge) or in buying the CD-ROM ($350) should contact Claudio Carnevali (fax: +39.332.789007; postal address: TP 670, CCR, Ispra (Va), 21020 Italy.

Technical Working Groups

Technical Working Groups (TWGs) have been set up by DG XI of the European Commission in consultation with MAHB to provide a forum for discussion and comparison of national approaches to various aspects of the Seveso Directives, in particular topics which have been introduced for the first time in the Seveso II Directive.

In most cases the TWGs include, in addition to representatives from the National Authorities, members from other interested parties, in particular industrial groupings, either those of the chemical or petrochemical industry in general (e.g. CEFIC) or those specifically concerned with safety or environmental issues (e.g. CONCAWE, EPSC).

The Technical Working Groups currently active are:

- TWG2 "Inspection Systems"
- TWG3 "Safety Reports" (guidance document published in 1997)
- TWG4 "Safety Management Systems" (guidance document currently in final draft)
- TWG5 "Major Hazard and Land-Use Planning"
- TWG6 "Harmonized Criteria for the Limitation of Information in the Safety Report"
- TWG7 "Substances Dangerous for the Environment"
- TWG8 "Carcinogens".

The first four TWGs are engaged in preparing guidance or similar documents, while the other three TWGs review the scope, the threshold levels, or other detailed provisions of the Seveso II Directive.

In the former case, the result will be a guidance document, which, if accepted by the National Authorities in the CCA, will be adopted and published as Commission guidance. Such a document does not have the force of law, but does offer explanations and interpretations as to how to implement provisions of the Directive. It is worth noting that these documents are often of interest both within and outside the European Union, since they represent a technical consensus on important topics affecting the control of major hazards.

In the second case, the TWG's job is to prepare a decision, which will subsequently be taken by a formal procedure, either as an European Commission decision (TWG6), or asan amendment to the Directive, which would have to follow the same legislative path as the Directive itself.

Seminars and studies

An important part of the mission of the MAHB is to enable the National Authorities responsible for the implementation of the Seveso Directive in the Member States to come together to share their experience in the development and implementation of national legislation. One important mechanism for this sharing has been a series of seminars organised on a roughly annual basis. Since 1993, these seminars have been organised on a thematic basis, and have covered:

- Safety Management Systems in the Process Industry
- Runaway Reactions
- Accident Scenarios and Emergency Response
- Chemical Hazards in Ports and Marshalling Yards
- Lessons Learnt from Accidents.

In addition to the Seveso Directive National Authorities, participants in these seminars have included representatives of the chemical or petrochemical industry, or of other national or local Authorities as appropriate to the matter under discussion. It is proposed to hold a seminar in 1998 on "Inspection Systems and the Safety Report", discussing conclusions to be drawn either from particular accidents or from collections of accidents, and also considering the structure of accident databases needed to enable such conclusions to be drawn.

Various studies on topics in the area of industrial risk have been carried out by or on behalf of MAHB, and are available through the CDCIR. Recent studies include:

- A review of chemical emergency management in the EU Member States
- Analysis of the safety-related issues of the temporary storage of hazardous materials in transportation-related activities
- Hazards and accidents involving pipelines transporting hazardous substances
- Land use planning in the context of major accident hazards
- Dangerous substances resulting from loss of control of a chemical process
- Soil and groundwater protection: classification system of the substances endangering subsoil and groundwater quality.

Acknowledgements

This article draws on a paper on the Seveso II Directive prepared by our colleagues Jürgen Wettig and Sam Porter of DG XI of the European Commission.

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1 Official Journal of the European Communities, No L 10, 14 January 1997.

2 Official Journal of the European Communities, No L 230, 5 August 1982.

3 Official Journal of the European Communities, No L 85, 28 March 1987.

Trans-national Investments: The Multilateral Agreement on Investment (MAI)

By Matthew Hebard

1 Background

Our world is growing smaller and smaller each day. The terms "Globalisation" and "Global Economy" are no longer clichés, they are a reality. A "'liberal' world 'free' trade order"[1] has arrived, and denying its existence smacks of hubris.

Investing in foreign lands and merging with foreign companies has become commonplace during the 1990's. Recent topics in the news provide plenty of examples: German car manufacturers are merging with the English and American automobile industries; Australian companies are rebuilding Ho Chi Minh City, Vietnam; foreign companies doing business in New Zealand reinvest 90% of their profits; 132 countries belong to the World Trade Organisation (WTO), and 30 more - including Russia and China - would like to join the WTO. The growing popularity of international trade and investment begs the question:

Should there be a set of world-wide rules governing direct foreign investment?

Twenty-nine member countries[2] to the Organisation for Economic Cooperation and Development (OECD) believe a set of rules should exist, and they have been diligently negotiating a Treaty that will govern foreign investments. The Treaty is called the Multilateral Agreement on Investment (MAI).[3]

2 What Is the MAI?[4]

The member countries have been negotiating for three years, but have never concluded a Treaty *per se*. Many sceptics think the member countries will never reach a consensus, and MAI will never be a reality.

Delegates from the countries intended to conclude negotiations on the 27th of April, 1998, and sign the MAI Treaty shortly thereafter. However, as with any negotiation involving 29 contracting parties, a final product that all parties agree upon takes time. On the 27th of April no agreement could be reached. Instead, countries expressed their concerns that more groups, individuals, and sectors of their societies should be consulted prior to signing the Treaty. Member countries claim, however, that their failure to conclude a final MAI Treaty on the 27th of April will not prevent them from reaching a consensus. Member countries are not going to give up MAI negotiations. The next scheduled meeting for the member countries' delegates is in October of 1998.

The tentative MAI Treaty is 145 pages long. However, the length of the tentative MAI is deceiving, the length originates from over 500 footnotes. Each footnote explains why one of the contracting countries believes the text of the agreement should be changed. The footnotes are a stark contrast to the multinational co-operation the MAI hopes to embody.

2.1 The purpose of the MAI

MAI was adopted "to promote greater economic co-operation between [the member states]."[5] The Preamble of the MAI Treaty expresses the member countries' objective:

> *The Contracting Parties to this Agreement ... [w]ish[] to establish a broad multilateral framework for international investment with high standards for the liberalisation of investment regimes and investment regimes and investment protection and with effective dispute settlement procedures.*[6]

Member States do not *intend* MAI to disturb any existing international laws or agreements.[7] Nor is the MAI *intended* to constrain national governments from promulgating their own laws that either directly[8] or indirectly[9] restrict multinational invest-

[1] S. Deimann, "Growth Hormones - Take Two", *elni* Newsletter 1/98, at para. 1.

[2] The countries are Australia, Austria, Belgium, Canada, Czech Republic, Denmark., Finland, Franc, Germany, Greece, Hungry, Iceland, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States. Argentina, Brazil, Chile, Estonia, Hong Kong (China), Latvia, Lithuania, and the Slovak Republic are observing, and are expected to join the negotiations.

[3] The most recent text of the MAI Treaty is available in '.pdf' format at <http://www.oecd.org/daf/cmis/mai/negtext.htm>. English and French translations are available. A German translation is available at <http://www.germanwatch.org/> or <http://userpage.hu-berlin.de/~timor/mai/>.

[4] The MAI Home Page is at http://www.oecd.org/daf/cmis/mai/maindex.htm>.

[5] MAI Negotiating Text at 7.

[6] *Id.*

[7] <http://www.oecd.org/daf/cmis/mai/repor98.htm>.

[8] *Id.; accord,* <http://www.oecd.org/daf/cmis/mai/wwpress.htm>.

[9] MAI Negotiating Text at 23.

ments. Theoretically, any country may become a member to MAI.[10]

Of course, many groups and organisations are sceptical of these good intentions.[11]

3 The Arguments against MAI

There are several arguments critiquing MAI. A synopsis, with counter-arguments, follows:

MAI has been negotiated in secrecy; countries ratifying MAI mock democratic institutions.

Critics argue MAI negotiations have been made under a cloak of "secrecy". Supporters of MAI do not have a good rebuttal to this assertion. Agreeing upon and signing the MAI will have monumental repercussions for the world, yet the open discussion of MAI and its consequences has been minimal. MAI has received very little coverage in the press. Compared with the publicity the 1994 amendment to the General Agreement on Tariffs and Trade (GATT) and North American Free Trade Agreement (NAFTA) received, MAI's publicity is non-existent.

Critics argue that if a government ratifies MAI, the government will be undermining the country's Democracy. Prior to citizens' or inhabitants' appraisal, the government would be signing a treaty which gives foreign investors the same rights and powers previously enjoyed exclusively by the country's citizens or inhabitants. (*See infra* § 3.2).

MAI gives multinational companies too much power and will result in "corporate colonialism"; national governments will be sapped of their power to protect their citizens' interests.

Critics argue that MAI will give multinational companies the legal power to circumvent state law, national law, environmental regulations, and sue national governments. In other words, the legal repercussions of the current MAI will result in the regulation of national governments' powers, not the regulation of trans-national investments.

As an example, critics cite a recent dispute allowed after the ratification of NAFTA. Ethyl Corporation (Ethyl) threatened to sue the Canadian government for $251 million dollars because Canada legislated and passed a new environmental regulation that bans inter-province trading and importing of a gasoline additive[12] Ethyl produces. Prior to NAFTA, no legal basis for this dispute existed.

Presently, the Ethyl/Canadian Government dispute (the Ethyl dispute) is not entered in a docket, and will probably settle out of court. However, Ethyl's legal argument is, presumably, based on NAFTA Articles 1501-02 and 1802 - 1804. These NAFTA Articles are nearly identical to MAI section III: "Treatment of Investors and Investments".[13] Under MAI, disputes similar to the Ethyl dispute could - and certainly will - arise between investing companies and national governments. Furthermore, there is no limitation to the type of new legislation investors can dispute. Any new law or policy that "may effect the operation of the Agreement"[14] is suspect.[15]

MAI Supporters rebut that all governments that ratify MAI are equally vulnerable to lawsuits from foreign companies. Furthermore, disputes similar to the Ethyl dispute will be settled fairly with "effective dispute settlement procedures."[16] Specifically, this means a foreign investor (i.e., a company similar to Ethyl) will be able to bring suit in either (1) a court of law in the government's country (in the Ethyl dispute, Canada would have jurisdiction). The holding from these court would, presumably, be precedent for future disputes. Or (2) an international arbitration tribunal. Disputes between MAI signatories are resolved exclusively in international arbitration tribunals.[17]

These rebuttals may be comforting to national governments, but do not address critic's environmental and labor concerns. (*See infra § 3.3*)

Other policy-based arguments of critics are: (1) national identities will be lost as wealthy foreign companies out-compete local businesses, and (2) MAI does not address trans-national investments in non-MAI countries. Wealthy companies from MAI signatories will invest in developing countries without

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[10] *Id.* at 9.

[11] *See e.g.*, <http://www.citizen.org> and <http://www.germanwatch.org>.

[12] The additive boosts gasoline octane ratings.

[13] *Compare*, NAFTA Article 1102: National Treatment:

1. Each Party shall accord to investors of another Party treatment no less favorable than that it accords, in like circumstances, to its own investors with respect to the establishment, acquisition, expansion, management, conduct, operation and sale or other disposition of investments.

With, current MAI Section III: Treatment of Investors and Investments: National Treatment and Most Favoured Nation Treatment:

Each Contracting Party shall accord to investors of another Contracting Party and to their investments, treatment no less favourable than the treatment it accords [in like circumstances] to its own investors and their investments with respect to the establishment, acquisition, expansion, operation, management, maintenance, use, enjoyment and sale or other disposition of investments. (p. 13).

(NAFTA Articles 1802-04 are also nearly identical to MAI Section III: "Treatment of Investors and Investments: Transparency " and Section IV: "Investment Protection ").

