

Analyses of Issues to be Addressed

Climate Change Litigation Cases



Friends of the Earth Netherlands



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**By the Amsterdam International Law Clinic and
Michael G. Faure & André Nolkaemper**

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P.O. Box 19199
1000 GD Amsterdam
The Netherlands
service@milieudefensie.nl
tel + 31 (0) 20 62 62 620

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Amsterdam International Law Clinic, March 2007

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International Liability as an Instrument to Prevent and to Compensate for Climate Change

Michael G. Fauré & André Nollkaemper

(Originally published in the Stanford Environmental Law Journal, Volume 26A, 2007)

Preface

A climate revolution has taken place over the last few years in the public debate. Alarming reports by the UN's climate panel IPCC, a few of the warmest summers ever in a row and icebergs and glaciers melting before our very eyes have pushed climate change to the top of the public agenda. Climate change is a complex issue. It does not follow country borders, which means that only an international approach will deliver real solutions. Government, business and consumers all need to acknowledge their responsibility and contribute to solutions to climate change.

It is all hands on deck if we really want to tackle climate change, no instrument can be ignored. An interesting question in this context is if there are legal instruments that can help us to stop climate change. Legal actions against those that cause climate change could be the key to forcing solutions. Also, 'victims' of climate change could be rewarded damages from countries with very high greenhouse gas emissions. For example, people in Bangladesh or the Pacific Islands hardly contributed to the cause climate change, but do suffer from its effects.

To date in the Netherlands no cases have been filed to bring those responsible for climate change before a court. There have been so-called climate litigation cases in the United States, Germany and Australia on the basis of public, civic and international law. This report presents an overview of these 'climate litigation' lawsuits, translates them to the Dutch situation and shortly discusses their relevance for the Netherlands' judicial system.

Each of the eleven cases described in this report is different. Chapter two analyses six *public law* cases from the United States, Australia and Germany. Cases were filed against governments and government institutions for their presumed failure to adhere to national environmental legislation. As a result, emissions of greenhouse gases increased and contributed to climate change.

Chapter three discusses two *civil law* cases in the United States. In one of the cases electricity companies are charged with their contribution to climate change and in the other a company with plans to build a factory to produce isolation material. The central question in both cases is whether companies can cause damages through greenhouse gas emissions and if they can be held accountable.

In chapter four three *international law* cases are highlighted. Climate change is an issue that crosses borders. Countries or communities that already or will in the future suffer from the effects of climate change have appealed to a number of international treaties to support their claims against countries with high greenhouse gas emissions. In the last chapter the possibilities of European law for similar cases are explored.

This research shows that legally sound evidence must become available at three levels:

- Firstly, evidence that the plaintiff is suffering or has suffered from climate change. These damages must be tangible and personal, already evident and therefore not hypothetical.
- Then, the damages must be able to be linked to actions of the defendant. This does not necessarily mean proving a direct one-to-one relationship between greenhouse gas emissions by the charged government or business and the damages suffered by the claimant. The scientific evidence that there is a relationship between greenhouse gas emissions and climate change is sufficient.
- Thirdly, it must be proven that the damage can be reduced if the defendant stops the activities in question.

This research shows that it could be interesting to study the possibilities for a climate litigation case in the Netherlands or elsewhere. For example, climate litigation could be used to stop the construction of a new coal-fired plant or to demand environmental impact assessments for export credits or other Dutch government investments in developing countries. The Dutch government has also signed a number of treaties that enable people already suffering from the effects of climate change to make a claim.

Time will show if the growing international trend of climate litigation cases will spread to include the Netherlands. It is clear that legal procedures are a promising new instrument to hold the Dutch government and governments all over the world accountable for stopping climate change. We hope that the information collected in this report will be of use to NGOs and others involved in the struggle against climate change.

Milieudefensie (Friends of the Earth Netherlands)

December 2007

Voorwoord

In de afgelopen jaren heeft zich een ware klimaatrevolutie voltrokken in het maatschappelijk debat. Dankzij o.a. de alarmerende rapporten van het VN-klimaatpanel IPCC, een aantal van de warmste zomers ooit op een rij en het zichtbaar afkalven van ijskappen en gletsjers, is klimaatverandering bovenaan de maatschappelijke agenda beland. Maar klimaatverandering is een complex probleem. Het houdt zich niet aan landsgrenzen, bij het zoeken naar oplossingen moeten zowel overheid, bedrijven als consumenten hun verantwoordelijkheid nemen. Alleen een internationale aanpak kan een daadwerkelijke oplossing bieden.

Om klimaatverandering te stoppen moet alles op alles gezet worden en mag geen middel onbenut blijven. Een interessante vraag die hierbij opkomt, is of er ook juridische middelen zijn om het klimaatprobleem aan te pakken. Via juridische weg zouden de oorzaken van klimaatverandering aangepakt kunnen worden en oplossingen afgedwongen kunnen worden. Maar ook zouden de eerste 'slachtoffers' van klimaatverandering hun verhaal kunnen halen bij landen met een (zeer) hoge uitstoot van broeikasgassen. De bevolking van bijvoorbeeld Bangladesh of de eilanden in de Stille Zuidzee heeft immers het klimaatprobleem niet veroorzaakt, maar lijdt wel onder de gevolgen ervan.

In Nederland zijn tot op heden nog geen rechtszaken gevoerd om de verantwoordelijken voor klimaatverandering aan te pakken. In landen als de Verenigde Staten, Duitsland en Australië zijn al wel een aantal zogenaamde 'climate litigation' rechtszaken gevoerd, op basis van zowel publiek-, privaat als internationaal recht. Dit rapport presenteert een overzicht van deze 'climate litigation' rechtszaken, vertaalt deze naar de Nederlandse situatie en bespreekt kort de relevantie ervan voor het Nederlandse recht.

De elf climate litigation rechtszaken uit dit rapport lopen sterk uiteen. Hoofdstuk 2 analyseert zes *publiekrechtelijke* zaken uit de Verenigde Staten, Australië en Duitsland. In een aantal van deze zaken werd de overheid of overheidsinstelling aangeklaagd voor haar vermeende falen in het voldoen aan de eigen milieuwetgeving. De uitstoot van broeikasgassen nam hierdoor toe, wat bijdroeg aan klimaatverandering.

Het derde hoofdstuk behandelt twee zaken op basis van *civiel recht*, beide uit de Verenigde Staten. In de ene zaak werden elektriciteitsbedrijven aangeklaagd voor hun bijdrage aan klimaatverandering en in de andere zaak werd een bedrijf aangeklaagd die een fabriek voor de productie van isolatiematerialen wilde bouwen. In beide gevallen stond de vraag centraal of bedrijven schade aan kunnen richten door de uitstoot van broeikasgassen en of ze hier ook voor aansprakelijk gesteld kunnen worden.

In het vierde hoofdstuk worden drie zaken uit het *internationale recht* beschreven.

Klimaatverandering is immers een grensoverschrijdend probleem. Landen of gemeenschappen die nu of in de toekomst lijden onder de gevolgen van klimaatverandering beroepen zich hierbij op een aantal internationale verdragen om landen met een hoge uitstoot van broeikasgassen aan te klagen. In het laatste hoofdstuk worden tenslotte de mogelijkheden van het Europese recht verkend.

Uit dit onderzoek blijkt dat er op een drietal niveaus bewijs op tafel moet komen dat juridisch stand houdt:

- bewijs dat de eiser schade lijdt/heeft geleden als gevolg van klimaatverandering. Deze schade moet concreet, 'persoonsgebonden' zijn, nu al aantoonbaar en dus niet hypothetisch.
- Vervolgens moet deze schade terug te voeren zijn op (daden van) de aangeklaagde. Hiervoor is het overigens niet nodig om een 'een-op-een-relatie' te bewijzen tussen de uitstoot van broeikasgassen door de aangeklaagde overheid of bedrijf en de geleden schade van de eiser. Het wetenschappelijke bewijs dat er een relatie is tussen de uitstoot van broeikasgassen en klimaatverandering is hierbij voldoende.
- Daarna moet bewezen worden dat deze schade verminderd kan worden indien de aangeklaagde stopt met de betwiste activiteiten.

Dit onderzoek laat zien dat het interessant kan zijn om ook in Nederland en elders de mogelijkheden van een 'climate litigation' zaak te onderzoeken. Denk bijvoorbeeld aan de mogelijkheid om via de rechter de bouw van een nieuwe kolencentrale in Nederland tegen te houden. Of om milieueffectrapportages af te dwingen van exportkredieten of andere investeringen van de Nederlandse overheid in o.a. ontwikkelingslanden. Bovendien heeft de Nederlandse overheid een aantal internationale milieuverdragen ondertekend die mogelijkheden bieden voor de mensen die nu al kampen met de gevolgen van klimaatverandering om genoegdoening te eisen.

De tijd zal uitwijzen of de internationale trend van een groeiend aantal 'climate litigation' rechtszaken, ook naar Nederland zal overslaan. Duidelijk is wel dat rechtspraak een nieuw middel kan zijn om overheid en bedrijven aan te spreken op hun verantwoordelijkheid voor het tegengaan van klimaatverandering, in Nederland én wereldwijd. Wij hopen dat de in dit rapport verzamelde kennis NGOs en anderen van dienst is bij de strijd tegen klimaatverandering.



The Case Concerning Climate Change

Report

March 2007

Willem Nelissen
Laura Piazza
Ying Tjoe

Supervised by:
Edda Kristjánsdóttir, Esq.
Prof. Mr. Rosa Uylenburg
Hege Elisabeth Veenstra-Kjos, J.D.

Amsterdam International Law Clinic



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1. INTRODUCTION

This Report was commissioned at the request of *Böhler Franken Koppe Wijngaarden advocaten* (the Client), and its purpose is to provide information on climate change jurisprudence based on various causes of action from different jurisdictions.

While basing itself on the Interim Report containing tables of jurisprudence as submitted to the Client in December 2006, this Final Report examines the cases more fully so as to identify global trends in climate change litigation.¹ It also assesses whether similar types of cases would be possible in the Netherlands.

Part 2 analyzes six public/administrative cases from the United States, Germany and Australia. Four cases deal with the alleged failure of government (agencies) to comply with environmental legislation, thereby contributing to climate change. Of these cases, one awaits judgment, and another has been appealed. In a separate case, a government agency was accused of taking measures beyond the scope of its authority to restrict the emission of air pollutants. Finally, there is a case concerning a request for information regarding government support of energy production projects abroad that may lead to climate change.

Part 3 analyzes two civil law cases from the United States. In the first case the Claimants based their claim on the U.S. federal common law doctrine of public nuisance. The Claimants in the second case alleged that the Defendant corporation had failed to obtain a preconstruction permit required under the U.S. Clean Air Act.

Part 4 examines three (potential) petitions to international (judiciary) bodies. The first case concerns the preservation of several sites by including them on the World Heritage in Danger List because they are threatened by the harmful effects of climate change. The second case notes the intention of the Government of Tuvalu to bring a suit before the International Court of Justice against the United States and Australia for their contribution to climate change and the resultant harmful effects for Tuvalu. The last case involves a petition to the Inter-American Commission of Human Rights alleging human rights violations by the United

¹ It is noted that this Report does not include an examination of jurisprudence from New Zealand, as set out in the Interim Report. For information about these cases, see New Zealand Climate Change, Relevant Case Law, available at <<http://www.climatechange.govt.nz/resources/local-govt/coastal-hazards-may04/html/page8.html>> (last visited March 3, 2007). The contact details of the New Zealand Environment Court can be accessed at <<http://www.justice.govt.nz/environment/>> (last visited Feb. 7, 2007).



States, caused by its large contribution to global warming and the subsequent deterioration of the circumpolar region on which indigenous people rely to sustain their traditional way of life.

Part 5 examines how European Community law has been and may be used to address climate change concerns. It consists of an analysis of jurisprudence of the European Court of Justice and the Court of First Instance, followed by a brief overview of relevant European Community law on climate change.

Finally, general findings and conclusions are set out Part 6.



2. PUBLIC/ADMINISTRATIVE LAW

2.1 CASE SUMMARIES

2.1.1 Friends of the Earth et al. v. Peter Watson and Phillip Merrill

Country: The United States
Court: U.S. District Court, Northern District of California, San Francisco Division
Year of Decision: 2005
Procedural Stage: Motion for Summary Judgment (final decision pending).
Latest development: Plaintiffs replied to Defendants' opposition to Plaintiffs' Motion to Strike (2006 WL 1044850 (Trial Motion, Memorandum and Affidavit) (N.D.Cal. Mar. 17, 2006))

This case, for which a final decision on the merits is still pending, concerns the obligation of U.S. federal agencies to conduct an environmental assessment before supporting projects undertaken by U.S. parties abroad, including the potential adverse effects of greenhouse gas emissions on the environment.²

The Plaintiffs – Friends of the Earth Inc. and Greenpeace Inc., supplemented by several U.S. cities³ – claimed that Peter Watson and Phillip Merrill, in their official capacity as CEO and Vice-President of the Overseas Private Investment Corporation (OPIC) and the Export-Import Bank of the United States (Ex-Im), respectively, had failed to comply with the National Environmental Policy Act 1969 (NEPA). OPIC and Ex-Im are independent government corporations that offers insurance and loan guarantees for projects in developing countries. The NEPA requires that all federal agencies conduct an environmental review of all programs and projects that could have a significant effect on the environment.⁴

According to the Plaintiffs, OPIC and Ex-Im provided financial support to fossil fuel projects abroad that resulted in the release of large quantities of greenhouse gas emissions. This constituted an action that had a significant impact on human environment, and thus triggered the NEPA.⁵ The Plaintiffs sought declaratory and injunctive relief, and the Defendants moved for Summary Judgment based on the following grounds: (1) lack of standing; (2) lack of final

² See *Friends of Earth, Inc. v. Watson*, 2005 WL 2035596, 35 ENVTL. L. REP. 20,179 (N.D.Cal. Aug 23, 2005) (NO. C 02-4106 JSW).

³ City of Boulder, City of Oakland, City of Arcata, and City of Santa Monica.

⁴ See National Environmental Policy Act 1969, Sections 102-103, available at <<http://www.nepa.gov/nepa/regs/nepa/nepaeqia.htm>> (last visited Feb. 5, 2007).

⁵ See *Friends of Earth, Inc. v. Watson*, 2005 WL 2035596, *supra*, fn. 2, at 3.



agency action; (3) OPIC's organic statute precludes judicial review; and (4) OPIC is not subject to the NEPA.⁶

In the Order Denying Defendants' Motion for Summary Judgment the Court held that Plaintiffs had standing to bring their claims. Generally, in order to demonstrate standing

“a plaintiff must show (1) it has suffered an ‘injury in fact’ that is (a) concrete and particularized and (b) actual or imminent, not conjectural or hypothetical; (2) the injury is fairly traceable to the challenged action of the defendant; and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.”⁷

However, if a plaintiff seeks to challenge a procedural violation, some uncertainty about redressability and causality is allowed.⁸ In particular, the Court pointed out, “to demonstrate standing in cases raising procedural issues, environmental plaintiffs need not show that substantive environmental harm is imminent.”⁹ As such, Plaintiffs were not required to present proof that the challenged federal project would have particular environmental effects; they only had to demonstrate that it was “reasonably probable that the challenged action would threaten their concrete interests.”¹⁰ According to the Court, the Plaintiffs had sufficiently demonstrated standing:

“While they concede that the impact of greenhouse gas emissions traceable to projects supported by OPIC and Ex-Im are not yet known with absolute certainty, Plaintiffs contend the only uncertainty is with respect to how great the consequences will be, and not whether there will be any significant consequences.

Moreover, Plaintiffs present evidence demonstrating that projects supported by OPIC and Ex-Im are directly or indirectly responsible for approximately 1,911 million tonnes of carbon dioxide and methane emissions annually, which equals nearly eight percent of the world's emissions and is equivalent to one-third of the total carbon emissions from the United States in 2003.

⁶ *See id.*, at 1.

⁷ *Id.*, at 2 (citing Article III U.S. Constitution).

⁸ *See id.*, at 2 (citing *Defenders of Wildlife*, 504 U.S. at 573 n. 7).

⁹ *Id.*, at 2 (citing *Cantrell v. City of Long Beach*, 241 F.3d 674, 679 n. 4 (9th Cir.2001); *Defenders of Wildlife*, 504 U.S. at 572 n. 7).

¹⁰ *Id.*, at 2 (citing *Citizens for Better Forestry*, 341 F.3d at 969-70 and *City of Sausalito v. O'Neill*, 386 F.3d 1186, at 1197 (9th Cir.2004) (A plaintiff must demonstrate that a government agency violated certain procedural rules and that these rules protect a plaintiff's concrete interests.)) However, because these aspects of the injury in fact test are not disputed in this case, the Court did not need to address them. *See id.*, at 2, fn. 2.



Plaintiff's evidence, if true, further demonstrates that: (1) increased greenhouse gases are the major factor that caused global warming in the twentieth century, (2) global warming that has already occurred has had significant environmental consequences, (3) continued increases in greenhouse gas emissions would continue to increase global warming with consequent widespread environmental impacts, (4) and that these impacts have and will effect areas used and owned by Plaintiffs."¹¹

The Court concluded that the Plaintiffs' evidence was sufficient to demonstrate it was reasonably probable that emissions from projects supported by the Defendants would threaten Plaintiffs' concrete interests.¹² Accordingly, the Defendants' Motion for Summary Judgment was denied.¹³

The relevance of this case is the willingness of the Court to accept the evidence put forward by the Plaintiffs to prove standing. One element of standing is that injury should be traceable to the challenged action of the Defendant. However, the impact of greenhouse gas emissions traceable to OPIC and Ex-Im were not known with absolute certainty. Nonetheless, the Court accepted the Plaintiffs' evidence that OPIC and Ex-Im supported projects that produced greenhouse gases, and that these gases may contribute to global warming, with a risk of adverse effects for the Plaintiffs.

Whether such a claim can be successful in the Netherlands depends on various factors, such as whether the Dutch legal system includes NEPA-like legislation, requiring governmental agencies to conduct environmental assessments of projects abroad. Second, such projects would need to be financed or sponsored by the Dutch Government in order to be analogous to the present case. Third, more research is suggested with respect to the requirement of standing before Dutch courts.

¹¹ *Id.*, at 3

¹² *Id.*, at 3.

¹³ Defendants' grounds for summary judgements were: (1) lack of standing; (2) lack of final agency action; (3) OPIC's organic statute precludes judicial review; and (4) OPIC is not subject to NEPA. *See Friends of Earth, Inc. v. Watson*, 2005 WL 2035596, *supra*, fn. 2, at 1.



2.1.2. BUND and Germanwatch e.v. v. Federal Republic of Germany represented by the Minister of Economy and Labour¹⁴

Country: Germany
Court: Administrative Court Berlin (*Verwaltungsgericht*)
Year of Decision: 2006
Procedural Stage: Final (settlement)

This action for judicial review (*Verpflichtungsklage*) was brought by two German environmental NGOs against a decision of the German Minister for Economy and Labour. In his decision, the Minister had rejected the Plaintiffs' request for information regarding the support of energy production projects by the public export credit agency Euler Hermes. This agency provided economic and political risk insurance for exports to developing countries.

The Plaintiffs invoked the German Access to Environmental Information Act (*Umweltinformationsgesetz* or UIG) in the version of 22 December 2004, as amended on 14 February 2005;¹⁵ the European Community (EC) Emissions Trading Directive (2003/87/EC) (in particular Article 17 that allows for public availability of decisions relating to the allocation of allowances and to the reports of emissions); and Addendum 2, Section 2 of the German Greenhouse Gas Emission Trading Act (*Treibhausgas-Emissionshandelsgesetz*, TEHG), which transposed the EC Directive into German law.

The Administrative Court found the EC Directive and the TEHG inapplicable, as they only concerned purely national (i.e. German) facts and data in connection with the allocation of emission permits to industrial installations on the basis of the national allocation plans. Instead, the Court applied the German Access to Environmental Information Act:

¹⁴ See Bund für Umwelt und Naturschutz Deutschland e.v. (BUND) (German section of NGO Friends of the Earth) and Germanwatch e.v. v. Federal Republic of Germany represented by the Minister of Economy and Labour (BMWA) 2006, VG 10A 215.04, Administrative Court Berlin (*Verwaltungsgericht*) (10 January 2006). For an unofficial translation to English, see

<<http://216.239.59.104/search?q=cache:SV3O2La77BYJ:www.climatelaw.org/media/Germany/de.export.decision.eng.doc+http://www.climatelaw.org/media/Germany/de.export.decision.eng.doc&hl=en&ct=clnk&cd=1>> (last visited March 4, 2007). The case is attached in the Annex. See also

<<http://www.germanwatch.org/rio/herbpe04.pdf>> (last visited 6 December 2006);

<<http://www.germanwatch.org/presse/2006-02-02e.htm>> (last visited 6 December 2006).

¹⁵ In Germany, the federal Government passed a freedom of information law in 2005 (*Umweltinformationsgesetz* or UIG). Six of the sixteen Bundesländer - Berlin, Brandenburg, Nordrhein-Westfalen, Schleswig-Holstein, Hamburg and Bremen - have approved individual *Informations-Freiheits-Gesetze*. See Wikipedia, *Freedom of Information Legislation*, available at <http://en.wikipedia.org/wiki/Freedom_of_Information_Act#Germany> (last visited 2 February, 2007). The German Freedom of Information Act (*Gesetz zur Regelung des Zugangs zu Informationen des Bundes (Informationsfreiheitsgesetz – IFG)*) is available in German at <<http://www.bundesbank.de/download/presse/publikationen/ifg.pdf>> (last visited Feb. 2, 2007).



“§ 3.1 of the UIG stipulates that it is the right of every person, in accordance with the provisions of the UIG, to have free access to environmental information held by or for public authorities (‘the obliged entity’). On the basis of the amended UIG § 2.1, the Ministry of Economic Affairs and Labour, BMWA, seems generally to be an obliged entity and obliged to make available information requested on the basis of the UIG as a section of the German Federal Government.”¹⁶

The Court recognized that “the primary purpose of an export credit is to support the German economy and not environmental protection.”¹⁷ However, when granting export credit for energy production projects, this would constitute a measure and activity that would likely affect the environment. The Court reasoned as follows:

“The wording of the Information Act fundamentally corresponds to Directive 2003/4/EC and is – due to its relatively vague formulations – subject to interpretation. To enable the most effective implementation of European law, such an interpretation must be broad. Therefore, measures and activities, whose primary purpose is not the protection of the environment, may also fall under Information Act § 2.3 subparagraph 3 b) because they nevertheless follow an important secondary or intermediate purpose. According to the defendant’s own statements found in many of its publications, as well as in the international agreements on the granting of export credits, environmental aspects do play a notable role in the process of granting export credit support/guarantees. In the defendant’s own words, environmental aspects constitute a ‘definite component of the decision process.’”¹⁸

In support for its conclusion that granting or denying export credit support/guarantees will positively or negatively affect the implementation of a project and therewith will, with some probably, also affect the environment, the Court referred to the Organisation for Economic Co-Operation and Development (OECD) “Common Approaches” which had been transposed into German law by the “Guidelines for the consideration of ecological, social and development matters.”¹⁹

¹⁶ See Bund für Umwelt und Naturschutz Deutschland, unofficial translation, *supra*, fn. 14, at 1 (unofficial translation).

¹⁷ *Id.*, at 2(b)

¹⁸ *Id.*, at 3(b)

¹⁹ See *id.*, at 3 (referring to the OECD Recommendation on common approaches on environment and officially supported export credits, TD/ECG (2005), 3, February 25, 2005): “Noting that OECD Ministers in 2001 have recognized that export credit policy can contribute positively to sustainable development and should be coherent with its objectives.”). The German version of the Guidelines (*Leitlinien für die Berücksichtigung von ökologischen, sozialen und entwicklungspolitischen Gesichtspunkten*), are available at [available at <http://www.agaportal.de/pdf/leitlinien_umwelt.pdf>](http://www.agaportal.de/pdf/leitlinien_umwelt.pdf) (last visited Feb. 7, 2007).



The Guidelines provided that with respect to export credit support for a value of “less than € 15 Million and of less than 2 years duration, the duty of the State with respect to the environment seems not to go beyond the general duty of the state to make sustainable decisions.”²⁰ Therefore, the Court found it “questionable whether information relating to projects that do not require an environmental impact assessment can qualify as environmental information in terms of [UIG] § 2.3 subparagraph 3 b).”²¹

The Defendant, the Minister of Economy and Labour, argued that the granting of the requested information could compromise international relations.²² The Court rejected this argument on the basis that any ground for the refusal of information must be interpreted in a restrictive way.²³ In addition, the Court found that the request for information could neither be denied on the basis that the request was manifestly unreasonable (UIG § 8.2 Nr. 1) nor on the ground that the confidentiality of commercial information was at stake (UIG § 9.1 Nr. 3). Commercial interests were sufficiently taken into account if the names of companies were taken out of the disclosed information.²⁴

What is interesting in this case is that the Court explicitly recognized that the granting of export credits in the field of energy production can constitute a measure or activity that may affect the environment. It should be noted that the Court did not issue a judgment, but rather proposed a settlement that was accepted by both parties. The settlement essentially granted the Plaintiffs’ request for information, but with certain limits, including temporal scope.²⁵

Transposing this case to the Dutch legal system, we note the *Wet openbaarheid van bestuur* adopted in 1991.²⁶ Further research into this law would be necessary to assess the possibilities of success of a request of access to government (supported) activities (abroad) that may have an impact on the climate.

²⁰ Bund für Umwelt und Naturschutz Deutschland, unofficial translation, *supra*, fn. 14, at 2(b)

²¹ *Id.*, at 2(b).

²² *Id.*, at 5 (referring to UIG, § 8. 1 Nr. 1).

²³ *Id.* (referring to Directive 2003/4/EC, art. 4.2, 2nd sentence).

²⁴ *Id.*, at 5.

²⁵ *Id.*, at 6 and 7.

²⁶ See *Wet van 31 oktober 1991, houdende regelen betreffende de openbaarheid van bestuur*, available at <<http://www.wetten.nl>> (last visited Feb. 4, 2007).



2.1.3. Center for Biological Diversity, Bluewater Network, and Sierra Club v. Spencer Abraham et al.

Country: United States
Court: United States District Court, Northern District, California
Year of Decision: 2002
Procedural Stage: Final (motion for summary judgment. motion for partial summary judgment, summary judgment).

In this case,²⁷ the Plaintiffs were three environmental organizations that were seeking the enforcement of certain provisions of the U.S. Energy Policy Act of 1992.²⁸ These provisions include several measures designed to encourage the wider use of alternative fuel vehicles (AFVs). AFVs operate on alcohol-based fuels, natural gas, biomass fuels, electricity, and other sources aside from petroleum.²⁹ The Defendants were eighteen federal government agencies and their heads, all of whom were being sued in their official capacities.³⁰

In January 2002, the Plaintiffs filed a complaint with the U.S. District Court for the Northern District of California alleging that the Defendants had failed to comply with the Energy Policy Act provisions on the acquisition of AFVs. Both parties essentially agreed that the Government had failed to live up to its duties under the Energy Policy Act.³¹ However, the Defendants asserted that the Plaintiffs lacked standing because they had not identified “any concrete and particularized injuries caused by the government’s conduct and redressable through judicial intervention.”³²

As to the issue of standing, the Court applied the same test as that in *Friends of Earth, Inc. v. Watson*.³³ In order to satisfy the standing requirements imposed by Article III of the U.S. Constitution,³⁴ held the Court, a plaintiff must show that (1) it has suffered an injury in fact

²⁷ See *Center For Biological Diversity v. Abraham*, 218 F.Supp.2d 1143 (N.D.Cal. Jul 30, 2002) (NO. 3:02CV00027).

²⁸ See U.S. Energy Policy Act, 1992, Pub. L. 102-486, Oct. 24, 1992, 106 Stat. 2776, 42 U.S.C. 13201, available at <http://www.law.cornell.edu/uscode/html/uscode42/usc_sup_01_42_10_134.html> (last visited Feb. 7, 2007).

²⁹ See *Center For Biological Diversity v. Abraham*, 218 F.Supp.2d 1143, supra, fn. 27, at 1148 (Introduction).

³⁰ Defendants, all sued in their official capacity, are the secretaries of Energy; Commerce; Defense; Interior; Veterans Affairs; Transportation; Agriculture; Health and Human Services; Housing and Urban Development; Labor; State; and Treasury; the postmaster general of the U.S. Postal Service; the administrators of the National Aeronautics and Space Administration; the U.S. Environmental Protection Agency; and the General Services Administration; the chair of the U.S. Nuclear Regulatory Commission; and the U.S. attorney general.

³¹ See *Center For Biological Diversity v. Abraham*, 218 F.Supp.2d 1143, supra, fn. 27, at 1151.

³² See *id.*, at 1153.

³³ See *supra*, Section 2.1.1.

³⁴ See U.S. Constitution, art. III, available at <http://www.archives.gov/national-archives-experience/charters/constitution_transcript.html> (last visited Feb. 7, 2007).



that is concrete, particularized, and actual or imminent; (2) the injury is fairly traceable to the challenged action of the defendant(s); and (3) it is likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.³⁵ The Court further pointed out that an association (such as Plaintiffs) has standing to bring suit on behalf of its members when the latter would otherwise have standing to sue in their own right, the interests at stake are germane to the organization's purpose, and neither the claim asserted nor the relief requested requires the participation of individual members in the lawsuit.³⁶

The Plaintiffs claimed that they had experienced or were experiencing injuries relevant to establishing standing through, *inter alia*, (1) concerns regarding the adverse health effects of smog and air pollution caused by vehicle emissions; (2) concerns about and assertions regarding global warming; (3) traffic complaints; and (4) aesthetic injuries.³⁷

The Court held that some of these injuries were not sufficient to demonstrate standing. First of all, it was unclear to the Court how "traffic problems would be eased by an injunction that would require Defendants to buy cars running on alternative fuels rather than gasoline."³⁸ Second, and most important for the purposes of this Report, the Court found that the concerns regarding global warming were "too general, too unsubstantiated, too unlikely to be caused by defendants' conduct, and/or too unlikely to be redressed by the relief sought to confer standing."³⁹

The Court did, however, rule that Plaintiffs had standing on the basis of aesthetic injuries and adverse health effects of smog and air pollution caused by the Defendants' conduct.⁴⁰ The Court noted that the Parties agreed that according to the U.S. Environmental Protection Agency, vehicles that run on gasoline emit certain pollutants into the air that can lead to health problems and reduced visibility.⁴¹ It also referred to the prior case law to the effect that "[being] compelled to breathe air less pure than that mandated by the Clean Air Act

³⁵ See *Center For Biological Diversity v. Abraham*, 218 F.Supp.2d 1143, *supra*, fn. 27, at 1154 (referring to *Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc.*, 528 U.S. 167, 180-181, 120 S.Ct. 693, 145 L.Ed.2d 610 (2000)).

³⁶ See *id.*, at 1154 (referring to *Friends of the Earth, Inc. v. Laidlaw Environmental Services (TOC), Inc.*, 528 U.S. 167, 181 (2000)).

³⁷ See *id.*, at 1154.