[14] MAI Negotiating Text at 13, "Transparency. " *See also, Id.* at 57, "Investment Protection. "

[15] This is a Non-Government Organization's general interpretation of the MAI Negotiating Text and the MAI Commentary to "Investment Incentives, " "Recognition Arrangements, " and "Authorization Procedures " . *See*, <http://www.citizen.org/pctrade/MAI/ngo.htm>.

[16] MAI Negotiating Text at 23.

[17] MAI "dispute settlement procedures " will likely be similar to the WTO Panel. *See*, S. Deimann, "Growth Hormones - Take Two " for an in depth legal analysis.

the developing countries reaping any benefits. The developing countries will be the abused surrogates for wealthy multinational companies.

Supporters of MAI argue that a common set of rules for international investment will "raise living standards, and combat social, economic, and environmental ills" because "direct foreign investment is critical for developing countries to achieve economic growth."[18] Presently each country has a different law for foreign investors. Therefore, each country is affected by foreign investment in a different way. Some countries are not affected at all, while some countries are greatly affected. MAI's common set of rules will "level the playing field," and make the affects of foreign investment fair and uniform. "A level playing field" will encourage companies to invest in countries where they previously would not have invested.

MAI does not address labour and environmental concerns to the extent needed.

Labour and environmental concerns are mentioned in the current MAI text, but this has been a point of controversy during the negotiations. The controversy over how to mention labour and environmental concerns may prevent MAI from being signed. Some countries prefer mentioning general principles such as "the polluter pays," "sustainable development," and "the precautionary principle." Other countries prefer mentioning the Rio Declaration, Agenda 21, and the Copenhagen Declaration of the World Summit on Social Development.[19]

How legally binding these principles, Conventions, and Declarations should be has also divided negotiations. Negotiators have drafted four Alternatives to address environmental and labor issues.[20] One Alternative reads:

> *[The Parties recognise that it is inappropriate to encourage investment by lowering [domestic] health, safety or environmental [standards] [measures] or relaxing [domestic] [core] labour standards. Accordingly, a Party should not waive or otherwise derogate from, or offer to waive or otherwise derogate form, such [standards] [measures] as an encouragement for the establishment, acquisition, expansion or retention in its territory of an investment of an investor ...]* [21] *(Brackets in original text).*

"[R]ecognize" and "should" are the operative words in this proposed Alternative. Recognize is to "acknowledge the existence of, " "take notice of" or "to acknowledge the acquaintance with. "[22] "Should" is the subjunctive form of "shall." It is used as "an auxiliary to express condition ... or probability, or futurity form a point of view in the past."[23] Grammatically analyzed, there is nothing binding in the above Alternative. Member countries would not be bound to do anything. The other three Alternatives pose a choice between "should" or "shall".

Supporters of the MAI claim the tentative text is not legally incompatible with existing international environmental agreements such as the Montreal Protocol an Substances the Deplete the Ozone Layer, the Convention on International Trade of Endangered Species, or the Kyoto Protocol.[24]

4 The Future of the MAI Treaty: Will It Be Adopted?

As the world economy grows smaller, MAI, or a treaty similar to MAI seems inevitable. Just as the United States has adopted the Uniform Commercial Code (UCC); as the European Countries will soon introduce their own currency (the Euro); as twenty-three countries cut tariffs on each others imports with GATT; and as North America liberalised trading and investing with the NAFTA; the twenty-nine members to the MAI will close the gap between national economies by unifying the rules governing trans-national investments. An agreement on international investments seems to be the next logical progression for the "'liberal' world 'free' trade order "[25].

[18] <http://www.oecd.org/daf/cmis/mai/sgngo.htm>

[19] MAI Negotiating Text at 7-10.

[20] *Id.* at 54-56.

[21] *Id.* at 54.

[22] Websters New Encyclopedic Dictionary (1996).

[23] *Id.*

[24] See, <http://www.oecd.org/daf/cmis/mai/meaenv.htm>. This paper concludes "that there are no prima facie legal incompatibilities between the present MAI text and existing MEAs [Multilateral Environmental Agreements] primarily because no MEA to date has sought to impose investment related sanctions or measures, and the obligations established by MEAs to date do not require or call for implementation which would clearly conflict with MAI obligations."

[25] *See, supra* note 1.

EC Study to Develop and Implement a Strategy for EIA/SEA Research in the European Union

By Gary Haq

A Study to develop and implement an overall strategy for Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) research in the European Union has been undertaken by the EC Joint Research Centre at Ispra for the EC DG XI, Brussels. The study proposes a number of research projects based on identified deficiencies in EIA and SEA. The Study undertook a literature review and questionnaire survey and identified six EIA and four SEA priority research areas. The selected areas are intended to form a "research priority group". At this stage the priority research areas are all considered of equal priority, and are as follows:

- Environmental indicators for EIA
- Prediction of impacts in EIA
- Monitoring in EIA
- Public participation in EIA
- Influence of the quality of the EIS and other components of the EIA process on the decision by the competent authority.
- Integration of EIA and socio-economic appraisal in the overall appraisal of the project
- Methods to predict the impacts of policies, plans and programmes
- Political and procedural problems in SEA
- Integration of SEA and socio-economic appraisal in overall appraisal of policies, plans and programmes
- Link between EIA and SEA.

The study proposes research tasks for each of the priority research areas identified. In total there are seventeen research tasks. These tasks are defined in general terms and relate to deficiencies and research needs common to a number of Member States. They involve different aspects of research-related actions: investigation (e.g. identification and critical evaluation of case studies of good practice), comparative analysis (e.g. comparison of methods and practices) and applied research (e.g. development of new methods).

The Study also includes a number of support measures to implement the research strategy, which relate to the duration and form of the research strategy, funding, research networking, dissemination of the research findings, co-ordination and monitoring of the research strategy and training.

The Study proposes that the research strategy should be implemented in two/three-year phases to enable the strategy to respond to developments in EIA/SEA practice. The first phase of the strategy is intended to focus on the EIA and SEA priority research areas. Subsequent phases of the strategy will address EIA/SEA areas of lower priority and evolving issues in all areas.

There is no particular source of funding available to implement the EIA/SEA research strategy. Funding is therefore expected to come from a variety of sources under different types of research programmes, depending on the extent to which the proposed tasks meet the objectives of a particular research programme. Possible sources of funding include international organisations (World Bank, UNEP, UNECE, OECD, WHO), Directorate-Generals of the European Commission under various EC programmes and organisations in Member States (public authorities, research institutes, private organisations). It is suggested that the EC DG XI finance the co-ordination and monitoring of the research strategy and a few selected EIA/SEA research tasks.

To encourage research networking, the study proposes the development of a database of EIA/SEA research activities. The database should aim to provide a comprehensive coverage of EIA/SEA research being undertaken at all levels (of geographical and institution) in the EU. It is suggested that the national EIA Centres provide a national register of EIA/SEA research. The compilation of the data obtained from the national research registers could then provide the basis of a European-wide database of EIA/SEA research. Research networking would be further encouraged by additional measures such as the undertaking of joint research projects between Member States and the organisation of researchers' meetings.

The creation of a homepage for EIA/SEA on the World Wide Web is also proposed. This would provide greater dissemination of information on a global scale and links with other WWW sites related to EIA/SEA.

The Study proposes better use to be made of existing means to disseminate the results of research, such as national EIA centres, the European Chapter of IAIA, existing journals, international and national meetings in the EIA/SEA field.

To co-ordinate and monitor the implementation of the research strategy, the establishment of a steering group is proposed, consisting of members from national EIA Centre research forums, researchers as well as practitioners. It is proposed that the steering group be responsible not only for the implementation of the first phase of the research strategy, but also for the evolving subsequent phases. Training should be addressed in a separate strategy to ensure it is given the attention which it deserves. However, the two strategies should be co-ordinated as much as possible.

A copy of the study can be obtained by contacting: Mrs S. Massart, European Commission, DG XI.B.2, Brussels, Belgium, Fax: +322 2969561
EC EIA Home Page: http://europa.eu.int/en/comm/dg11/eia/home.htm

EU Commission Proposes Directive on the Limitation of Nitrogen Oxide Emissions from Aircraft

The EU Commission put forward a proposal for a Council Directive to tackle the problem of nitrogen oxide (NOx) emissions from civil subsonic jet aeroplanes into the atmosphere on 3 December 1997[1].

NOx emissions from aeroplanes are known, though not yet in detail, to contribute to global climate change. As civil air transport activity is expected to double by 2010 NOx emissions will also increase significantly, if no action is taken. In December 1995 the Committee on Aviation Environmental Protection (CAEP), a working-group of the International Civil Aviation Organization (ICAO), which is in charge of establishing international emissions standards for civilian aircraft, recommended tightening the existing standards for NOx emissions by about 16%. This CAEP/3 recommendation was supported by EU Member States and others, but opposed by Canada, Poland, Russia, and the United States. Due to intensive lobbying by the US, the ICAO failed to implement its recommendation. Instead, in April 1998 CAEP/4 agreed on a much weaker compromise.

The EU Commission now proposes to transpose the CAEP/3 recommendation at least into Community legislation. It is notable that the Commission intends to address this problem unilaterally at the EU level, despite full knowledge about the effects of aircraft emissions on the atmosphere and the application of the precautionary principle.

In line with the ICAO recommendation, the Commission's proposal differs between a standard for engines with a maximum rated thrust of more than 89.0 kN and a less severe regime for those engines between 26.7 kN and 89.0 kN. Aircraft with a smaller maximum rated thrust than 26.7 kN are not covered by the proposal. Most of today's manufactured aircraft engines can already achieve these NOx emission standards.

However, the scope of the proposed directive is rather limited. This is mainly due to the fact that the proposal only aims to introduce tighter emission standards in the form of a non-addition rule. A non-addition rule in this context means that it applies only to aircraft on the registers of an EU Member State. The directive does not affect aviation operations within and into Community airports of aeroplanes registered in other states.

Besides, the proposal only aims at aeroplanes and engines to be developed in the future. According to the proposed directive (Art. 2) more stringent standards on NOx emissions shall be obligatory for those jet aeroplanes "fitted with engines of a type or model number of which the date of manufacture of the first individual production model was after 31st December 1999 or for which the date of manufacture of the individual engine is after 31st December 2007". The proposed directive does not foresee a clause to get existing aeroplanes modernised in correspondence to the new standards. According to the explanatory memorandum of the Commission it is possible to draw conclusions on both costs and benefits concerning a more stringent NOx emission standard for future planes, but not for the already existing fleet. It seems that this lack of data has caused the Commission to refrain from also setting standards for the existing fleet.

Unfortunately, the environmental effect of the directive will thus be limited. Taking into account the expected expansion in air traffic over the next years the proposed measure will, as the Commission acknowledges, only slow down the rate of increase in NOx emissions from aircraft and encourage manufacturers to exploit and continue the development of less polluting technologies. The draft directive will be discussed at the Council of Transport Ministers on 18 June. Environmental experts do not expect the directive to get passed by the Council because of the results of CAEP/4 in April.

Ralf Jülich

[1] COM 97/629.

Draft for a Protocol on Water and Health

The United Nations Economic Commission for Europe (UN/ECE), the World Health Organisation (WHO), United Nations Environmental Programme (UNEP), the European Union (EU), and a number of single countries are preparing a Protocol on Water and Health to the Convention on the Protection of Transboundary Watercourses and International Lakes of 1992 (hereafter: protocol). The protocol is supposed to be adopted and signed at the Ministerial Conference on Environment and Health in London in 1999.

A first draft was prepared by the drafting group on the basis of the conclusions made during the first meeting in Hungary in February 1998. The objective of the protocol is to contribute to the protection of human health and well-being and to promote sustainable development. This is to be achieved through improving water management and preventing, controlling and reducing water related disease (Art. 1).

The protocol establishes a number of general obligations to achieve these goals. According to Art. 3 of the draft the parties shall, in particular, take appropriate measures to achieve adequate supplies of drinking water, adequate sanitation, good quality of irrigation water and systems for monitoring hazards.