³⁸ *Id.*, at 1155.

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*



constitutes an injury sufficient to support standing,⁴² as well as jurisprudence supporting the proposition that aesthetic injuries can demonstrate standing.⁴³ According to the Court, as long as the injuries were “concrete and particularized, [they] were sufficient even if many people suffer them.”⁴⁴ Moreover, given the personal contact of the Members of the Plaintiffs with air pollution the concerns were reasonable and sufficient to show an injury.⁴⁵

As to the question whether the injuries to health and aesthetic injuries were traceable to the Defendants’ conduct, the Court made clear that the Plaintiffs did not need to establish causation with an absolute degree of certainty;⁴⁶ rather they must establish a “reasonable probability” that the challenged action threatened their concrete interests.⁴⁷ The Court found it is reasonably likely that if the Defendants had met their AFV requirements, the alleged injuries would have been less severe because there would have been less pollution from government vehicles, and also because “the much larger private market would follow the government’s lead.”⁴⁸ Given these considerations, the Court found that the Plaintiffs had sufficiently demonstrated standing.

The Court could therefore go on to hold on the merits that the agencies’ failure to comply with reporting requirements of the Energy Policy Act was a failure to act, in the context of the Administrative Procedure Act.⁴⁹ It also found that the enjoining of agency compliance with reporting requirement was consistent with the Energy Policy Act’s underlying purposes. Thus, in sum, the Court denied the Defendants’ motion for summary judgment and granted in part and denied in part Plaintiffs’ motion for partial summary judgment and summary judgment.⁵⁰

The importance of this case for climate change litigation is that while the Court rejected standing on the basis of general concerns for global warming, it did recognize standing on

⁴² *Id.*, at 1155 (citing *NRDC v. U.S. E.P.A.*, 507 F.2d 905, at 910 (9th Circuit 1974)).

⁴³ *See id.*, at 1155 (citing *Cantrell v. City of Long Beach*, 241 F.3d 674, at 681 (9th Circuit 2001)).

⁴⁴ *See id.*, at 1155 (citing *Sierra Club*, 405 U.S. at 734, 92 S.Ct. 1361).

⁴⁵ *See id.*, at 1155 (citing *Laidlaw*, 528 U.S. at 184-85, 120 S.Ct. 693 (holding that “reasonable concerns” regarding nearby pollution discharge affecting recreational and aesthetic interests suffice as an injury)).

⁴⁶ *See id.*, at 1156 (citing *Hall v. Norton*, 266 F.3d 969, at 977 (9th Cir.2001)).

⁴⁷ *Id.*, at 1156 (citing *Hall*, 266 F.3d at 977)

⁴⁸ *Id.*, at 1156.

⁴⁹ *Id.*, at 1158. *Cf.* United States Administrative Procedure Act, 5 U.S.C. § 702, available at http://www.law.cornell.edu/uscode/html/uscode05/usc_sec_05_00000702----000-.html (last visited Feb. 7, 2007) (“A person suffering a legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof.”).

⁵⁰ *See Center For Biological Diversity v. Abraham*, 218 F.Supp.2d 1143, *supra*, fn. 27, at 1164.



bases which are intrinsically linked to global warming, namely aesthetic injuries caused by greenhouse gas emissions and adverse health effects of smog and air pollution.

Bringing a case such as this one in the Netherlands would seem contingent upon there being national legislation in place that is similar to the Energy Policy Act and that incorporates provisions on the acquisition of alternative fuel vehicles. Furthermore, while it seems from this case that injury cannot necessarily be based on the threat of global warming *per se*, an argument to fight governmental decisions also affecting the climate can be made on the basis of health effects or aesthetic injuries caused by air pollution.

2.1.4. Australian Conservation Foundation et al. v. Minister for Planning

Country: Australia
Court: Victorian Civil and Administrative Tribunal, Australia
Year of Decision: 2004
Procedural Stage: Final

Partly due to their large resource of coal,⁵¹ Australia is one of the world's largest greenhouse gas emitters per capita.⁵² In this Australian case,⁵³ a power station in Victoria was planning the future development of an additional coalfield to enable the power station to run until the year 2031. The mining of this coalfield would require certain licenses and an "environmental effects statement." This statement had been issued and it described the direct implications of coal mining on the emission of greenhouse gases. However, the statement did not address the production of greenhouse gases by the burning of coal won from the additional field. The Minister of Planning set up a separate Inquiry Panel to address the issue, but excluded from the inquiry climate change impacts from the use of coal to produce energy. The Plaintiffs⁵⁴ challenged this exclusion and sought judicial review of the decision rendered by the Minister.

⁵¹ See Energy Information Administration, *available at* <<http://www.eia.doe.gov/emeu/cabs/ausenv.html>> (last visited Feb 20, 2007)

⁵² See Sustainability Victoria, *Australia's Emissions*, *available at* <http://www.greenhousegases.gov.au/about_greenhouse_gases/australia's_emissions.html> (last visited Feb. 20, 2007)

⁵³ *Australian Conservation Foundation v. Minister for Planning* 2004 VCAT 2029, 140 LGERA 100, Victorian Civil and Administrative Tribunal, Australia, 29 October 2004, also cited as *Australian Conservation Foundation v. Latrobe City Council*, *available at* <<http://www.austlii.edu.au/au/cases/vic/VCAT/2004/2029.html>> (last visited Feb. 7, 2007).

⁵⁴ Australian Conservation Foundation, World Wildlife Fund Australia, Environment Victoria, and the Climate Action Network Australia.



The Victorian Civil and Administrative Tribunal first examined the provisions of the 1997 Victorian Planning and Environment Act (Act) and their underlying objectives.⁵⁵ The objectives were to provide sustainable use and development of land, the protection of natural resources and maintenance of ecological processes, and to balance the present and future interests of all Victorians.⁵⁶ Moreover, the Act specifically provided that the Minister had to take into account any significant effect on the environment by the development of an additional coalfield.⁵⁷

The Tribunal found that the further development of a brown coal mine would make it more probable that the power station would continue to operate in the future. Therefore, the development of the mine would make it more likely that a greater amount of greenhouse gases would be emitted into the atmosphere than would otherwise be the case. According to the Tribunal, this could have significant environmental effects.⁵⁸

The Tribunal concluded that the Inquiry Panel had failed to live up to the requirements of the Act by denying submissions on the approval of the mine that relate to the adverse environmental effects caused by greenhouse gas emissions of a future additional coalfield.⁵⁹ The Panel was obliged to include in their assessment information about the additional negative environmental effects of the future mine.⁶⁰

To support the ruling, the Tribunal referred to the objectives of the Act: the “maintenance of ecological processes” and the “future interest of all Victorians.”⁶¹ The Tribunal held that while the expansion of the mine would be in the present interest of Victorians, the interests of the future should also be taken into account. The further coal generation of the mine would lead to significant environmental effects in the future. Therefore the Tribunal found that when approving the future development of a coal mine, a provision reducing greenhouse gas emission could be appropriate, not only to maintain ecological processes but also to balance present and future interests.⁶²

⁵⁵ See Australian Conservation Foundation, *supra*, fn. 53, at 108. The Victorian Planning and Environment Act 1997 is available at <http://www.austlii.edu.au/au/legis/vic/consol_act/paea1987254/> (last visited Feb. 7, 2007).

⁵⁶ See Australian Conservation Foundation, *supra*, fn. 53, at 108.

⁵⁷ Victorian Planning and Environment Act 1997, Section 12 (2).

⁵⁸ See Australian Conservation Foundation, *supra*, fn. 53, at 110.

⁵⁹ See *id.*, at 110.

⁶⁰ See *id.*

⁶¹ See *id.*, at 109

⁶² See *id.*



What is interesting to note in this case is that the Tribunal explicitly acknowledged that greenhouse gas emission “clearly has the potential to give rise to ‘significant’ environmental effects” on future generations.⁶³ Therefore, when considering the further development of the coalfield, an environmental assessment should take into account all submissions, especially those concerning the negative effects of greenhouse gas emissions produced by the coalfield. Accordingly, in the Australian State of Victoria, there is an obligation for the Government to consider the environmental effects of global warming on future generations when contemplating projects that bring along additional greenhouse gas emissions.

For such a case to be successful in the Netherlands, some basic requirements would need to be met. First, Dutch law, or through it international law, should oblige planning authorities to conduct environmental assessments when considering projects that bring along greenhouse gas emissions. While emphasizing the need for more research in this respect, it is suggested that the 1979 Environmental Management Act (*Wet Milieubeheer*) might be of interest.⁶⁴

⁶³ *Id.* at 109.

⁶⁴ See 1979 Environmental Management Act (*Wet Milieubeheer*), available at <<http://www.wetten.nl/wet%20milieubeheer>> (last visited Feb. 7, 2007). For more information on the *Wet Milieubeheer*, see Dutch Ministry of Housing, Spatial Planning and the Environment (*Ministerie van Volkshuisvesting, Ruimtelijke Ordening and Milieubeheer*), Information Folder on the Environmental Management Act (in Dutch), available at <<http://www.vrom.nl/pagina.html?id=24176>> (last visited Feb. 20, 2007). See for VROM International, see <<http://www.vrom.nl/pagina.html?id=25089>> (last visited Feb 26, 2007).



2.1.5. Commonwealth of Massachusetts et al. v. Environmental Protection Agency et al.

Country:	United States
Court:	United States Court of Appeals, District of Columbia Circuit
Year of decision:	2005
Type of procedural stage:	Appeal (final decision pending)
Subsequent developments:	Petition for rehearing en banc dismissed by the U.S. Court of Appeals, District of Columbia Circuit on December 2, 2005 (Commonwealth of Massachusetts v. Environmental Protection Agency, 433 F.3d 66, 61 ERC 1671, 369 U.S. App. D.C. 56). Petition for writ of certiorari to the U.S. Supreme Court granted on June 26, 2005 (Massachusetts v. E.P.A., 126 S.Ct. 2960, U.S., 2006). On November 29, 2006, the U.S. Supreme Court heard oral arguments (Massachusetts v. E.P.A., Oral Arguments, November 29, 2006, 75 USLW 3311). Last development: Motion of respondents Alliance of Automobile Manufacturers, et al., for divided argument granted (Massachusetts v. E.P.A., 127 S.Ct. 617, 166 L.Ed.2d 427, 75 USLW 3262 (U.S. Nov 13, 2006) (NO. 05-1120))

In this case, a final decision of which is still pending as of March 11, 2007, twelve U.S. States, three cities, a U.S. territory, and thirteen NGOs filed a petition with the U.S. Court of Appeals, District of Columbia Circuit seeking review of a 2005 order of the Environmental Protection Agency (EPA) refusing to regulate greenhouse gas emissions from motor vehicles, such as carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons (HFCs).⁶⁵

The Petitioners claimed that Section 202(1)(a) of the U.S. Clean Air Act⁶⁶ (CAA) grants the EPA the authority to prescribe standards applicable to the emission of any air pollutant from new motor vehicles.⁶⁷ The EPA denied having this authority under the CAA, and stated that, even if it did, it would not exercise the authority at this time.⁶⁸

⁶⁵ See *Mass. v. E.P.A.*, 415F. 3d 50, 60 ERC 1641, 367 U.S. App. D.C. 282 (United States Court of Appeals, District of Columbia Circuit), 35 *Env'tl. L. Rep.* 20,148, 13 *A.L.R. Fed.* 2d 899 (July 15, 2005). Note: Opinion dissenting in part and concurring in the judgment filed by Circuit Judge Sentelle. Opinion dissenting in Nos. 03-1361, 03-1362, 03-1363, and 03-1364 filed by Circuit Judge Tatel. See *further infra*, fns. 80-83 and accompanying text.

⁶⁶ See United States Clean Air Act, Section 202(a)(1), 42 U.S.C. § 7521(a)(1) (“The Administrator shall by regulation prescribe [...] standards applicable to the emission of any air pollutant from [...] new motor vehicles [...] which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.”). The U.S. Clean Air Act is *available at* <<http://www.epa.gov/air/caa/>> (last visited Feb. 7, 2007).

⁶⁷ See *Mass. v. E.P.A.*, 415F. 3d 50, *supra*, fn. 65, at 53; Brief for the Petitioners, 2006 WL 2563378 (U.S.), at pp. 1-2

⁶⁸ See *Mass. v. E.P.A.*, 415F. 3d 50, *supra*, fn. 65, at 53.



Intervening on behalf of the EPA, the States of Michigan, Texas, Idaho, North Dakota, Utah, South Dakota, Alaska, Kansas, Nebraska, and Ohio, and the Amicus State of Indiana, submitted that:

“The CAA does not authorize EPA to regulate the emission of greenhouse gases for the purpose of addressing global climate change. One of the key regulatory provisions in the Act is the National Ambient Air Quality Standard (NAAQS) system under which the states have the primary responsibility for controlling air pollution to meet the national standards. The NAAQS system, however, addresses air quality at or near the earth’s surface; it does not address greenhouse gases at many of the altitudes at which they occur. In addition, the CAA does not provide states with the power to compel a reduction in the emissions of greenhouse gases from foreign countries that come to be located in a state. In light of the homogenous concentrations of CO₂ throughout the atmosphere and the substantial emissions of CO₂ from foreign sources, a NAAQS for CO₂ would impose an air quality standard on the states that would be impossible for them to meet. Such a regulatory scheme is implausible and could not have been intended by Congress.”⁶⁹

On the question of jurisdiction, the Court held that under the Clean Air Act, the Court of Appeals has exclusive jurisdiction over nationally applicable regulations promulgated, or final actions taken, by the EPA, and that the EPA’s denial of the rulemaking petition seeking regulation of greenhouse gas emissions from motor vehicles was a “final action” for purposes of the Administrative Procedure Act (APA) since the petition sought regulations national in scope.⁷⁰

The Petitioners claimed standing on the basis that they, their citizens or members, will in the future become the victim of global warming, which scientists say is caused by high emissions of (man-made) greenhouse gases, and which the EPA has refused to regulate. In support of their argument, the Petitioners filed with the Court two volumes of declarations from scientists, engineers, state officials, homeowners, users of the nation’s recreational resources, and other individuals, predicting catastrophic consequences from global warming caused by greenhouse gases, including loss of or damage to state and private property, frequent intense storm surge floods, and increased health care costs.⁷¹

⁶⁹ See Brief for the Intervenor, 2005 WL 257458 (D.C. Cir.), at pp.9-10

⁷⁰ See *Mass. v. E.P.A.*, 415 F. 3d 50, *supra*, fn. 65, at 53 (relying on 5 U.S.C.A. § 551, Clean Air Act, § 307(b)(1), and 42 U.S.C.A. § 7607(b)(1)).

⁷¹ *Id.*, at 55 (quoting *Sierra Club v. EPA*, 292 F.3d 895, 899 (D.C.Cir.2002); *Lujan v. Defenders of Wildlife*, 504 U.S. 555 (1992); and the U.S. Federal Rules of Civil Procedure, Rule 56(e) (“[...] When a motion for summary



As the “‘merits inquiry and the statutory standing inquiry often overlap’ and ‘are sometimes identical, so that it would be exceedingly artificial to draw a distinction between the two,’” the Court went on to proceed to the merits with respect to the EPA’s decision not to regulate on the grounds, among others, that the effect of greenhouse gases on climate is unclear and that the models used to predict climate change might not be accurate.⁷² Thus, the Court decided to assume *arguendo* that EPA had statutory authority to regulate greenhouse gases from new motor vehicles and to address the question whether EPA properly declined to exercise that authority.⁷³

Held the Court:

“[I]t is not accurate to say, as petitioners do, that the EPA Administrator’s refusal to regulate rested entirely on scientific uncertainty, or that EPA’s decision represented an ‘open-ended invocation of scientific uncertainty to justify refusing to regulate.’ A ‘determination of endangerment to public health,’ the Court [Court of Appeals D.C. Circuit] said in *Ethyl*, ‘is necessarily a question of policy that is to be based on an assessment of risks and that should not be bound by either the procedural or the substantive rigor proper for questions of fact.’ [...] [A] reviewing court ‘will uphold agency conclusions based on policy judgments’ ‘when an agency must resolve issues “on the frontiers of scientific knowledge.”’⁷⁴

The Court concluded that even if the EPA had statutory authority to regulate greenhouse gases from new motor vehicles, the EPA had properly declined to exercise that authority as the EPA’s denial of the rulemaking petition was based on “policy” considerations including scientific uncertainties regarding climate change and endangerment to public health.⁷⁵

In a dissenting opinion, Judge Tatel wrote that “[a]lthough this case comes to us in the context of a highly controversial question--global warming--it actually presents a quite traditional legal issue: has the Environmental Protection Agency complied with the Clean Air Act?”⁷⁶

judgment is made and supported as provided in this rule, an adverse party may not rest upon the mere allegations or denials of the adverse party’s pleading, but the adverse party’s response, by affidavits or as otherwise provided in this rule, must set forth specific facts showing that there is a genuine issue for trial. If the adverse party does not so respond, summary judgment, if appropriate, shall be entered against the adverse party.”)

⁷² *See id.*, at 55-56.

⁷³ *See id.*

⁷⁴ *See id.*, at 58 (referring to *Ethyl Corp. v. EPA*, 541 F.2d 1 (D.C.Cir.1976); *Envtl. Def. Fund v. EPA*, 598 F.2d 62, 82 (D.C.Cir.1978)).

⁷⁵ *Id.*

⁷⁶ *See id.*, at 82 (dissenting opinion, Tatel, Circuit Judge).



Judge Tatel believed that EPA had both misinterpreted the scope of its statutory authority and failed to provide a statutorily based justification for refusing to make an endangerment finding.⁷⁷ He would have granted the petitions for review.⁷⁸

The Petition for rehearing en banc was dismissed by the U.S. Court of Appeals, District of Columbia Circuit on December 2, 2005.⁷⁹ The Petition for writ of certiorari to the United States Supreme Court was granted on June 26, 2006.⁸⁰ On November 29, 2006, the U.S. Supreme Court heard oral arguments.⁸¹ The eagerly awaited final decision is expected to be handed down in July 2007.

This case could be relevant before a Dutch court if there is legislation similar to the U.S. Clean Air Act, making it possible for or requiring a Dutch government agency to regulate greenhouse gas emissions. The issue of standing, i.e. whether the refusal to regulate greenhouse gases causes damages and whether those damages can be redressed by a favorable decision, would appear to be similar in a Dutch administrative court. The Petitioner would have to prove that he or she has a significant *belang*, a special interest, in a favorable decision.

2.1.6. Lignite Energy Council v. Minnesota Public Utilities Commission

Country: State of Minnesota, United States
Court: Minnesota Court of Appeals
Year of decision: 1997, Petition for review denied 18 August 1998
Type of procedural stage: Appeal (final)

In 1994 the Minnesota Public Utilities Commission (MPUC) set final environmental cost values⁸² for certain pollutants, including carbon dioxide (CO₂). In the case *Lignite Energy Council v. Minnesota Public Utilities Commission*,⁸³ the Petitioner sought to appeal this

⁷⁷ *Id.*

⁷⁸ *Id.*

⁷⁹ See *Mass. v. E.P.A.*, 433 F.3d 66, 61 ERC 1671, 369 U.S. App. D.C. 56.

⁸⁰ *Mass. v. E.P.A.*, 126 S.Ct. 2960, U.S., 2006, 74 USLW 3713, 74 USLW 3720, 75 USLW 3018, 06.

⁸¹ *Mass. v. E.P.A.*, Oral Arguments, November 29, 2006, 75 USLW 3311. See also

<<http://www.supremecourtus.gov/qp/05-01120qp.pdf>> (last visited Dec. 5, 2006);

<<http://www.supremecourtus.gov/docket/05-1120.htm>> (last visited Dec. 5, 2006);

<http://www.supremecourtus.gov/oral_arguments/argument_transcripts/05-1120.pdf> (last visited Dec. 5, 2006) (oral arguments transcript).

⁸² Environmental cost values determine what prices need to be paid, under State law, for environmental damage caused by energy production.

⁸³ See *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993*, Chapter 356, Section 3, Minnesota Court of Appeal, 19 May 1997, 578 N.W. 2d 794, also available at



decision, claiming that the MPUC in doing so exceeded its authority and/or acted arbitrarily and/or capriciously.⁸⁴ The Petitioner, Lignite Energy Council (LEC) is a non-profit trade association representing the interests of lignite⁸⁵ fuel producers, users, and suppliers.

The LEC based its claim on Chapter 356, Section 3 of the Laws of Minnesota of 1993, (Environmental Cost Statute),⁸⁶ asserting that the MPUC's decision to set values for CO₂ is (i) not supported by substantial evidence and/or (ii) its decision was arbitrary and capricious because the testimony of an expert witness (and the bases for his testimony) was grounded in incomplete data, speculation, conjecture, and uncertainty; and (iii) that there is no substantial evidence that CO₂ causes or contributes to serious environmental damage.⁸⁷

The MPUC defended its decision by claiming on the basis that it was made only after initiating a contested case proceeding, and that it had appointed an administrative law judge to preside over the proceedings.⁸⁸ According to the MPUC, this judge conducted a careful review of (1) Intergovernmental Panel on Climate Change (IPCC) research and the peer review process; (2) research on CO₂ values by other scientific review panels; (3) the uncertainties in the scientific reports and how the uncertainties are acknowledged in the scientific community; (4) Dr. Ciborowski's testimony and the basis for his testimony; (5) damage estimates; (6) discount rates; (7); the Minnesota Pollution Control Agency's and the Attorney General's recommended values; and (8) several parties' recommendations that a zero value be used.⁸⁹

The Court held that the MPUC's order setting final environmental cost values for CO₂ was entitled to special deference, where such order was made after the legislature assigned the task

<<http://www.oah.state.mn.us/aljBase/25008632.rt3.htm>> (last visited Feb. 7, 2007). Petition for review denied 18 August 1998.

⁸⁴ *Id.*, at 799.

⁸⁵ Lignite, often referred to as brown coal, is the lowest rank of coal and used almost exclusively as fuel for steam-electric power generation. See Wikipedia, *Lignite*, available at <<http://en.wikipedia.org/wiki/Lignite>> (last visited Feb. 7, 2007).

⁸⁶ See Minnesota Statute § 216B.2422, subd. 3(a) (“The commission shall, to the extent practicable, quantify and establish a range of environmental costs associated with each method of electricity generation. A utility shall use the values established by the commission in conjunction with other external factors, including socioeconomic costs, when evaluating and selecting resource options in all proceedings before the commission, including resource plan and certificate of need proceedings.”).

⁸⁷ See *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993*, 578 N.W. 2d 794, *supra*, fn. 83, at 799

⁸⁸ See *id.*, at 796. See also Minnesota Statute § 216.161 (1996).

⁸⁹ See *id.*, at 800 (referring to M.S.A. § 261B.2422, subd. 3(a)).



of determining environmental cost values to the administrative agency it presumably thought was the most appropriate to take on that responsibility.⁹⁰

The Court found that the MPUC's order was supported by substantial evidence, including expert testimony and research on climate change; the MPUC's decision that CO₂ negatively affects the environment was proper; and that the MPUC made findings of fact, adequately explained the basis underlying the determinations, and acted pursuant to a valid delegation of authority from the legislature in an area in which the courts were not accustomed to dealing.⁹¹

In sum, the Court concluded that the MPUC's decision setting final environmental cost values for CO₂ was supported by substantial evidence, was not contrary to legislative intent, and was otherwise not affected by legal error.⁹² Therefore, LEC's appeal of the decision failed.

As this case concerns an appeal of a governmental decision in favor of the environment, it is doubtful that it is of *direct* use for the Client. However, to the extent to which there is a Dutch (semi-) governmental agency that has been charged with a similar task as the MPUC, the findings of the Court could possibly be of assistance if a decision by such agency is challenged by Dutch manufacturers.

2.2. INTERIM CONCLUSIONS AND SUGGESTIONS

In this Part we have analyzed six public/administrative law cases from different jurisdictions that concern the effects of global warming. The cases generally deal with government or government agencies alleged to have failed to comply with environmental legislation or, as in the *Minnesota* case, are accused of overstepping their mandate. There is also the German case, in which the Court granted the Plaintiffs' request for information of government supported projects abroad that may impact the climate.

In the cases from the United States, much if not all of the attention has been focused on standing. A plaintiff needs to prove standing before a court or tribunal can reach a judgment on the merits. As demonstrated, a plaintiff must show that it has suffered an injury that is

⁹⁰ See *id.*, at 799 (referring to M.S.A. § 261B.2422, subd. 3(a)).

⁹¹ See *id.*, at 800 (referring to M.S.A. § 261B.2422, subd. 3(a)).

⁹² See *id.*



traceable to the challenged action of the defendant, and that the injury can be redressed by a favorable decision. Courts have interpreted standing broadly in this area of environment-related litigation: a plaintiff is not obliged to show that substantive environmental harm is imminent and traceable to the defendant's action. Rather, the plaintiff only has to demonstrate that it is *reasonably probable* that the challenged action will threaten their concrete interests. On this basis, standing on the basis of injury caused by the emissions of greenhouse gases was accepted in some cases. In two cases it was not: *Center for Biological Diversity* and *Commonwealth of Massachusetts*. In the former, standing was, however, allowed on the basis that emissions can cause health and aesthetic injuries. In the latter case, the issue of standing became moot since the Court concluded that even if the EPA had statutory authority to regulate greenhouse gases from new motor vehicles, the EPA properly declined to exercise that authority.

The courts in Germany and Australia also recognized that greenhouse gas emissions can lead to climate change, allowing the public access to information, and overturning a decision by the Government not to consider the consequences for the climate when approving the development of a project, respectively.

In sum, the administrative law cases demonstrate the possibility of success, in various jurisdictions, of ensuring government compliance with legislation with an aim to protect the environment against the adverse effects of greenhouse gas emissions.



3. CIVIL LAW

3.1 CASE SUMMARIES

3.1.1. State of Connecticut, et al. v. American Electric Power Company, Inc., et al.; Open Space Institute, et al., v. American Electric Company, Inc., et al.

Country: United States
Court: U.S. District Court, Southern District of New York
Year of Decision: 2005
Procedural Stage: Motion to Dismiss. Final Judgment.

This civil lawsuit⁹³ is the first U.S. case addressing the problem of global warming through the federal common law doctrine of public nuisance. Public nuisance is “a condition dangerous to health, offensive to community moral standards, or unlawfully obstructing the public in the free use of public property.” It includes “any unreasonable interference with rights common to all members of community in general and encompasses public health, safety, peace, morals or convenience.”⁹⁴ It affects “rights enjoyed by citizens as part of public and must affect a considerable number of people or an entire community or neighborhood, although the extent of damage may be unequal.”⁹⁵

In two separate lawsuits, various U.S. states⁹⁶ and non-profit land trusts⁹⁷ sued electric utility companies.⁹⁸ The Plaintiffs sought an order holding the Defendants liable for contributing to an ongoing public nuisance: global warming. Furthermore, the Plaintiffs sought the abatement of the Defendants’ contribution to the public nuisance (global warming) by a reduction of their greenhouse gas emissions.

⁹³ See *Connecticut v. American Elec. Power Co., Inc.*, 406 F.Supp.2d 265, 35 Env'tl. L. Rep. 20,186 (S.D.N.Y. Sep 22, 2005) (NO. 04 CIV. 5669 (LAP), 04 CIV. 5670 (LAP)). See generally Benjamin P. Harper, *Climate Change Litigation: The Federal Common Law of Interstate Nuisance and Federalism Concerns*, 40 GA. L. REV. 661 (2006); Matthew F. Pawa & Benjamin A. Krass, *Global Warming as a Public Nuisance: Connecticut V. American Electric Power*, 16 FORDHAM ENVTL L. REV. 407 (2005).

⁹⁴ BLACK'S LAW DICTIONARY (Bryan A. Garner ed., 7th edition, West Group, 1999).

⁹⁵ See *id.*

⁹⁶ The States of Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, and Wisconsin and the City of New York.

⁹⁷ Open Space Institute, Inc. (“OSI”), the Open Space Conservancy, Inc., and the Audubon Society of New Hampshire.

⁹⁸ American Electric Power Company, Inc., American Electric Power Service Corporation (together, “AEP”), the Southern Company (“Southern”), Tennessee Valley Authority (“TVA”), Xcel Energy Inc. (“Xcel”), and Cinergy Corporation (“Cinergy”).



The State Plaintiffs claimed they represented the interests of more than 77 million people and their related environments, natural resources, and economies.⁹⁹ The Private Plaintiffs, non-profit land trusts, brought these actions to put an end to what they alleged to be the Defendants' contributions to the "phenomenon commonly known as global warming."¹⁰⁰ The New York State Plaintiffs asserted that global warming would cause "irreparable harm to property in New York State and New York City and that it threatens the health, safety, and well-being of New York's citizens, residents, and environment."¹⁰¹ Moreover, all the Plaintiffs claimed that the Defendants collectively emitted approximately 650 million tons of carbon dioxide annually. Carbon dioxide is the primary greenhouse gas and the emission of this gas leads to atmospheric heat and global warming.¹⁰² The Plaintiffs pointed out that the past, present, and future emissions of the Defendants would remain in the atmosphere and contribute to global warming for many decades and, possibly, centuries.¹⁰³

The Defendants moved to dismiss the complaints against them. First, the Defendants contended that the Plaintiffs had failed to state a claim upon which relief can be granted because:

- (1) There is no recognized federal common law cause of action¹⁰⁴ to abate greenhouse gas emissions that allegedly contribute to global warming;
- (2) Separation of powers principles¹⁰⁵ preclude the Court from adjudicating the actions; and
- (3) Congress has displaced any federal common law cause of action to address the issue of global warming.¹⁰⁶

⁹⁹ Connecticut v. American Elec. Power Co., Inc., 406 F.Supp.2d 265, *supra*, fn. 97, at 268.

¹⁰⁰ *Id.*.

¹⁰¹ *Id.*

¹⁰² *See id.*

¹⁰³ *See id.*

¹⁰⁴ "Cause of action" is a recognized kind of legal claim that the Plaintiff alleges in a complaint to start a lawsuit. Without a recognized cause of action, the Plaintiffs do not have a legal claim on which to base the suit.

¹⁰⁵ *See* Connecticut v. American Elec. Power Co., Inc., 406 F.Supp.2d 265, *supra*, fn. 93, at 267 (referring to Federalist Paper No. 47 (1788) and U.S. Constitution arts. I, II, III, and citing Nixon, 506 U.S. at 234-35, 113 S.Ct. 732 ("The Framers based our Constitution on the idea that a separation of powers enables a system of checks and balances, allowing our Nation to thrive under a Legislature and Executive that are accountable to the People, subject to judicial review by an independent Judiciary. Were judges to resolve political questions, there would be no check on their resolutions because the Judiciary is not accountable to any other branch or to the People. Thus, when cases present political questions, 'judicial review would be inconsistent with the Framers' insistence that our system be one of checks and balances.'")).

¹⁰⁶ *See supra* 91, at 270. *See also* U.S. Constitution, art. III, § 2, *available at* <http://www.archives.gov/national-archives-experience/charters/constitution_transcript.html> (last visited Feb. 7, 2007). *Cf.* Applicable Rule of Civil Procedure § 1331 ("The district courts shall have original jurisdiction of all civil actions arising under the Constitution, laws, or treaties of the United States").