Art. 4 of the draft constitutes the guiding principles for the implementation of the protocol, such as the precautionary principle, the preventative principle, the principle of intergenerational equity, the polluter pays principal, the principle of water conservation, of transparency, the integrative principles, the vulnerability principle, the principal of reciprocal responsibilities and others.

More specific obligations are mentioned in Art. 5 of the draft. The parties have to establish, publish and periodically revise national or local targets.

The targets shall cover, *inter alia*:

- The area of their territory, or the size or proportion of the population, which should be served by collective systems for the supply of drinking water or where the supply of drinking water by other means should be improved;
- The area of their territory, or the size or proportion of the population, which should be served by collective systems of sanitation or where sanitation by other means should be improved;
- The standards of performance to be achieved by such collective systems and by such other means of water supply and sanitation;
- The application of recognised good practice to the management of water supply and sanitation;
- The quality of the drinking water supplied;
- The quality of discharges of waste water to waters within the scope of this protocol from waste-water collection systems and waste-water treatment installations;
- The disposal of solid wastes from collective systems of sanitation or other sanitation installations;
- The quality of waters used for bathing, irrigation, the production of fish by aquaculture and the production or harvesting of shellfish;
- The application of recognised good practice to the management of enclosed waters generally available for swimming;
- The performance of systems for the management and protection of water resources, including the application of recognised good practice to the control of pollution from all sources.

The parties are obliged to design indicators that enable them to monitor the progress towards the achievement of the targets. A progress report has to be published at least every five years (Art. 6).

Further obligations under the protocoll concern reporting mechanisms to identify outbreaks of water-related diseases and the respective risks and to give early notification should an outbreak occur. National plans for responses of outbreaks have to be worked out.

The draft protocol devotes a number of provisions to improving education and training in water resource management and to the support of water research on water related diseases.

The protocol also stresses the obligation for and the importance of transboundary co-operation and international co-operation during the implementation of the protocol.

In particular, co-operation is envisaged for the definition of commonly accepted targets, the preparation of legislation needed to implement the protocol and the preparation of national and local water management plans and schemes for improving water supply and sanitation. A further field of co-operation is the establishment of joint or co-ordinated systems for surveillance and early warning systems, contingency plans and response capacities.

In the meantime, some amendments to the protocol are being prepared. The drafters met in June 1998, and had to take into consideration the comments of 25 countries and about 5 international organisations. One major amendment will be the definition of more specific targets and dates.

Betty Gebers

NEW REGULATIONS

New Legislation on Industrial Safety in Russia[1]

A federal Law on the Industrial Safety of Hazardous Production Facilities was approved by the State Duma on 20.6.1997. The aim of the law is to ensure the safe operation of hazardous production facilities and to prevent accidents. The preventive approach distinguishes this law from its predecessors. Previous laws only intended to minimise the negative consequences of accidents. According to the law hazardous production facilities are defined as enterprises or as enterprise workshops. Enterprise workshops are specified in the Attachment I to the law. The list of hazardous facilities includes facilities where specifically mentioned dangerous substances are produced, utilised, processed, created, stored, transported and/or eliminated. (Examples of dangerous substances are flammable substances, oxidisers, explosive substances, toxic substances, highly toxic substances and substances which are dangerous to the natural environment). The list also includes facilities where dangerous activities are carried out. (For example, stationary lifting mechanisms, smelters of ferrous and non-ferrous metals, certain mining operations).

The law contains in Chapter II the industrial safety principles. These include the requirement of a license for anyone who establishes, modernises, maintains and operates a hazardous facility.

Prior to the construction of a facility, an „Industrial Safety Expertise“ will be conducted by the facility operator. The Industrial Safety Expertise is confirmed by a specially authorised federal executive authority for industrial safety or by the federal authority's local division. The Industrial Safety Expertise is one requirement of the preparation of an Industrial Safety Declaration. This Declaration includes a comprehensive evaluation of the risk of an accident and the hazards associated with an accident. The Declaration also includes an analysis of the adequacy of the measures preventing an accident and the development of measures reducing the consequences of an accident. The Industrial Safety Declaration is mandatory for those facilities that produce, process, store, transport, or eliminate a certain amount of hazardous substances. (Attachment 2 to the law provides a list of hazardous substances and amounts.)

Technical devices applied at hazardous production facilities must be certified to meet the industrial safety requirements. A list of the devices that are subject to certification shall be developed on the basis of the law.

The Law on Industrial Safety contains a number of further obligations that have to be met by the operator during the operation of the facility. Among the obligations are actions to localise and minimise damage from worker accidents and worker training and the conclusion of service agreements with professional rescue divisions or the creation of own rescue teams, as well as the creation and maintenance of a monitoring and alarm communication and action support system in the case of an accident. The Law on Industrial Safety also contains obligations for facility employees, such as the compliance with legal requirements, training measures, and informing the management of the facility in a timely manner in case of accidents.

In the case of an accident, an investigation will be carried out by a Special Commission headed by the representative of the specially authorised Federal Executive Authority for Industrial Safety. The Special Commission can also consist of members of other groups. The operator of the facility will have to submit all relevant information to the Special Commission, and will also have to finance the accident investigation.

The law also establishes the obligation for a mandatory insurance. Mandatory insurance ensures the coverage of damages to the life, health or property of other individuals and the natural environment in the case of an accident at the production facility. The law will be enforced by the specially authorised Federal Executive Authority for Industrial Safety.

The law makes a number of references to other legal documents. These documents will have the character of decrees or government directives. They have not been passed yet, but are under preparation. The law will only be fully applicable when these documents are passed.

Betty Gebers

[1] The informational basis for this article has been submitted by V. Sidorov and E. Klovach of STC "Industrial Safety" and by M. Brinchuk, Institute for State and Law, Russian Academy of Sciences, Moscow.

RECENT COURT DECISIONS

ECJ Decides on Standing in Environmental Matters

By Sven Deimann

[I]ndividuals and public interest groups should have practicable access to the courts in order to ensure that their legitimate interests are protected and that prescribed environmental measures are effectively enforced and illegal practices stopped.[1]

1 Introduction

This is the second time[2] that the above citation from the Community's Fifth Environmental Action Programme precedes a case comment in the *elni* Newsletter. The quote, however, bears repeating. For the European Courts persist in denying individuals and public interest groups practicable access to the courts with the result that their legitimate interests are not or only insufficiently protected and that prescribed environmental measures are not effectively enforced just as illegal practices on the part of the Community institutions cannot be stopped.

On 2 April 1998, the European Court of Justice (ECJ) dismissed an appeal[3] by *Greenpeace International* as well as a number of individual local applicants from the Canary Islands from an order of the Court of First Instance[4] (CFI) which had held their application for judicial relief at the Community level against Community funding of certain infrastructure projects on the Canary Islands in violation of Community environmental legislation inadmissible for lack of standing. The CFI had held the applicants, including local residents from the Canary Islands, to be affected by the Commission decision to finance the construction of two thermal power plants only in their 'objective capacity' as residents of the islands and hence, not individually and directly concerned by the Commission decision within the meaning of Art. 173 (4) EC Treaty.[5]

In dismissing the appeal brought by Greenpeace and a number of local residents, the ECJ confirms a trend discernible in a number of rulings in the lower EC jurisdictions that suggests, first, that a double standard exists with respect to the role and scope of public interest litigation when it comes to enforcing EC environmental law against the Member States on the one hand and Community institutions on the other[6] and, second, that the EC Courts will pass the jurisdictional buck[7] when reviewing the legality of Community acts that combine with Member State acts is at issue.[8]

2 The Issues

In the proceedings at the Court of First Instance, Greenpeace and the individual applicants had sought judicial relief by way of an action for annulment against a Commission decision[9] by which the latter had agreed to disburse substantial monies from the Community's regional development funds for the construction of thermal power plants on the Canary Islands. Greenpeace and the other applicants alleged the projects had been licensed by the Canary Islands' regional authorities in violation of obligations arising for the Kingdom of Spain under the Environmental Impact Assessment Directive.[10]

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1 *A European Community Programme of Policy and Action in Relation to the Environment and Sustainable Development*, COM (92) 23 final - Vol. II, [1993] O.J. C 138, pp. 5 et seq.; see also Council resolution of 1 February 1993, [1993] O.J. C 138, pp. 1-5.

2 See S. Deimann, "French Nuclear Tests: Court of First Instances Dismisses Application for Interim Relief" (1996) elni Newsletter 1/96 48.

3 Case C-321/95 P, *Stichting Greenpeace Council (Greenpeace International) and Others* v. *Commission of the European Communities*, judgment of the Court of 2 April 1998, nyr. [hereinafter cited Greenpeace International to the hectographical version available on the ECJ's webpage.

4 Case T-585/93, *Greenpeace and Others* v. *Commission*, [1995] ECR-II 2205.

5 *Ibid.* at paras. 49-55.

6 N. Gérard, "Access to Justice on Environmental Matters - A Case of Double Standards?" (1996) 8 J. of Env'l L. 149 at 154. As this author also correctly point out, the Court of First Instance appears to apply a double standard between access to justice for the protection of economic interests on the one hand and access to justice for protection of non-economic interests on the other.

7 J. Scott, "Environmental Compatibility and the Community's Structural Funds: A Legal Analysis" (1996) 8 J. of Env'l. L 99 at 113.

8 The present litigation, shutting the courtroom door not only to environmental NGOs but also to individual third parties affected by Community acts directly impinging on their health, complements and neatly fits into the picture painted by the outcome of the litigation in An Taisce and WWF/U.K., see C-325/94 P, *An Taisce and WWF/U.K.* v. *Commission*, [1996] E.C.R. I-3727 (dismissing appeal against a ruling by the Court of First Instance holding that an action against the Commission's refusal to discontinue or revoke disbursement of funds for a tourist information centre at Mullaghmore in the Burren, Republic of Ireland inadmissible for lack of an 'act' capable of being challenged as a decision within the meaning of Art. 173 (4) EC Treaty).

9 Decision C (91) 440 concerning financial assistance provided by the European Regional Development Fund for the construction of two power stations in the Canary Islands (Gran Canaria and Tenerife).

10 *Greenpeace* v. *Commission*, *supra* note 3 at para. 2.

Proceedings were also commenced in the national courts. In both the national courts and the Court of First Instance, the individual applicants alleged the power plants would result in damage to their health.

The Court of First Instance, citing the ECJ's *Plaumann*-jurisprudence,[11] held the action inadmissible on the grounds that even if the individual applicants were to suffer the damage they alleged, they had failed to demonstrate being individually and directly concerned by the Commission decision to finance the contested projects. For in the Court's view, the applicants were affected only in their objective status as residents of the islands. Since any other resident of the Canary Islands would suffer similar or identical damage, the applicants had failed to show that the challenged decision affected them by reason of certain attributes peculiar to them or by reason of factual circumstances which were capable of differentiating them from all other persons.[12] As for Greenpeace and other NGOs, they lacked standing, according to the CFI, under the settled case law of the ECJ under which actions brought by associations are inadmissible if the members of such an association could not individually commence proceedings either.[13]

Greenpeace and the other applicants appealed from the CFI's order alleging the CFI's interpretation of the standing requirements under Art. 173 (4) EC Treaty had created a jurisdictional void with respect to reviewing the legality of Community acts impacting adversely on the environment. Interests linked to environmental protection or well-being, as of necessity, could not fulfill the requirements set forth by the CFI, since environmental conditions could never affect only a closed class of Community citizens.[14] Furthermore, the appellants submitted proceedings before the national courts that could not fill the void, as these could only concern Spain's compliance with obligations under Directive 85/337/EEC, but not the legality of the Community act in question.[15] Finally, the appellants suggested *locus standi* under Art. 173 (4) EC Treaty should be determined under an alternative test that would primarily address the question of actual or threatened personal detriment suffered, or likely to be suffered, as a result of an allegedly illegal Community act.[16]

In support of its arguments in favour of a more liberal construction of standing rules for individuals challenging acts not addressed to them under Art. 173 (4) EC Treaty, Greenpeace cited not only more liberal standing rules in other jurisdictions but also a number of international law documents, including the Community's Fifth Environmental Action Programme and Principle 10 of the Rio Declaration.[17]

3 The Ruling

The Community's own commitments notwithstanding, the European Court of Justice affirmed its previous jurisprudence on the question of *locus standi* under Art. 173 (4) EC Treaty and dismissed the appeal. Nine terse paragraphs were sufficient to dispose of the various issues raised by the applicants.