Second, the Defendants asserted that the Court lacked jurisdiction over the claim. Firstly, the Defendants claimed that the Plaintiffs lacked standing to sue on account of global warming. Secondly, the Defendants asserted that the Plaintiffs' failure to state a claim under federal law divested the Court of Civil Procedure Rule § 1331 jurisdiction.¹⁰⁷

The Court found that “the scope and magnitude of the relief Plaintiffs seek reveals the transcendently legislative nature of this litigation. Plaintiffs ask this Court to cap carbon dioxide emissions and mandate annual reductions of an as-yet-unspecified percentage.”¹⁰⁸ Such a relief would require the Court to balance different societal interests and make policy decisions. “Thus, these actions present non-justiciable political questions that are consigned to the political branches, not the Judiciary.”¹⁰⁹ Therefore, the District Judge found she had no power to continue the suit. The Plaintiffs did not file a timely appeal.¹¹⁰

This case represents an attempt to hold private companies liable for their contribution to global warming through judicial means. Government officials found a rather creative way to address the problem of global warming and its general and transboundary effects on the health and well-being of people and their environment.

The Netherlands lacks the common law doctrine of public nuisance. The nearest equivalents in Dutch tort law are *hinder*¹¹¹ or *onrechtmatige daad*¹¹² and it could possibly be argued that an act causing global warming is an *onrechtmatige daad* or can lead to *hinder*. Whereas the relevance of these provisions should be assessed in more detail, it is briefly noted that according to Article 162 of the Dutch Civil Code 6, an *onrechtmatige daad* (or tort) is committed if (1) there is an infringement of a right, (2) an act or omission violates a legal obligation, or (3) the act is contrary to an unwritten rule of proper social conduct, unless there

¹⁰⁷ See *Connecticut v. American Elec. Power Co., Inc.*, 406 F.Supp.2d 265, *supra*, fn. 93, at 268.

¹⁰⁸ *Id.*, at 272

¹⁰⁹ *Id.*, at 273

¹¹⁰ See Benjamin P. Harper, *Climate Change Litigation: The Federal Common Law of Interstate Nuisance and Federalism Concerns*, 40 GA. L. REV. 661, 668 (2006) (referring, in footnote 40, to the Federal Rules of Appellate Procedure Rule 4(a)(1)(A), which specify that a notice of appeal must be filed with the district court within thirty days after the judgment or order is entered.).

¹¹¹ See Dutch Civil Code 5, art. 37 (*Burgerlijk Wetboek Boek 5*), available at <<http://wetten.overheid.nl>> (last visited Feb. 7, 2007).

¹¹² See Dutch Civil Code 6, art. 162 (*Burgerlijk Wetboek Boek 6*), available at <<http://wetten.overheid.nl>> (last visited Feb. 7, 2007).



are grounds for justification.¹¹³ A tort can be attributed to an actor if it was owing to his or her fault or to a cause for which s/he is accountable by virtue of the law or by the applicable opinion in social interaction.¹¹⁴ One who commits a tort, which can be attributed to him/her, is obliged to compensate for the damage the other party suffers as a result.¹¹⁵ Accordingly, a tort has to be committed against another, there has to be damage, there has to be a causal link between the act and the damage, and the act has to be attributable to the author.

As to *hinder*, Article 37 of the Dutch Civil Code V¹¹⁶ requires landowners not to cause inconvenience or nuisance to the property of other landowners through e.g. the spreading of noise, vibrations, stench, fumes, or gasses, the deprivation of light or removal of support. The inconvenience or nuisance should not be caused in a way that violates Article 162 of the Dutch Civil Code VI on torts.

3.1.2. Northwest Environmental Defense Center, et al., v. Owens Corning Corporation

Country:	United States
Court:	United States District Court, District of Oregon
Year of decision:	2006
Type of procedural stage:	Motion to dismiss. From the scope and wording of the decision, as well as our research of the history of the case, it <i>appears</i> that the decision is final. As of March 21, 2007, there have been no subsequent developments.

In this case,¹¹⁷ the Plaintiffs, the Northwest Environmental Defense Center on behalf of its members, brought action before the United States District Court for the District of Oregon, alleging that the Defendant, the Owens Corning Corporation, was constructing a polystyrene foam insulation manufacturing facility in Gresham without having obtained a preconstruction permit required under the United States Clean Air Act.¹¹⁸

¹¹³ See *id.*, at art. 162(2) (*Als onrechtmatige daad worden aangemerkt een inbreuk op een recht en een doen of nalaten in strijd met een wettelijke plicht of met hetgeen volgens ongeschreven recht in het maatschappelijk verkeer betaamt, een en ander behoudens de aanwezigheid van een rechtvaardigingsgrond.*).

¹¹⁴ See Dutch Civil Code 6, supra, fn. 112, art 162(3).

¹¹⁵ See *id.*, art 162(1).

¹¹⁶ See Dutch Civil Code 5, supra, fn. 111, art. 37.

¹¹⁷ See *Northwest Environmental Defense Center v. Owens Corning Corp.*, 434 F.Supp.2d 957, 63 ERC 1254 (D.Or. Jun 08, 2006) (NO. CIV. 04-1727-JE).

¹¹⁸ Part C of Title I of the U.S. Clean Air Act, 42 U.S.C. § 7475 mandates preconstruction review and approval of major new stationary sources of air pollution, such as factories. A major stationary source is “any stationary facility or source of air pollutants which directly emits, or has the potential to emit, one hundred tons per year or more of any air pollutant [...]” 42 U.S.C. § 7602(j).



The Plaintiffs alleged that emissions from the Defendant's Gresham facility would contribute to global warming, which in turn would harm environmental resources in Oregon used or enjoyed by members of the Plaintiff organization. Plaintiffs additionally alleged that the facility under construction in Gresham would emit particulate matter, carbon monoxide, and volatile organic compounds that Plaintiff feared would harm the health of their members and the local environment that they utilize.¹¹⁹ The Plaintiffs sought declaratory and injunctive relief, civil penalties, plus their costs and attorney fees; the Defendant filed a motion to dismiss.

The Court first noted that after the action was commenced, the parties had entered into the following stipulation: The Plaintiffs agreed not to seek a preliminary injunction, and the Defendants agreed to halt construction pending issuance of a state Air Contaminant Discharge for the facility.¹²⁰ Still, the case was not moot, as “[a]t a minimum, the parties still dispute whether construction was undertaken without one or more required permits, whether Defendant's facility is subject to those permit requirements, whether civil penalties should be imposed, and, if so, the amount and disposition of those penalties.”¹²¹

With respect to standing, the Court referred to the same criteria as in *Friends of Earth, Inc. v. Watson*¹²² and *Center For Biological Diversity v. Abraham*:¹²³ The Plaintiff must establish that (1) he or she has suffered (or is about to suffer) an “injury in fact:” an invasion of a legally protected interest that is (a) concrete and particularized, and (b) actual or imminent, not conjectural or hypothetical; (2) there must be a causal connection between the injury and the conduct complained of; and (3) it must be likely, as opposed to merely speculative, that the injury will be redressed by a favorable decision.¹²⁴

With respect to the requirement of injury, the Plaintiffs feared that emissions from Defendant's new facility would heighten the risk that members of the Plaintiff organization would contract certain diseases associated with elevated levels of ultraviolet radiation subsequent to ozone depletion, that other diseases afflicting their members would be

¹¹⁹ See Northwest Environmental Defense Center, 434 F.Supp.2d 957, *supra*, fn. 117, at 960-961.

¹²⁰ See *id.*, at 961.

¹²¹ *Id.*

¹²² See *supra*, Section 2.1.1.

¹²³ See *supra*, Section 2.1.3.

¹²⁴ See Northwest Environmental Defense Center, 434 F.Supp.2d 957, *supra*, fn. 117, at 962 (referring to U.S.C.A. Const. Art. III § 2, cl. 1; *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560-61, 112 S.Ct. 2130, 119 L.Ed.2d 351 (1992)).



exacerbated, and that the environmental resources used and enjoyed by Plaintiffs would be harmed by ozone depletion. The Court found the injury requirement to be satisfied:

“The challenged emissions source is local, not halfway around the globe. Members of the Plaintiff organizations reside, work, and recreate near the partially-completed Gresham facility. Assuming the truth of the allegations in the Complaint, as I must on a motion to dismiss, those individuals would suffer some direct impact from emissions entering into the atmosphere from Defendant’s facility, as would the local ecosystem with which these individuals constantly interact.

Other forecasted impacts from these emissions would operate less directly. For instance, ozone-depleting emissions from Defendant’s facility must first ascend to the stratosphere before impacting persons on the ground in Oregon. Global warming likewise operates indirectly. Higher sea levels in Oregon will supposedly result from melting ice in the earth's polar regions. Changes in weather patterns, winds, ocean currents, and rainfall do not occur in isolation. Nevertheless, the adverse effects alleged in Plaintiffs’ Complaint would be felt by them here in Oregon, and the source of Defendant’s emissions would be in Oregon.

Adverse effects from the emissions will not necessarily be limited to Oregon, yet Plaintiffs’ injuries are not diminished by the mere fact that other persons may also be injured by the Defendant’s conduct. Standing has never required proof that the plaintiff is the *only* person injured by the defendant’s conduct. A class action may be prosecuted on behalf of a class of millions of similarly situated persons, all claiming to have been injured by the same conduct. As Judge Gould’s concurrence in *Covington* ably illustrates, the notion that ‘injury to all is injury to none’ does not correctly reflect the current doctrine of standing. If Defendant’s theory of standing were correct, no person could have standing to maintain an action aimed at averting harm to the Grand Canyon or Yellowstone National Park, or threats to the giant sequoias and blue whales, as the loss of those treasures would be felt by everyone. For that matter, if the proposed action threatened the very survival of our species, no person would have standing to contest it. The greater the threatened harm, the less power the courts would have to intercede. That is an illogical proposition.”¹²⁵

In order to prove causality, the Plaintiffs cited a report predicting that global warming will increase regional temperatures in the Pacific Northwest leading to a prolonged allergy season, earlier breeding by plants and animals, and an increased fire season; rising sea levels, leading to increased erosion and a loss of land along the coastline; a decline in snow-pack, which will lead to an increase in spring runoff, followed by decreased water levels in streams in the

¹²⁵ See Northwest Environmental Defense Center, 434 F.Supp.2d 957, *supra*, fn. 117, at 965-966 (referring to *Covington*, 358 F.3d at 651-55) [footnotes omitted].



summer and fall; and a change in ocean circulation which will cause increased stress on estuarine species.¹²⁶ Holding that the Plaintiffs had satisfied the “fairly traceable” element, the Court stated:

“While Defendant is not the sole entity allegedly discharging pollutants into the atmosphere that may adversely impact the Plaintiffs, the ‘fairly traceable’ element does not require that a plaintiff show to a scientific certainty that the defendant’s emissions, and only the defendant’s emissions, are the source of the threatened harm [...]. It is sufficient for Plaintiffs to assert that emissions from Defendant’s facility will contribute to the pollution that threatens Plaintiffs’ interests.”¹²⁷

On redressability, the Court held:

“Plaintiffs need not show that the entire problem (for instance, global warming) will be cured if the Plaintiffs prevail in this action, or that the challenged action is the exclusive source of that harm. Particularly in environmental and land use cases, the challenged harm often results from the cumulative effects of many separate actions that, taken together, threaten the plaintiff’s interests. The relief sought in the Complaint need not promise to solve the entire problem, any more than a legislative body is forbidden to enact a law addressing a discrete part of a problem rather than the entire problem.”¹²⁸

Referring to the case *Connecticut v. American Electric Power Company*,¹²⁹ the Court concluded that Plaintiffs had standing to bring suit, and that civil penalties could be imposed on the Defendant:

“At issue here is nothing more than whether the courts will enforce the Congressional mandate set forth in the Clean Air Act and its enabling regulations. This court is not being asked to make a free-wheeling policy choice and decide whether global warming is, or is not, a serious threat or what measures should be taken to remedy that problem. Enjoining violations of an Act of Congress, and imposing civil penalties on the wrongdoer at the

¹²⁶ See *id.*, at 961, fn. 1

¹²⁷ See *id.*, at 967-968 (referring to *Sierra Club, Lone Star Chapter, 73 F.3d at 558*; *Public Interest Research Group of New Jersey, Inc. v. Powell Duffryn Terminals Inc., 913 F.2d 64, 72 (3d Cir.1990)*; *Natural Resources Defense Council v. Southwest Marine, Inc., 236 F.3d 985, 995 (9th Cir.2000)*). See also *Lujan v. Defenders of Wildlife, 504 U.S. 555, 560-61, 112 S.Ct. 2130, 119 L.Ed.2d 351 (1992)*; *Southwest Marine, 236 F.3d at 995* (requirement of traceability does not mean plaintiff must show to a scientific certainty that defendant’s effluent caused the precise harm suffered by the plaintiff; rather, the plaintiff must show that a defendant discharges a pollutant that causes or contributes to the kinds of injuries alleged in the specific geographic area of concern).

¹²⁸ *Id.*, at 968. See also *Parker v. Scrap Metal Processors, Inc., 386 F.3d 993, 1004 (11th Cir.2004)*; *Friends of the Earth, 528 U.S. at 185-86, 120 S.Ct. 693, Covington, 358 F.3d at 641* (possible deterring effect); *Railway Express Agency, Inc. v. New York, 336 U.S. 106, 110, 69 S.Ct. 463, 93 L.Ed. 533 (1949)* (“It is no requirement of equal protection that all evils of the same genus be eradicated or none at all”).

¹²⁹ See *supra*, Section 3.1.1.



behest of an injured plaintiff, lie not at the outer margin of the judicial authority but squarely within the judicial power to adjudicate cases and controversies.”¹³⁰

In sum, the Court denied the Defendant’s Motion to Dismiss in its entirety,¹³¹ and held that civil penalties were not limited to a single day.¹³²

This case can be of relevance in a Dutch court if there is legislation similar to the provision of the Clean Air Act, requiring new factories and manufacturing facilities to obtain a license that takes into account the level of pollution for which the facility will be responsible.

3.2. INTERIM CONCLUSIONS AND SUGGESTIONS

Unlike public law cases, private suits concerning climate change are still relatively rare. We have analyzed two cases from the United States, both of which refer to global warming. *Connecticut v. American Electric Power Company* concerned the abatement of the effects of global warming through a public nuisance suit. While the Dutch jurisdiction lacks this doctrine, a Dutch equivalent could be found in the concepts of *hinder*, or more generally *onrechtmatige daad*. *Northwest Environmental Defense Center v. Owens Corning Corporation* concerned the causality (and subsequent redressability) between possibly harmful emissions and the Plaintiffs injury. The Court held that even though the Defendant was not the only emission source “it is sufficient for Plaintiffs to assert that emissions from Defendant’s facility will contribute to the pollution that threatens Plaintiffs’ interests.”¹³³

In *Connecticut v. American Electric Power Company* the Court declined to decide the case on the merits because it found that such a decision would be contrary to the separation of powers doctrine and, as the issue lay solely within the power of the political branches of government.¹³⁴ The Court in *Northwest Environmental Defense Center v. Owens Corning Corporation* decided differently. It found that it was not asked to make policy decisions that lay outside its power, and went on to accept that private companies may cause (future imminent) injury by emitting greenhouse gases.¹³⁵

¹³⁰ See *Northwest Environmental Defense Center*, 434 F.Supp.2d 957, *supra*, fn. 117, at 970.

¹³¹ *Id.*, at 974.

¹³² *Id.*, at 973.

¹³³ *Id.*, at 967

¹³⁴ *State of Connecticut et al.*, 406 F.Supp.2d 265, *supra*, fn. 93, at 273.

¹³⁵ *Northwest Environmental Defense Center*, 434 F.Supp.2d 957, *supra*, fn. 117, at 973.



4. INTERNATIONAL LAW

In this Chapter we have merged the section “Public International Law” and “International Human Rights Law” as found in the Interim Report.

4.1 CASE SUMMARIES

4.1.1. UNESCO Petitions (Belize Barrier Reef, Sagarmatha National Park, and Huascarán National Park)

Country: Belize, Nepal and Peru
Forum: UNESCO World Heritage Committee
Year of Filing: 2004
Procedural Stage: Petitions (final decision pending)

In November 2004, several NGOs¹³⁶ filed three petitions¹³⁷ to request the World Heritage Committee for the immediate and urgent addition of the sites Belize Barrier Reef (Belize), Sagarmatha National Park (Nepal), and Huascarán National Park (Peru) to the List of World Heritage in Danger on the basis of serious potential dangers arising from the impacts of climate change.¹³⁸ In particular, the petitions asserted that climate change would lead to, *inter alia*, the rising of sea temperatures; coral bleaching; and the melting of ice caps and flood disasters respectively.¹³⁹ The petitions proposed a program of corrective measures to repair the damage done by the effects of climate change.¹⁴⁰ The essential part of the corrective program would be to reduce the emissions of greenhouse gases by States who are Parties to the United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Convention (Convention) and who emit, or have emitted, the highest levels of these gases.¹⁴¹

¹³⁶ Belize Institute of Environmental Law and Policy, Foro Ecológico de Peru, and Forum for Protection of Public Interest respectively. They are supplemented by some individuals.

¹³⁷ See Petition to the World Heritage Committee requesting the inclusion of Sagarmatha National Park in the List of World Heritage in Danger as a result of Climate Change and for Protective Measures and Actions (Nepal Petition), Petition to the World Heritage Committee requesting the inclusion of the Huascarán National Park in the List of World Heritage in Danger as a result of Climate Change (Peru Petition), and Petition to the World Heritage Committee requesting inclusion of Belize Barrier Reef Reserve System in the List of World Heritage in Danger as a Result of Climate Change and for Protective Measures and Actions (Belize Petition). The petitions are available at <<http://www.climatelaw.org/media/UNESCO.petitions.release>> (last visited Jan. 23, 2007).

¹³⁸ See Nepal Petition, at p. 3; Peru Petition, at p. 2; Belize Petition, at p. 3.

¹³⁹ See Nepal Petition, at Section 3, pp. 18-23; Peru Petition, at Section 2, pp. 9-19; Belize Petition, at Section 3, pp. 11-23.

¹⁴⁰ See Nepal Petition, at Section 4, pp. 31-41; Peru Petition, at Section 4 pp. 46-59; Belize Petition, at Section 3C pp. 25-31.

¹⁴¹ See Nepal Petition, Section 4, pp. 37-40; Peru Petition, at Section 4, pp. 55-58; Belize Petition, at Section 3C2, pp. 29-31



In July 2005, the World Heritage Committee noted that the impacts of climate change were affecting many and were likely to affect World Heritage sites.¹⁴² All State Parties to the Convention were encouraged to seriously consider the potential impacts of climate change within their management planning. Furthermore, a working group of experts was established to review the risk posed to the sites to develop a strategy for response.¹⁴³ In February 2006, a similar petition was filed.¹⁴⁴ At the Committee's 30th session in July 2006, no substantial decisions concerning the petitions were made.¹⁴⁵ As of January 2007, no final decision has been taken on the inclusion of the three sites to the List of World Heritage in Danger.

All three of the petitions concern the adverse effects of climate change on sites included on the World Heritage List. The World Heritage List includes 830 sites that are part of the cultural and natural world heritage and that the World Heritage Committee considers to be of outstanding value.¹⁴⁶ The List of World Heritage in Danger is designed to inform the international community of conditions that threaten the very characteristics for which a site was inscribed on the World Heritage List, and to encourage corrective action. These threats may “come from armed conflict and war, earthquakes and other natural disasters, pollution, poaching, uncontrolled urbanization and unchecked tourist development”.¹⁴⁷ Inscription on the List of World Heritage in Danger obliges the World Heritage Committee to develop and adopt, in consultation with the State Party concerned, a program for corrective measures, and subsequently the duty to monitor the situation.¹⁴⁸ It will also enable the site to access financial assistance from the World Heritage Fund, as well as help with conservation planning.¹⁴⁹ Finally, all efforts must be made by the State Party on whose territory the site is found to restore the site's value in order to enable its removal from the Danger list as soon as possible.¹⁵⁰

¹⁴² See Decision of the World Heritage Committee Durban 2005, 29th Session July 2005, Chapter 7b, p. 36

¹⁴³ See *id.*

¹⁴⁴ See Petition to the World Heritage Committee Requesting Inclusion of Waterton-Glacier International Peace Park on the List of World Heritage in Danger as a Result of Climate Change and for Protective Measures and Actions, Feb. 16, 2006, available at <<http://law.lclark.edu/org/ielp/objects/Waterton-GlacierPetition2.15.06.pdf>> (last visited Feb. 11, 2007)

¹⁴⁵ See Decision of the World Heritage Committee Vilnius 2006, 30th Session July 2006, Chapter 7.1, p. 7

¹⁴⁶ See World Heritage Centre, *World Heritage List*, available at <<http://whc.unesco.org/pg.cfm?CID=31&l=EN>> (last visited Jan. 13, 2007).

¹⁴⁷ *Id.*, *World Heritage in Danger*, available at <<http://whc.unesco.org/EN/158/>> (last visited Jan. 13, 2007).

¹⁴⁸ See *id.*

¹⁴⁹ See *id.*

¹⁵⁰ See *id.*



A requirement for a site to be enlisted on the List of World Heritage in Danger is that it is already included in the “general” List of World Heritage.¹⁵¹ A petition needs to be filed to the World Heritage Committee, which determines whether the conditions for inclusion have been met.¹⁵² When accepted by the Committee, a subsequent petition is required for inclusion on the World Heritage in Danger List.¹⁵³

Sites in the Netherlands that could be considered for inclusion on the “general” or “Danger” list are *inter alia* the Veluwe, the Biesbosch, the Waddeneilanden, and perhaps even the famous Dutch dike system (Deltawerken).

4.1.2. Tuvalu v. United States of America and Australia

Country: Tuvalu
Forum: International Court of Justice
Year of Filing: Not applicable
Procedural Stage: Intention to file claim

The small island nation Tuvalu located in the Pacific Ocean has voiced its intention to file a claim against the U.S. and Australia at the International Court of Justice (ICJ) for their contribution to climate change.¹⁵⁴ Tuvalu holds these two States responsible due to their failure to stabilize emissions of greenhouse gas concentrations as required by the United Nations Framework Convention on Climate Change (UNFCCC).¹⁵⁵ Tuvalu claims that

¹⁵¹ UNESCO Convention Concerning the Protection of the World Cultural and Natural Heritage (UNESCO World Heritage Convention), art. 11 (4), available at <<http://whc.unesco.org/?cid=175>> (last visited Feb. 7, 2007).

¹⁵² See *id.*, arts. 1, 2, 11 and 13

¹⁵³ See *id.*, art. 11 (4).

¹⁵⁴ See Rebecca Elizabeth Jacobs, *Treading Deep Waters: Substantive Issues in Tuvalu’s Threat to Sue the United States in the International Court of Justice*, 14 Pac. Rim L. & Pol’y J. 103 (January, 2005); Akiko Okamoto, *Problems and Prospects of International Legal Disputes on Climate Change*, available at <http://web.fu-berlin.de/ffu/akumwelt/bc2005/papers/okamoto_bc2005.pdf> (last visited Jan. 13, 2007); Competitive Enterprise Institute website, available at <<http://www.cei.org/utills/printer.cfm?AID=2947>> (last visited Jan. 13, 2007); Andrew Revkin, *Eskimos Seek to Recast Global Warming as a Rights Issue*, NEW YORK TIMES, 15 December, 15, 2004, available at <<http://www.massclimateaction.org/news%20articles/EskimosHumanRightsNYT121504.htm>> (last visited Jan. 13, 2007).

¹⁵⁵ See United Nations Framework Convention on Climate Change (UNFCCC), U.N. GAOR Intergov’t Negotiating Comm., 5th Sess., U.N. Doc. A/AC.237/18 (Part II)/Add.2 (1992), reprinted in 31 I.L.M. 854 (1992) (entered into force Mar. 21, 1994), also available at <http://unfccc.int/essential_background/convention/background/items/2853.php> (last visited March 11, 2007). Both Australia and the U.S. are parties to the UNFCCC, see <http://unfccc.int/parties_and_observers/parties/annex_i/items/2774.php> (last visited Jan. 21, 2007). The UNFCCC was adopted in 1992 at the Rio Earth Summit. The Convention has the goal of preventing dangerous human interference with the global climate system. See UNFCCC, *Facing and Surveying the Problem*, available at <http://unfccc.int/essential_background/feeling_the_heat/items/2914.php> (last visited Jan. 21, 2007). The



climate change has caused the melting of ice caps, which consequently leads to the rising of sea levels. This phenomenon is now threatening the territory of Tuvalu because the island nation has an average elevation of two meters above sea level, and is therefore extremely vulnerable to changes in sea levels.

As of January 2007, Tuvalu has not officially filed a claim concerning climate change against any State at the ICJ or any other forum. This may in part be explained by legal obstacles concerning the jurisdiction of the ICJ, and the scope of legal obligations flowing from the various international environmental instruments.

It should first be noted that Article 34(1) of Statute of the International Court of Justice provides that only States may be parties in contentious cases before the Court.¹⁵⁶ Another limitation to the ICJ's jurisdiction is that it is consensual, i.e., the parties must have consented to the bringing of the case before the Court. Article 36 of the ICJ Statute sets out four bases on which may rest the Court's jurisdiction.¹⁵⁷

First, Article 36(1) provides that parties may refer cases to the Court. In this situation, jurisdiction is established *ad hoc* on basis of the mutual consent of the parties.¹⁵⁸ Second, Article 36(1) provides that the Court's jurisdiction can extend to all matters specifically provided for in the Charter of the United Nations or in treaties or conventions in force.¹⁵⁹

Article 14 of the United Nations Framework Convention on Climate Change (UNFCCC) provides that “[i]n the event of a dispute between any two or more Parties concerning the interpretation or application of the Convention, the Parties concerned shall seek a settlement of the dispute through negotiation or any other peaceful means of their own choice.”¹⁶⁰ More specifically, it states that

UNFCC places the heaviest burden for fighting climate change on industrialized nations. This is because they are responsible for most of the past and current greenhouse gas emissions. These countries were expected by the year 2000 to reduce emissions to 1990 levels. As a group, they succeeded. *See id.*

¹⁵⁶ *See* Statute of the International Court of Justice, art. 36, available at <<http://www.icj-cij.org/icjwww/basicdocuments/basictext/basicstatute.htm>> (last visited Feb. 5, 2007).

¹⁵⁷ *See id.*

¹⁵⁸ *See id.*, art. 36(1).

¹⁵⁹ *See id.*

¹⁶⁰ United Nations Framework Convention on Climate Change (UNFCCC), *supra*, fn. 155, art. 14(1).



“when acceding to the Convention, or at any time thereafter, a Party may declare in a written instrument submitted to the Depository that, in respect of any dispute concerning the interpretation or application of the Convention, it recognizes as compulsory ipso facto and without special agreement, in relation to any Party accepting the same obligation: (a) Submission of the dispute to the International Court of Justice, and/or (b) Arbitration in accordance with procedures to be adopted by the Conference of the Parties as soon as practicable, in an annex on arbitration.”¹⁶¹

It is noted that none of the Parties to the UNFCCC have so far made an Article 14 declaration accepting the jurisdiction of the ICJ.¹⁶²

Third, Article 36(2) allows for States to make an optional clause declaration accepting the compulsory jurisdiction of the ICJ. While Australia has made an Article 36(2) declaration in which it accepts the compulsory jurisdiction of the Court, this declaration is made on the condition of reciprocity.¹⁶³ Tuvalu has not made an Article 36(2) declaration. However, even if it would make such a declaration, the Australian declaration provides for an exception of disputes

“in respect of which any other party to the dispute has accepted the compulsory jurisdiction of the Court only in relation to or for the purpose of the dispute; or where the acceptance of the Court’s compulsory jurisdiction on behalf of any other party to the dispute was deposited less than 12 months prior to the filing of the application bringing the dispute before the Court.”¹⁶⁴

While the United States accepted the Court’s compulsory jurisdiction upon its creation in 1946, they withdrew its acceptance in 1984, following the Court’s judgement in *Military and Paramilitary Activities in and against Nicaragua*.¹⁶⁵

¹⁶¹ *Id.*, art. 14(2).

¹⁶² See UNFCCC, Status of Ratification, Nov. 22, 2006, available at <http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/unfccc_ratification_22.11.06.pdf> (last visited Jan. 26, 2007).

¹⁶³ See International Court of Justice, Declarations Recognizing as Compulsory the Jurisdiction of the Court, available at <<http://www.icj-cij.org/icjwww/ibasicdocuments/ibasictext/ibasicdeclarations.htm>> (last visited Feb. 5, 2007).

¹⁶⁴ See *id.*

¹⁶⁵ See *Military and Paramilitary Activities in and against Nicaragua (Nicar. v. U.S.)*, 1984 I.C.J. 392 (Nov. 26) (Jurisdiction and Admissibility). available at <<http://www.icj-cij.org/icjwww/icasess/inus/inusframe.htm>> (last visited 26 January 2007).



To conclude, unless Australia or the United States would agree to accept the jurisdiction of the ICJ *ad hoc*, pursuant to Article 36(1), the ICJ would probably not have jurisdiction over Tuvalu's claims against these States.

4.1.3. Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States

Country:	Countries inhabited by Plaintiffs (the Inuit people): Alaska, Canada, Greenland, and Chukotka (Russia). Country of the Defendant: United States.
Forum:	Inter-American Commission on Human Rights
Year of Filing:	2005
Procedural Stage:	Petition filed (final decision pending)
Last development:	The Inter-American Commission on Human Rights held a hearing on March 1, 2007 to investigate the relationship between global warming and human rights (<i>see Earthjustice, available at <http://www.earthjustice.org/news/press/007/inter-american-commission-on-human-rights-Hearing-on-Global-Warming.html></i> (last visited March 5, 2007).

On December 7, 2005, Sheila Watt-Cloutier and the Inuit Circumpolar Conference (ICC)¹⁶⁶ on behalf of all Inuit filed a petition to the Inter American Commission on Human Rights (IACHR) seeking relief from violations resulting from global warming caused by acts and omissions of the United States.¹⁶⁷ According to Article 44 of the American Convention on Human Rights, “[a]ny person or group of persons, or any nongovernmental entity legally recognized in one or more member states of the Organization [of American States (OAS)], may lodge petitions with the Commission containing denunciations or complaints of violations of this Convention by a State Party.”¹⁶⁸

The ICC claims that the Inuit traditional way of life is threatened as a result of global

¹⁶⁶ The Inuit Circumpolar Conference (ICC) is the international organization representing approximately 150,000 Inuit living in the Arctic regions of Alaska, Canada, Greenland and Chukotka, Russia. *See* Inuit Circumpolar Conference, <<http://www.inuit.org/index.asp?lang=eng&num=2>> (last visited March 6, 2007).

¹⁶⁷ *See* Petition to the Inter-American Commission on Human Rights Seeking Relief from Violations Resulting from Global Warming Caused by Acts and Omissions of the United States (ICC Petition), *available at* <<http://www.inuitcircumpolar.com/files/uploads/icc-files/FINALPetitionICC.pdf>> (last visited March 6, 2007) (hereinafter ICC Petition).

¹⁶⁸ American Convention on Human Rights, art. 44, 1144 U.N.T.S. 123, 9 I.L.M. 673 (entered into force Jul. 18, 1978), *also available at* <<http://www.cidh.org/Basicos/basic3.htm>> (last visited March 11, 2007). *See also* Inter-American Commission on Human Rights, Rules of Procedure, art. 28, *available at* <<http://www.cidh.org/Basicos/basic16.htm>> (last visited March 11, 2007) (Requirements for the consideration of petitions).



warming. Global warming negatively affects the land, the snow, the ice, and the sea, all of which are vital to the Inuit traditional life-style. The Inuit hold the United States responsible because while it is responsible for 25% of global greenhouse gas emissions, it has refused to ratify the Kyoto Protocol to the United Nations Framework on Climate Change and to cut U.S. carbon dioxide emissions.¹⁶⁹

The ICC assert that there is scientific consensus that global warming is caused by the increase in concentrations of greenhouse gases in the atmosphere as a result of human activity.¹⁷⁰ In support, it refers to the Intergovernmental Panel on Climate Change (IPCC), which has determined that human activities are altering the makeup of the atmosphere in ways that are very likely causing the Earth to warm and the global climate to change.¹⁷¹ It relies on the IPCC Third Assessment Report (TAR), which notes that in the five years between publication of its second and third assessment reports, *every* study published has found that “a significant anthropogenic contribution is required to account for surface and tropospheric trends over at least the last 30 years.”¹⁷² The TAR concludes: “[a]nthropogenic greenhouse gases are likely to have made a significant and substantial contribution to the warming observed over the second half of the 20th century, *possibly larger than the total observed warming*.”¹⁷³

The ICC also refers to the first major assessment by a U.S. Government agency of global warming and its consequences to be released during the Bush administration, entitled *Climate Change Impacts on the United States*, and notes its consistency with the IPCC TAR.¹⁷⁴ The assessment’s findings with respect to Alaska are sobering: Recent warming has been accompanied by several decades of thawing in discontinuous permafrost, which is present in most of central and southern Alaska, causing increased ground subsidence, erosion, landslides, and disruption and damage to forests, buildings, and infrastructure. Sea ice off the Alaskan coast is retreating (by 14% since 1978) and thinning (by 40% since the 1960s), with widespread effects on marine ecosystems, coastal climate, human settlements, and subsistence activities.¹⁷⁵

¹⁶⁹ See ICC Petition, *supra*, fn. 167, at pp. 15, 69.

¹⁷⁰ See *id.*, at p. 27.

¹⁷¹ See *id.*, at p. 29 (referring to TAR, Synthesis Report, Summary for Policymakers (2001), at 4).

¹⁷² See *id.*, at 30 (referring to TAR).

¹⁷³ *Id.* (referring to TAR) [emphasis added].

¹⁷⁴ *Id.*, at p. 31 (referring to NATIONAL ASSESSMENT SYNTHESIS TEAM, CLIMATE CHANGE IMPACTS ON THE UNITED STATES: THE POTENTIAL CONSEQUENCES OF CLIMATE VARIABILITY AND CHANGE 6 (Cambridge University Press, 2001).)

¹⁷⁵ See *id.*, at p. 32.



The ICC Petition presents the following evidence to support its conclusion that the United States is the world's largest contributor to global warming: In 1890, the United States emitted 31% of the world's energy-related carbon dioxide (CO₂). By 1950, U.S. emissions peaked, relative to other countries, at 43% of the world's CO₂ emissions.¹⁷⁶ On a per-person basis, U.S. emissions in 2000 were more than five times the global average.¹⁷⁷ U.S. emissions of energy-related CO₂ are vastly out of proportion to its population size. With only 4.7% of the world's population, the United States produced 24% of global emissions in 2000.¹⁷⁸

The ICC asserts that the effects of global warming constitute violations of Inuit human rights for which the United States is responsible. The ICC claims that international law protects the ties that many indigenous people have to their environment:

- Article 7(4) of the ILO Convention (No. 169) concerning Indigenous and Tribal Peoples in Independent Countries.¹⁷⁹
- Article 15(1) of the ILO Convention (No. 169) concerning Indigenous and Tribal Peoples in Independent Countries.¹⁸⁰
- Article 28 of the Draft United Nations Declaration on the Rights of Indigenous People.¹⁸¹
- The right to a healthy environment is a right of customary international law also outside the context of indigenous peoples.
- Article 1(2) of the International Covenant on Economic, Social and Cultural Rights.¹⁸²

¹⁷⁶ *Id.*, at p. 68 (referring to World Resources Institute, Climate Analysis Indicators Tool (CAIT), available at <<http://cait.wri.org>> (last visited Feb. 7, 2007). This on-line tool combines information from sources such as the Marland study cited *infra*, the United Nations, the World Bank, and the International Energy Agency in a database allowing comparison and analysis of reputable climate data. For more information, see <<http://cait.wri.org/faq-about-cait.php>>).

¹⁷⁷ *Id.*, at p. 69 (referring to CAIT (5.4 tons per U.S. citizen versus 1 ton of carbon per person globally in 2000)).

¹⁷⁸ *Id.*, at p. 69.

¹⁷⁹ International Labour Organisation Convention (No. 169) concerning Indigenous and Tribal Peoples in Independent Countries, art. 7(4), available at <<http://www.unhchr.ch/html/menu3/b/62.htm>> (last visited 11 January 2007) (“Governments shall take measures [...] to protect and preserve the environment of the territories [indigenous people] inhabit.”)

¹⁸⁰ *Ibid.*, art. 15(1) (“[Indigenous peoples’ rights] to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources.”)

¹⁸¹ Draft United Nations Declaration on the Rights of Indigenous People, art. 28, available at <[http://www.unhchr.ch/huridocda/huridoca.nsf/\(Symbol\)/E.CN.4.SUB.2.RES.1994.45.En?OpenDocument](http://www.unhchr.ch/huridocda/huridoca.nsf/(Symbol)/E.CN.4.SUB.2.RES.1994.45.En?OpenDocument)> (last visited 11 January 2007) (“[Indigenous people have] the right to the conservation, restoration and protection of the total environment and the productive capacity of their lands, territories and resources.”)

¹⁸² International Covenant on Economic, Social and Cultural Rights, art. 1(2), available at <http://www.unhchr.ch/html/menu3/b/a_ceschr.htm> (last visited 11 January 2007) (“All peoples may, for their own ends, freely dispose of their natural wealth and resources without prejudice to any obligations arising out of



- Article 6 of the Convention on the Rights of the Child.¹⁸³
- Article 11 of the San Salvador Protocol to the American Convention on Human Rights in the Area of Economic Social and Cultural Rights.¹⁸⁴
- Preamble of the North American Agreement on Environmental Cooperation.¹⁸⁵
- 1992 Rio Declaration on Environment and Development.¹⁸⁶

The ICC continues its argumentation by elaborating on the rights of the Inuit under international law and how the refusal of the United States to regulate greenhouse gas emissions affects those rights. The following briefly summarizes the arguments presented by the ICC:

The right to property of indigenous people:

“The Inter-American Court and this Commission [the IACHR] have long recognized that indigenous peoples have a fundamental international human right to use and enjoy the lands they have traditionally occupied, independent of domestic title. [...] The Inter-American Court affirmed the independent existence of indigenous peoples’ collective rights to their land, resources and environment in the *Awás Tingi* case.”¹⁸⁷

The United States is violating the Inuit right to property:

“The land they [the Inuit] have traditionally used and occupied is fundamentally changing as a result of climate change, making it less valuable and useful to the Inuit. The United States’

international economic co-operation, based upon the principle of mutual benefit, and international law. In no case may a people be deprived of its own means of subsistence.”)

¹⁸³ Convention on the Rights of the Child, art. 6, *available at* <<http://www.unhchr.ch/html/menu3/b/k2crc.htm>> (last visited 11 January 2007).

¹⁸⁴ Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights (“Protocol of San Salvador”), art. 11, *available at* <<http://www.cidh.org/Basicos/basic5.htm>> (last visited 11 January 2007) (“1. Everyone shall have the right to live in a healthy environment and to have access to basic public services. 2. The States Parties shall promote the protection, preservation, and improvement of the environment.”)

¹⁸⁵ North American Agreement on Environmental Cooperation Between the Government of Canada, the Government of the United Mexican States and the Government of the United States of America, Preamble, *available at* <http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/index.cfm?varlan=english> (last visited 11 January 2007).

¹⁸⁶ Rio Declaration on Environment and Development, Principles 1 and 14, *available at* <<http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=78&ArticleID=1163>> (last visited 11 January 2007) (“[H]uman beings [...] are entitled to a healthy and productive life in harmony with nature” and “States should effectively cooperate to discourage or prevent the relocation and transfer to other States of any activities and substances that cause severe environmental degradation or are found to be harmful to human health.”)

¹⁸⁷ ICC Petition, *supra*, fn. 167, at p. 79 (citing *Caso de la Comunidad Mayagna (Sumo) Awás Tingi*, Inter-Am. Ct. H.R. Ser. C, No. 79 para. 151).



acts and omissions regarding climate change have violated their right to use and enjoy their ancestral lands and their rights of property in those lands.”¹⁸⁸

“Deprivation of the use and enjoyment of personal property through environmental degradation caused by a State’s actions or inactions can constitute a violation of the Human Right to property: *Belize Maya*-case: ‘the right to use and enjoy property may be impeded when the State itself, or third parties acting with the acquiescence or tolerance of the State, affect the existence, value, use or enjoyment of that property.’”¹⁸⁹

Harm to the environment violates indigenous people’s human right to health:

“In the *Yanomami* case the Commission recognized that harm to people resulting from environmental degradation violated the right to health in Article XI of the American Declaration (right to preservation of health).”¹⁹⁰

“In the *Belize Maya* case the Commission noted that the right to health and well-being in the context of indigenous peoples’ rights was so dependent on the integrity and condition of indigenous land that “broad violations” of indigenous property rights necessarily impacted the health and well-being of the Maya.”¹⁹¹

The Petition also refers to the Preamble of the Constitution of the World Health Organization;¹⁹² the Stockholm Convention on Persistent Organic Pollutants;¹⁹³ the WHO Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes;¹⁹⁴ and Principle 14 of the Rio Declaration.¹⁹⁵

¹⁸⁸ *Id.*, at p. 83.

¹⁸⁹ *Id.*, at p. 83 (citing *Maya Indigenous Communities of the Toledo District (Belize Maya)*, Case 12.053, Inter-Am. C.H.R. Report 40/04 (2004), para. 140).

¹⁹⁰ *Id.*, at pp. 87-89 (referring to *Case of Yanomami Indians*, Case 7615 (Brazil), Inter-Am. C.H.R., OEA/Ser.L/V/II.66 doc. 10 rev. 1 at 8 (1985)).

¹⁹¹ *Id.*, at pp. 85-86 (referring to *Maya Indigenous Communities of the Toledo District (Belize Maya)*, Case 12.053, Inter-Am. C.H.R. Report 40/04 (2004) (Belize) at paras. 154-156).

¹⁹² *Id.*, at 86 (referring to the Constitution of the World Health Organization, July 22, 1946, 14 U.N.T.S. 185, 186 (“[t]he enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being.”)).

¹⁹³ *Id.* (referring to the Stockholm Convention on Persistent Organic Pollutants, U.N. Environment Programme, U.N. Doc. UNEP/POPS/CONF/2 (2001) (signed by U.S. on May 23, 2001), *available at* <<http://untreaty.un.org/English/notpubl/27-15E.doc>> (last visited March 11, 2007) (seeking “to protect human health and the environment from persistent organic pollutants.”)).

¹⁹⁴ *Id.* (referring to the Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, art. 1, U. N. Doc MP.WAT/AC.1/1999/1 (1999),



The United States has an international obligation not to harm Inuit health through degradation of the environment:

“The right to preservation of health recognized in the American Declaration necessarily includes a prohibition on degradation of the environment to the point that human health and well-being are threatened. The United States has an international obligation not to infringe upon the Inuit’s human rights to health and well-being through degradation of their physical environment.”¹⁹⁶

The relevance of other international rules:

The American Declaration should be applied “with due regard to other relevant rules of international law applicable to member states against which complaints of human rights violations are properly lodged.”¹⁹⁷

- ❑ The United States is a party to the U.N. Framework Convention on Climate Change (FCCC) but has failed to meet its requirements. The US is thus violating its international obligation under the FCCC.
- ❑ The United States also violates customary international law by not preventing its territory from being used in a manner that causes harm outside its jurisdiction: *sic utere tuo ut alienum non laedus (laedus)* (do no use your property in a manner that will harm others). This principle has been recognized by several international tribunals:
 - Trail Smelter Arbitration ¹⁹⁸
 - Corfu Channel Case ¹⁹⁹
 - Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 ²⁰⁰

available at <<http://www.euro.who.int/Document/Peh-ehp/ProtocolWater.pdf>> (last visited March 11, 2007) (aiming “to promote at all appropriate levels, nationally as well as in transboundary and international contexts, the protection of human health and well-being, both individual and collective.”)).

¹⁹⁵ *Id.* (referring to Rio Declaration on Environment and Development, U.N. ESCOR, at princ. 1, 14, U.N. Doc. A/CONF.151/26 (Vol. I) (1992) (recognizing the importance of controlling “any activities and substances that ... are found to be harmful to human health.”)).

¹⁹⁶ *See id.*, p. 87.

¹⁹⁷ *See id.*, at p. 97.

¹⁹⁸ *Id.*, at p. 99 (referring to Trail Smelter Arbitration (U.S. v. Can.) (1941), 3 R.I.A.A. 1938, 1965 (1949)).

¹⁹⁹ *Id.* (referring to Corfu Channel Case (U.K. v. Alb.), 1949 I.C.J. 4, 22 (Apr. 9)).

²⁰⁰ *Id.* (referring to Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, 241-42.)



This case could be of great importance for the global struggle against climate change. If the IACHR finds this Petition admissible, it will open the gates for indigenous peoples living in Member States to the OAS²⁰¹ to bring claims based on environmental degradation due to climate change against either the government of the country in which they reside, or against (other) OAS Member States that they believe are primarily responsible for the harm done to their traditional lands – which will most likely be the United States because of its very large emission of greenhouse gases. Whereas no firm conclusion can be reached as of yet regarding the admissibility of the Petition, the hearing held by the IACHR on March 1, 2007, to investigate the relationship between global warming and human rights,²⁰² shows willingness on the part of the Commission to consider these issues. If the IACHR decides in favor of the Inuit, the consequences will be even more far reaching. A favorable decision for the Inuit would mean that, at least in OAS Member States, national governments can be held responsible for human rights violations resulting from their contribution to global warming. That is, unless the Inter-American Court for Human Rights would reach a different conclusion.²⁰³

Notwithstanding the fact that the Netherlands is not as significant a polluter as the United States, the case could also have relevance in the Dutch setting. On the basis that international law may be invoked before Dutch courts, individuals may invoke (some of) the same or similar provisions against the Dutch Government (to the extent that they are legally binding).²⁰⁴ A further assessment could include an analysis of the relevance of the European Convention on Human Rights and Fundamental Freedoms (ECHR).²⁰⁵ If it includes relevant provisions, and the Dutch Government can be said to have violated such provisions, the possibility exists for Dutch nationals to bring a case before the European Court of Human

²⁰¹ For more information about the Organization of American States, see <<http://www.oas.org/>> (last visited Feb. 7, 2007).

²⁰² See Inter-American Commission on Human Rights, *Global Warming and Human Rights: Hearing – 127th ordinary period of sessions*, available at http://www.earthjustice.org/library/legal_docs/inter-american-commission-on-human-rights-inuit-invite.pdf (last visited March 5, 2007). The audio of the hearing is available at <<http://www.cidh.oas.org/Audiencias/Audios%20hearings%20127%20PS.htm>> (last visited March 5, 2007) (several languages (including English) are included in the same hearing).

²⁰³ See Inter-American Commission on Human Rights, What is the IACHR? Commission Processing of Individual Cases, available at <<http://www.cidh.oas.org/what.htm>> (last visited March 5, 2007) (“Rather than preparing a second report for publication, the Commission may decide to take the case to the Inter-American Court. If it wishes to take the case to the Court, it must do so within three months from the date in which it transmits its initial report to the State concerned. The initial report of the Commission will be attached to the application to the Court. The Commission will appear in all proceedings before the Court.”).

²⁰⁴ See *infra*, at Section 4.2.

²⁰⁵ See (European) Convention for the Protection of Human Rights and Fundamental Freedoms, as amended by Protocol No. 11, Rome, 4.XI.1950, available at <<http://www.echr.info/>> (last visited Feb. 7, 2007).



Rights. In that case, and because the European Court of Justice has held that the European Convention on Human Rights forms an integral part of the general principles of Community law,²⁰⁶ arguments relying on the ECHR might possibly also be invoked against EC Member States or the European Commission.

4.2. INTERIM CONCLUSIONS AND SUGGESTIONS

The relevance of international law for Dutch proceedings can be found in Articles 93 and 94 of the Dutch Constitution. According to Article 93 of the Dutch Constitution, international rules that are “binding upon everyone” can be applied directly by Dutch courts and provide a basis for a court decision.²⁰⁷ The main condition is “whether the provision obliges the Dutch legislature to introduce national legislation with a given content or scope or whether it is of such a kind that the provision can simply function as an objective rule in the national legal order.”²⁰⁸ Article 94 of the Dutch Constitution provides that national legislation shall not apply if its application will be incompatible with provisions of treaties and with decisions of international organizations, which are binding upon everyone.²⁰⁹ Therefore, all rules of international law, both rules of customary law and international agreements, have internal effect within the Netherlands.²¹⁰ Not only are they part of the national legal order, all branches of government must apply and implement international law, to the extent compatible with their competences.²¹¹ Moreover, if a plaintiff alleges that a governmental act conflicts with international law, Dutch courts have the opportunity to review the compatibility of the act with international law.²¹² The general approach of Dutch courts is to attempt whenever possible to reconcile national law with international law.²¹³

In this Part, we have analyzed three cases that seek to address the consequences of climate change through international (judicial) means. First, we discussed the UNESCO petitions, in

²⁰⁶ See, e.g., Case C-260/89 *ERT* [1991] ECR I-2925.

²⁰⁷ Dutch Constitution, art. 93 (*Grondwet voor het Koninkrijk der Nederlanden* 2002), available at <http://www.minbzk.nl/contents/pages/7430/grondwet_NL_6-02.pdf> (last visited Feb. 7, 2007).

²⁰⁸ *Id.*

²⁰⁹ See Dutch Constitution, art. 94 (*Grondwet voor het Koninkrijk der Nederlanden* 2002), available at <http://www.minbzk.nl/contents/pages/7430/grondwet_NL_6-02.pdf> (last visited Feb. 7, 2007).

²¹⁰ André Nollkaemper, *International Environmental Law in the Courts of the Netherlands*, INTERNATIONAL ENVIRONMENTAL LAW IN NATIONAL COURTS 185 (M. Anderson & P. Galizzi eds., British Institute of International and Comparative Law 2002).

²¹¹ *Id.*

²¹² See *id.*

²¹³ See *id.*, at 188.



which environmental NGOs requested the inclusion of certain properties on the UNESCO List of World Heritage in Danger on the basis of serious potential dangers arising from the impacts of climate change. The petitions proposed a program of corrective measures to repair the damage by climate change through the reduction of greenhouse gas emissions by State Parties to the UNESCO World Heritage Convention that emit, or have emitted, the highest levels of these gases. Second, we examined the case of Tuvalu and its intention to sue Australia and the United States for their contribution to climate change, which is threatening their island nation through rising sea levels. Finally, we discussed the ICC Petition to the IACHR, in which the Inuit hold the United States primarily responsible for the negative effects climate change and global warming have on their native lands. They claim that because their culture depends solely on what have traditionally been their lands, the deterioration of those lands due to climate change is a violation of their human rights.

The cases reflect international concerns about climate change and their effects. While the three cases have taken different approaches to fight climate change, they all concern the emission of greenhouse gases and are calling for a reduction of these emissions. In this respect, particularly the IACHR's decision in the *Inuit* case should be followed closely. Depending on the outcome, it may put much pressure on the United States, and thereby also on other States, to change their official policy with respect to greenhouse gas emissions.



5. EUROPEAN COMMUNITY LAW

This section of the Report provides an overview of jurisprudence of the European Court of Justice (ECJ) and the Court of First Instance (CFI) in matters concerning climate change. The European Union (EU) and its institutions have considered environmental matters, including global warming, as important for their activities; and much effort has been made to promulgate policies and legislation in this area.²¹⁴ It is well known that the corpus of European Community (EC) law creates rights and obligations on EU Members States, and sometimes directly on natural and legal persons. Therefore, a natural or legal person of an EU Member State, such as the Netherlands, should consider EC law both as a source of further commitments and obligations, and as an additional source of protection in the area of climate change.

5.1. CASE SUMMARIES

The European Court of Justice (ECJ) and the Court of First Instance (CFI) have contributed to the body of case-law relating to climate change. The relevance of climate change varies from one case to another.

Of the following cases, three are references for preliminary ruling; three are actions for annulment; and two are actions for failure to fulfill obligations. The applicable ECJ procedures will be briefly described, followed by an analysis of the various cases.

5.1.1. References for Preliminary Rulings

The European Court of Justice cooperates with all the courts of the Member States, which are the ordinary courts in matters of Community law. To ensure the effective and uniform application of Community legislation and to prevent divergent interpretations, the national courts may, and sometimes must, refer to the ECJ and ask it to clarify a point concerning the interpretation of Community law, so that they may ascertain, for example, whether their national legislation complies with that law.²¹⁵ Such a reference for a preliminary ruling may

²¹⁴ For an overview of ways in which the European Community addresses climate change, see European Commission: *Environment: Climate Change*, available at http://ec.europa.eu/environment/climat/home_en.htm (last visited Feb. 7, 2007).

²¹⁵ See EC Treaty, art. 234 (ex art. 177), available at



also seek the review of the validity of an act of Community law. The ECJ's reply is not merely an opinion, but takes the form of a judgment or reasoned order. The national court to which it is addressed is, in deciding the dispute before it, bound by the interpretation given. The ECJ's ruling likewise binds other national courts before which the same problem is raised. It is thus through references for preliminary rulings that a European citizen can seek clarification of the Community rules which affect him or her. Although such a reference can be made only by a national court, all the parties to the proceedings before that court, the Member States, and the European institutions may take part in the proceedings before the ECJ. Several important principles of Community law have been established by preliminary rulings, sometimes in reply to questions referred by national courts of first instance.²¹⁶

The first preliminary ruling relating to the issue of climate change is a reference by the *Giudice di Pace di Genova* (Magistrate's Court, Genoa, Italy) in the case *Safety Hi-Tech Srl v. S. & T. Srl* (C-284/95).²¹⁷ The questions put to the ECJ concerned the implementation and validity of Council Regulation No 3093/94²¹⁸ on substances that deplete the ozone layer, adopted to fulfil international requirements on this matter, and more specifically the Vienna Convention for the Protection of the Ozone Layer²¹⁹ and the Montreal Protocol on Substances that Deplete the Ozone Layer.²²⁰

In the original proceeding, the Claimant applied for an order of payment submitting the invalidity of the Regulation No 3093/94 on the grounds that it imposed a prohibition for

<<http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/ce321/ce32120061229en00010331.pdf>> (last visited March 11, 2007) ("The Court of Justice shall have jurisdiction to give preliminary rulings concerning: (a) the interpretation of this Treaty; (b) the validity and interpretation of acts of the institutions of the Community and of the ECB; (c) the interpretation of the statutes of bodies established by an act of the Council, where those statutes so provide. Where such a question is raised before any court or tribunal of a Member State, that court or tribunal may, if it considers that a decision on the question is necessary to enable it to give judgment, request the Court of Justice to give a ruling thereon. Where any such question is raised in a case pending before a court or tribunal of a Member State, against whose decisions there is no judicial remedy under national law, that court or tribunal shall bring the matter before the Court of Justice.")

²¹⁶ See *The Court of Justice of the European Communities: The jurisdiction*, available at

<http://www.curia.europa.eu/en/instit/presentationfr/index_cje.htm> (last visited Feb. 7, 2007).

²¹⁷ See *Safety Hi-Tech Srl and S. & T. Srl* (C-284/95), available at <www.curia.europa.eu> (last visited Jan. 19, 2007).

²¹⁸ See Council Regulation (EC) No 3093/94 of 15 December 1994, available at <www.eur-lex.europa.eu> (last visited Jan. 19, 2007).

²¹⁹ See Vienna Convention for the Protection of the Ozone Layer, available at

<<http://www.unep.ch/Ozone/pdfs/viennaconvention2002.pdf>> (last visited Feb. 7, 2007).

²²⁰ See Montreal Protocol on Substances that Deplete the Ozone Layer, available at

<<http://www.unep.org/OZONE/pdfs/Montreal-Protocol2000.pdf>> (last visited Feb. 7, 2007).



certain substances, authorizing others that are equally or more environmental harmful.²²¹ The ECJ was requested to interpret the Regulation on the basis of the principle of proportionality.

The ECJ held that specific reasons justify the prohibition of certain substances and the authorization of others.²²² Moreover, it stated that such prohibition does not constitute an unjustified quantitative restriction and that it is not disproportionate to the aim pursued. In its judgment, the ECJ referred to Council Decision 88/540²²³ concerning the conclusion of the Vienna Convention, and the Montreal Protocol and Council Decision 94/68²²⁴ concerning the conclusion of the first and second amendment of the Montreal Protocol. The interpretation by the ECJ of these instruments can be relevant for future claims on climate change as it recognizes the existence of a complex of interrelated norms on climate change whose respect and enforcement is essential in order to limit the effects of global warming.

The other cases are marginally significant to the issue of climate change. In particular, the cases *PreussenElektra AG v Schleswag* (C-379/98)²²⁵ and *EVN AG and Wienstrom SmgH v Republik Österreich* (C-448/01)²²⁶ deal with regulation of the electricity market and the supply of electricity. The reference to climate change is limited to the fact that the use of renewable energy sources for producing electricity contributes to the reductions of greenhouse gases emissions. Nevertheless, the pronouncements of the ECJ in these cases can be useful for future claims on climate change. In fact, the ECJ expressly mentioned the objective of reducing global warming related to certain renewable energy sources for producing electricity.²²⁷

²²¹ See *Safety Hi-Tech Srl and S. & T. Srl* (C-284/95) para. 6, available at <www.curia.europa.eu> (last visited Jan. 19, 2007).

²²² See *Safety Hi-Tech Srl and S. & T. Srl* (C-284/95) para. 63-67, available at <www.curia.europa.eu> (last visited Jan. 19, 2007).

²²³ See Council Decision 88/540/EEC of 14 October 1988 concerning the conclusion of the Vienna Convention for the protection of the ozone layer and the Montreal Protocol on substances that deplete the ozone layer, available at <www.eur-lex.europa.eu> (last visited Jan. 19, 2007).

²²⁴ See Council Decision 94/68/EC of 2 December 1994 concerning the conclusion of the first and second amendment of the Montreal Protocol, available at <www.eur-lex.europa.eu> (last visited Jan. 19, 2007).

²²⁵ See *PreussenElektra AG v Schleswag* (C-379/98), available at <www.curia.europa.eu> (last visited Jan. 19, 2007).

²²⁶ See *EVN AG and Wienstrom SmgH v Republik Österreich* (C-448/01), available at <www.curia.europa.eu> (last visited Jan. 19, 2007).

²²⁷ See *EVN AG and Wienstrom SmgH v Republik Österreich* (C-448/01), para. 40, <www.curia.europa.eu> (last visited Jan. 19, 2007).



5.1.2. Actions for Annulment

By an action for annulment,²²⁸ the applicant seeks the annulment of a measure (regulation, directive or decision) adopted by an EC institution. The ECJ has exclusive jurisdiction over actions brought by a Member State against the European Parliament and/or against the Council (apart from Council measures in respect of State aid, dumping and implementing powers) or brought by one Community institution against another. The Court of First Instance has jurisdiction, at first instance, in all other actions of this type and particularly in actions brought by individuals.²²⁹

A recent action for annulment regarding climate change is the case **United Kingdom of Great Britain and Northern Ireland v Commission**. (T-178/05).²³⁰ The United Kingdom applied for the annulment of a Commission decision declaring that the British proposed amendment of Commission Decision C(2005) 1081 (plan for allocation of greenhouse gases emissions) was inadmissible. The contested decision had been annulled by the ECJ, ruling that the United Kingdom was entitled to propose amendments to the national plan, even though they increased the total quantity of emission allowances. In spite of the ruling of the ECJ, the Commission adopted a new decision concluding again that the amendment proposed by the United Kingdom was inadmissible. This decision was challenged by the Applicant.

The judgment of the Court of First Instance concerns some procedural aspects of the execution of plans for the allocation of greenhouse gases emissions. The Court annulled the decision of the Commission to refuse the admissibility of the proposed British amendment

²²⁸ See EC Treaty, *supra*, fn. 215, art. 230 (ex art. 173) (“The Court of Justice shall review the legality of acts adopted jointly by the European Parliament and the Council, of acts of the Council, of the Commission and of the ECB, other than recommendations and opinions, and of acts of the European Parliament intended to produce legal effects vis-à-vis third parties. It shall for this purpose have jurisdiction in actions brought by a Member State, the European Parliament, the Council or the Commission on grounds of lack of competence, infringement of an essential procedural requirement, infringement of this Treaty or of any rule of law relating to its application, or misuse of powers. The Court of Justice shall have jurisdiction under the same conditions in actions brought by the European Parliament, by the Court of Auditors and by the ECB for the purpose of protecting their prerogatives. Any natural or legal person may, under the same conditions, institute proceedings against a decision addressed to that person or against a decision which, although in the form of a regulation or a decision addressed to another person, is of direct and individual concern to the former. The proceedings provided for in this Article shall be instituted within two months of the publication of the measure, or of its notification to the plaintiff, or, in the absence thereof, of the day on which it came to the knowledge of the latter, as the case may be.”)

²²⁹ See *The Court of Justice of the European Communities, The Court of Justice of the European Communities in the Community legal order*, available at <http://www.curia.europa.eu/en/instit/presentationfr/index_cje.htm> (last visited Feb. 7, 2007).

²³⁰ See *UK v Commission (T-178/05)*, 23 November 2005, available at <www.curia.europa.eu> (last visited Jan. 19, 2007).



implying an increased quantity of emission allowances. Therefore, the judgment of the Court in this case can be deemed as being not climate-change friendly. Nevertheless, the approach of the Court in this case implies a strict interpretation of Member States' rights and obligations on the execution of national plans, that constitutes a fundamental activity for the limitation of emissions, one of the main causes of climate change. Such rigorous approach of the Court toward the system of allocation of emission can be recalled in future disputes on the same matter.