As for the detrimental effects flowing from the Commission decision for the health and environmental conditions of the individual applicants residing in the Canary Islands, the ECJ upheld the CFI's order holding that the applicants were affected only in a general and abstract fashion in their objective capacity as residents of the islands, and that was not sufficient to set them apart as a closed class compared to other island residents.[18]

With respect to the appellants' submission regarding the peculiar nature of the interests for which judicial protection was being sought, the Court held these interests in the proceedings before it to be only indirectly affected by the challenged act, as the decision to build the power stations had been made by the national authorities.[19]

Finally, addressing the appellants' submission concerning the availability of judicial protection and review for rights of Community citizens arising under Directive 85/337/EEC, the Court held these to be fully protected by proceedings before the national courts. Although the subject matter of the proceedings brought by Greenpeace and local NGOs to challenge the licensing decision was different from the subject matter before the European courts, both actions were based on the same rights afforded to individuals by virtue of Directive 85/337/EEC which could find adequate protection in the national courts where preliminary rulings could be sought in conformity with Art. 177 EC Treaty.[20]

4 Consequences

As one commentator had aptly described it,[21] the European courts' restrictive interpretation of standing requirements under Art. 173 (4) EC Treaty has the 'paradoxical' result of shielding acts by the Community institutions against judicial review in proportion to the potential number of Community

[11] Case 25/62, *Plaumann* v. *Commission*, [1963] E.C.R. 95.

[12] See *Greenpeace, supra* note 4.

[13] *Ibid.* at paras. 59 *et seq.*

[14] *Greenpeace* v. *Commission, supra* note 3 at para. 18.

[15] *Ibid.* at para. 19.

[16] *Ibid.* at para. 23.

[17] *Ibid.* at para. 22.

[18] *Ibid.* at paras. 27 *et seq.*

[19] *Ibid.* at paras. 30-31.

[20] *Ibid.* at paras. 32 *et seq.*

[21] See Gérard, *supra* note 5 at 152.

citizens adversely affected by them. In other words, the more Community citizens are negatively affected by a decision not addressed to them, the less likely they are to have standing to bring an action for reviewing the legality of the act in question under the Treaties.

Moreover, as has also been pointed out,[22] the ECJ and the CFI appear to employ a double standard with respect to the role and function of public interest litigation depending on whether EC law is to be enforced as against the Member States or Community institutions. While the ECJ has been more than generous in holding individuals capable of invoking a large number of provisions in the Treaties and ostensibly non-binding directives adopted under them directly against Member State authorities, the same liberality in allowing individuals to force the authorities' hands in respecting and enforcing secondary EC environmental legislation does not appear to prevail where compliance with the same directives by EC institutions is at issue. The double standard practiced by the European institutions has the unfortunate effect of not only introducing a substantial qualifier to the supposedly comprehensive nature of the system of judicial protection afforded by Arts. 173 and 184 EC Treaty[23] but also of undermining the credibility of the Court's jurisprudence as to the possibility for individuals to directly invoke provisions of primary and secondary EC law against Member State authorities.

On the precise issue of payments out of the EC's structural funds that violate European environmental protection directives, the Court's continued adherence to narrow and formalistic standing rules effectively shields an entire class of legal acts by Community institutions against legal challenges in the European courts. For apart from third parties negatively affected by a decision to disburse monies to a Member State, who else, under the EC's institutional framework, would have an interest in bringing appropriate legal action to force the various Commission Directorate-Generals and subsidiary institutions to respect and abide by the tenor of secondary EC environmental legislation?[24] Certainly not the Member States.

Moreover, ensuring compliance with European environmental legislation by the structural funds constitutes an important element in effectuating the integration principle in Art. 130r (2) EC Treaty, which in turn is crucial in achieving sustainable economic development within the EC.[25] In this respect, the Court's ruling comes at the very moment when the Commission's half-time review of the Communities' performance under the Fifth Environmental Action Programme is replete with references to the incomplete effectuation of the integration principle, especially as regards the disbursement of monies from the Regional Funds.[26]

In part, the Court's apparent reluctance to open the courtroom door to public interest litigators in the present proceedings appears to be premised on a certain factual construction as to the concrete effects disbursing monies from the Community funds can have on the rights invoked by the applicants. Oddly, the Court seems to take the view that, in whatever way construction of the power plants may affect the applicants' rights under the Environmental Impact Assessment Directive - an assertion of rights which, as an aside, the Court fortunately does not take issue with - the primary cause for adverse effects on these rights lies with the decision of the national authorities to carry out the infrastructure project concerned. This is a most curious view that seems to want to attribute any loss or detriment suffered as a result of the project mono-causally to the national authorities; and this would appear to be at variance with the prevailing view regarding lenders' environmental responsibility in other international *fora* and national jurisdictions. It obfuscates the responsibility of Community institutions that public funds ultimately collected from European taxpayers not be disbursed in a way that runs counter to European environmental legislation.

To place reliance in this context on possible proceedings before national courts, which do not have jurisdiction to adjudge the legality of acts by Community institutions, simply amounts to an attempt at jurisdictional buck-passing that was already evident in the ruling by the President of the Court of First Instance in the *Danielsson* case.[27] That litigation concerned the Commission's highly questionable decision under Art. 34 Euratom Treaty finding that the recently concluded series of underground nu-

[22] *Ibid.* at 154.

[23] Case 294/83, *Les Verts* v. *European Parliament*, [1986] E.C.R. 1339 at para. 23.

[24] See L. Krämer, "Public Interest Litigation in Environmental Matters Before European Courts" (1996) 8 J. of Env'l L. 1; R. Macrory, "Environmental Citizenship and the Law: Repairing the European Road" (1996) 8 J. of Env'l. L. 219 at 229: "The result seems to be a lacuna in ensuring compliance with law."

[25] See Scott, *supra* note 7.

[26] See *Progress Report from the Commission on the Implementation of the European Community Programme of Policy and Action in relation to the Environment and Sustainable Development "Towards Sustainability"*, COM (95) 624 final of 10 January 1996 at 4:
Whilst there have been improvements in ensuring better integration of environmental considerations into the use of the Community's financial support mechanisms, there is a continuing need to improve the evaluation of the impact of such funding to avoid unsustainable approaches.
See also now *Proposal for a European Parliament and Council Decision on the review of the European Community Programme of policy and action in relation to the environment and sustainable development "Towards Sustainability"*, COM (95) 647 final of 24 January 1996.

[27] Case T-219/95 R, *Danielsson and Others* v. *Commission*, [1995] E.C.R. II-3885.

clear tests in French Polynesia did not constitute a 'particularly dangerous experiment' within the meaning of the provision.[28] The President of the CFI sought to justify his restrictive interpretation of standing requirements under the Euratom Treaty (which are identical to those under the EC Treaty) as well as his refusal to see a jurisdictional void with respect to judicial review of the Commission's decision by arguing legal protection under the Treaties was assured not only before the Community courts but also before national courts which could refer questions of Community law to the Community courts. Nor would the reference to preliminary references under Art. 177 EC Treaty appear to be a particularly useful argument in justifying the denial of access to justice in proceedings directly before the ECJ or the CFI. As is well-known, the Court is hopelessly overburdened with references from national courts which may take up to two years and hence cannot resolve issues pertaining to the legality of Community acts in an appropriately speedy and economically feasible manner.

5 Relief

Doctrinally, however, relief against the European courts' narrow construction of standing rules that precludes individuals from challenging Community acts on the grounds that they interfere with their health or other rights relating to a safe and clean environment may be in sight. For the courts' assertion that reliance on these rights, as part of a statement of claim alleging loss due to residing within the geographical 'impact' area of a Community act, cannot be sufficient to demonstrate individual concern because any other Community citizen resident in the area will be affected in the same way, appears hardly compatible with the presumption of an impairment of rights established in Art. 9 of the Århaus-UN/ECE Draft Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters. This Convention is to be signed in June, and it is generally expected that the Commission will sign it as well. It will enter into force upon ratification by sixteen parties signatory to the Convention.

Under Art. 9 of the draft Convention, each Party

> *"shall, within the framework of its national legislation, ensure that members of the public concerned (a) having a sufficient interest or, alternatively, (b) maintaining impairment of a right, where the administrative procedural law of a Party requires this as a precondition, have access to a review procedure before a court of law and/or another independent and impartial body established by law to challenge the substantive and procedural legality of any decision, act or omission subject to the provisions of article 6 and, ..., other relevant provisions of this Convention."*

Article 6 requires Parties, under paragraph 1, to apply provisions on public participation in permitting procedures, as specified in the paragraphs 2 to 11, to projects listed in annex I to the Convention. Under Art. 6.1 (b), this obligation also applies to "decisions on proposed activities not listed in annex I *which may have a significant effect on the environment*."

For purposes of demonstrating standing requirements, Art. 9.2 then creates a presumption in favour of an applicant alleging a violation of rights:

> *What constitutes a sufficient interest and impairment of a right shall be determined in accordance with the requirements of national law and consistently with the objective of giving the public concerned wide access to justice within the scope of this Convention. To this end, the interest of any non-governmental organization meeting the requirements referred to in article 2, subparagraph (e), shall be deemed sufficient for the purpose of subparagraph (a) above. Such organizations shall also be deemed to have rights capable of being impaired for the purpose of subparagraph (b) above.*

It seems the Community legal system, much like the legal system of some of the Member States, cannot do without the helping hand of the UN/ECE in ensuring effective judicial protection for individuals and public interest suitors as one element in effectuating EC environmental law and citizenship.[29]

[28] See Deimann, *supra* note 2.

[29] See Macrory, *supra* note 26 and Chr. Callies, "Towards a European Environmental Constitutional Law" [1997] Eur. Env'l L. Rev. 113.

Growth Hormones - Take Two

By Sven Deimann

1 Introduction

On January 16, the World Trade Organisation's (WTO) Appellate Body rendered its decision on the appeal filed by the European Communities from the Panel Report, *EC Measures Concerning Meat and Meat Products (Hormones)*. It will be recalled that the original Panel Report raised very serious concerns with respect to the position WTO law was willing to accord certain fundamental tenets of modern environmental policy such as the precautionary principle. In adjudicating the EC's appeal from the original Panel Report, the Appellate Body now had the chance to set the record straight, and assuage well-founded fears within the environmental community as to the essential compatibility of the emerging "liberal" world "free" trade order with sustainability.

Before delving into the details of the Appellate Body's ruling, it is safe to say at the outset that in many respects the appellate ruling amounts to an almost complete disavowal of the original Panel Report and some of the doctrinal assertions it had sought to advance.[1] Save the question of whether the EC had actually carried out a risk assessment of the substances concerned - admittedly not a minor point and one on which the Appellate Body's findings will continue to invite criticism - the appellate ruling set aside most of the legal interpretations the Panel purported to derive from the Sanitary and Phytosanitary Agreement (hereafter SPS Agreement, or Agreement) and previous GATT/WTO jurisprudence.

Nevertheless, this comment will argue that the Appellate Body did not entirely discharge its duty to set the record straight. It will be shown that on closer inspection the Appellate Body's ruling leaves untouched some of the Panel's methodological findings with respect to risk and risk-assessment and in that regard pays mere lip-service to its own conclusions justifying a reversal of the Panel's findings.