The case *Commission v Council* (C-176/03)²³¹ is an action for annulment of the Council Framework Decision 2003/80/JHA²³² on the protection of the environment through criminal law. The Commission challenged such decision considering that it was founded on an erroneous legal basis. The core of the case is related to the complex relations between the EC and the EU and between the 1st Pillar (European Communities, including environmental law) and the 3rd Pillar (Police and Judicial Co-operation in Criminal Matters). The case is a milestone in the ECJ jurisprudence on the protection of the environment as it deals for the first time with the interaction of criminal and environmental law (i.e. the application of criminal sanction as consequences of an environmental damage). It demonstrates that criminal sanctions can be imposed by Member States to punish violations of EC legislation on climate change.

The last action for annulment is the case *Commission v European Parliament* (C-122/04). The Commission applied for the annulment of Article 17(2) of EC Regulation 2152/2003²³³ concerning monitoring of forest and environmental interactions in the Community (Forest Focus), in so far as it made the adoption of implementing measures for the Forest Focus programme subject to the regulatory procedure laid down in Article 5 of Council Decision

²³¹ See *Commission v, Council* (C-176/03), available at <<http://www.curia.europa.eu>> (last visited Jan. 19, 2007).

²³² See Council Framework Decision 2003/80/JHA of 27 January 2003 on the protection of the environment through criminal law, available at <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²³³ See Regulation (EC) No 2152/2003 of the European Parliament and the Council of 17 November 2003 on the monitoring of forest and environmental interactions in the Community (Forest Focus), art. 17, available at <<http://europa.eu/scadplus/leg/en/lvb/l28125.htm>> (last visited Feb. 7, 2007) (“1. The Commission shall be assisted by the Standing Forestry Committee. 2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof. The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at two months. 3. The Committee shall adopt its Rules of Procedure.”)



1999/468²³⁴ until amended.²³⁵ Article 5 of the Council Decision laid down the procedures for the exercise of implementing powers conferred on the Commission. The application by the Commission was dismissed. The relevance of this case for the purposes of the present Report is only due to the fact that the Forest Focus regulation deals, among other matters, also with impact of climate change on forests. Thus, the case contributes to delineate ECJ jurisprudence on matters (even indirectly) linked to climate change.

5.1.3. Actions for Failure to Fulfil Obligations

Actions for failure to fulfil obligations²³⁶ enable the ECJ to determine whether an EC Member State has fulfilled its obligations under Community law. Before bringing the case before the ECJ, the Commission conducts a preliminary procedure in which the Member State is given the opportunity to reply to the complaints against it. If that procedure does not result in the Member State terminating the failure, an action for infringement of Community law may be brought before the ECJ. The action may be brought by the Commission - as, in practice, is usually the case - or by a Member State. If the ECJ finds that an obligation has not been fulfilled, the State must bring the failure to an end without delay. If, after a further action is brought by the Commission, the ECJ finds that the Member State concerned has not complied with its judgment, it may impose on it a fixed or periodic financial penalty.²³⁷

In the case *Commission v. Austria* (C-320/03),²³⁸ the Commission claimed that a measure applied by the Austrian Region of Tyrol was incompatible with the free movement of goods and the freedom to transport services, as it was a measure having equivalent effect to quantitative restrictions. The contested measure consisted in a ban on the use by heavy goods vehicles weighting more than 7.5 tonnes and carrying certain goods on a section of the A12 motorway. It was applied in order to protect the environment by contributing to the reduction

²³⁴ See Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission, <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²³⁵ The Council Decision 1999/468 has been amended by the Council Decision 2006/512/EC of 17 July 2006, available at <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²³⁶ EC Treaty, *supra*, fn. 215, art. 226 (ex art. 169) (“If the Commission considers that a Member State has failed to fulfil an obligation under this Treaty, it shall deliver a reasoned opinion on the matter after giving the State concerned the opportunity to submit its observations. If the State concerned does not comply with the opinion within the period laid down by the Commission, the latter may bring the matter before the Court of Justice.”)

²³⁷ See *The Court of Justice of the European Communities: The jurisdiction*, available at <http://www.curia.europa.eu/en/instit/presentationfr/index_cje.htm> (last visited Feb. 7, 2007).

²³⁸ See *Commission v Austria* (C-320/03), available at <<http://www.curia.europa.eu>> (last visited Jan. 19, 2007).



in emissions of greenhouse gases, amongst the main causes of climate change. The Austrian Government argued that the contested measure was justified under Council Directives 96/62²³⁹ on ambient air quality assessment and management, and 1999/30²⁴⁰ relating to limit values for sulphur dioxide and oxides nitrogen, particulate matter and lead in ambient air. The ECJ held that the contested measure constituted a violation of Articles 28-30 TEC on the free movement of goods. As the measure infringed on the principle of proportionality, it could not be justified by reasons concerning the protection of air quality (i.e. the struggle against climate change).²⁴¹

In *Commission v UK* (C-6/04),²⁴² the Commission complained that the United Kingdom had failed to respond adequately to various provisions of Council Directive 92/43 EEC²⁴³ on the conservation of natural habitat and of wild flora and fauna (Habitats Directive). The ECJ confirmed that the UK had failed to fulfil its obligations deriving from the Habitats Directive. The involvement of climate change in this case is indirect, as the Habitats Directive does not directly refer to climate change as one of the threats to the conservation of natural habitats and of wild flora and fauna. Still, the point of interest for the purpose of this Report is the possible link between climate change and other environmental matters disciplined by EU law.

The case *Commission v Germany* (C-98/03)²⁴⁴ is also an infringement procedure for violation of the Habitat Directive. In particular, Germany was alleged to have failed with respect to the obligations contained in the Directive regarding special areas of conservation (“SACs”) in particular authorizing emissions, irrespective of whether they are likely to have a significant effect on that area. The reference to climate change is indirect as it concerns, among other alleged violations, the authorization of emission in a SAC. Moreover, it is not specified whether or not such emissions have consequences on climate change nor whether the

²³⁹ See Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management, available at <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²⁴⁰ See Council Directive 1999/30/EC of 22 April 1999 on limit values for sulphur dioxide and oxides nitrogen, particulate matter and lead in ambient air, available at <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²⁴¹ See *Commission v Austria* (C-320/03) para. 85-91, available at <<http://www.curia.europa.eu>> (last visited Jan. 19, 2007).

²⁴² See *Commission v UK* (C-6/04), available at <<http://www.curia.europa.eu>> (last visited Jan. 19, 2007).

²⁴³ See Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitat and of wild flora and fauna (Habitats Directive), available at <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²⁴⁴ See *Commission v Germany* (C-98/03). The case is not contained in the Interim Report tables. However, it is included in the CD-ROM attached to this Report and it is available in the ECJ website: <<http://www.curia.europa.eu>> (last visited Jan. 19, 2007).



prohibition of emissions aims at limiting climate change. The Court accepted the application by the Commission.

In both *Commission v. UK* and *Commission v Germany* the decisions are based on the precautionary principle, providing that a risk exists if it cannot be excluded on the basis of objective information. The relevance of these cases is mostly due to the application of the precautionary principle, which can be invoked in a future claim for climate change responsibility.

Additional actions for failure to fulfil obligation (not included in the Interim Report)

The following cases concerning actions for failure to fulfil obligations were not analyzed in the Interim Report, as they do not contain any explicit reference to climate change.²⁴⁵ Nevertheless, these cases deal with the application by Member States of the EC law concerning emissions of CO₂, waste incineration, emissions in special areas of conservation; in other words, activities that *may* affect climate change.

One of these cases is **Commission v Spain** (Case 139/00),²⁴⁶ an action for failure to fulfil the obligations deriving from Council Directive 89/369/EEC²⁴⁷ on the prevention of air pollution from new municipal waste incineration plants. Here the connection with climate change is potential and not expressed, but it represents an effective way to enforce climate change legislation through EC litigation. A similar case, again only indirectly and potentially related to climate change, is **Commission v Greece** (C-364/03),²⁴⁸ an action for failure to fulfil obligation under the Council Directive 84/360/EEC²⁴⁹ on the combating of air pollution from industrial plants, and in particular its Article 13. It has to be considered that the Directive 89/369/EEC is a specification of the Directive 84/360/EEC, with respect to incineration plants. In both cases the ECJ declared that the Members States had failed to fulfil their obligations under the respective Directives on the prevention and combating of air pollution.

²⁴⁵ The mentioned cases are not contained in the Interim Report. However, they are included in the CD-ROM attached to this Report and they are also *available at* the ECJ website: <<http://www.curia.europa.eu>> (last visited Jan. 19, 2007).

²⁴⁶ See *Commission v Spain* (Case 139/00).

²⁴⁷ See Council Directive 89/369/EEC of 8 June 1989 on the prevention of air pollution from new municipal waste incineration plants, *available at* <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²⁴⁸ See *Commission v Greece* (C-364/03).

²⁴⁹ See Council Directive 84/360/EEC of 28 June 1984 on the combating of air pollution from industrial plants, *available at* <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).



Commission v Italy (C-22/02)²⁵⁰ and *Commission v France* (C-161/02)²⁵¹ are twin cases, in which the Commission brought an action under Article 226 EC for failure to comply with Directive 1999/94/EC²⁵² relating to the availability of consumer information on fuel economy and CO₂ emissions in respect of the marketing of new passenger cars, and in particular its Article 12.²⁵³ The references to climate change are indirect. Nevertheless, the case concerns consumer information on CO₂ emissions, the main cause of climate change. In these cases, the ECJ held that the Member States had failed to fulfil their obligations under the Directive.

5.2. RELEVANT EUROPEAN COMMUNITY AND EUROPEAN UNION LEGISLATION

In the cases analyzed above, the Parties and the ECJ refer to the following EC/EU legislation relating to climate change:²⁵⁴

- Council Regulation No 3093/94 on substances that deplete the ozone layer;
- Council Decision 88/540 concerning the conclusion of the Vienna Convention;
- Council Decision 91/68 concerning the conclusion of the first and second amendment of the Montreal Protocol;
- Commission Decision C(2005) 1081 (plan for allocation of greenhouse gases emissions);
- Council Directive 96/62 on ambient air quality assessment and management;
- Council Directive 1999/30 relating to limit values for sulphur dioxide and oxides nitrogen, particulate matter and lead in ambient air;
- Council Directive 84/360/EEC on the combating of air pollution from industrial plants;
- Council Directive 89/369/EEC on the prevention of air pollution from new municipal waste incineration plants; and

²⁵⁰ See *Commission v Italy* (C-364/03).

²⁵¹ See *Commission v France* (C-161/02).

²⁵² See Directive 1999/94/EC of the European Parliament and the Council of 13 December 1999 relating to the availability of consumer information on fuel economy and CO₂ emissions in respect of the marketing of new passenger cars, available at <<http://www.eur-lex.europa.eu>> (last visited Jan. 19, 2007).

²⁵³ Directive 1999/94/EC, art. 12 (“1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 18 January 2001. They shall forthwith inform the Commission thereof. When Member States adopt these provisions, they shall contain a reference to this Directive or shall be accompanied by such reference at the time of their official publication. The procedure for such reference shall be adopted by Member States. 2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive”).

²⁵⁴ The legislation listed in this paragraph is contained in the CD-ROM attached to this Report and can be found in the EU on-line database: <<http://eur-lex.europa.eu/en/index.htm>> (last visited Feb. 7, 2007).



- Directive 1999/94/EC relating to the availability of consumer information on fuel economy and CO₂ emissions in respect of the marketing of new passenger cars.

The following legislation is not focused on climate change but has an indubitable relevance for environmental matters in general. Some direct or indirect references to climate change in the following legal instruments make them interesting for our purposes:

- Council Framework Decision 2003/80/JHA on the protection of the environment through criminal law;
- EC Regulation 2152/2003 concerning monitoring of forest and environmental interactions in the Community (Forest Focus); and
- Council Directive 92/43 EEC on the conservation of natural habitat and of wild flora and fauna (Habitats Directive).

Further relevant legislation on climate change that has not been applied in the cases discussed above will be annexed to this Report, the most relevant of which are:

- Decision 94/69 concerning the conclusion of the UN Framework Convention on Climate Change;
- Decision 2002/358 concerning the approval of the Kyoto Protocol to the UN Framework Convention on Climate Change;
- Decisions 91/565 on energy saving;
- Decision 93/500 on alternative energies;
- Decision 99/296 amending Decision 93/389 for a monitoring mechanism of Community CO₂ and other greenhouse gases;
- Directive 2002/91 on the energy performance of buildings;
- Decision 1600/2002 laying down the 6th Community Environment Action Programme;
- Directive 96/61 on integrated pollution prevention and control;
- Directive 93/76 to limit carbon dioxide emissions by improving energy efficiency (SAVE);
- Directive 2001/77 on the promotion of electricity produced from renewable energy sources in the internal electricity market; and



- Directive 2003/30 on the promotion of the use of bio-fuels or other renewable fuels.

5.3. INTERIM CONCLUSIONS AND SUGGESTIONS

It must be underlined that none of the considered cases in this Part dedicated to European Community law is a claim for climate change responsibility as such. All the cases concern the violation and/or interpretation of certain European laws that directly or indirectly deal with climate change.

Generally speaking, the ECJ has proven to have a climate-friendly attitude. Only in the cases T-178/05 and C-320/03 the Court relied on principles that imply limits to environmental protection. In the first case, the Court allowed an amendment even if it increased the total quantity of emission allowances; and in the second case, the ECJ privileged the protection of the free movement of goods rather than the protection of the environment.

One of the most relevant cases for the purposes of this Report is C-284/95 in which the Court, through a reference for preliminary ruling, interpreted a regulation in a manner to preserve the right of State to apply certain measures in order to combat climate change.

In the cases C-284/95 and C-320/03 the ECJ applied the principle of proportionality to ascertain the admissibility of a certain environmental measure; while the precautionary principle was applied in the cases C-98/03 and C-6/04, both actions for failure to fulfil obligations.

The different types of proceedings before the ECJ represent various degrees of suitability for different legal persons. For instance, an action for annulment or for failure to fulfil obligations can be brought by Member States or European institutions. Consequently, a natural or legal person in a Member State – the Netherlands for instance – has small chance to have a role in the above-mentioned litigation and, if such role is played, it is likely to be indirect and informal. Conversely, preliminary rulings, implying a direct involvement of national courts and of the parties to a national dispute, give national legal persons the option to bring a claim concerning certain EC legislation that has not yet been interpreted, in order to refer to the ECJ on this matter.



The most significant option for present purposes comes from the Court of First Instance (CFI), which has jurisdiction to hear direct actions brought by natural and legal persons against acts of Community institutions or against a failure to act on the part of those institutions. Even though the case-law of CFI on climate change is very limited, it is reasonable to hypothesize that it is going to be the most suitable way to approach climate change responsibility from the point of view of a natural or legal person of an EC Member State. In this regard, the interpretations given by the ECJ in the cases here analyzed remain relevant, as they could constitute the basis for a future claim before the CFI.

It is noted that all the considerations related to Member States, national courts and legal and natural persons of Member States contained in this Part should be deemed as referring to all EU Member States, such as the Netherlands, including their courts and natural and legal persons.



6. GENERAL CONCLUSIONS

The purpose of this Report was to review climate change jurisprudence that currently exists in different jurisdictions. Supplementing the cases provided to us by the Client, we have identified and examined several cases in public/administrative law, private law, international law, and European Community law that deal with the emission of greenhouse gases and climate change in general.

In the Part dedicated to cases of a *public/administrative law* nature, we analyzed cases from the United States, Germany and Australia. The cases mainly concern government agencies that were said to have failed to comply with environmental legislation. Since some of the U.S. cases have not yet been decided, we focused on the preliminary issue of standing for such cases to proceed to the merits. We note that in the U.S. cases, the Courts have broadly interpreted the requirement of standing in respect of cases that concern the emission of greenhouse gases. The plaintiff is only obliged to demonstrate that it is *reasonably probable* that the challenged action will threaten his/her concrete interests and it is not necessary to establish causation with an absolute degree of certainty. While the Court in the *Bluewater* case denied standing on the basis of climate change, it accepted standing based on health effects and aesthetic injuries caused by air pollution. In the German *Bund* case, the Court – in a settlement – granted the Claimants’ request for information concerning projects that may cause climate change. In the Australian case, *Australian Conservation Foundation*, the Court explicitly recognized that greenhouse gas emissions may lead to future environmental problems. In sum, the cases demonstrate the potential usefulness of addressing, and thereby limiting, climate change through public/administrative law litigation.

In the Part concerning *private law* we analyzed two cases. The first case is a suit brought against several electric companies in the United States because of their contribution to global warming, which the Plaintiffs regarded as a public nuisance. This case was dismissed by the U.S. District Court, Southern District of New York, because it found itself without mandate to decide on non-justiciable political questions assigned to the political branches of government. In the *Northwest* case, however, the U.S. District Court, District of Oregon, accepted that climate change and global warming can have adverse health effects, thus satisfying the first requirement for standing. The Court went on to state that the Plaintiffs were not required to demonstrate with scientific certainty that the Defendant’s greenhouse gas emissions were the



only source of the threatened harm. It was sufficient for the Plaintiffs to assert that the Defendant's polluting emissions threaten the Plaintiffs' interests. This case is therefore of importance for individuals seeking to hold private companies liable for their contribution to climate change through judicial means.

The third Part illustrates diverse ways of addressing climate change by invoking international law. In the first case, petitions were filed for sites to be put on the UNESCO List of World Heritage in Danger on the basis of serious potential dangers arising from the impacts of climate change. The petitions also proposed a corrective program to repair the damage caused by climate change, which essentially consisted of a worldwide reduction of greenhouse gas emissions. A decision has not yet been made. The second case concerns the intention of the island nation of Tuvalu to start proceedings at the International Court of Justice against the United States and Australia for their failure to stabilize emissions of greenhouse gas concentrations as required by the United Nations Framework Convention on Climate Change. However, it may prove difficult for Tuvalu to sue these two States due to the ICJ's limited jurisdiction. The third and final case concerns a petition filed on behalf of all Inuit at the Inter American Commission on Human Rights. The petition seeks relief from violations resulting from global warming caused by acts and omissions of the United States. The Petitioners claim that the Inuit traditional way of life is threatened as a result of global warming that negatively affects the land, the snow, the ice, and the sea. All of these are vital to the Inuit traditional life-style. The Petition may have far-reaching consequence for the effort to hold national governments responsible for their contribution to global warming. The same or similar arguments based on international law may be particularly useful before a Dutch court as it may directly apply international law, and because the Netherlands is party to various environmental treaties such as the United Nations Framework Convention on Climate Change, and it has ratified the Kyoto Protocol.

Finally, the Part *European Community Law* leads to several different remarks. The jurisprudence of the European Court of Justice and the Court of First Instance devotes special attention to climate change. In fact, this environmental phenomenon is frequently cited by the ECJ as one of the most urgent environmental emergencies, even in cases that make only a weak or indirect reference to climate change, and that are focused on more general environmental problems. This attitude could constitute the basis for a consolidated interpretation to be invoked in future disputes on climate change responsibility. Considering



the prominence given to climate change within environmental matters and the fact that, in the words of EC Treaty Article 6, “environmental protection requirements must be integrated in to the definition and implementation of the Community policies and activities,” it is to be expected that more case law will be generated in this area.

To conclude, even though cases that directly concern climate change are still few in number, there is a discernable increase in this area of litigation. Especially cases that concern greenhouse gas emissions, and thus indirectly relate to climate change, are on the rise. Due to increased awareness by media, governmental and intergovernmental institutions, and the public,²⁵⁵ one may expect that climate change litigation will spread to other jurisdictions than those considered in this Report, including the Netherlands.²⁵⁶ While it will present different degrees of difficulty to transpose the various rules applied in foreign jurisdictions, it is hoped that the above analysis may assist in choosing successful strategies to address climate change in the Dutch setting.

²⁵⁵ Note, in particular, activities undertaken by the United Nations Intergovernmental Panel on Climate Change, information available at <<http://www.ipcc.ch/>> (last visited Feb. 7, 2007); Stern Review on the Economics of Climate Change, available at <http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/sternreview_index.cfm> (last visited Feb. 7, 2007); former U.S. Vice President Al Gore’s campaign and movie *An Inconvenient Truth*, information available at <<http://www.climatecrisis.net/>> (last visited Feb. 7, 2007).

²⁵⁶ Note in this respect also the discussion in January 2007 by Mark Kantor and John Gaffney in the OGEMID forum on the relevance of climate change for international arbitration. OGEMID discussions are available (monthly) at <<http://www.transnational-dispute-management.com/>> (last visited Feb. 7, 2007) (the journal Transnational Dispute Management is accessible in the University of Amsterdam Law Library).



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ANNEXES

Please note that the numbers of the footnotes do not necessarily correspond to those used in the instruments. Also, not every annex to each instrument is included.

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ANNEX 1: Decision 94/69 concerning the conclusion of the UN Framework Convention on Climate Change

Council Decision 94/69/EC of 15 December 1993 concerning the conclusion of the United Nations Framework Convention on Climate Change¹

OFFICIAL JOURNAL NO. L 033, 07/02/1994 P. 0011

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 130s (1) in conjunction with Article 228 (3), first subparagraph, thereof,

Having regard to the proposal from the Commission²,

Having regard to the opinion of the European Parliament³,

Having regard to the opinion of the Economic and Social Committee,⁴

Whereas the Community and its Member States participated in the negotiations conducted in the Intergovernmental Negotiating Committee established by the United Nations General Assembly for the preparation of a Framework Convention on Climate Change⁵;

Whereas, during the United Nations Conference on Environment and Development in Rio de Janeiro from 3 to 14 June 1992, the United Nations Framework Convention on Climate Change was signed by the Community and all its Member States;

Whereas the ultimate objective of the Convention, as expressed in Article 2 thereof, is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system, within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner;

¹ Council Decision 94/69/EC is *available at* <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31994D0069:EN:HTML> (last visited March 29, 2007).

² OJ No C 44, 16. 2. 1993, p. 1.

³ OJ No C 194, 19. 7. 1993, p. 358.

⁴ OJ No C 201, 26. 7. 1993, p. 1.

⁵ Resolution 45/212 of the General Assembly of the United Nations of 19 December 1990 on protection of global climate for present and future generations of mankind.



Whereas the Convention, when ratified, will commit the developed countries and other parties listed in Annex I to the Convention to take measures to limit anthropogenic emissions of CO₂ and other greenhouse gases not controlled by the Montreal Protocol with the aim of returning, individually or jointly, to the 1990 levels these anthropogenic emissions by the end of the present decade;

Whereas, when the Convention was being signed, the Community and its Member States reaffirmed the objective of stabilization of CO₂ emissions by 2000 at 1990 levels in the Community as a whole, as referred to in the Council conclusions of 29 October 1990, 13 December 1991, 5 and 26 May 1992;

Whereas the Convention, under Article 22, is open for ratification, acceptance or approval by States and by regional economic integration organizations that have signed it;

Whereas preventive action against dangerous anthropogenic climate change must be taken at international as well as at national level;

Whereas the Community and its Member States each possess competence in certain of the areas covered by the Convention; whereas it is necessary for the Community and its Member States to become Contracting Parties so that all the obligations under the Convention can be properly fulfilled;

Whereas the commitment to limit anthropogenic CO₂ emissions set out in Article 4 (2) of the Convention will be fulfilled by the Community as a whole, through action by the Community and its Member States, within the respective competence of each;

Whereas the Community takes note that the Member States will take the measures necessary to permit, at the earliest opportunity and as far as possible simultaneously, the deposit of the instruments of ratification or approval of the Member States and the Community,

HAS DECIDED AS FOLLOWS:

Article 1

The United Nations Framework Convention on Climate Change signed in June 1992 in Rio de Janeiro is hereby approved on behalf of the European Community.

Article 2

1. On behalf of the European Community, the President of the Council shall deposit the instrument of approval with the Secretary-General of the United Nations in accordance with Article 22 (1) of the Convention.

2. At the same time, the President of the Council shall deposit the declaration of competence set out in Annex B to this Decision, according to the provisions of Article 22 (3) of the Convention, as well as the Declaration set out in Annex C.



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Done at Brussels, 15 December 1993.

For the Council

The President

M. DE GALAN

1. OJ No C 44, 16. 2. 1993, p. 1.
2. OJ No C 194, 19. 7. 1993, p. 358.
3. OJ No C 201, 26. 7. 1993, p. 1.
4. Resolution 45/212 of the General Assembly of the United Nations of 19 December 1990 on protection of global climate for present and future generations of mankind.



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ANNEX 2: Decision 2002/358 concerning the approval of the Kyoto Protocol to the UN Framework Convention on Climate Change

COUNCIL

COUNCIL DECISION

of 25 April 2002

concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder

(2002/358/CE)⁶

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175(1) in conjunction with Article 300(2), first sentence of the first subparagraph, and Article 300(3), first subparagraph, thereof,

Having regard to the proposal from the Commission⁷,

Having regard to the Opinion of the European Parliament⁸,

Whereas:

(1) The ultimate objective of the United Nations Framework Convention on Climate Change (.the Convention.), which was approved on behalf of the Community by Council Decision 94/69/EC of 15 December 1993 concerning the conclusion of the United Nations Framework Convention on Climate Change⁹, is to achieve stabilisation of greenhouse-gas concentrations in the atmosphere at a level which prevents dangerous anthropogenic interference with the climate system.

(2) The Conference of the Parties to the Convention, at its first session, concluded that the commitment by developed countries to aim at returning, individually or jointly, their emissions of carbon dioxide and other greenhouse gases not controlled by the Montreal Protocol to the Convention for the Protection of the Ozone Layer to 1990 levels by the year 2000 was inadequate for achieving the Convention's long-term objective of preventing dangerous anthropogenic interference with the climate system. The Conference further agreed to begin a

⁶ Council Decision 2002/358 is available at http://europa.eu.int/eur-lex/pri/en/oj/dat/2002/l_130/l_13020020515en00010020.pdf (last visited March 29, 2007).

⁷ OJ C 75 E, 26.3.2002, p. 17.

⁸ Opinion delivered on 6 February 2002 (not yet published in the Official Journal).

⁹ OJ L 33, 7.2.1994, p. 11.



process to enable appropriate action to be taken for the period beyond 2000, through the adoption of a protocol or another legal instrument¹⁰.

(3) This process resulted in the adoption on 11 December 1997 of the Kyoto Protocol to the United Nations Framework Convention on Climate Change (.the Protocol.)¹¹.

(4) The Conference of the Parties to the Convention, at its fourth session, decided to adopt the Buenos Aires Plan of Action, to reach agreement on the implementation of key elements of the Protocol at the sixth session of the Conference of the Parties¹².

(5) The core elements for the implementation of the Buenos Aires Plan of Action were agreed upon by consensus by the Conference of the Parties at its resumed sixth session in Bonn from 19 to 27 July 2001¹³.

(6) A range of decisions giving effect to the Bonn Agreements were adopted by consensus by the Conference of the Parties at its seventh session in Marrakech from 29 October to 10 November 2001¹⁴.

(7) The Protocol, under Article 24, is open for ratification, acceptance or approval by States and by regional economic integration organisations that have signed it.

(8) The Protocol, under Article 4, provides for Parties to fulfil their commitments under Article 3 jointly, acting in the framework of and together with a regional economic integration organisation.

(9) When the Protocol was signed in New York on 29 April 1998, the Community declared that it and its Member States would fulfil their respective commitments under Article 3(1) of the Protocol jointly in accordance with Article 4 thereof.

(10) In deciding to fulfil their commitments jointly in accordance with article 4 of the Kyoto Protocol, the Community and the Member States are jointly responsible, under paragraph 6 of that article and in accordance with article 24(2) of the Protocol, for the fulfilment by the Community of its quantified emission reduction commitment under Article 3(1) of the Protocol. Consequently, and in accordance with Article 10 of the Treaty establishing the European Community, Member States individually and collectively have the obligation to take all appropriate measures, whether general or particular, to ensure fulfilment of the obligations

¹⁰ Decision 1/CP.1: .The Berlin Mandate: Review of the adequacy of Article 4, paragraph 2(a) and (b), of the Convention, including proposals related to a protocol and decisions on follow-up.

¹¹ Decision 1/CP.3: .Adoption of the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

¹² Decision I/CP.4: .The Buenos Aires Plan of Action.

¹³ Decision 5/CP.6: .Implementation of the Buenos Aires Plan of Action.

¹⁴ Decisions 2-24/CP.7: The Marrakech Accords.



resulting from action taken by the institutions of the Community, including the Community's quantified emission reduction commitment under the Protocol, to facilitate the achievement of this commitment and to abstain from any measure that could jeopardise the attainment of this commitment.

(11) The legal base of any further Decision in relation to the approval by the Community of future commitments in respect of emission reductions will be determined by the content and effect of that Decision.

(12) The Council agreed upon the contributions of each Member State to the overall Community reduction commitment in the Council conclusions of 16 June 1998¹⁵. Certain Member States expressed assumptions concerning base year emissions and common and coordinated policies and measures. The contributions are differentiated to take account i.a. of expectations for economic growth, the energy mix and the industrial structure of the respective Member State. The Council further agreed that the terms of the agreement would be included in the Council Decision on the approval of the Protocol by the Community. Article 4(2) of the Protocol requires the Community and its Member States to notify the Secretariat, established by Article 8 of the Convention, of the terms of this agreement on the date of deposit of their instruments of ratification or approval. The Community and its Member States have an obligation to take measures in order to enable the Community to fulfil its obligations under the Protocol without prejudice to the responsibility of each Member State towards the Community and other Member States to fulfilling its own commitments.

(13) The base-year emissions of the Community and its Member States will not be established definitively before the entry into force of the Protocol. Once these base-year emissions are definitively established and at the latest before the start of the commitment period, the Community and its Member States shall determine these emission levels in terms of tonnes of carbon dioxide equivalent in accordance with the procedure referred to in Article 8 of Council Decision 93/389/EEC of 24 June 1993 for a monitoring mechanism of Community CO₂ and other greenhouse gas emissions¹⁶.

(14) The Gothenburg European Council on 15 and 16 June 2001 reaffirmed the determination of the Community and the Member States to meet their commitments under the Protocol, and stated that the Commission will prepare a proposal for ratification before the end of 2001 making it possible for the Community and its Member States to fulfil their commitment rapidly to ratify the Protocol.

(15) The Laeken European Council on 14 and 15 December 2001 confirmed the Union's determination to honour its commitment under the Kyoto Protocol and its desire that the Protocol

¹⁵ Doc. 9702/98 of 19 June 1998 of the Council of the European Union reflecting the outcome of proceedings of the Environment Council of 16-17 June 1998, Annex I.

¹⁶ OJ L 167, 9.7.1993, p. 31. Decision as last amended by Decision 1999/296/EC (OJ L 117, 5.5.1999, p. 35).



should come into force before the Johannesburg World Summit on Sustainable Development, 26 August to 4 September 2002.

(16) The measures necessary for the implementation of this Decision should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission¹⁷,

HAS ADOPTED THIS DECISION:

Article 1

The Kyoto Protocol to the United Nations Framework Convention on Climate Change (.the Protocol.) signed on 29 April 1998 in New York is hereby approved on behalf of the European Community.