2 The Appellate Body's ruling

While the Appellate Body listed no less than ten issues as being raised by the appeal from the original Panel Report,[2] five of these would appear to be of particular significance in the 'trade and environment' context:

2.1 the allocation of the burden of proof under the SPS Agreement

2.2 the meaning of "based on" in Art. 3.1 of the SPS Agreement

2.3 the status of the precautionary principle under the SPS Agreement

2.4 the meaning of "risk assessment" in Art. 5.1 of the SPS Agreement; and

2.5 the interpretation of Art. 5.5 of the SPS Agreement pertaining to WTO Members' obligation not to introduce arbitrary distinctions in the level of protection that result in discrimination against other WTO Members

2.1 Burden of Proof

It will be remembered that on the Panel's construction of the SPS Agreement, the burden of proof in dispute settlement procedures involving the SPS Agreement does not follow the rules that ordinarily apply in WTO dispute settlement procedures. On the Panel's interpretation of the relevant provision of the Agreement, a 'rule-exception'-relationship had been established notably by Art. 3 of the Agreement, to the effect that the Agreement which presumed, as a rule, that Members would follow existing international norms and regulations, including non-binding recommendations made by such bodies as the Codex Alimentarius Commission in their regulations respecting sanitary and phytosanitary measures. As a consequence, while under the ordinary allocation of the burden of proof a Member alleging another Member's violation of obligations arising under GATT/WTO law must make a *prima facie* case with respect to such a violation, the Panel sought to shift the onus to the Member defending a measure under the SPS Agreement once the challenging Member has made its *prima facie* case that the defending Member does not follow existing international norms and regulations in its regulations concerning sanitary and phytosanitary meas-

[1] This, at first glance, appears a very sweeping statement indeed. In this author's view, it is, however, something quite out of the ordinary for an appellate jurisdiction to find fault not only with the trial judge's interpretation and application of the law but also its handling of the evidence. The Appellate Body agreed with the EC's submission that the Panel had misquoted one of the experts relied on by the EC and had indeed, on the issue of risks inherent in controlling good veterinary practices in administering growth hormones to cattle, not presented the opinion of its own experts accurately, see WTO, *EC Measures Concerning Meat and Meat Products (Hormones)*, AB-1997-4, WT/DS26/AB/R & WT/DS48/AB/R at paras. 138 and 144. The Appellate Body, however, found these two specific instances of disregard for one of the party's or indeed the Panel's own scientific evidence not to be a "deliberate disregard of evidence or gross negligence amounting to bad faith", see *ibid.* at para. 138.

[2] *Ibid.* at para. 96.

ures.[3] In that respect, the Panel sought to draw a parallel to the allocation of the burden of proof where a Member relies on the justificatory rules in Art. XX of the GATT. Hence, on the Panel's construction of Art. 3.1, 3.2, and 3.3 of the SPS Agreement, it was for the European Community to make a prima facie case that its measures imposing an import ban on beef products originating from cattle that have been treated with growth hormones were in compliance with a WTO Member's obligations under the SPS Agreement, because the United States and Canada had been able to make a *prima facie* case that the EC measures in question deviated from existing international norms and regulations, *in casu* the recommendations made by the Codex Alimentarius Commission's scientific advisory body, Joint FAO/WHO Expert Committee on Food Additives (JECFA), for threshold levels expressed in Acceptable Daily Intakes and Maximum Residue Levels.

The Appellate Body rectified this interpretation with regard to the burden of proof. According to the Appellate Body's ruling, no such shift in the onus could be deduced merely from ascribing a 'rule-exception'-relationship to the relevant provisions in Art. 3 of the Agreement.[4] Consequently, it was for the United States and Canada to make a *prima facie* case indicating inconsistency with the EC's obligations under the Agreement.[5]

2.2 The meaning of "based on"

Consistent with the reversal of the Panel's distribution of the burden of proof, the Appellate Body also took issue with the Panel's interpretation of "based on" in Art. 3.1 of the SPS Agreement. The provision reads as follows:

> *To harmonize sanitary and phytosanitary measures on as wide a basis as possible, Members shall base their sanitary or phytosanitary measures on international standards, guidelines or recommendations, where they exist, except as otherwise provided for in this Agreement, and in particular in paragraph 3.*

The Panel construed this obligation to 'base' sanitary or phytosanitary measures on 'international standards, guidelines or recommendations' as an obligation to enact only those measures that would actually 'conform' to existing international standards, guidelines or recommendations.[6]

The Appellate Body had little difficulty in rejecting the Panel's interpretation as unfounded not only on a literal interpretation of the words used in Art. 3.1, but also on a reading in conjunction with other provisions of the Agreement that actually used the terms 'conform to.'[7] In addition, the Appellate Body held that the effect of the Panel's interpretation went far beyond what the drafters of the Agreement had intended in terms of the nature of the obligation created by Art. 3.1. For the Panel's interpretation would have, for all practical purposes, rendered existing international norms and regulations, even where these have been adopted, as in the case of the Codex Alimentarius recommendations, as no more than non-binding recommendations, *binding* on WTO Members.[8] There was, however, no indication as to any intent on the part of the signatories to the Agreement to agree to such a far-reaching limitation on their sovereign right to enact regulatory measures. Moreover, presuming such an intent would, according to the Appellate Body, run afoul of received standards of treaty interpretation in international law:

> *We cannot lightly assume that sovereign states intended to impose upon themselves the more onerous, rather than the less burdensome, obligation by mandating* conformity *or* compliance with *such standards, guidelines and recommendations.*[9]

While the Appellate Body reversed the Panel's interpretation of Art. 3.1, it subsequently agreed with the Panel's reading of Art. 3.3. As a result, the Appellate Body affirmed the Panel's construction of Art. 3.3 of the Agreement, and held, like the Panel, that a Member, wishing to depart from existing international standards, guidelines or recommendations in order to achieve a higher level of sanitary protection, could only do so by complying with another provision of the Agreement, in particular, the obligation under Art. 5.1 of the Agreement to base sanitary or phytosanitary measures "on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques

[3] See Complaint by the United States, EC Measures Concerning Meat and Meat Products (Hormones), WT/DS26/R/USA, paras 8.86 et seq. and Complaint by Canada, EC Measures Concerning Meat and Meat Products (Hormones), WT/DS48/R/CAN paras. 8.89 et seq.

[4] WTO, *supra* note 1 at para. 104.

[5] The EC's victory on this point proved to be a Pyrrhic one. For subsequently the Appellate Body found the United States and Canada had in fact discharged their burden of proof by making a prima facie case that the import ban on growth hormone-treated beef products had been not been based on a proper risk assessment within the meaning of Art. 5.1 of the Agreement and was thus inconsistent with the EC's obligations arising from Art. 5.1 of the Agreement, see WTO *supra* note 1 at para. 197 and accompanying note 180.

[6] See WTO, *supra* note XX at paras. 8.72 *et seq.* (U.S. Panel Report) and at paras. 8.75 *et seq.* (Canada Panel Report) as well as the WTO, *supra* note 1 at para. 161.

[7] WTO, *supra* note X at para. 163 *et seq.*

[8] *Ibid.* at para. 165.

[9] *Ibid.* at para. 165 (citation omitted).

developed by the relevant international organizations."[10]

2.3 The Status of the Precautionary Principle

Although acknowledging that the wording of Art. 3.3 lent considerable support to the contention put forward by the EC - namely that the provision envisaged two distinct situations of a Member enacting sanitary or phytosanitary measures aimed at effecting a higher level of protection than could be achieved under international standards or guidelines and that one of these situations did not require a showing of compliance with the provisions of Art. 5.1 to 5.8[11] - the Appellate Body, on a purposive interpretation of Art. 3.3 and the entire Agreement held Art. 5.1 to 5.8 applicable to both situations contemplated in Art. 3.3:

> *Consideration of the object and purpose of Article 3 and of the SPS Agreement as a whole reinforces our belief that compliance with Article 5.1 was intended as a countervailing factor in respect of the right of Members to set their appropriate level of protection.*

In this respect, the Appellate Body found the object of the whole Agreement to establish a balance between 'shared, but sometimes competing, interests:'

> *The requirement of a risk assessment under Article 5.1, as well as of "sufficient scientific evidence" under Article 2.2, are essential for the maintenance of the delicate and carefully negotiated balance in the SPS Agreement between the shared, but sometimes competing, interests of promoting international trade and of protecting the life and health of human beings.*[12]

With this determination, the principal outcome of the appeal rested upon whether the EC had complied with the requirement under Art. 5.1 of the Agreement to base its sanitary and phytosanitary measures in question on a risk-assessment within the meaning of this provision. It will be recalled that the Panel's findings on this question were premised upon a sharp dichotomy between on the one hand risk-assessment, which the Panel held to be a purely factual, non-judgmental exercise in empirical science, and on the other risk-management which would allow a Member to take account of value-driven policy considerations.[13] Furthermore, the Panel had rejected the EC's submission according to which the interpretation and application of Art. 5 of the SPS Agreement would have to take account of the precautionary principle which, the EC had submitted, applied as a matter of customary international law.[14]

The Appellate Body, although ultimately upholding the Panel's findings with respect to these issues, substantially modified some of the interpretations suggested by the Panel. Its reasoning on the status and relevance of the precautionary principle is not, however, devoid of considerable ambiguity. For although the Appellate Body affirms the Panel's holding that the principle could not, in and of itself, find application irrespective of Art. 5.1 of the Agreement, it rejected the Panel's further assertion that the principle was 'consumed' by Art. 5.7 of the Agreement:

> *We agree, at the same time, with the European Communities, that there is no need to assume that Art. 5.7 exhausts the relevance of the precautionary principle. It is reflected also in the sixth paragraph of the preamble and in Article 3.3. These explicitly recognize the right of Members to establish their own appropriate level of sanitary protection, which level may be higher (i.e., more cautious) than that implied in existing international standards, guidelines and recommendations. Thirdly, a panel charged with determining, for instance, whether "sufficient scientific evidence" exists to warrant the maintenance by a Member of a particular SPS measure may, of course, and should, bear in mind that responsible, representative governments commonly act from perspectives of prudence and precaution where risks of irreversible, e.g. life-terminating, damage to human health are concerned.*[15]

Yet, in spite of these considerations, the precautionary principle could not override the text of the SPS

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10 *Ibid.* at para. 177.

11 The provision reads:

Members may introduce or maintain sanitary or phytosanitary measures which result in a higher level of sanitary or phytosanitary protection than would be achieved by measures based on the relevant international standards, guidelines or recommendations, if there is a scientific justification, or as a consequence of the level of sanitary or phytosanitary protection a Member determines to be appropriate in accordance with the relevant provisions of paragraphs 1 through 8 of Article 5. Notwithstanding the above, all measures which result in a level of sanitary or phytosanitary protection different from that which would be achieved by measures based on international standards, guidelines or recommendations shall not be inconsistent with any other provision of this Agreement.

Appended to this provision is a footnote which defines 'scientific justification' as a Member's determination, "on the basis of an examination and evaluation of available scientific information in conformity with the relevant provisions of this Agreement," "that the relevant international standards, guidelines or recommendations are not sufficient to achieve its appropriate level of sanitary or phytosanitary protection."

12 *Ibid.* at para. 177.

13 See WTO, *supra* note 2 at paras. 8.107 *et seq.* (U.S. Panel Report) and at paras. 8.110 *et seq.* (Canada Panel Report), for criticism of this largely artificial and uncritical distinction between allegedly purely scientific, value-free risk-assessment and policy-driven risk-management see S. Deimann, "Case Comment: EC Measures Concerning Meat and Meat Products (Hormones)" (1998) elni Newsletter 1/98 1 at note 38 and accompanying text, citing W.E. Wagner, "The Science Charade in Toxic Risk Regulation" (1995) 95 Col. L. Rev. 1613.

14 Ibid. at paras. 8.157 *et seq.* (U.S. Panel Report) and at paras. 8.160 *et seq.* (Canada Panel Report).

15 WTO, *supra* note 1 at para. 124.

Agreement.[16] The Appellate Body's ambiguity with respect to the status that should be accorded the precautionary principle in the interpretation and application of the SPS Agreement also finds reflection in its criticism of the Panel's characterization of such key-terms as 'risk' and 'risk-assessment.' Although rejecting the Panel's reading of 'risk' as meaning a concrete 'identifiable particular risk' reflecting a 'minimum magnitude of risk,'[17] the Body accepts the Panel's view that the risks to be assessed under Art. 5.1 could not be those inherent to the limitations of human scientific knowledge and methods. Similarly, while the Body finds fault with the Panel's characterization of risk-assessment as an exercise in laboratory experimental empirical science,[18] it finds the studies adduced in evidence presented by the EC to demonstrate the presence of a risk requiring a regulatory response deficient in particularity.[19]

2.4 The meaning of "Risk Assessment"

For in rejecting the Panel's distinction between 'risk-assessment' on the one hand and 'risk-management' on the other - a distinction for which the Appellate Body could not find a textual justification, as the SPS Agreement makes no reference to 'risk management', the Body nevertheless accepts the test set forth by the Panel for determining whether a measure complies *substantively* with the requirement of a prior 'risk-assessment' within the meaning of Art. 5.1 of the Agreement.[20] Under this test, a measure is substantively 'based on' on a risk-assessment for purposes of Art. 5.1 of the Agreement if it bears a 'rational relationship' to the prior risk-assessment. The Appellate Body found this element to be lacking, because the 1987 study by the *International Agency for Research on Cancer* relied on by the EC treated the question of cancerogenicity of growth hormones in an abstract and general manner without addressing each one of the particular substances at issue in the dispute.[21]

2.5 Interpretation of Art. 5.5. of the SPS Agreement

Finally, the Appellate Body disposed of what surely constituted the most controversial aspect of the original report, namely the Panel's findings concerning the EC's violation of obligations arising under Art. 5.5 of the Agreement that, it is no exaggeration to say, bordered on the preposterous. Art. 5.5 requires Members to refrain from introducing arbitrary distinctions in the level of sanitary or phytosanitary protection they deem necessary:

> *With the objective of achieving consistency in the application of the concept of appropriate level of sanitary or phytosanitary protection against risks to human life or health, or to animal and plant life or health, each Member shall avoid arbitrary or unjustifiable distinctions in the levels it considers to be appropriate in different situations, if such distinctions result in discrimination or a disguised restriction on international trade.*

The Panel had found such arbitrary distinctions in the level of protection in the relevant EC legislation not only in relation to the different regulatory treatment reserved for the use of growth hormones in cattle rearing and the use of certain anti-biotics in pig rearing, but also in the different regulatory treatment afforded to growth hormone-treated beef on the one hand and meat or other food products with naturally occurring levels of growth hormones on the other. The Panel considered the EC's zero risk policy, regarding the residues in beef of artificially raised levels of either naturally occurring or synthetically manufactured growth hormones, arbitrary because naturally occurring residues of the substances at issue in other food stuffs had been left unregulated.[22]

In reversing the Panel's findings on this point, the Appellate Body's reasoning speaks for itself:

> *We do not share the Panel's conclusions that the above differences in levels of protection in respect of added hormones in treated meat and in respect of naturally-occurring hormones in food, are merely arbitrary and unjustifiable. To the contrary, we consider there is a fundamental distinction between added hormones (natural or synthetic) and naturally-occurring hormones in meat and other foods. In respect of the latter, the European Communities simply takes no regulatory action; to require it to prohibit totally the production and consumption of such foods or to limit the residues of naturally-*

[16] *Ibid.* at para. 125.

[17] *Ibid.* at para. 186.

[18] *Ibid.* at para. 187.

[19] *Ibid.* at paras. 197-200.

[20] Ibid. at para. 193. Note, however, that the Body reverses the Panel with respect to a procedural element and its finding that the lack of appropriate recitals in the preambles to the respective enactments indicated that they had been procedurally 'based on' the studies the EC had submitted as risk-assessments for purposes of Art. 5.1., at paras. 190-194. In this respect, the Body made it quite clear that a Member was not required, for instance, to perform its own risk-assessment but could also rely on studies previously conducted by other Members.

[21] *Ibid.* In passing, it should be noted, however, that the Body reversed the Panel on the question of whether a 'risk-assessment' under Art. 5.1 could also address risks arising from the difficulty of ensuring compliance with good veterinary practices in administering growth hormones. Contrary to the Panel, the Appellate Body held these to be risks that could be considered by a member in the context of Art. 5.1. Again, however, it found the studies submitted by the EC to buttress its allegations deficient in particularity to qualify as proper 'risk-assessments' for purposes of Art. 5.1., see *ibid.* at paras. 202-208.

[22] *Ibid.* at paras. 8.193 *et seq.* (U.S. Panel Reports) and at paras. 8.196 *et seq.* (Canada Panel Report).

> *occurring hormones in food, entails such a comprehensive and massive governmental intervention in nature and in the ordinary lives of people as to reduce the comparison itself to an absurdity.*[23]

Although the Appellate Body affirmed the Panel's finding with respect to the EC's failure to ban the use of carbadox in pig rearing, it reversed the Panel's further finding under Art. 5.5 that the distinction in the level of protection had resulted in discrimination or a disguised restriction on international trade. The Body explicitly rejected the Panel's attempt to apply previous panel and appellate rulings' doctrinal reasoning under Art. III and the chapeau of Art. XX GATT to Art. 5.5 of the Agreement.[24] Thus, a finding as to the difference or discrepancy in the level of protection in comparable situations cannot in and of itself be determinative of the last element of the test set forth in Art. 5.5, *i.e.* the question of whether such measures lead to discrimination against other Members or lead to disguised restrictions on international trade.

The Appellate Body also found fault with the Panel's attributing protectionist and hence discriminatory motives to the EC's enactment of the import ban. The Panel based their reasoning on the percentage of beef treated with growth hormones in the United States and Canada, compared with the percentage of treated beef in the EC at the time of the coming into force of the import ban. Citing the lack of any evidence suggesting lobbying on the part of the EC's beef producers (who, moreover, as the Body rightly pointed out, are also subject to a corresponding ban on the export of treated meat),[25] the Appellate Body accepted the EC's submission maintaining consumer and health protection considerations as underlying the ban:

> *We are unable to share the inference that the Panel apparently draws that the import ban on treated meat and the Community-wide prohibition of the use of the hormones here in dispute for growth promotion purposes in the beef sector were not really designed to protect its population from the risk of cancer, but rather to keep out US and Canadian hormone-treated beef and thereby to protect the domestic beef producers in the European Communities.*[26]

3 Conclusion

While there is much to commend the Appellate Body's ruling, it still leaves open a number of questions concerning the status of the precautionary principle, and the latitude WTO Members continue to enjoy under the SPS Agreement in determining appropriate levels of protection and corresponding regulatory measures.

It is precisely on the issue of the precautionary principle and its status under or beside the SPS Agreement that the Appellate Body appears to take with one hand what it gives with the other. On the one hand, the Body reverses the Panel's conclusion as to the alleged exhaustiveness of Art. 5.7 of the Agreement in relation to the precautionary principle and its attempt to restrict a Member's right to aim at a higher level of protection to 'identifiable risks.' On the other hand, the Body affirms the impossibility for a WTO Member to enact regulatory measures directed at risks related to the inherent uncertainty of scientific knowledge and methods and, consequently, interprets Art. 5.1 of the Agreement as requiring assessment of particular substances.

It is, however, precisely in the area of (at present) non-identifiable risks that arise from the inherent limitations of scientific knowledge that the precautionary principle will have an increasingly greater role to play, especially in the bio-technology sector. These types of risks are addressed in part by the EC's Novel Foods Regulation[27] and its requirement of proper labelling for genetically modified food stuffs. This Regulation was promulgated because scientific knowledge and understanding of how humans, animals, or, the physical environment react to trans-genetic plants and foods stuffs remains incomplete. In fact, for some bio-tech products it must of necessity remain incomplete due to the impossibility of performing scientific experiments and gathering empirical data. What we do know, however, as a matter of theoretical knowledge, is that the potential for damage is greatly increased and that, furthermore, the type of damage that will occur as a result of a trans-genetic plant replacing natural species, for instance, is quite different in magnitude and nature than any other transformation human civilization has fastened on the environment since the onset of the industrial revolution.[28] On the

[23] WTO, *supra* note 1 at para. 221. The Body also reversed the Panel's findings as to an arbitrary distinction in the level of protection to the extent that the EC provisions at issue contained certain exemptions from the import ban on growth-hormone treated beef for hormones administered for therapeutic or zootechnical purposes, see *ibid.* at para. 225.

[24] *Ibid.* at para. 239.

[25] *Ibid.* at para. 244.

[26] *Ibid.* at para. 245.

[27] *European Parliament and Council Regulation 258/97/EC of 27 January 1997 on novel foods and novel food ingredients*, [1997] O.J. L 43, p. 1 *et seq.*

[28] At times, one gets the impression the Appellate Body is well aware of the different nature of the risks involved, as when it reminds the Panel that where it is "charged with determining, for instance, whether 'sufficient scientific evidence' exists to warrant the maintenance by a Member of a particular SPS measure" it "may, of course, and should bear in mind that responsible, representative governments commonly act from perspectives of prudence and precaution where risks of irreversible, e.g. life-terminating, damage to human health are concerned", see WTO,

Appellate Body's interpretation, an argument could be made that, despite the differences in the magnitude and types of risks involved, no labelling requirement, or indeed even more restrictive regulatory measures, can be enacted for an entire technology as such. Rather, the EC first has to assess individually the risks inherent to each and every transgene that is used in agro-industrial food production.[29]

As for the nature of risk-assessment within the meaning of Art. 5.1 of the Agreement, the Appellate Body, refreshingly, took objection to the Panel's misguided and flawed dichotomy between 'scientific' risk-assessment and 'policy-guided' risk-management.[30] On this point, the Body's reversal of the Panel holds out the perspective of a more realistic understanding of risk-assessment prevailing under the SPS Agreement. Unfortunately, though, the Body did not grasp the opportunity to remind its audience that, contrary to what the Panel implied, the 1988 and 1989 JECFA reports that the safety of allowing growth hormones to be administered in bovine meat production were based on a number of policy considerations.[31]

The Appellate Body's interpretation of Art. 5.5 of the Agreement also would appear to be much more congenial to environmentalist and consumer protection concerns. On this specific point, the appellate ruling seems to have taken much of the *de*regulatory sting out of the original Panel Report, although it accepted the Panel's reasoning on the question of an arbitrary distinction in the level of protection in relation to the allowed use of carbadox within the EC, and thus followed a line of argument that can be summarized as 'equality in wrongfulness.'[32]

Nevertheless, as long as the apostles of the new liberal free trade order continue to extol the virtues of deregulation,[33] it is well for environmentalists to continue to remind the public of the ulterior motivation and rationale behind much of modern environmental, consumer protection and other regulation that seeks to further important public purposes. The rationale for modern regulation was stated with exceptional clarity by Mr. Justice Cory in the Supreme Court of Canada:

> *In short, regulation is absolutely essential for our protection and well being as individuals, and for the effective functioning of society. It is properly present throughout our lives. The more complex the activity, the greater the need for and the greater our reliance upon regulation and its enforcement. For example, most people would have no idea what regulations are required for air transport or how they should be enforced. Of necessity, society relies on government regulation for its safety.*
>
> *Regulatory legislation is essential to the operation of our complex industrial society; it plays a legitimate and vital role in protecting those who are most vulnerable and least able to protect themselves. The extent and importance of that role has increased continuously since the onset of the Industrial Revolution. Before effective workplace legislation was enacted, labourers - including children - worked unconscionably long hours in dangerous and unhealthy surroundings that evoke visions of Dante's* Inferno. *It was regulatory legislation with its enforcement provisions which brought to an end the shameful situation that existed in mines, facto-*

supra note 1 at para. 124. Yet, the Body shrinks away from the necessary consequence in such a situation, namely that governments must be allowed to respond to such risks even where a dearth of scientific knowledge and empirical data suggest the probability of their materializing into concrete harm to human or animal health or to the environment as a whole may be very small.