Article 2

The European Community and its Member States shall fulfil their commitments under Article 3(1) of the Protocol jointly, in accordance with the provisions of Article 4 thereof, and with full regard to the provisions of Article 10 of the Treaty establishing the European Community. The quantified emission limitation and reduction commitments agreed by the European Community and its Member States for the purpose of determining the respective emission levels allocated to each of them for the first quantified emission limitation and reduction commitment period, from 2008 to 2012, are set out in Appendix I.

The European Community and its Member States shall take the necessary measures to comply with the emission levels set out in Appendix I, as determined in accordance with Article 3 of this Decision.

Article 3

The Commission shall, at the latest by 31 December 2006 and in accordance with the procedure referred to in Article 4(2) of this Decision, determine the respective emission levels allocated to the European Community and to each Member State in terms of tonnes of carbon dioxide equivalent following the establishment of definitive base-year emission figures and on the basis of the quantified emission limitation or reduction commitments set out in Appendix I, taking into account the methodologies for estimating anthropogenic emissions by sources and removals by sinks referred to in Article 5(2) of the Protocol and the modalities for the calculation of assigned amount pursuant to Article 3(7) and (8) of the Protocol. The assigned amount of the European Community and of each Member State shall be equal to its respective emission level determined in accordance with this Article.

¹⁷ OJ L 184, 17.7.1999, p. 23.



Article 4

1. The Commission shall be assisted by the committee instituted by Article 8 of Decision 93/389/EEC.
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply. The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.
3. The Committee shall adopt its rules of procedure.

Article 5

1. The President of the Council is hereby authorised to designate the person or persons empowered to notify, on behalf of the European Community, this Decision to the Secretariat of the United Nations Framework Convention on Climate Change in accordance with Article 4(2) of the Protocol.
2. The President of the Council is hereby authorised to designate the person or persons empowered to deposit, on the same date as the notification referred to in paragraph 1, the instrument of approval with the Secretary-General of the United Nations in accordance with Article 24(1) of the Protocol, in order to express the consent of the Community to be bound.
3. The President of the Council is hereby authorised to designate the person or persons empowered to deposit, on the same date as the notification referred to in paragraph 1, the declaration of competence set out in Appendix II, according to the provisions of Article 24(3) of the Protocol.

Article 6

1. When depositing their instruments of ratification or approval of the Protocol, Member States shall notify, at the same time and on their own behalf, this Decision to the Secretariat of the United Nations Framework Convention on Climate Change in accordance with Article 4(2) of the Protocol.
2. Member States shall endeavour to take the necessary steps with a view to depositing their instruments of ratification or approval simultaneously with those of the European Community and the other Member States and as far as possible not later than 1 June 2002.
3. Member States shall inform the Commission not later than 1 April 2002 of their decisions to ratify or to approve the Protocol or, according to the circumstances, of the probable date of completion of the requisite procedures. The Commission shall, in cooperation with the Member States, arrange a date for depositing the instruments of ratification or approval simultaneously.

Article 7

This Decision is addressed to the Member States.

Done at Luxembourg, 25 April 2002.

For the Council The President M. RAJOY BREY



APPENDIX I

Table of quantified emission limitation or reduction commitments for the purpose of determining the respective emission levels allocated to the European Community and its Member States in accordance with article 4 of the Kyoto Protocol

	Quantified emission reduction commitment as laid down in Annex B of the Kyoto Protocol (percentage of base year or period)
European Community	92 %
	Quantified emission limitation or reduction commitment as agreed in accordance with article 4(1) of the Kyoto Protocol (percentage of base year or period)
Belgium	92,5 %
Denmark	79 %
Germany	79 %
Greece	125 %
Spain	115 %
France	100 %
Ireland	113 %
Italy	93,5 %
Luxembourg	72 %
Netherlands	94 %
Austria	87 %
Portugal	127 %
Finland	100 %
Sweden	104 %
United Kingdom	87,5 %



APPENDIX II

Declaration by the European Community made in accordance with article 24(3) of the Kyoto Protocol

The following States are at present members of the European Community: the Kingdom of Belgium, the Kingdom of Denmark, the Federal Republic of Germany, the Hellenic Republic, the Kingdom of Spain, the French Republic, Ireland, the Italian Republic, the Grand Duchy of Luxembourg, the Kingdom of the Netherlands, the Republic of Austria, the Portuguese Republic, the Republic of Finland, the Kingdom of Sweden, the United Kingdom of Great Britain and Northern Ireland.

The European Community declares that, in accordance with the Treaty establishing the European Community, and in particular Article 175(1) thereof, it is competent to enter into international agreements, and to implement the obligations resulting therefrom, which contribute to the pursuit of the following objectives:

- . preserving, protecting and improving the quality of the environment;
- . protecting human health;
- . prudent and rational utilisation of natural resources;
- . promoting measures at international level to deal with regional or world wide environmental problems.

The European Community declares that its quantified emission reduction commitment under the Protocol will be fulfilled through action by the Community and its Member States within the respective competence of each and that it has already adopted legal instruments, binding on its Member States, covering matters governed by the Protocol.

The European Community will on a regular basis provide information on relevant Community legal instruments within the framework of the supplementary information incorporated in its national communication submitted under Article 12 of the Convention for the purpose of demonstrating compliance with its commitments under the Protocol in accordance with Article 7(2) thereof and the guidelines thereunder.

- 3 Decisions 91/565 on energy saving
- 4 Decision 93/500 on alternative energies



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ANNEX 3: Council Decision 29 October 1991 concerning the promotion of energy efficiency in the Community (SAVE programme) (91/565/EEC)

COUNCIL DECISION of 29 October 1991 concerning the promotion of energy efficiency in the Community (SAVE programme) (91/565/EEC)¹⁸

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Article 235 thereof,

Having regard to the proposal from the Commission¹⁹,

Having regard to the opinion of the European Parliament²⁰,

Having regard to the opinion of the Economic and Social Committee²¹,

Whereas, in its resolution of 15 January 1985 on the improvement of energy saving programmes in the Member States²², the Council invited the latter to pursue and, where necessary, increase their efforts to promote the more rational use of energy by the development of integrated energy-saving policies;

Whereas, in its resolution of 16 September 1986 concerning new Community energy policy objectives for 1995 and the convergence of the policies of Member States²³, the Council considered that the energy policy of the Community and the Member States must endeavour to achieve the objective of more secure conditions of supply through a vigorous policy for energy-saving and the rational use of energy; whereas, in that resolution, the Council adopted for the Community the objective of achieving a more rational use of energy through improved energy efficiency and decided that the efficiency of final demand should be improved by at least 20 % by 1995;

¹⁸ Council Decision 91/565/EEC is available at

[http://eur-](http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31991D0565&model=guichett)

[lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31991D0565&model=guichett](http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31991D0565&model=guichett) (last visited March 29, 2007). Please note that this Decision is no longer in force.

¹⁹ OJ No C 301, 30. 11. 1990, p. 11.

²⁰ OJ No C 240, 16. 9. 1991, p. 273.

²¹ OJ No C 120, 6. 5. 1991, p. 6.

²² OJ No C 20, 22. 1. 1985, p. 1.

²³ OJ No C 241, 25. 9. 1986, p. 1.



Whereas Article 130r of the Treaty requires a prudent and rational utilization of natural resources and the rational use of energy is one of the principal means by which this objective can be respected and environmental pollution reduced;

Whereas the Commission, in its Communication to the Council of 3 May 1988 on the principal results of the review of Member States' energy policies, noted that the Community would fail to achieve the energy efficiency objective of a further 20 % saving if vigorous measures were not adopted;

Whereas the promotion of energy efficiency in all regions of the Community will help to reinforce the economic and social development of the Community as a whole, an objective which, according to Article 130r of the Treaty, should be taken into account when implementing common policies and the internal market;

Whereas the Commission, in its Communication to the Council of 8 February 1990 on energy and the environment, stressed that energy efficiency had to be increased to reduce the negative impact of energy on the environment;

Whereas improved energy efficiency will have a positive impact on both the security of energy supplies and the environment, which are by nature of global significance, and whereas a high level of international cooperation is therefore desirable to produce the most positive results; Whereas the Council, in its Decision 89/364/EEC²⁴, established a Community action programme for improving the efficiency of electricity use;

Whereas a programme lasting five years is called for;

Whereas an amount of ECU 35 million is estimated as necessary to implement this multiannual programme; whereas, for the period 1991 to 1992, in the framework of the current financial perspective, the funds estimated as necessary are ECU 14 million;

Whereas the amounts to be committed for the financing of the programme for the period after the budget year 1992 will have to fall within the Community financial framework in force;

Whereas the Treaty makes no provision for powers other than those of Article 235 for the adoption of this Decision,

HAS ADOPTED THIS DECISION:

²⁴ OJ No L 157, 9. 6. 1989, p. 32.



Article 1

1. The Community shall support a series of energy efficiency actions within the context of this programme, entitled SAVE (Specific Actions for Vigorous Energy Efficiency) and hereinafter referred to as the 'programme'.

2. The programme shall last five years.

3. The Community financial resources estimated as necessary for its implementation amount to ECU 35 million, of which ECU 14 million are for the period 1991 to 1992 in the framework of the 1988 to 1992 financial perspectives.

For the subsequent period of implementation of the programme, the amount shall fall within the Community financial framework in force.

4. The budget authority shall determine the appropriations available for each financial year, taking into account the principles of sound management referred to in Article 2 of the Financial Regulation applicable to the general budget of the European Communities.

Article 2

Four categories of action on energy efficiency shall be financed under the programme, namely:

(a) technical evaluations for assessing the data needed for defining technical standards or specifications;

(b) measures to support the Member States' initiatives for extending or creating infrastructures concerned with energy efficiency. These initiatives shall include:

- training and information activities with regard to energy efficiency at a level as close as possible to the final consumers of energy,

- sectoral pilot projects such as those listed in the Annex to this Decision;

(c) measures to foster the creation of an information network aimed at promoting better coordination between national, Community and international activities through the establishment of appropriate means for exchanging information and at evaluating the impact of the various measures provided for in this Article;

(d) measures to implement the programme for improving the efficiency of electricity use adopted by Decision 89/364/EEC.

Article 3

1. All costs relating to the measures referred to in Article 2 (a) shall be borne by the Community.

2. The level of Community support for the measures referred to in Article 2 (b) and (c) shall be between 30 and 50 % of their total cost. The balance may be made up from either government or private funding or by a combination of the two. In exceptional cases duly justified to the advisory committee referred to in Article 5 (2), Community funding may exceed the 50 % limit, while not exceeding 60 %.

3. The level of Community support for the measures referred to in Article 2 (d), covered by Decision 89/364/EEC, shall be determined case by case in the light of the type of measure.

Article 4

1. The Commission shall establish guidelines for the support measures referred to in Article 2 (b) and (c) in consultation with the committee referred to in Article 5 (2).



2. The proposed initiatives referred to in Article 2 (b) and the list of bodies which are to implement these projects shall be submitted annually by the Member States to the Commission, which shall decide on the level and conditions of Community funding according to the procedure referred to in Article 6. The Commission shall sign contracts relating to the support measures with those bodies.

Article 5

1. The Commission shall be responsible for the implementation of the programme.
2. The Commission shall be assisted by an advisory committee, hereinafter referred to as the committee, composed of the representatives of the Member States and chaired by the representative of the Commission.

Article 6

As regards the measures referred to in Article 2 (a), (b) and (c), the representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter, if necessary by taking a vote.

The opinion shall be recorded in the minutes; in addition, each Member State shall have the right to ask to have its position recorded in the minutes.

The Commission shall take the utmost account of the opinion delivered by the committee. It shall inform the committee of the manner in which its opinion has been taken into account.

Article 7

1. During the third year of the programme, the Commission shall present a report to the European Parliament to the Council on the basis of the results achieved. This report shall be accompanied by proposals for any changes which may be necessary in the light of these results.
2. On the expiry of the programme, the Commission shall assess the results obtained, the application of this Decision and the coherence of national and Community actions. It shall present a report thereon to the European Parliament and the Council.

Article 8

This Decision shall apply from 1 January 1991 to 31 December 1995.

Article 9

This Decision is addressed to the Member States. Done at Luxembourg, 29 October 1991. For the Council

The President
K. ANDRIESSEN



ANNEX

Illustrative, non-limitative list of sectoral pilot projects referred to in the second indent of Article 2 (b), to be implemented at a level as close as possible to the final consumers of energy²⁵

1. Pilot studies on least cost planning and demand side management
2. Feasibility studies on cogeneration projects involving institutional or organizational innovations
3. Sectoral targeting and monitoring of energy efficiency
4. Sectoral audits
5. Pilot projects in the transport sector, e.g. improving traffic flow in towns, toll systems, etc.
6. Pilot projects on third-party financing within the framework of the European network for third-party financing (Community participation in the direct financing of an investment is ruled out).

²⁵ A non-binding framework of the projects, drawn up by the Commission on the basis of the amendments proposed by the European Parliament, will be found in a separate Commission communication in the Official Journal of the European Communities ('C' edition).



ANNEX 4: Council Decision of 13 September 1993 concerning the promotion of renewable energy sources in the Community (Altener programme) (93/500/EEC)

COUNCIL DECISION of 13 September 1993 concerning the promotion of renewable energy sources in the Community (Altener programme) (93/500/EEC)²⁶

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 130s and 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, at their meeting on 29 October 1990, the Council (Environment and Energy Ministers) agreed that the Community and Member States, assuming that other leading countries would enter into similar commitments, and acknowledging the targets identified by a number of Member States for stabilizing or reducing emissions by different dates, were willing to take action aimed at reaching stabilization of the total CO₂ emissions by 2000 at the 1990 level in the Community as a whole and that Member States which start from relatively low levels of energy consumption and therefore low emissions measured on a per capita or other appropriate basis are entitled to have CO₂ targets and/or strategies corresponding to their economic and social development, while continuing to improve the energy efficiency of their economic activities;

Whereas, in its communication to the Council concerning a Community strategy to limit carbon dioxide emissions and to improve energy efficiency, the Commission indicated the action the Community should take to limit CO₂ emissions;

Whereas, at its meeting on 13 December 1991, the Council invited the Commission to put forward formal proposals for the adoption of measures as part of a Community strategy;

²⁶ Council Decision 93/500/EEC is available at

<http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=EN&numdoc=31993D0500&model=guichet> (last visited March 29, 2007). Please note that this Decision is no longer in force.



Whereas a significant increase in the use of renewable energy sources will contribute towards achieving the objective of stabilizing CO₂ emissions;

Whereas, pursuant to Article 130r of the Treaty, action by the Community relating to the environment should improve the quality of the environment and ensure a prudent and rational utilization of natural resources, objectives which are furthered by the use of renewable energy sources;

Whereas the development of renewable energy sources can make a significant contribution to the reduction of polluting emissions arising from the consumption of fossil fuels;

Whereas the development of renewable energy sources will contribute to the reduction of greenhouse gases and the danger of global warming; whereas wide-ranging international cooperation is therefore desirable in order to obtain significant results;

Whereas, since the Treaty does not provide for other powers to cover the energy aspects of the programme referred to in Article 2, Article 235 should also be invoked;

Whereas the Council resolution of 16 September 1986 concerning new Community energy policy objectives for 1995 and convergence of the policies of the Member States (4) states that the contribution of new and renewable energy sources to the replacement of traditional fuels should increase substantially, so that those energy sources can play a significant part in the overall energy balance sheet;

Whereas some renewable energy sources today occupy only a few market slots; whereas, if they are not yet competitive, this is to be explained in part by the fact that the present pricing system does not always take into account fully the ecological cost of the principal traditional sources of energy; whereas, in order to strengthen the future contribution of renewable energy sources to energy supplies, the Member States will have to avoid such distortions;

Whereas, by its recommendation of 9 June 1988 on developing the exploitation of renewable energy sources in the Community (5), the Council confirmed in detail its desire to pursue a policy of developing renewable energy sources;

Whereas, when reviewing the progress made towards achieving the energy objectives for 1995 provided for in its resolution of 16 September 1986, the Council stated in its conclusions of 8 November 1988 that it attributed particular importance to renewable energy sources for future energy supplies;

Whereas the development of renewable energy sources and in particular the exploitation of biomass offer secondary economic advantages in terms of employment and keeping local populations in situ;



Whereas the promotion and wider use of renewable energy sources throughout the Community are likely to strengthen its economic and social cohesion, as called for by Article 130a of the Treaty;

Whereas, to this end, it is appropriate to take account of the Community's indicative objectives and make provision for resources to further the attainment of those objectives, taking into consideration the particular conditions in each Member State;

Whereas provision should be made for a five-year programme;

Whereas ECU 40 million is the amount estimated as necessary in order to implement the multiannual programme; whereas this amount is intended to fund the programme for the period 1993 to 1997 provided it is consistent with the Community's medium-term financial perspective in force as from 1 January 1993,

HAS ADOPTED THIS DECISION:

Article 1

Member States shall endeavour to contribute in their energy policies to the limitation of carbon dioxide emissions by taking account of the Community's indicative objectives relating to the renewable energy sources which are set out in Annex I.

Article 2

1. The Community shall support a series of actions to promote renewable energy sources within the context of the Altener programme (specific actions for greater penetration of renewable energy sources), hereinafter referred to as 'the programme'.
2. The programme shall last five years.
3. The amount of Community funds estimated as necessary for implementation of the programme shall be ECU 40 million for the period 1993 to 1997, provided that amount is consistent with the Community's medium-term financial perspective in force as from 1 January 1993.
4. The budget authority shall determine the appropriations available for each financial year, taking into account the principles of sound management referred to in Article 2 of the Financial Regulation of 21 December 1977 applicable to the general budget of the European Communities (6).

Article 3

Four categories of actions on renewable energy sources shall be financed under the programme, namely:

- (a) studies and technical evaluations for defining technical standards or specifications;
- (b) measures to support the Member States' initiatives for extending or creating infrastructures concerned with renewable energy sources. These initiatives shall include:
 - training and information activities with regard to renewable energy sources at a level as close as possible to operators and the final consumers of energy,



- sectoral actions, as referred to in Annex II;
- (c) measures to foster the creation of an information network aimed at promoting better coordination between national, Community and international activities through the establishment of appropriate means for exchanging information and at evaluating the impact of the various actions provided for in this Article;
- (d) studies, evaluations and other appropriate measures aimed at assessing the technical feasibility and the advantages for the economy and the environment of the industrial exploitation of biomass for energy purposes, in particular heat and electricity production.

Article 4

1. All costs relating to the actions referred to in Article 3 (a) shall be borne by the Community.
2. The level of funding for the actions referred to in Article 3 (b) and (c) shall be between 30 and 50 % of their total cost.
In exceptional cases duly justified to the committee provided for in Article 7 (1) such funding may exceed the 50 % limit, while not, however, exceeding 60 %.
3. The level of funding for the actions referred to in Article 3 (d) must not exceed 30 % of their total cost.
4. The balance of the funding of the actions referred to in Article 3 (b), (c) and (d) may be made up from either public or private sources or from a contribution of the two.

Article 5

1. The Commission shall establish guidelines for the support measures referred to in Article 3 (b), (c) and (d) each year, in consultation with the committee provided for in Article 7 (1).
2. The proposed initiatives referred to in Article 3 (b) and the list of bodies which are to implement them shall be submitted annually by the Member States to the Commission, which shall decide on the level and conditions of Community funding according to the procedure provided for in Article 7 (1). The Commission shall sign contracts relating to the support measures with those bodies.

Article 6

1. The Commission shall be responsible for the implementation of the programme.
2. For the implementation of the actions referred to in Article 3 (a), (b) and (c), the Commission shall apply the procedure laid down in Article 7 (1).
3. For the implementation of the actions referred to in Article 3 (d), the Commission shall apply the procedure laid down in Article 7 (2).

Article 7

1. In carrying out the activities referred to in Article 6 (2), the Commission shall be assisted by an advisory committee composed of the representatives of the Member States and chaired by the representative of the Commission.
The representative of the Commission shall submit to the committee a draft of the measures to be taken. The Committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter, if necessary by taking a vote.



The opinion shall be recorded in the minutes; in addition, each Member State shall have the right to ask to have its position recorded in the minutes.

The Commission shall take the utmost account of the opinion delivered by the committee. It shall inform the committee of the manner in which its opinion has been taken into account.

2. In carrying out the activities referred to in Article 6 (3), the Commission shall be assisted by a committee composed of the representatives of the Member States and chaired by the representative of the Commission.

The representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 148 (2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the committee shall be weighted in the manner set out in that Article. The chairman shall not vote.

The Commission shall adopt measures which shall apply immediately.

However, if these measures are not in accordance with the opinion of the committee, they shall be communicated by the Commission to the Council forthwith.

In that event, the Commission shall defer application of the measures which it has decided for a period of one month from the date of communication.

The Council, acting by a qualified majority, may take a different decision within the time limit referred to in the previous subparagraph.

Article 8

1. During the third year of the programme, the Commission shall present a report to the European Parliament and to the Council on the results achieved. The report shall be accompanied by proposals for any amendments which might be necessary in the light of these results.

2. On expiry of the programme, the Commission shall assess the results obtained, the application of this Decision and the consistency of national and Community actions. It shall present a report thereon to the European Parliament, the Council and the Economic and Social Committee.

Article 9

This Decision shall apply from 1 January 1993 to 31 December 1997.

Article 10

This Decision is addressed to the Member States.

Done at Brussels, 13 September 1993.

For the Council, The President, Ph. MAYSTADT

(1) OJ No C 179, 16. 7. 1992, p. 4.

(2) OJ No C 176, 28. 6. 1993.

(3) OJ No C 19, 25. 1. 1993, p. 7.

(4) OJ No C 241, 25. 9. 1986, p. 1.

(5) OJ No L 160, 28. 6. 1988, p. 46.



(6) OJ No L 356, 31. 12. 1977, p. 1. Financial Regulation as last amended by Regulation (Euratom, ECSC, EEC) No 610/90 (OJ No L 70, 16. 3. 1990, p. 1).

ANNEX I

Community indicative objectives for reducing carbon dioxide emissions by developing renewable energy sources A 180-million tonne reduction in carbon dioxide emissions could be achieved in 2005 by:

A. increasing the contribution of renewable energy sources to the coverage of total energy demand from nearly 4 % in 1991 to 8 % in 2005 (1).

To achieve this objective, the production of renewable energy sources should rise from nearly 43 million toe in 1991 to approximately 109 million toe in 2005;

B. trebling the production of electricity from renewable energy sources (excluding large hydro-electric power stations).

To achieve this objective, the capacity and electricity production of all power stations (excluding large hydro-electric power stations) using renewable energy sources should rise from 8 GW and 25 TWh in 1991 to 27 GW and 80 TWh in 2005;

C. securing for biofuels a market share of 5 % of total fuel consumption by motor vehicles.

The production in 2005 of 11 million toe of biofuels is considered necessary in order to achieve this objective.

(1) In the energy balances on which the formulation of objective A is based, the electricity produced from the various alternative sources is accounted for in accordance with the conventions of the Statistical Office of the European Communities.

ANNEX II

Illustrative, non-restrictive list of sectoral actions, as referred to in the second indent of Article 3 (b) 1. Pilot actions aimed at introducing a 'guarantee of solar results' in the market for solar collectors and solar water heaters.

2. Pilot actions relating to vehicle fleets aimed at introducing biofuels in place of petroleum products in the transport sector.

3. Pilot studies on least-cost (integrated resource) planning and demand-side management.

4. Pilot projects on third-party financing within the framework of the European network for third-party financing (without direct Community funding).

5. Guarantee of financial risks arising from the geological uncertainties surrounding the development of geothermal resources.

6. Establishment of local plans for the development of renewable energy sources.

7. Establishment and development of infrastructures in the Member States for offering investors assistance with the drawing up of pre-feasibility studies.

8. Pilot actions involving the equipping of new or existing buildings with photovoltaic modules.

9. Pilot actions relating to the planning of windform projects.

10. Pilot actions to integrate bioclimatic systems into architecture.



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ANNEX 5: Decision 99/296 amending Decision 93/389 for a monitoring mechanism of Community CO₂ and other greenhouse gases

COUNCIL DECISION

of 26 April 1999

amending Decision 93/389/EEC for a monitoring mechanism of Community CO₂ and other greenhouse gas emissions

(1999/296/EC)²⁷

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 130s(1) thereof,

Having regard to the proposal from the Commission²⁸,

Having regard to the opinion of the Economic and Social Committee²⁹,

Acting in accordance with the procedure referred to in Article 189c of the Treaty³⁰,

(1) Whereas all Member States and the Community are Parties to the United Nations Framework Convention on Climate Change (UNFCCC) which, from its entry into force on 21 March 1994, commits all Parties to develop, periodically update, publish and report to the Conference of the Parties national inventories of anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, using comparable methodologies agreed upon by the Conference of the Parties;

(2) Whereas that same Convention commits all Parties to formulate, implement, publish and regularly update national, and where appropriate, regional programmes containing measures to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol;

²⁷ Council Decision 1999/296/EC is available at

<[http://eur-](http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=en&type_doc=Decision&an_doc=1999&nu_doc=296)

[lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=en&type_doc=Decision&an_doc=1999&nu_doc=296](http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexplus!prod!DocNumber&lg=en&type_doc=Decision&an_doc=1999&nu_doc=296)> (last visited March 29, 2007).

²⁸ OJ C 120, 18.4.1998, p. 22.

²⁹ OJ L 89, 19.3.1997, p. 7.

³⁰ Opinion of the European Parliament of 18 September 1997 (OJ C 304, 6.10.1997, p. 109), Council Common Position of 16 June 1998 (OJ C 333, 30.10.1998, p. 38) and Decision of the European Parliament of 9 February 1999 (not yet published in the Official Journal).



(3) Whereas the First Conference of the Parties to the UNFCCC decided that Annex I Parties to the said Convention should submit to the secretariat national inventory data on emissions by sources and removals by sinks on an annual basis and that the guidelines for national greenhouse gas inventories and technical guidelines for assessing climate change impacts and adaptations adopted by the Intergovernmental Panel on Climate Change should be used in preparing their reports pursuant to the Convention;

(4) Whereas it is necessary to amend Decision 93/389/EEC³¹ to allow for the updating of the monitoring process, in particular the post-2000 monitoring of greenhouse gas emission limitations and reductions and its application to all anthropogenic greenhouse gas emissions not controlled by the Montreal Protocol, in line with the obligations of the UNFCCC and taking into account the requirements of the Kyoto Protocol to that Convention, adopted by the Third Conference of the Parties to the UNFCCC on 10 December 1997;

(5) Whereas it is vital to be able to assess accurately and regularly the extent of progress being made towards the Community's commitments under the UNFCCC and the Kyoto Protocol to that Convention;

(6) Whereas the Community considers the monitoring mechanism to be an essential instrument in the assessment of this progress;

(7) Whereas the Kyoto Protocol requires Annex I Parties to have made demonstrable progress in achieving their commitments under the Protocol by 2005;

(8) Whereas the provisions of the monitoring mechanism established under Decision 93/389/EEC need to apply equally to anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol and the monitoring process should continue to be updated to reflect further decisions in the framework of the Kyoto Protocol;

(9) Whereas it is recognised that the 31 July deadline for reporting inventories provided for by Decision 93/389/EEC is difficult to meet for all Member States;

(10) Whereas at its meeting of 22 and 23 June 1995 the Council reaffirmed the determination of the Community to meet its commitments under the Convention and confirmed its conclusions of 29 October 1990, 15 and 16 December 1994 and 9 March 1995;

(11) Whereas Decision 93/389/EEC should be amended accordingly,

HAS ADOPTED THIS DECISION:

³¹ OJ L 167, 9.7.1993, p. 31.



Article 1

Articles 1 to 8 of Decision 93/389/EEC shall be replaced by the following:

“Article 1

This Decision establishes a mechanism for:

$\frac{3}{4}$ monitoring all anthropogenic greenhouse gas emissions not controlled by the Montreal Protocol in the Member States; and $\frac{3}{4}$ evaluating progress towards meeting commitments in respect of these emissions.

Article 2 National programmes

1. The Member States shall devise, publish and implement national programmes for limiting and/or reducing their anthropogenic emissions by sources and enhancing removals by sinks of all greenhouse gases not controlled by the Montreal Protocol in order to contribute to:

$\frac{3}{4}$ the stabilisation of CO₂ emissions by 2000 at 1990 levels in the Community as a whole, assuming that other leading countries undertake commitments along similar lines, and on the understanding that Member States which start from relatively low levels of energy consumption and therefore low emissions measured on a per capita or other appropriate basis are entitled to have CO₂ targets and/or strategies corresponding to their economic and social development, while improving the energy efficiency of their economic activities, as agreed at the Council meetings of 29 October 1990, 13 December 1991 and 15 and 16 December 1994, $\frac{3}{4}$ the fulfilment of the Community's commitments relating to the limitation and/or reduction of all greenhouse gas emissions not controlled by the Montreal Protocol under the UN Framework Convention on Climate Change and under the Kyoto Protocol, $\frac{3}{4}$ transparent and accurate monitoring of the actual and projected progress of Member States, including the contribution made by Community measures, in meeting any agreed national contributions to the Community's commitments under the UN Framework Convention on Climate Change and the Kyoto Protocol. These programmes shall be periodically updated.

2. Each Member State shall include in its national programme:

(a) estimates of the effect of policies and measures on emissions and removals and incorporation of these in projections for CO₂ and other greenhouse gases not controlled by the Montreal Protocol between the base year and 2000, in line with the reporting requirements under the UN Framework Convention on Climate Change;

(b) as a minimum for the six greenhouse gases listed in Annex A to the Kyoto Protocol (carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF₆)), $\frac{3}{4}$ its 1990 base year anthropogenic emissions of carbon dioxide, methane and nitrous oxide in accordance with Article 3(1), $\frac{3}{4}$ its 1990 and/or 1995 base year anthropogenic emissions of hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride determined in accordance with Article 3(1), $\frac{3}{4}$ inventories of its anthropogenic emissions by sources and removal by sinks, determined in accordance with Article 3(1), $\frac{3}{4}$ details of national policies and measures implemented or committed to since the base year which contribute significantly to its efforts to reduce emissions and enhance sinks of



greenhouse gases, organised by gas and by sector and including the objective of the measure, the type of policy instrument used by measure, the status of implementation of the policy or measure as well as, where possible, intermediate indicators of progress for policies and measures, ^{3/4} measures being taken or envisaged for the implementation of relevant Community legislation and policies, ^{3/4} estimates of the effect of policies and measures on emissions and removals and incorporation of these in projections:

for the greenhouse gases listed in Annex A to the Kyoto Protocol between the base year and the period 2008 to 2012; and

(ii) to the extent possible, for the greenhouse gases listed in Annex A to the Kyoto Protocol between the base year and 2005, in accordance with the procedure set out in Article 8, on the basis of standard procedural guidelines, including information for a quantitative understanding of the key assumptions used to develop the said rojections and the methodology used for the provision of the estimates, ^{3/4} an assessment of the economic impact of the above measures, to the extent possible;

(c) information on the following gases: carbon monoxide (CO), nitrogen oxides (NO_x), non methane volatile organic compounds (NMVOCs) and sulphur oxides, in line with the reporting requirements under the UNFCCC, including: ^{3/4} data on emissions, ^{3/4} a description of policies and measures being taken or envisaged for the limitation and/or reduction of the emissions of these gases, ^{3/4} as far as possible, estimates for emissions projections at regular intervals in the future and as being agreed upon in accordance with the procedure set out in Article 8, on the basis of standard procedural guidelines, including information for a quantitative understanding of the key assumptions and the methodology used for the provision of the estimates.