29 In this regard, the Appellate Body's ruling would also appear to have, much like the original Panel Report, a detrimental side-effect on animal welfare. Just as the original Panel implicitly held the commercial free trade interests of Canada and the United States to outweigh whatever indescribable pain has to be inflicted on castrated rhesus macaque monkeys and ovariectomized female cynomolgus monkeys to 'prove' the innocuousness of the substances at issue, the Appellate Body, in holding the studies submitted by the EC as lacking in particularity, appears to suggest the EC will simply have to perform similar experiments in order to legitimately arrive at the opposite conclusion under Art. 5.1.

30 See Deimann, *supra* note 13.

31 First and foremost that it is possible to determine the risks inherent to administering the substances concerned in terms of threshold values expressed as Acceptable Daily Intakes and corresponding Maximum Residue Levels and, secondly, that for purposes of arriving at such threshold values it is possible to extrapolate from the results of animal testing. Generally speaking, the Body did not address the issue of science being instrumentalized for purposes of challenging regulatory measures under the Agreement, see J. Atik, "Science and International Regulatory Convergence" (1997) 17 Nw. J. of Int'l L. & Bus. 736.

32 See Deimann, *supra* note 13. Indeed, following the Appellate Body's ruling, one could only hope that the Dutch government, for example, will finally challenge criminal and administrative bans on the importation, distribution, and sale of cannabis products in most of its trading partners as unjustifiable and arbitrary distinctions in the level of protection, since a large number of studies have shown alcohol to be far more addictive (and toxic) than marijuana. Curiously, however, most Western industrialized countries, notably the United States, Germany, and France, continue to adhere to their prohibitionist ideology while allowing not only the sale of more addictive and toxicologically potentially more damaging alcoholic beverages, but also encouraging their consumption through permitting active advertisement and sponsoring on the part of beer and other alcoholic beverages brands.

33 See only E.-U. Petersmann, "Constitutionalism and International Organizations" (1997) 17 Nw. J. of Int'l L. & Bus. 398 (emphasis added):

"The worldwide trend towards *deregulation*, market economies, protection of human rights and democracies reflects an increasing recognition that individual freedom, non-discrimination and rule of law the best conditions for promoting individual and collective self-determination and social welfare."

The suggestion that regulation, as this remark implies, is incompatible with individual freedom, non-discrimination and the democratic rule of law must, of course, be vigorously protested.

ries and workshops in the nineteenth century. ...[34]

It would appear that his lordship's remarks have lost nothing of their relevance in the face of continued efforts at the international level to instrumentalize international trade agreements for deregulatory purposes that are incompatible with a commitment to sustainability. There can be no doubt that the environment constitutes a vulnerable element in our societies that is worthy of appropriate regulatory protection. The Appellate Body's ruling goes some way towards setting the WTO's record straight. Unfortunately, it has shied away from confirming whole-heartedly, with the same degree of clarity and unequivocation as the Supreme Court of Canada, WTO Members' sovereign right to engage in legitimate regulation under the SPS Agreement and the precautionary principle.

[34] *R.* v. *Wholesale Travel Group Inc.*, [1991] 3 S.C.R. 154 at 224 & 234. To this one might add Madame Justice Wilson's observation in *McKinney* v. *University of Guelph*, [1990] 3 S.C.R. 229 at 356:
"It is, in my view, untenable to suggest that freedom is co-extensive with the absence of government. Experience shows the contrary, that freedom has often required the intervention and protection of government against private action."

ECJ on German Implementation of Access to Information Directive

The German Federal Freedom of Access to Environmental Information Act intends to transpose Directive 90/313/EEC. The Act had encountered some strong criticism from environmental organisations because of its extensive list of exemptions.

Art. 7 of the Act generally denies a right for access to environmental information "during ongoing court proceedings, criminal investigations and administrative procedures, concerning the information the public authority has obtained during the proceeding."

The provision in Art. 7 of the Act is based on the provision of Art. 3 of the European Directive which says that the Member States may refuse information where it affects "matters which are or have been sub justice or under enquiry". The German legislator's interpretation of the exemption clause had the effect that the actual range of information was in certain cases severely narrowed. Some authorities argued that they were entitled to refuse information in all cases where decisions were still to be made.

The European Court of Justice (ECJ) clarified on 17.6.1998 that the exemption clause does not comply with the requirements of the European Directive. Art. 3 of the European Directive protects preliminary investigations in matters that are under consideration by a judicial body. According to the ECJ, Art. 3 is not applicable to administrative procedures in general. The higher administrative court of Schleswig-Holstein had forwarded the question to the ECJ. The ECJ had to decide whether a citizen had the right to receive access to documents that were prepared during an ongoing road planning procedure.

Betty Gebers

NEWS IN BRIEF

Work Programme of the European Commission in 1998

The European Commission has set five political priority areas for action during 1998: The priorities are (1) the employment policy, (2) the introduction of the Euro, (3) the implementation of the reforms that were proposed in Agenda 2000, (4) external relations with other countries. Environmental protection is addressed under the fifth priority: "Serving the public for a better quality of life".

Under this heading the Commission expresses its concern about improving public health. The work programme includes better standards for the protection of consumer health when human health products are placed on the market. The Commission plans to propose amendments to a number of existing directives relating to environment and agriculture, but does not specify this intention.

A further priority of the Commission is the respect for basic values and human dignity. The Commission specifically refers to the field of genetic engineering. The Commission plans to address these concerns and will rely on the guidance of the opinion from a group of advisers to the ethical implications of biotechnology.

The European Commission also addresses the relation between high environmental standards and economic growth. The Commission believes that their goals are not incompatible and that environmental standards must be enforced in such a way as to make Europe more competitive and to reduce employment. In particular, environmental implications will be considered during the implementation of other EU policies. Particular attention will be paid to environmental issues in relation to enlargement, especially on the matter of nuclear safety.

However, the legislative agenda for 1998 includes only three new proposals in the environmental sector:

- proposals on national emission ceilings (SO_2, NOx, NH_3, VOCs).
- proposal on air quality
- proposal on electronic waste.

The legislative activities also include those activities that have been started in the years before but have not been passed yet.

Recommendations for the Revision of Directive on Access to Information

The Directive 90/313/EEC on the Freedom of Access to Information on the Environment opens up access to environmental information to individuals and organisations throughout the EU. A review and possibly an amendment of the Directive is due in 1998. The Member States had to deliver reports on the implementation of the Directive to the European Commission by 31.12.1996.

Since 1992 the Dutch Stichting Natuur en Milieu (SNM), one of the major environmental organisations in the Netherlands, has conducted a series of activities to encourage early and effective use of the Directive 90/313/EEC. SNM gathered experts that are affiliated with environmental protection organisations from all Members States and the Enlargement States. In 1996 a compilation of independent reports on the implementation of the Directive in the Member States was published. This compilation of reports reviews legislation and experience in practice. The official reports of the Member States were considered to be „uneven in quality, the majority being sketchy and lacking solid foundation based on either statistics concerning the handling of requests or on input from citizens and organisations who have been attempting to exercise the right to access to environmental information“ (SNM).

SNM prepared a report recommending a possible revision of the Directive 90/313/EEC. The report was prepared on the informational basis of the 1996 compilation of independent reports and on the results of a workshop held in Utrecht in January 1998. The report tracks the provisions of the Directive and provides a synopsis of the experience in practice. It also identifies good practices which have emerged and makes specific recommendations for each provision.

Stichting Natuur en Milieu, Ralf Hallo, Recommendations for the Review and Revision of Directive 90/131/EEC on the freedom of Access to Information on the Environment, Utrecht 1998. For orders and further information, fax: +31 30 233 1311, email: snm@antenna.nl

Ralf Hallo (Ed.): Access to Environmental information in Europe: The Implementation and Implications of Directive 90/313/EEC, 464 p., ISBN: 90-411-0651-0, 114 USD, Kluwer Law International, The Hague 1996

Subscribers to the elni newsletter and elni members

can receive single copies at a considerably reduced price. Please contact the elni Coordination office.

European Commission Takes Legal Action against Member States

- The Commission has started legal proceedings against Belgium, France, Germany, Spain, Italy, and Greece for their failure to comply with previous European Court of Justice rulings regarding waste, battery waste, natural habitats, wild birds, genetically modified organisms, and waste water. The Commission has given formal notice to all of the Member States except Italy. Italy will receive a Reasoned Opinion regarding Case C-302/95 concerning Directive 91/271/EEC (waste water treatment). The countries and case numbers are : Belgium, Case C-357/96; France, Cases C-282/96, C-283/96 and C-223/96; Germany, Case C-442/92; Spain, Case C-107/96; and Greece, Case C-329/96.
- The Commission has made an application to the Court of Justice against France, Finland, Denmark, Germany, Luxembourg, the Netherlands, and Ireland for their failure to provide a list of Special Protection Areas (SPAs) as required by Art. 4 of the Habitats Directive (92/43/EEC). (Article 4 defines that SPA information shall include a map of the site, its name, location, etc.) The Commission has decided to send a Reasoned Opinion to Austria and Spain. The Habitats Directive ensures Member State compliance with NATURA 2000. NATURA 2000 creates a network of SPAs which will conserve animal and plant habitats. The NATURA 2000 network will be implemented in three phases: (1) the Member States will propose sites; (2) the Commission will adopt the list of sites of Community importance, in agreement with the Member States; and (3) the Member States will then designate these sites as special areas of conservation. Presently, the implementation of NATURA 2000 is behind schedule. The Commission also has cases against Spain, Germany, and the Netherlands concerning the Wild Birds Directive (79/409/EEC); France will receive a Reasoned Opinion regarding Regulation No 3254/92, which prohibits the use of leghold traps.
- The Commission will take legal action against Spain, the United Kingdom, Portugal, Finland and France to curb water pollution by nitrates according to the Nitrates Directive (91/676/EEC). The United Kingdom, Portugal, Finland and France will receive Reasoned Opinions. Spain will be referred to the ECJ. The Directive is intended to reduce water pollution caused by agricultural sources, and to prevent further pollution. Presently, none of the countries are in compliance with the Directive.

United Kingdom will Enact a Freedom of Information Bill

In December 1997 the British government published 'The White Paper.' 'The White Paper' outlined a proposal for a Freedom of Information (FOI) Act that the Government would like to have in force in 1999. 'The White Paper' invited the British public to make comments that will be considered during the drafting of the FOI Bill. UK citizens submitted their comments to the UK Citizen's Online Democracy Website <http://www.foi.democracy.org.uk>.

Presently, the public's comments are being used to draft a FOI Bill. The Government intends to publish the draft Bill in 1998 for further comment. Thereafter, the introduction to Parliament of the Bill will be an early priority.

The FOI Act will open up public authorities and other organisations which carry out public functions. The public will have a legal right to access information held by almost all public bodies. (For example, government departments and agencies, The National Health Service, local councils and local registered bodies, nationalised industries and public corporations, courts and tribunals, the police, The Armed Forces, schools, colleges and universities, public service broadcasters, privatised utilities, private sector organisations working for the government). Public bodies covered by the Act will have a statutory duty to make certain information available.

Commenting on 'The White Paper', Prime Minister Tony Blair said, "The traditional culture of secrecy will only be broken down by giving people in the United Kingdom the legal right to know. This fundamental and vital change in the relationship between government and governed is at the heart of this 'White Paper'."

The FOI Act will emulate similar statutory provisions existing in the U.S.A, Canada, New Zealand, Australia, and Sweden.

For up to date information, see <http://open.gov.uk/m-of-g/foihome.htm> and <http://www.foi.democracy.org.uk>.

New Proposal for a European Directive Reducing Outdoor Equipment Noise Emissions

In view of an analysis of the noise situation in Western Europe (see COM /96/540) which shows that about 20% of the inhabitants suffer from noise of a critical level, a Commission Directive (see COM /98/ 0046-final, published April 22, 1998, OJ C 125) seeks to reduce the total noise emissions in Europe.