Article 3 Inventories and data reporting

1. Member States shall determine their anthropogenic emissions by sources and removals by sinks of all greenhouse gases not controlled by the Montreal Protocol, as specified in Article 2 (2), in accordance with the methodologies accepted by the IPCC and agreed upon by the Conference of the Parties. They shall be revised, in accordance with the procedure under Article 8, as appropriate, to take fully into account any relevant future decisions by the Conference of the Parties.

2. Member States shall each year, not later than 31 December, report to the Commission their anthropogenic CO₂ emissions and CO₂ removal by sinks for the previous calendar year. Member States shall also report national inventory data on emissions by sources and removals by sinks of the other greenhouse gases referred to in Article 2(2) on an annual basis. They shall report to the Commission by 31 December their final data for the previous year but one, and provisional data for the previous year. Member States shall also report by 31 December on the most recent projected emissions by sources and removals by sinks of the greenhouse gases listed in Annex A to the Kyoto Protocol for the period 2008 to 2012 and, as far as possible, for 2005. The Commission shall take further steps to promote the comparability and transparency of national inventories and reporting.



3. The Commission shall, in cooperation with the Member States, establish, on the basis of the information provided by them, inventories of anthropogenic greenhouse gas emissions and removal by sinks in the Community. The Commission shall circulate to all Member States by 1 March these inventories based on data received in accordance with paragraph 2.

Article 4 Procedures and methods for evaluation

In accordance with the procedure referred to in Article 8, the Commission shall establish procedures and methods for the evaluation of national programmes as referred to in Article 6 and the frequency of updating by the Member States.

Article 5 Evaluation of national programmes and of the state of emissions in the Community

1. Member States shall forward to the Commission their existing national programmes not already forwarded, or updates of programmes already forwarded, within three months of receiving notification of this Decision. Future national programmes and their updates shall be forwarded to the Commission within three months of their adoption.

2. The Commission shall forward to the other Member States the national programmes received within one month of their reception.

3. The Commission shall evaluate the national programmes, in order to assess whether progress in the Community as a whole is sufficient to ensure fulfilment of the commitments referred to in Article 2(1).

4. The Commission shall report to the European Parliament and the Council the results of its evaluation within six months of the reception of the national programmes. The European Environment Agency will assist in compiling this report as appropriate, in accordance with its annual work programme.

Article 6 Evaluation of progress

The Commission shall assess annually in consultation with Member States whether the actual and projected progress of Member States, including the contribution made by Community measures, towards fulfilling the Community's commitments under the UNFCCC and the Kyoto Protocol is sufficient to ensure that the Community and its Member States are on course to fulfil their commitments and shall report to the European Parliament and the Council, on the basis of information received under Articles 2, 3 and 5. The Commission's report shall be made available to the European Parliament and the Council even in the case of incomplete data being received from Member States, and the Commission may include in this case the best available data in the report, in consultation with the Member State concerned.

Article 7 Other greenhouse gases
(deleted)

Article 8 Committee

1. The Commission shall be assisted by a committee composed of the representatives of the



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Member States and chaired by the representative of the Commission.

2. The representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 148(2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the committee shall be weighted in the manner set out in that Article. The chairman shall not vote.

3.

(a) The Commission shall adopt the measures envisaged if they are in accordance with the opinion of the committee.

(b) If the measures envisaged are not in accordance with the opinion of the committee, or if no opinion is delivered, the Commission shall, without delay, submit to the Council a proposal relating to the measures to be taken. The Council shall act by a qualified majority. If, on the expiry of a period of three months from the date of referral to the Council, the Council has not acted, the proposed measures shall be adopted by the Commission.”

Article 2

This Decision shall enter into force on 1 May 1999.

Article 3

This Decision is addressed to the Member States.

Done at Luxembourg, 26 April 1999.

For the Council

The President

J. FISCHER



ANNEX 6: Directive 2002/91 on the energy performance of buildings

DIRECTIVE 2002/91/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 16 December 2002
on the energy performance of buildings³²

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE
EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article
175(1) thereof,

Having regard to the proposal from the Commission³³,

Having regard to the opinion of the Economic and Social Committee³⁴,

Having regard to the opinion of the Committee of the Regions³⁵,

Acting in accordance with the procedure laid down in Article 251 of the Treaty³⁶,

Whereas:

(1) Article 6 of the Treaty requires environmental protection requirements to be integrated into
the definition and implementation of Community policies and actions.

(2) The natural resources, to the prudent and rational utilization of which Article 174 of the
Treaty refers, include oil products, natural gas and solid fuels, which are essential sources of
energy but also the leading sources of carbon dioxide emissions.

(3) Increased energy efficiency constitutes an important part of the package of policies and
measures needed to comply with the Kyoto Protocol and should appear in any policy package to
meet further commitments.

(4) Demand management of energy is an important tool enabling the Community to influence the
global energy market and hence the security of energy supply in the medium and long term.

³² Directive 2002/91 is available at
<http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_001/l_00120030104en00650071.pdf> (last visited March 29,
2007).

³³ OJ C 213 E, 31.7.2001, p. 266 and OJ C 203 E, 27.8.2002, p. 69.

³⁴ OJ C 36, 8.2.2002, p. 20.

³⁵ OJ C 107, 3.5.2002, p. 76.

³⁶ Opinion of the European Parliament of 6 February 2002 (not yet published in the Official Journal), Council
Common Position of 7 June 2002 (OJ C 197, 20.8.2002, p. 6) and decision of the European Parliament of 10
October 2002 (not yet published in the Official Journal).



(5) In its conclusions of 30 May 2000 and of 5 December 2000, the Council endorsed the Commission's action plan on energy efficiency and requested specific measures in the building sector.

(6) The residential and tertiary sector, the major part of which is buildings, accounts for more than 40 % of final energy consumption in the Community and is expanding, a trend which is bound to increase its energy consumption and hence also its carbon dioxide emissions.

(7) Council Directive 93/76/EEC of 13 September 1993 to limit carbon dioxide emissions by improving energy efficiency (SAVE)³⁷, which requires Member States to develop, implement and report on programmes in the field of energy efficiency in the building sector, is now starting to show some important benefits. However, a complementary legal instrument is needed to lay down more concrete actions with a view to achieving the great unrealised potential for energy savings and reducing the large differences between Member States' results in this sector.

(8) Council Directive 89/106/EEC of 21 December 1988 on the approximation of laws, regulations and administrative provisions of the Member States relating to construction products³⁸ requires construction works and their heating, cooling and ventilation installations to be designed and built in such a way that the amount of energy required in use will be low, having regard to the climatic conditions of the location and the occupants.

(9) The measures further to improve the energy performance of buildings should take into account climatic and local conditions as well as indoor climate environment and cost-effectiveness. They should not contravene other essential requirements concerning buildings such as accessibility, prudence and the intended use of the building.

(10) The energy performance of buildings should be calculated on the basis of a methodology, which may be differentiated at regional level, that includes, in addition to thermal insulation other factors that play an increasingly important role such as heating and air-conditioning installations, application of renewable energy sources and design of the building. A common approach to this process, carried out by qualified and/or accredited experts, whose independence is to be guaranteed on the basis of objective criteria, will contribute to a level playing field as regards efforts made in Member States to energy saving in the buildings sector and will introduce transparency for prospective owners or users with regard to the energy performance in the Community property market.

(11) The Commission intends further to develop standards such as EN 832 and prEN 13790, also including consideration of air-conditioning systems and lighting.

³⁷ OJ L 237, 22.9.1993, p. 28.

³⁸ OJ L 40, 11.2.1989, p. 12. Directive as amended by Directive 93/68/EEC (OJ L 220, 30.8.1993, p.1).



(12) Buildings will have an impact on long-term energy consumption and new buildings should therefore meet minimum energy performance requirements tailored to the local climate. Best practice should in this respect be geared to the optimum use of factors relevant to enhancing energy performance. As the application of alternative energy supply systems is generally not explored to its full potential, the technical, environmental and economic feasibility of alternative energy supply systems should be considered; this can be carried out once, by the Member State, through a study which produces a list of energy conservation measures, for average local market conditions, meeting cost-effectiveness criteria. Before construction starts, specific studies may be requested if the measure, or measures, are deemed feasible.

(13) Major renovations of existing buildings above a certain size should be regarded as an opportunity to take cost-effective measures to enhance energy performance. Major renovations are cases such as those where the total cost of the renovation related to the building shell and/or energy installations such as heating, hot water supply, air-conditioning, ventilation and lighting is higher than 25 % of the value of the building, excluding the value of the land upon which the building is situated, or those where more than 25 % of the building shell undergoes renovation.

(14) However, the improvement of the overall energy performance of an existing building does not necessarily mean a total renovation of the building but could be confined to those parts that are most relevant for the energy performance of the building and are cost-effective.

(15) Renovation requirements for existing buildings should not be incompatible with the intended function, quality or character of the building. It should be possible to recover additional costs involved in such renovation within a reasonable period of time in relation to the expected technical lifetime of the investment by accrued energy savings.

(16) The certification process may be supported by programmes to facilitate equal access to improved energy performance; based upon agreements between organisations of stakeholders and a body appointed by the Member States; carried out by energy service companies which agree to commit themselves to undertake the identified investments. The schemes adopted should be supervised and followed up by Member States, which should also facilitate the use of incentive systems. To the extent possible, the certificate should describe the actual energy-performance situation of the building and may be revised accordingly. Public authority buildings and buildings frequently visited by the public should set an example by taking environmental and energy considerations into account and therefore should be subject to energy certification on a regular basis. The dissemination to the public of this information on energy performance should be enhanced by clearly displaying these energy certificates. Moreover, the displaying of officially recommended indoor temperatures, together with the actual measured temperature, should discourage the misuse of heating, air-conditioning and ventilation systems. This should contribute to avoiding unnecessary use of energy and to safeguarding comfortable indoor climatic conditions (thermal comfort) in relation to the outside temperature.



(17) Member States may also employ other means/measures, not provided for in this Directive, to encourage enhanced energy performance. Member States should encourage good energy management, taking into account the intensity of use of buildings.

(18) Recent years have seen a rise in the number of air-conditioning systems in southern European countries. This creates considerable problems at peak load times, increasing the cost of electricity and disrupting the energy balance in those countries. Priority should be given to strategies which enhance the thermal performance of buildings during the summer period. To this end there should be further development of passive cooling techniques, primarily those that improve indoor climatic conditions and the microclimate around buildings.

(19) Regular maintenance of boilers and of air-conditioning systems by qualified personnel contributes to maintaining their correct adjustment in accordance with the product specification and in that way will ensure optimal performance from an environmental, safety and energy point of view. An independent assessment of the total heating installation is appropriate whenever replacement could be considered on the basis of cost-effectiveness.

(20) The billing, to occupants of buildings, of the costs of heating, air-conditioning and hot water, calculated in proportion to actual consumption, could contribute towards energy saving in the residential sector. Occupants should be enabled to regulate their own consumption of heat and hot water, in so far as such measures are cost effective.

(21) In accordance with the principles of subsidiarity and proportionality as set out in Article 5 of the Treaty, general principles providing for a system of energy performance requirements and its objectives should be established at Community level, but the detailed implementation should be left to Member States, thus allowing each Member State to choose the regime which corresponds best to its particular situation. This Directive confines itself to the minimum required in order to achieve those objectives and does not go beyond what is necessary for that purpose.

(22) Provision should be made for the possibility of rapidly adapting the methodology of calculation and of Member States regularly reviewing minimum requirements in the field of energy performance of buildings with regard to technical progress, *inter alia*, as concerns the insulation properties (or quality) of the construction material, and to future developments in standardisation.

(23) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission³⁹,

HAVE ADOPTED THIS DIRECTIVE:

³⁹ OJ L 184, 17.7.1999, p. 23.



Article 1 Objective

The objective of this Directive is to promote the improvement of the energy performance of buildings within the Community, taking into account outdoor climatic and local conditions, as well as indoor climate requirements and cost-effectiveness. This Directive lays down requirements as regards:

- (a) the general framework for a methodology of calculation of the integrated energy performance of buildings;
- (b) the application of minimum requirements on the energy performance of new buildings;
- (c) the application of minimum requirements on the energy performance of large existing buildings that are subject to major renovation;
- (d) energy certification of buildings; and
- (e) regular inspection of boilers and of air-conditioning systems in buildings and in addition an assessment of the heating installation in which the boilers are more than 15 years old.

Article 2 Definitions

For the purpose of this Directive, the following definitions shall apply:

1. 'building': a roofed construction having walls, for which energy is used to condition the indoor climate; a building may refer to the building as a whole or parts thereof that have been designed or altered to be used separately;
2. 'energy performance of a building': the amount of energy actually consumed or estimated to meet the different needs associated with a standardised use of the building, which may include, *inter alia*, heating, hot water heating, cooling, ventilation and lighting. This amount shall be reflected in one or more numeric indicators which have been calculated, taking into account insulation, technical and installation characteristics, design and positioning in relation to climatic aspects, solar exposure and influence of neighbouring structures, own-energy generation and other factors, including indoor climate, that influence the energy demand;
3. 'energy performance certificate of a building': a certificate recognised by the Member State or a legal person designated by it, which includes the energy performance of a building calculated according to a methodology based on the general framework set out in the Annex;
4. 'CHP' (combined heat and power): the simultaneous conversion of primary fuels into mechanical or electrical and thermal energy, meeting certain quality criteria of energy efficiency;
5. 'air-conditioning system': a combination of all components required to provide a form of air treatment in which temperature is controlled or can be lowered, possibly in combination with the control of ventilation, humidity and air cleanliness;
6. 'boiler': the combined boiler body and burner-unit designed to transmit to water the heat released from combustion;



7. 'effective rated output (expressed in kW)': the maximum calorific output specified and guaranteed by the manufacturer as being deliverable during continuous operation while complying with the useful efficiency indicated by the manufacturer;
8. 'heat pump': a device or installation that extracts heat at low temperature from air, water or earth and supplies the heat to the building.

Article 3 Adoption of a methodology

Member States shall apply a methodology, at national or regional level, of calculation of the energy performance of buildings on the basis of the general framework set out in the Annex. Parts 1 and 2 of this framework shall be adapted to technical progress in accordance with the procedure referred to in Article 14(2), taking into account standards or norms applied in Member State legislation. This methodology shall be set at national or regional level. The energy performance of a building shall be expressed in a transparent manner and may include a CO₂ emission indicator.

Article 4 Setting of energy performance requirements

1. Member States shall take the necessary measures to ensure that minimum energy performance requirements for buildings are set, based on the methodology referred to in Article 3. When setting requirements, Member States may differentiate between new and existing buildings and different categories of buildings. These requirements shall take account of general indoor climate conditions, in order to avoid possible negative effects such as inadequate ventilation, as well as local conditions and the designated function and the age of the building. These requirements shall be reviewed at regular intervals which should not be longer than five years and, if necessary, updated in order to reflect technical progress in the building sector.

2. The energy performance requirements shall be applied in accordance with Articles 5 and 6.

3. Member States may decide not to set or apply the requirements referred to in paragraph 1 for the following categories of buildings:

- buildings and monuments officially protected as part of a designated environment or because of their special architectural or historic merit, where compliance with the requirements would unacceptably alter their character or appearance,
- buildings used as places of worship and for religious activities,
- temporary buildings with a planned time of use of two years or less, industrial sites, workshops and non-residential agricultural buildings with low energy demand and nonresidential agricultural buildings which are in use by a sector covered by a national sectoral agreement on energy performance,
- residential buildings which are intended to be used less than four months of the year,
- stand-alone buildings with a total useful floor area of less than 50 m².

Article 5 New buildings

Member States shall take the necessary measures to ensure that new buildings meet the minimum energy performance requirements referred to in Article 4. For new buildings with a total useful



floor area over 1 000 m², Member States shall ensure that the technical, environmental and economic feasibility of alternative systems such as:

- decentralised energy supply systems based on renewable energy,
- CHP,
- district or block heating or cooling, if available,
- heat pumps, under certain conditions, is considered and is taken into account before construction starts.

Article 6 Existing buildings

Member States shall take the necessary measures to ensure that when buildings with a total useful floor area over 1 000 m² undergo major renovation, their energy performance is upgraded in order to meet minimum requirements in so far as this is technically, functionally and economically feasible. Member States shall derive these minimum energy performance requirements on the basis of the energy performance requirements set for buildings in accordance with Article 4. The requirements may be set either for the renovated building as a whole or for the renovated systems or components when these are part of a renovation to be carried out within a limited time period, with the abovementioned objective of improving the overall energy performance of the building.

Article 7 Energy performance certificate

1. Member States shall ensure that, when buildings are constructed, sold or rented out, an energy performance certificate is made available to the owner or by the owner to the prospective buyer or tenant, as the case might be. The validity of the certificate shall not exceed 10 years. Certification for apartments or units designed for separate use in blocks may be based:

- on a common certification of the whole building for blocks with a common heating system, or
- on the assessment of another representative apartment in the same block.

Member States may exclude the categories referred to in Article 4(3) from the application of this paragraph.

2. The energy performance certificate for buildings shall include reference values such as current legal standards and benchmarks in order to make it possible for consumers to compare and assess the energy performance of the building. The certificate shall be accompanied by recommendations for the cost-effective improvement of the energy performance. The objective of the certificates shall be limited to the provision of information and any effects of these certificates in terms of legal proceedings or otherwise shall be decided in accordance with national rules.

3. Member States shall take measures to ensure that for buildings with a total useful floor area over 1 000 m² occupied by public authorities and by institutions providing public services to a large number of persons and therefore frequently visited by these persons an energy certificate, not older than 10 years, is placed in a prominent place clearly visible to the public. The range of recommended and current indoor temperatures and, when appropriate, other relevant climatic factors may also be clearly displayed.



Article 8 Inspection of boilers

With regard to reducing energy consumption and limiting carbon dioxide emissions, Member States shall either:

- (a) lay down the necessary measures to establish a regular inspection of boilers fired by non-renewable liquid or solid fuel of an effective rated output of 20 kW to 100 kW. Such inspection may also be applied to boilers using other fuels. Boilers of an effective rated output of more than 100 kW shall be inspected at least every two years. For gas boilers, this period may be extended to four years. For heating installations with boilers of an effective rated output of more than 20 kW which are older than 15 years, Member States shall lay down the necessary measures to establish a one-off inspection of the whole heating installation. On the basis of this inspection, which shall include an assessment of the boiler efficiency and the boiler sizing compared to the heating requirements of the building, the experts shall provide advice to the users on the replacement of the boilers, other modifications to the heating system and on alternative solutions; or
- (b) take steps to ensure the provision of advice to the users on the replacement of boilers, other modifications to the heating system and on alternative solutions which may include inspections to assess the efficiency and appropriate size of the boiler. The overall impact of this approach should be broadly equivalent to that arising from the provisions set out in (a). Member States that choose this option shall submit a report on the equivalence of their approach to the Commission every two years.

Article 9 Inspection of air-conditioning systems

With regard to reducing energy consumption and limiting carbon dioxide emissions, Member States shall lay down the necessary measures to establish a regular inspection of airconditioning systems of an effective rated output of more than 12 kW. This inspection shall include an assessment of the air-conditioning efficiency and the sizing compared to the cooling requirements of the building. Appropriate advice shall be provided to the users on possible improvement or replacement of the air-conditioning system and on alternative solutions.

Article 10 Independent experts

Member States shall ensure that the certification of buildings, the drafting of the accompanying recommendations and the inspection of boilers and air-conditioning systems are carried out in an independent manner by qualified and/or accredited experts, whether operating as sole traders or employed by public or private enterprise bodies.

Article 11 Review

The Commission, assisted by the Committee established by Article 14, shall evaluate this Directive in the light of experience gained during its application, and, if necessary, make proposals with respect to, *inter alia*:

- (a) possible complementary measures referring to the renovations in buildings with a total useful floor area less than 1 000 m²;
- (b) general incentives for further energy efficiency measures in buildings.



Article 12 Information

Member States may take the necessary measures to inform the users of buildings as to the different methods and practices that serve to enhance energy performance. Upon Member States' request, the Commission shall assist Member States in staging the information campaigns concerned, which may be dealt with in Community programmes.

Article 13 Adaptation of the framework

Points 1 and 2 of the Annex shall be reviewed at regular intervals, which shall not be shorter than two years. Any amendments necessary in order to adapt points 1 and 2 of the Annex to technical progress shall be adopted in accordance with the procedure referred to in Article 14(2).

Article 14 Committee

1. The Commission shall be assisted by a Committee.
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof. The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.
3. The Committee shall adopt its Rules of Procedure.

Article 15 Transposition

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive at the latest on 4 January 2006. They shall forthwith inform the Commission thereof. When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. Member States shall determine how such reference is to be made.
2. Member States may, because of lack of qualified and/or accredited experts, have an additional period of three years to apply fully the provisions of Articles 7, 8 and 9. When making use of this option, Member States shall notify the Commission, providing the appropriate justification together with a time schedule with respect to the further implementation of this Directive.

Article 16 Entry into force

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

Article 17 Addressees

This Directive is addressed to the Member States.

Done at Brussels, 16 December 2002.

For the European Parliament

The President

P. COX

For the Council



The President
M. FISCHER BOEL

ANNEX

General framework for the calculation of energy performance of buildings (Article 3)

1. The methodology of calculation of energy performances of buildings shall include at least the following aspects:

- (a) thermal characteristics of the building (shell and internal partitions, etc.). These characteristics may also include air-tightness;
- (b) heating installation and hot water supply, including their insulation characteristics;
- (c) air-conditioning installation;
- (d) ventilation;
- (e) built-in lighting installation (mainly the non-residential sector);
- (f) position and orientation of buildings, including outdoor climate;
- (g) passive solar systems and solar protection;
- (h) natural ventilation;
- (i) indoor climatic conditions, including the designed indoor climate.

2. The positive influence of the following aspects shall, where relevant in this calculation, be taken into account:

- (a) active solar systems and other heating and electricity systems based on renewable energy sources;
- (b) electricity produced by CHP;
- (c) district or block heating and cooling systems;
- (d) natural lighting.

3. For the purpose of this calculation buildings should be adequately classified into categories such as:

- (a) single-family houses of different types;
- (b) apartment blocks;
- (c) offices;
- (d) education buildings;
- (e) hospitals;
- (f) hotels and restaurants;
- (g) sports facilities;
- (h) wholesale and retail trade services buildings;
- (i) other types of energy-consuming buildings.



Amsterdam International Law Clinic

ANNEX 7: Decision 1600/2002 laying down the 6th Community Environment Action Programme

DECISION No 1600/2002/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 22 July 2002

laying down the Sixth Community Environment Action Programme⁴⁰

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175(3) thereof,

Having regard to the proposal from the Commission⁴¹,

Having regard to the opinion of the Economic and Social Committee⁴²,

Having regard to the opinion of the Committee of the Regions⁴³,

Acting in accordance with the procedure laid down in Article 251 of the Treaty⁴⁴, in the light of the joint text approved by the Conciliation Committee on 1 May 2002,

Whereas:

(1) A clean and healthy environment is essential for the well-being and prosperity of society, yet continued growth at a global level will lead to continuing pressures on the environment.

(2) The Community's fifth environmental action programme 'Towards Sustainability' ended on 31 December 2000 having delivered a number of important improvements.

(3) Continued effort is required in order to meet the environmental objectives and targets already established by the Community and there is a need for the Sixth Environmental Action Programme (the 'Programme') set out in this Decision.

⁴⁰ Decision 1600/2002/EC is available at

<<http://www.europarl.europa.eu/oeil/FindByProcnum.do?lang=2&procnum=COD/2001/0029>> (last visited March 30, 2007) (see "final legislative act").

⁴¹ OJ C 154 E, 29.5.2001, p. 218.

⁴² OJ C 221, 7.8.2001, p. 80.

⁴³ OJ C 357, 14.12.2001, p. 44.

⁴⁴ Opinion of the European Parliament of 31 May 2001 (OJ C 47 E, 21.2.2002, p. 113), Council Common Position of 27 September 2001 (OJ C 4, 7.1.2002, p. 52) and Decision of the European Parliament of 17 January 2002 (not yet published in the Official Journal). Decision of the European Parliament of 30 May 2002 and Decision of the Council of 11 June 2002.



- (4) A number of serious environmental problems persist and new ones are emerging which require further action.
- (5) Greater focus on prevention and the implementation of the precautionary principle is required in developing an approach to protect human health and the environment.
- (6) A prudent use of natural resources and the protection of the global eco-system together with economic prosperity and a balanced social development are a condition for sustainable development.
- (7) The Programme aims at a high level of protection of the environment and human health and at a general improvement in the environment and quality of life, indicates priorities for the environmental dimension of the Sustainable Development Strategy and should be taken into account when bringing forward actions under the Strategy.
- (8) The Programme aims to achieve a decoupling between environmental pressures and economic growth whilst being consistent with the principle of subsidiarity and respecting the diversity of conditions across the various regions of the European Union.
- (9) The Programme establishes environmental priorities for a Community response focusing in particular on climate change, nature and biodiversity, environment and health and quality of life, and natural resources and wastes.
- (10) For each of these areas key objectives and certain targets are indicated and a number of actions are identified with a view to achieving the said targets. These objectives and targets constitute performance levels or achievements to be aimed at.
- (11) The objectives, priorities and actions of the Programme should contribute to sustainable development in the candidate countries and endeavour to ensure the protection of the natural assets of these countries.
- (12) Legislation remains central to meeting environmental challenges and full and correct implementation of the existing legislation is a priority. Other options for achieving environmental objectives should also be considered.
- (13) The Programme should promote the process of integration of environmental concerns into all Community policies and activities in line with Article 6 of the Treaty in order to reduce the pressures on the environment from various sources.
- (14) A strategic integrated approach, incorporating new ways of working with the market, involving citizens, enterprises and other stakeholders is needed in order to induce necessary changes in both production and public and private consumption patterns that influence negatively the state of, and trends in, the environment. This approach should encourage sustainable use and management of land and sea.



(15) Provision for access to environmental information and to justice and for public participation in policy-making will be important to the success of the Programme.

(16) Thematic strategies will consider the range of options and instruments required for dealing with a series of complex issues that require a broad and multi-dimensional approach and will propose the necessary actions, involving where appropriate the European Parliament and the Council.

(17) There is scientific consensus that human activity is causing increases in concentrations of greenhouse gases, leading to higher global temperatures and disruption to the climate.

(18) The implications of climate change for human society and for nature are severe and necessitate mitigation. Measures to reduce emissions of greenhouse gases can be implemented without a reduction in levels of growth and prosperity.

(19) Regardless of the success of mitigation, society needs to adapt to and prepare for the effects of climate change.

(20) Healthy and balanced natural systems are essential for supporting life on the planet.

(21) There is considerable pressure from human activity on nature and biodiversity. Action is necessary to counteract pressures arising notably from pollution, the introduction of non-native species, potential risks from releasing genetically modified organisms and the way in which the land and sea are exploited.

(22) Soil is a finite resource that is under environmental pressure.

(23) Despite improvements in environmental standards, there is increased likelihood of a link between environmental degradation and certain human illnesses. Therefore the potential risks arising, for example, from emissions and hazardous chemicals, pesticides, and from noise should be addressed.

(24) Greater knowledge is required on the potential negative impacts arising from the use of chemicals and the responsibility for generating knowledge should be placed on producers, importers and downstream users.

(25) Chemicals that are dangerous should be replaced by safer chemicals or safer alternative technologies not entailing the use of chemicals, with the aim of reducing risks to man and the environment.

(26) Pesticides should be used in a sustainable way so as to minimise negative impacts for human health and the environment.



(27) The urban environment is home to some 70 % of the population and concerted efforts are needed to ensure a better environment and quality of life in towns and cities.

(28) There is a limited capacity of the planet to meet the increasing demand for resources and to absorb the emissions and waste resulting from their use and there is evidence that the existing demand exceeds the carrying capacity of the environment in several cases.

(29) Waste volumes in the Community continue to rise, a significant quantity of these being hazardous, leading to loss of resources and to increased pollution risks.

(30) Economic globalisation means that environmental action is increasingly needed at international level, including on transport policies, requiring new responses from the Community linked to policy related to trade, development and external affairs enabling sustainable development to be pursued in other countries. Good governance should make a contribution to this end.

(31) Trade, international investment flows and export credits should make a more positive contribution to the pursuit of environmental protection and sustainable development.

(32) Environmental policy-making, given the complexities of the issues, needs to be based on best available scientific and economic assessment, and on knowledge of the state and trends of the environment, in line with Article 174 of the Treaty.

(33) Information to policy makers, stakeholders and the general public has to be relevant, transparent, up to date and easily understandable.

(34) Progress towards meeting environmental objectives needs to be measured and evaluated.

(35) On the basis of an assessment of the state of the environment, taking account of the regular information provided by the European Environment Agency, a review of progress and an assessment of the need to change orientation should be made at the mid term point of the Programme,

HAVE DECIDED AS FOLLOWS:

Article 1 Scope of the Programme

1. This Decision establishes a programme of Community action on the environment (hereinafter referred to as the 'Programme'). It addresses the key environmental objectives and priorities based on an assessment of the state of the environment and of prevailing trends including emerging issues that require a lead from the Community. The Programme should promote the integration of environmental concerns in all Community policies and contribute to the achievement of sustainable development throughout the current and future enlarged Community.



The Programme furthermore provides for continuous efforts to achieve environmental objectives and targets already established by the Community.

2. The Programme sets out the key environmental objectives to be attained. It establishes, where appropriate, targets and timetables. The objectives and targets should be fulfilled before expiry of the Programme, unless otherwise specified.

3. The Programme shall cover a period of ten years starting from 22 July 2002. Appropriate initiatives in the different policy areas with the aim of meeting the objectives shall consist of a range of measures including legislation and the strategic approaches outlined in Article 3. These initiatives should be presented progressively and at the latest by four years after the adoption of this Decision.

4. The objectives respond to the key environmental priorities to be met by the Community in the following areas:

- climate change,
- nature and biodiversity,
- environment and health and quality of life,
- natural resources and wastes.

Article 2 Principles and overall aims

1. The Programme constitutes a framework for the Community's environmental policy during the period of the Programme with the aim of ensuring a high level of protection, taking into account the principle of subsidiarity and the diversity of situations in the various regions of the Community, and of achieving a decoupling between environmental pressures and economic growth. It shall be based particularly on the polluter pays principle, the precautionary principle and preventive action, and the principle of rectification of pollution at source. The Programme shall form a basis for the environmental dimension of the European Sustainable Development Strategy and contribute to the integration of environmental concerns into all Community policies, *inter alia* by setting out environmental priorities for the Strategy.