The World Health Organisation (WHO) report 'Community noise - Environmental Health Criteria' (not yet published) shows that sleeping problems, auditory, cardiovascular, and other physiological and psychological injuries are possible effects of noise on human health. Transportation emits the most noise, but noise contributions from outdoor equipment is growing as the equipment grows in number and increases in power. This new Directive should end these tendencies, and protect Community Citizens from noise exposure and health hazards.

The main aims of the Directive are:

- reducing the absolute noise emissions of outdoor equipment
- simplifying noise making equipment regulations in the Community
- avoiding fragmentation of the internal market by adopting legislation that reduces future noise emissions
- informing customers and public authorities

The noise emissions of more than 50 kinds of outdoor equipment such as power generators, cranes, lawnmowers, or compressors shall be controlled. The Directive intends to guarantee the free movement of the products within the European Community; the Member States shall not prohibit, restrict or impede the placement of the product on the market. The Directive contains a range of measures from defined noise levels to informing the public with compulsory markings of all products that have a guaranteed noise level.

Protocols on Heavy Metals and Persistent Organic Pollutants

During the fourth ministerial conference "Environment for Europe" in Århus two protocols to the UN/ECE Convention on Long Range Transboundary Air Pollution were adopted and signed.

The draft protocol on heavy metals targets three particularly harmful substances: lead, cadmium and mercury. The countries have to reduce their emissions of these three metals below their emission levels of 1990 (or an alternative year between 1985 and 1995). The protocol aims to cut emissions from industrial sources, combustion processes and waste incineration. It lays down limit values for emissions from stationary sources and suggests best available techniques for these sources. The protocol requires countries to phase out leaded petrol. It also introduces measures to lower heavy metal emissions from other products, such as mercury in batteries.

The second protocol on persistent organic pollutants (POPs) focuses on a list of 16 substances, which have been singled out according to certain risk criteria. The objective is to eliminate any discharges, emissions and losses of POPs. The protocol bans the production and use of some products (Aldrin, chlordane, chlordecone, dieldrin, endrin, hexabromobiphenyl, mirex and toxaphene). Other POPs are scheduled for elimination at a later stage (DDT, heptachlor, hexachlorobenzene, PCBs). The protocol also severely restricts the use of DDT, HCH (including lindane) and PCBs. However, the protocol also contains exemptions (e.g., the use of POPs for health emergencies).

The countries are also obliged to reduce their emissions of dioxins, furans, PAHs and HCB below the levels of 1990 (or an alternative year between 1985 and 1995). The protocol puts forward best available techniques to cut emissions of these POPs. For the incineration of municipal, hazardous and medical waste it lays down specific limit values.

Contact at United Nations Commission for Europe, UN/ECE, Environment and Human Settlement Division: Lars Nordberg, Henning Wuester, Fax: +41 22 907 01 07,
email: lars.nordberg@unece.org and henning.wuester@unece.org

CONFERENCES

Greening the Industry - 7th International Conference

The conferences of the Greening of Industry Network are a platform for people from diverse backgrounds to exchange ideas, experiences and to develop (new) relationships, visions and practices for sustainability. To facilitate this process a variety of discussion forms will be offered during the conference, such as plenary debate, dialogue workshops, paper workshops, keynote speeches with breakout sessions, and poster presentations. For doctoral researchers a one-day workshop will be organized on Sunday, November 15. **On Monday November 16 the conference will be opened officially and it closes at Wednesday, November 18.** The Conference Programme Committee will design the final programme of the conference following the results of this call and with respect to the learning process within the Network. The conference fee (including conference material, lunches and receptions) will be approximately US$400 for all participants, including presenters.

For registration and the detailed programme please contact: Conference Organizing Committee, Legambiente, Via Salaria 403, 00199 Rome, Italy, Tel. +39 6862 68343, Fax: +39 6862 18474, email: md5922@mclink.it.

Surviving the 21st Century - Chances for a Sustainable Society?

The earth's population is growing exponentially, global effects of environmental pollution are becoming visible, the social disparity is increasing. How do we reach a sustainable society that balances our ecological, economic and social priorities?

From October 29 until November 1 a conference organised by AEGEE Heidelberg (Association des Etats Généraux des Etudiants de l'Europe) will focus on this question. Interested people will be offered an insight into the many aspects of sustainability and a forum for discussions with other young Europeans, scientists, politicians and managers.

Topics to be covered by lectures include the use of energy, better consumer behaviour, mobility and ecological management concepts. Complementary workshops will critically evaluate our own conduct to achieve a more sustainable style of living, resulting in a checklist for our every-day actions and a concept for a sustainable university. The event will be concluded by a panel discussion about the possibilities for a political implementation of the concept of sustainable development.

The contribution to cover the conference expenses will be ECU 20 for members of AEGEE, ECU 28 for students and ECU 40 for other participants. Lodging in a gymnasium will be provided.

AEGEE is the largest interdisciplinary student's organisation in Europe. It is open for students from all faculties, and is not linked to any political party or religion. Each weekend large scale congresses, language courses and study trips are organised by AEGEE.

For more information please contact AEGEE Heidelberg, Postfach 102129, 69011 Heidelberg, email: AEGEE.Heidelberg@urz.uni-heidelberg.de or visit the following web pages: http://www.rzuser.uni-heidelberg.de/~dl1/base

TASKS AND ACTIVITIES

What is elni?

The Environmental Law Network International (*elni*) is a network of individuals and organisations who share an interest in environmental law. *elni* provides an international forum for the exchange of news, views, ideas and experiences in environmental law and in so doing promotes international communication and cooperation of those working in this field.

elni was set up in 1990 and now has over 300 members including legal practitioners and academic lawyers from all over the world.

Why is elni Necessary?

In many countries lawyers are working on aspects of environmental law, often with environmental initiatives and organisations or as legislators, but without contact with other lawyers abroad. Such contact and communication is vital for the successful and effective implementation of environmental law. For example:

For the legal practitioner offering advice to affected groups or persons, a wider knowledge of environmental law and international contacts with others working in the same field will enable him to draw on wider legal arguments based on European and international law allowing him to be more creative in the presentation of his case.

For the legislator or executive authorities, and those advising or aiming to influence them, a knowledge and understanding of different systems of environmental regulation of different states, countries or continents and of the effectiveness of their practical implementation allows comparisons and enables the legislator or authority to learn from wide and diverse experiences when faced with the task of developing and improving environmental legislation and its practical application.

How are elni's Objectives Achieved?

elni coordinates a number of different activities to facilitate the communication and contact of those interested in environmental law around the world.

1 Studies of the Environmental Law Network International

elni publishes a series of books entitled „Publications of the Environmental Law Network International“. Each volume contains papers by various authors on a particular theme in environmental law and in some cases is based on the proceedings of the annual conference. There are nine volumes to date:

- International Environmental Impact Assessment
- Participation and Litigation Rights of Environmental Associations in Europe,
- Civil Liability for Waste,
- Licensing procedures for Industrial Plants and the Influence of EC Directives,
- Environmentally Sound Waste Management,
- Dynamic International Regimes,
- Environmental Control of Products and Substances,
- Environmental Rights - Law, Litigation and Access to Justice,
- New Instruments of Sustainability - The Contribution of Voluntary Agreements to Environmental Policy (in preparation)

2 elni Newsletter

The *elni* Coordinating Bureau in Darmstadt, Germany, produces and sends to each member the *elni* Newsletter twice a year containing member's reports on projects, legal cases and developments in environmental law. *elni* therefore encourages its members to submit such articles to be published in the Newsletter, in English, in order to allow the exchange and sharing of experiences with other members.

3 Annual Conference

The annual conference focuses on a different theme in environmental law and is held at a different venue each year. This event allows members to meet, exchange ideas and plan cooperative projects as well as being legally informative with talks from lawyers and others from all over the world.

4 Coordinating Bureau

The Coordinating Bureau is at the Öko-Institut in Darmstadt, Germany, which is a non-governmental, non-profit making research institute. The Bureau acts as an information centre where members can obtain information about others working in certain areas thus promoting the development of international projects and cooperation.

elni's Board

At the *elni* annual conference in 1991, the participating members decided to create a board that assumes partial responsibility for the Network's future development. Members of the Board are:

James Cameron, barrister, Foundation for International Environmental Law and Development (FIELD), SOAS, University of London, U.K.

Jerzy Jendroska, lawyer, member of the Research Group on Environmental Law at the Polish Academy of Science in Wroclaw, Poland

Sanford Lewis, laywer, director of the Good Neighbor Project for Sustainable Industries, Waverly, USA

Stefano Nespor, lawyer, editor of the "Rivista Guiridica dell'Ambiente", Milano, Italy

Nelly Paleologou, member of the board of the Greek Environmental Law Association, Birdlife International, Brussels, Belgium.

Marga Robesin, staff lawyer with the Stichting Natuur en Milieu, Utrecht, the Netherlands

Gerhard Roller, lawyer, Öko-Institut e.V., Damstadt, Germany

Nicolas de Sadeleer, lawyer and academic for the Centre d'étude du droit de l'environnement (CEDRE) at the facultés universitaires Saint-Louis, Brussels, Belgium

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IMPRINT

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Manuscripts should be submitted to the Editors using an IBM compatible word processing package. Articles that are not signed are in the responsibility of the Editors.

The *elni* Newsletter is the Newsletter of the Environmental Law Network International. It is distributed twice a year to its members at the following price levels: commercial users (consultants, law firms, government administrations): DM100/S$60; private users, students, libraries: DM40/US$25. Members from Central and Eastern Europe will receive the *elni* Newsletter free of charge. Non-members can order single issues at a fee of DM10 incl. packaging. The Environmental Law Network International also welcomes an exchange of publications as a way of payment. Private members and libraries who feel that the charge is exceeding their financial capability can subscribe to the newsletter at a reduced rate on request.

The *elni* Newsletter is prepared with the financial and organisational support of the Öko-Institut e.V., a non-profit private research institute. The address of the main office is: Öko-Institut e.V., P.O. Box 62 26, 79038 Freiburg, Germany, Tel.: +49 (0)761 45 295-0, Fax: +49 (0)761 475437

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elni PUBLICATIONS

elni (Ed.): New Instruments of Sustainability: The Contribution of Voluntary Agreements to Environmental Policy
Cameron May Ltd., London, summer 1998, pb., ca. £40 post paid UK, £45 post paid EU, £50 post paid other countries

elni (Ed.): Environmental Impact Assessment
European and Comparative; Law and Practical Experience
Cameron May Ltd. London 1997, 284pp, ISBN 1 874698 074, pb. £40 post paid UK, £45 post paid EU, £50 post paid other countries.

Sven Deimann / Bernard Dyssli (Eds.): Environmental Rights : Law, Litigation and Access to Justice
Cameron May Ltd. London 1995, 340pp, ISBN 1-874698-11-2, pb. £40 post paid UK, £45 post paid EU, £50 post paid other countries.

Betty Gebers / Jerzy Jendroska (Eds.): Environmental Control of Products and Substances:
Legal Concepts in Europe and the United States
Peter Lang Verlag Frankfurt/M., Bern, New York, Paris 1994, Vol. 6, 179pp., ISBN 3-631-47672-8, pb. DM65,00

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Institutions for International Environmental Governance
Peter Lang Verlag Frankfurt/M., Bern, New York, Paris 1994, Vol. 5, 515pp., 22 fig. 12 tab., ISBN 3-631-47631-0, pb. DM128,00

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Current Legal Situation and Practical Experience in Europe
Peter Lang Verlag Frankfurt/M., Bern, New York, Paris, 1993, Vol. 4, 241pp., ISBN 3-631-45863-0, pb. DM74,00

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Peter v. Wilmowsky / Gerhard Roller: Civil Liability Waste: A Legal Analysis of the Proposed EC Directive
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Cameron May Ltd., London, 1998, 544pp, ISBN 1874-698-627, pb., £60

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