2. The Programme aims at:

- emphasising climate change as an outstanding challenge of the next 10 years and beyond and contributing to the long term objective of stabilising greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Thus a long term objective of a maximum global temperature increase of 2 °Celsius over pre-industrial levels and a CO₂ concentration below 550 ppm shall guide the Programme. In the longer term this is likely to require a global reduction in emissions of greenhouse gases by 70 % as compared to 1990 as identified by the Intergovernmental Panel on Climate Change (IPCC);
- protecting, conserving, restoring and developing the functioning of natural systems, natural habitats, wild flora and fauna with the aim of halting desertification and the loss of biodiversity, including diversity of genetic resources, both in the European Union and on a global scale;



- contributing to a high level of quality of life and social well being for citizens by providing an environment where the level of pollution does not give rise to harmful effects on human health and the environment and by encouraging a sustainable urban development;
- better resource efficiency and resource and waste management to bring about more sustainable production and consumption patterns, thereby decoupling the use of resources and the generation of waste from the rate of economic growth and aiming to ensure that the consumption of renewable and non-renewable resources does not exceed the carrying capacity of the environment.

3. The Programme shall ensure that environmental objectives, which should focus on the environmental outcomes to be achieved, are met by the most effective and appropriate means available, in the light of the principles set out in paragraph 1 and the strategic approaches set out in Article 3. Full consideration shall be given to ensuring that the Community's environmental policy-making is undertaken in an integrated way and to all available options and instruments, taking into account regional and local differences, as well as ecologically sensitive areas, with an emphasis on:

- developing European initiatives to raise the awareness of citizens and local authorities;
- extensive dialogue with stakeholders, raising environmental awareness and public participation;
- analysis of benefits and costs, taking into account the need to internalise environmental costs;
- the best available scientific evidence, and the further improvement of scientific knowledge through research and technological development;
- data and information on the state and trends of the environment.

4. The Programme shall promote the full integration of environmental protection requirements into all Community policies and actions by establishing environmental objectives and, where appropriate, targets and timetables to be taken into account in relevant policy areas. Furthermore, measures proposed and adopted in favour of the environment should be coherent with the objectives of the economic and social dimensions of sustainable development and vice versa.

5. The Programme shall promote the adoption of policies and approaches that contribute to the achievement of sustainable development in the countries which are candidates for accession ('Candidate Countries') building on the transposition and implementation of the acquis. The enlargement process should sustain and protect the environmental assets of the Candidate Countries such as wealth of biodiversity, and should maintain and strengthen sustainable production and consumption and land use patterns and environmentally sound transport structures through:

- integration of environmental protection requirements into Community Programmes including those related to development of infrastructure;
- promotion of transfer of clean technologies to the Candidate Countries;
- extended dialogue and exchange of experience with the national and local administrations in the Candidate Countries on sustainable development and preservation of their environmental assets;



- cooperation with civil society, environmental non-governmental organisations (NGOs) and business in the Candidate Countries to help raise public awareness and participation;
- encouraging international financing institutions and the private sector to support the implementation of and compliance with the environmental acquis in the Candidate Countries and to pay due attention to integrating environmental concerns into the activities of the economic sector.

6. The Programme shall stimulate:

- the positive and constructive role of the European Union as a leading partner in the protection of the global environment and in the pursuit of a sustainable development;
- the development of a global partnership for environment and sustainable development;
- the integration of environmental concerns and objectives into all aspects of the Community's external relations.

Article 3 Strategic approaches to meeting environmental objectives

The aims and objectives set out in the Programme shall be pursued, *inter alia*, by the following means:

1. Development of new Community legislation and amendment of existing legislation, where appropriate;

2. Encouraging more effective implementation and enforcement of Community legislation on the environment and without prejudice to the Commission's right to initiate infringement proceedings. This requires:

- increased measures to improve respect for Community rules on the protection of the environment and addressing infringements of environmental legislation;
- promotion of improved standards of permitting, inspection, monitoring and enforcement by Member States;
- a more systematic review of the application of environmental legislation across the Member States;
- improved exchange of information on best practice on implementation including by the European Network for the Implementation and Enforcement of Environmental Law (IMPEL network) within the framework of its competencies;

3. Further efforts for integration of environmental protection requirements into the preparation, definition and implementation of Community policies and activities in the different policy areas are needed. Further efforts are necessary in different sectors including consideration of their specific environmental objectives, targets, timetables and indicators. This requires:

- ensuring that the integration strategies produced by the Council in different policy areas are translated into effective action and contribute to the implementation of the environmental aims and objectives of the Programme;
- consideration, prior to their adoption, of whether action in the economic and social fields, contribute to and are coherent with the objectives, targets and time frame of the Programme;
- establishing appropriate regular internal mechanisms in the Community institutions, taking full account of the need to promote transparency and access to information, to ensure that



environmental considerations are fully reflected in Commission policy initiatives, including relevant decisions and legislative proposals;

- regular monitoring, via relevant indicators, elaborated where possible on the basis of a common methodology for each sector, and reporting on the process of sectoral integration;
- further integration of environmental criteria into Community funding programmes without prejudice to existing ones;
- full and effective use and implementation of Environmental Impact Assessment and Strategic Environmental Assessment;
- that the objectives of the Programme should be taken into account in future financial perspective reviews of Community financial instruments;

4. Promotion of sustainable production and consumption patterns by effective implementation of the principles set out in Article 2, to internalise the negative as well as the positive impacts on the environment through the use of a blend of instruments, including market based and economic instruments. This requires, *inter alia*:

- encouraging reforms of subsidies that have considerable negative effects on the environment and are incompatible with sustainable development, *inter alia* by establishing, by the mid-term review, a list of criteria allowing such environmentally negative subsidies to be recorded, with a view to gradually eliminating them;
- analysing the environmental efficiency of tradable environmental permits as a generic instrument and of emission trading with a view to promoting and implementing their use where feasible;
- promoting and encouraging the use of fiscal measures such as environmentally related taxes and incentives, at the appropriate national or Community level;
- promoting the integration of environmental protection requirements in standardisation activities;

5. Improving collaboration and partnership with enterprises and their representative bodies and involving the social partners, consumers and their organisations, as appropriate, with a view to improving the environmental performance of enterprises and aiming at sustainable production patterns. This requires:

- promoting an integrated product policy approach throughout the Programme that will encourage the taking into account of environmental requirements throughout the life-cycle of products, and more widespread application of environmentally friendly processes and products;
- encouraging wider uptake of the Community's Eco-Management and Audit Scheme (EMAS)⁴⁵ and developing initiatives to encourage companies to publish rigorous and independently verified environmental or sustainable development performance reports;
- establishing a compliance assistance programme, with specific help for small and medium enterprises;

⁴⁵ Regulation (EC) No 761/2001 of the European Parliament and of the Council of 19 March 2001 allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS) (OJ L 114, 24.4.2001, p. 1).



- stimulating the introduction of company environmental performance award schemes;
 - stimulating product innovation with the aim of greening the market including through improved dissemination of results of the LIFE Programme⁴⁶;
 - encouraging voluntary commitments or agreements to achieve clear environmental objectives, including setting out procedures in the event of non-compliance;
6. To help ensure that individual consumers, enterprises and public bodies in their roles as purchasers, are better informed about the processes and products in terms of their environmental impact with a view to achieving sustainable consumption patterns. This requires:
- encouraging the uptake of eco-labels and other forms of environmental information and labelling that allow consumers to compare environmental performance between products of the same type;
 - encouraging the use of reliable self-declared environmental claims and preventing misleading claims;
 - promoting a green public procurement policy, allowing environmental characteristics to be taken into account and the possible integration of environmental life cycle, including the production phase, concerns in the procurement procedures while respecting Community competition rules and the internal market, with guidelines on best practice and starting a review of green procurement in Community Institutions;
7. To support environmental integration in the financial sector. This requires:
- considering a voluntary initiative with the financial sector, covering guide-lines for the incorporation of data on environmental cost in company annual financial reports, and the exchange of best policy practices between Member States;
 - calling on the European Investment Bank to strengthen the integration of environmental objectives and considerations into its lending activities in particular with a view to supporting a sustainable development of Candidate Countries;
 - promoting integration of environmental objectives and considerations into the activities of other financial institutions such as the European Bank for Reconstruction and Development;
8. To create a Community liability regime requires *inter alia*:
- legislation on environmental liability;
9. To improve collaboration and partnership with consumer groups and NGOs and promote better understanding of and participation in environmental issues amongst European citizens requires:
- ensuring access to information, participation and justice through early ratification of the Aarhus Convention⁴⁷ by the Community and by Member States;

⁴⁶ Regulation (EC) No 1655/2000 of the European Parliament and of the Council of 17 July 2000 concerning the Financial Instrument for the Environment (LIFE) (OJ L 192, 28.7.2000, p. 1).

⁴⁷ Convention on Access to Information, Public Participation in Decision- Making and Access to Justice in Environmental Matters, Aarhus, 25 June 1998.



- supporting the provision of accessible information to citizens on the state and trends of the environment in relation to social, economic and health trends;
- general raising of environmental awareness;
- developing general rules and principles for good environmental governance in dialogue processes;

10. To encourage and promote effective and sustainable use and management of land and sea taking account of environmental concerns. This requires, while fully respecting the subsidiarity principle, the following:

- promoting best practice with respect to sustainable land use planning, which takes account of specific regional circumstances with particular emphasis on the Integrated Coastal Zone Management programme;
- promoting best practices and supporting networks fostering the exchange of experience on sustainable development including urban areas, sea, coastline, mountain areas, wetlands and other areas of a sensitive nature;
- enhancing the use, increasing resources and giving broader scope for agri-environment measures under the Common Agricultural Policy;
- encouraging Member States to consider using regional planning as an instrument for improving environmental protection for the citizen and promoting the exchange of experience on sustainable regional development, particularly in urban and densely populated areas.

Article 4 Thematic strategies

1. Actions in Articles 5 to 8 shall include the development of thematic strategies and the evaluation of existing strategies for priority environmental problems requiring a broad approach. These strategies should include an identification of the proposals that are required to reach the objectives set out in the Programme and the procedures foreseen for their adoption. These strategies shall be submitted to the European Parliament and Council and shall, where appropriate take the form of a Decision of the European Parliament and of the Council to be adopted in accordance with the procedure laid down in Article 251 of the Treaty. Subject to the legal base of the proposal, the legislative proposals arising from these strategies shall be adopted in accordance with the procedure laid down in Article 251 of the Treaty.
2. The thematic strategies may include approaches among those outlined in Article 3 and in Article 9 and relevant qualitative and quantitative environmental targets and timetables against which the measures foreseen can be measured and evaluated.
3. The thematic strategies should be developed and implemented in close consultation with the relevant parties, such as NGOs, industry, other social partners and public authorities, while ensuring, as appropriate, consultation of Candidate Countries in this process.
4. The thematic strategies should be presented to the European Parliament and the Council within 3 years of the adoption of the Programme at the latest. The mid term report, in which the Commission evaluates the progress made in implementing the Programme, shall include a review of the thematic strategies.



5. The Commission shall report annually to the European Parliament and the Council on the progress in the development and implementation of the strategies and on their effectiveness.

Article 5 Objectives and priority areas for action on tackling climate change

1. The aims set out in Article 2 should be pursued by the following objectives:

- ratification and entering into force of the Kyoto Protocol to the United Nations framework Convention on climate change by 2002 and fulfilment of its commitment of an 8 % reduction in emissions by 2008-12 compared to 1990 levels for the European Community as a whole, in accordance with the commitment of each Member State set out in the Council Conclusions of 16 and 17 June 1998;
- realisation by 2005 of demonstrable progress in achieving the commitments under the Kyoto Protocol;
- placing the Community in a credible position to advocate an international agreement on more stringent reduction targets for the second commitment period provided for by the Kyoto Protocol. This agreement should aim at cutting emissions significantly, taking full account, *inter alia*, of the findings of the IPCC 3rd Assessment Report, and take into account the necessity to move towards a global equitable distribution of greenhouse gas emissions.

2. These objectives shall be pursued by means, *inter alia*, of the following priority actions:

- (i) Implementing international climate commitments including the Kyoto Protocol by means of:
 - (a) examining the results of the European Climate Change Programme and adopting effective common and coordinated policies and measures on its basis, as appropriate, for various sectors complementary to domestic actions in the Member States;
 - (b) working towards the establishment of a Community framework for the development of effective CO₂ emissions trading with the possible extension to other greenhouse gases;
 - (c) improving monitoring of greenhouse gases and of progress towards delivering Member States commitments made under the Internal Burden Sharing Agreement;
- (ii) Reducing greenhouse gas emissions in the energy sector:
 - (a) undertaking as soon as possible an inventory and review of subsidies that counteract an efficient and sustainable use of energy with a view to gradually phasing them out;
 - (b) encouraging renewable and lower carbon fossil fuels for power generation;
 - (c) encouraging the use of renewable energy sources, including the use of incentives, including at the local level, with a view to meeting the indicative target of 12 % of total energy use by 2010;
 - (d) introducing incentives to increase Combined Heat and Power and implement measures aiming at doubling the overall share of Combined Heat and Power in the Community as a whole to 18 % of the total gross electricity generation;
 - (e) prevent and reduce methane emissions from energy production and distribution;
 - (f) promoting energy efficiency;



- (iii) Reducing greenhouse gas emissions in the transport sector:
 - (a) identifying and undertaking specific actions to reduce greenhouse gas emissions from aviation if no such action is agreed within the International Civil Aviation Organisation by 2002;
 - (b) identifying and undertaking specific actions to reduce greenhouse gas emissions from marine shipping if no such action is agreed within the International Maritime Organisation by 2003;
 - (c) encouraging a switch to more efficient and cleaner forms of transport including better organisation and logistics;
 - (d) in the context of the EU target of an 8 % reduction in greenhouse gas emissions, inviting the Commission to submit by the end of 2002 a Communication on quantified environmental objectives for a sustainable transport system;
 - (e) identifying and undertaking further specific action, including any appropriate legislation, to reduce greenhouse gas emissions from motor vehicles including N₂O;
 - (f) promoting the development and use of alternative fuels and of low-fuel-consuming vehicles with the aim of substantially and continually increasing their share;
 - (g) promoting measures to reflect the full environmental costs in the price of transport;
 - (h) decoupling economic growth and the demand for transport with the aim of reducing environmental impacts;

- (iv) Reducing greenhouse gas emissions in industrial production:
 - (a) promoting eco-efficiency practices and techniques in industry;
 - (b) developing means to assist SMEs to adapt, innovate and improve performance;
 - (c) encouraging the development of more environmentally sound and technically feasible alternatives, including the establishment of Community measures, aiming at reducing emissions, phasing out the production where appropriate and feasible and reducing the use of industrial fluorinated gases HFCs (hydrofluorocarbons), PFCs (Perfluorocarbons) and SF₆ (sulphur hexafluoride);

- (v) Reducing greenhouse gas emissions in other sectors:
 - (a) promoting energy efficiency notably for heating, cooling and hot tap water in the design of buildings;
 - (b) taking into account the need to reduce greenhouse gas emissions, alongside with other environmental considerations, in the Common agricultural policy and in the Community's waste management strategy;
- (vi) Using other appropriate instruments such as:
 - (a) promoting the use of fiscal measures, including a timely and appropriate Community framework for energy taxation, to encourage a switch to more efficient energy use, cleaner energy and transport and to encourage technological innovation;
 - (b) encouraging environmental agreements with industry sectors on greenhouse gas emission reductions;
 - (c) ensuring climate change as a major theme of Community policy for research and technological development and for national research programmes.

3. In addition to the mitigation of climate change, the Community should prepare for measures aimed at adaptation to the consequences of climate change, by:



- reviewing Community policies, in particular those relevant to climate change, so that adaptation is addressed adequately in investment decisions;
- encouraging regional climate modelling and assessments both to prepare regional adaptation measures such as water resources management, conservation of biodiversity, desertification and flooding prevention and to support awareness raising among citizens and business.

4. It must be ensured that the climate challenge is taken into account in the Community's enlargement. This will require, *inter alia*, the following actions with Candidate Countries:

- supporting capacity building, for the application of domestic measures for the use of the Kyoto mechanisms and improved reporting and emission monitoring;
- supporting a more sustainable transport and energy sector;
- ensuring that cooperation with candidate countries is further strengthened on climate change issues.

5. Combating climate change will form an integral part of the European Union's external relations policies and will constitute one of the priorities in its sustainable development policy. This will require concerted and coordinated efforts on the part of the Community and its Member States with a view to:

- capacity-building to assist developing countries and countries with economies in transition for example through encouraging projects in connection with the Clean Development Mechanism (CDM) in the Kyoto Protocol and joint implementation;
- responding to identified technology-transfer needs;
- assisting with the challenge of adapting to climate change in the countries concerned.

Article 6 Objectives and priority areas for action on nature and biodiversity

1. The aims set out in Article 2 should be pursued by the following objectives:

- halting biodiversity decline with the aim to reach this objective by 2010, including prevention and mitigation of impacts of invasive alien species and genotypes;
- protection and appropriate restoration of nature and biodiversity from damaging pollution;
- conservation, appropriate restoration and sustainable use of marine environment, coasts and wetlands;
- conservation and appropriate restoration of areas of significant landscape values including cultivated as well as sensitive areas;
- conservation of species and habitats, with special concern to preventing habitat fragmentation;
- promotion of a sustainable use of the soil, with particular attention to preventing erosion, deterioration, contamination and desertification.

2. These objectives shall be pursued by means of the following priority actions, taking into account the principle of subsidiarity, based on the existing global and regional conventions



and strategies and full implementation of the relevant Community acts. The ecosystem approach, as adopted in the Convention on Biological Diversity⁴⁸, should be applied whenever appropriate:

(a) on biodiversity:

- ensuring the implementation and promoting the monitoring and assessment of the Community's biodiversity strategy and the relevant action plans, including through a programme for gathering data and information, developing the appropriate indicators, and promoting the use of best available techniques and of best environmental practices;
- promoting research on biodiversity, genetic resources, ecosystems and interactions with human activities;
- developing measures to enhance sustainable use, sustainable production and sustainable investments in relation to biodiversity;
- encouraging coherent assessment, further research and cooperation on threatened species;
- promoting at the global level a fair and equitable sharing of benefits arising from the use of genetic resources to implement Article 15 of the Convention on Biological Diversity on access to genetic resources originating from third countries;
- developing measures aimed at the prevention and control of invasive alien species including alien genotypes;
- establishing the Natura 2000 network and implementing the necessary technical and financial instruments and measures required for its full implementation and for the protection, outside the Natura 2000 areas, of species protected under the Habitats and Birds Directives;
- promoting the extension of the Natura 2000 network to the Candidate Countries;

(b) on accidents and disasters:

- promoting Community coordination to actions by Member States in relation to accidents and natural disasters by, for example, setting up a network for exchange of prevention practices and tools;
- developing further measures to help prevent the major accident hazards with special regards to those arising from pipelines, mining, marine transport of hazardous substances and developing measures on mining waste;

(c) a thematic strategy on soil protection, addressing the prevention of, *inter alia*, pollution, erosion, desertification, land degradation, land-take and hydrogeological risks taking into account regional diversity, including specificities of mountain and arid areas;

(d) promoting sustainable management of extractive industries with a view to reduce their environmental impact;

(e) promoting the integration of conservation and restoration of the landscape values into other policies including tourism, taking account of relevant international instruments;

⁴⁸ OJ L 309, 13.12.1993, p. 1.



(f) promoting the integration of biodiversity considerations in agricultural policies and encouraging sustainable rural development, multifunctional and sustainable agriculture, through:

- encouraging full use of current opportunities of the Common Agriculture Policy and other policy measures;
- encouraging more environmentally responsible farming, including, where appropriate, extensive production methods, integrated farming practices, organic farming and agrobiodiversity, in future reviews of the Common Agricultural Policy, taking account of the need for a balanced approach to the multifunctional role of rural communities;

(g) promoting sustainable use of the seas and conservation of marine ecosystems, including sea beds, estuarine and coastal areas, paying special attention to sites holding a high biodiversity value, through:

- promoting greater integration of environmental considerations in the Common Fisheries Policy, taking the opportunity of its review in 2002;
- a thematic strategy for the protection and conservation of the marine environment taking into account, *inter alia*, the terms and implementation obligations of marine Conventions, and the need to reduce emissions and impacts of sea transport and other sea and landbased activities;
- promoting integrated management of coastal zones;
- further promote the protection of marine areas, in particular with the Natura 2000 network as well as by other feasible Community means;

(h) implementing and further developing strategies and measures on forests in line with the forest strategy for the European Union, taking account the principle of subsidiarity and biodiversity considerations, incorporating the following elements:

- improving existing Community measures which protect forests and implementing sustainable forest management, *inter alia*, through national forest programmes, in connection with rural development plans, with increased emphasis on the monitoring of the multiple roles of forests in line with recommendations adopted by the Ministerial Conference on the Protection of Forests in Europe and the United Nations Forum on Forests and the Convention on Biodiversity and other fora;
- encouraging the effective coordination between all policy sectors involved in forestry, including the private sector, as well as the coordination of all stakeholders involved in forestry issues;
- stimulating the increase of the market share for sustainably produced wood, *inter alia*, through encouraging certification for sustainable forest management and encouraging labelling of related products;
- continuing the active participation of the Community and of Member States in the implementation of global and regional resolutions and in discussions and negotiations on forest-related issues;
- examining the possibilities to take active measures to prevent and combat trade of illegally harvested wood;
- encouraging consideration of climate change effects in forestry;

(i) on genetically modified organisms (GMOs):



- developing the provisions and methods for risk assessment, identification, labelling and traceability of GMOs in order to enable effective monitoring and controls of health and environmental effects;
- aiming for swift ratification and implementation of the Cartagena Protocol on Biosafety and supporting the build up of regulatory frameworks in third countries where needed through technical and financial assistance.

Article 7 Objectives and priority areas for action on environment and health and quality of life

1. The aims set out in Article 2 should be pursued by the following objectives, taking into account relevant World Health Organisation (WHO) standards, guidelines and programmes:
 - achieving better understanding of the threats to environment and human health in order to take action to prevent and reduce these threats;
 - contributing to a better quality of life through an integrated approach concentrating on urban areas;
 - aiming to achieve within one generation (2020) that chemicals are only produced and used in ways that do not lead to a significant negative impact on health and the environment, recognising that the present gaps of knowledge on the properties, use, disposal and exposure of chemicals need to be overcome;
 - chemicals that are dangerous should be substituted by safer chemicals or safer alternative technologies not entailing the use of chemicals, with the aim of reducing risks to man and the environment;
 - reducing the impacts of pesticides on human health and the environment and more generally to achieve a more sustainable use of pesticides as well as a significant overall reduction in risks and of the use of pesticides consistent with the necessary crop protection. Pesticides in use which are persistent or bio-accumulative or toxic or have other properties of concern should be substituted by less dangerous ones where possible;
 - achieving quality levels of ground and surface water that do not give rise to significant impacts on and risks to human health and the environment, and to ensure that the rates of extraction from water resources are sustainable over the long term;
 - achieving levels of air quality that do not give rise to significant negative impacts on and risks to human health and the environment;
 - substantially reducing the number of people regularly affected by long-term average levels of noise, in particular from traffic which, according to scientific studies, cause detrimental effects on human health and preparing the next step in the work with the noise directive.
2. These objectives shall be pursued by means of the following priority actions:
 - (a) reinforcement of Community research programmes and scientific expertise, and encouragement to the international coordination of national research programmes, to support achievement of objectives on health and environment, and in particular the:
 - identification and recommendations on the priority areas for research and action including among others the potential health impacts of electromagnetic pollution sources and including particular attention to the development and validation of alternative methods to animal testing in particular in the field of chemical safety;



- definition and development of indicators of health and environment;
- re-examination, development and updating of current health standards and limit values, including where appropriate, the effects on potentially vulnerable groups, for example children or the elderly and the synergies and the reciprocal impact of various pollutants;
- review of trends and the provision of an early warning mechanism for new or emerging problems;

(b) on chemicals:

- placing the responsibility on manufacturers, importers and downstream users for generating knowledge about all chemicals (duty of care) and assessing risks of their use, including in products, as well as recovery and disposal;
- developing a coherent system based on a tiered approach, excluding chemical substances used in very low quantities, for the testing, risk assessment and risk management of new and existing substances with testing procedures that minimise the need for animal testing and develop alternative testing methods;
- ensuring that the chemical substances of concern are subject to accelerated risk management procedures and that substances of very high concern, including carcinogenic, mutagenic or toxic for reproduction substances and those which have POPs (persistent organic pollutants) characteristics, are used only in justified and well defined cases and must be subject to authorization before their use;
- ensuring that the results of the risk assessments of chemicals are taken fully into account in all areas of Community legislation where chemicals are regulated and to avoid duplication of work;
- providing criteria for including among the substances of very high concern those that are persistent and bioaccumulating and toxic and substances that are very persistent and very bio-accumulative and envisaging the addition of known endocrine disrupters when agreed test methods and criteria are established;
- ensuring that the main measures that are necessary in view of the identified objectives are developed speedily so that they can come into force before the mid-term review;
- ensuring public access to the non-confidential information in the Community Register on Chemicals (REACH Register);

(c) on pesticides:

- full implementation and review of the effectiveness of the applicable legal framework⁴⁹ in order to ensure a high level of protection, when amended. This revision might include, where appropriate, comparative assessment and the development of Community authorisation procedures for placing on the market;
- a thematic strategy on the sustainable use of pesticides that addresses:
 - (i) minimising the hazards and risks to health and environment from the use of pesticides;
 - (ii) improved controls on the use and distribution of pesticides;

⁴⁹ Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market (OJ L 230, 19.8.1991, p. 1). Directive as last amended by Commission Directive 2001/49/EC (OJ L 176, 29.6.2001, p. 61).



- (iii) reducing the levels of harmful active substances including through substituting the most dangerous with safer, including non-chemical, alternatives;
- (iv) encouragement of the use of low input or pesticide free cultivation among others through raising users' awareness, promoting the use of codes of good practices, and promoting consideration of the possible application of financial instruments;
- (v) a transparent system for reporting and monitoring progress made in fulfilling the objectives of the strategy including the development of suitable indicators;

(d) on chemicals and pesticides:

- aiming at swift ratification of the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade and of the Stockholm Convention on Persistent Organic Pollutants (POPs);
- amending Council Regulation (EEC) No 2455/92 of 23 July 1992 concerning the export and import of certain dangerous chemicals⁵⁰ with the aim of bringing it into line with the Rotterdam Convention, improving its procedural mechanisms and improving information to developing countries;
- support the improvement of the management of chemicals and pesticides in developing and candidate countries, including the elimination of stocks of obsolete pesticides, *inter alia*, by supporting projects aimed at such elimination;
- contributing to international efforts on the elaboration of a strategic approach on international chemicals management;

(e) on the sustainable use and high quality of water:

- ensuring a high level of protection of surface and groundwater, preventing pollution and promoting sustainable water use;
- working towards ensuring full implementation of the Water Framework Directive⁵¹, aiming at a good ecological, chemical and quantitative water status and a coherent and sustainable water management;
- developing measures aimed at cessation of discharges, emissions and losses of Priority Hazardous Substances, in line with the provisions of the Water Framework Directive;
- ensuring a high level of protection of bathing water, including revising the Bathing Water Directive⁵²;
- ensuring the integration of the concepts and approaches of the Water Framework Directive and of other water protection directives in other Community policies;

⁵⁰ OJ L 251, 29.8.1992, p. 13. Regulation as last amended by Commission Regulation (EC) No 2247/98 (OJ L 282, 20.10.1998, p. 12).

⁵¹ Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy (OJ L 327, 22.12.2000, p. 1).

⁵² Council Directive 76/160/EEC of 8 December 1975 concerning the quality of bathing water (OJ L 31, 5.2.1976, p. 1). Directive as last amended by the 1994 Act of Accession.



(f) on air quality, development and implementation of the measures in Article 5 in the transport, industry and energy sectors should be compatible with and contribute to improvement of quality of air. Further measures envisaged are:

- improving the monitoring and assessment of air quality, including the deposition of pollutants, and the provision of information to the public, including the development and use of indicators;
- a thematic strategy to strengthen a coherent and integrated policy on air pollution to cover priorities for further actions, the review and updating where appropriate of air quality standards and national emission ceilings with a view to reach the long term objective of no-exceedence of critical loads and levels and the development of better systems for gathering information, modelling and forecasting;
- adopting appropriate measures concerning ground-level ozone and particulates;
- considering indoor air quality and the impacts on health, with recommendations for future measures where appropriate;
- playing a leading role in the negotiations and the implementation of the Montreal Protocol on ozone depleting substances;
- playing a leading role in the negotiations on and strengthening the links and interactions with international processes contributing to clean air in Europe;
- further development of specific Community instruments for reducing emissions from relevant source categories;

(g) on noise:

- supplementing and further improving measures, including appropriate type-approval procedures, on noise emissions from services and products, in particular motor vehicles including measures to reduce noise from the interaction between tyre and road surface that do not compromise road safety, from railway vehicles, aircraft and stationary machinery;
- developing and implementing instruments to mitigate traffic noise where appropriate, for example by means of transport demand reduction, shifts to less noisy modes of transport, the promotion of technical measures and of sustainable transport planning;

(h) on urban environment:

- a thematic strategy promoting an integrated horizontal approach across Community policies and improving the quality of urban environment, taking into account progress made in implementing the existing cooperation framework⁵³ reviewing it where necessary, and addressing:
 - the promotion of Local Agenda 21;
 - the reduction of the link between economic growth and passenger transport demand;
 - the need for an increased share in public transport, rail, inland waterways, walking and cycling modes;

⁵³ Decision No 1141/2001/EC of the European Parliament and of the Council of 27 June 2001 on a Community framework for cooperation to promote sustainable urban development (OJ L 191, 13.7.2001, p. 1).



- the need to tackle rising volumes of traffic and to bring about a significant decoupling of transport growth and GDP growth;
- the need to promote the use of low emission vehicles in public transports;
- the consideration of urban environment indicators.

Article 8 Objectives and priority areas for action on the sustainable use and management of natural resources and wastes

1. The aims set out in Article 2 should be pursued by the following objectives:

- aiming at ensuring that the consumption of resources and their associated impacts do not exceed the carrying capacity of the environment and breaking the linkages between economic growth and resource use. In this context the indicative target to achieve a percentage of 22 % of the electricity production from renewable energies by 2010 in the Community is recalled with a view to increasing drastically resource and energy efficiency;
- achieving a significant overall reduction in the volumes of waste generated through waste prevention initiatives, better resource efficiency and a shift towards more sustainable production and consumption patterns;
- a significant reduction in the quantity of waste going to disposal and the volumes of hazardous waste produced while avoiding an increase of emissions to air, water and soil;
- encouraging re-use and for wastes that are still generated: the level of their hazardousness should be reduced and they should present as little risk as possible; preference should be given to recovery and especially to recycling; the quantity of waste for disposal should be minimised and should be safely disposed of; waste intended for disposal should be treated as closely as possible to the place of its generation, to the extent that this does not lead to a decrease in the efficiency in waste treatment operations.

2. These objectives shall be pursued taking into consideration the Integrated Product Policy approach and the Community's strategy for waste management⁵⁴ by means of the following priority actions:

- (i) developing a thematic strategy on the sustainable use and management of resources, including *inter alia*:
 - (a) an estimate of materials and waste streams in the Community, including imports and exports for example by using the instrument of material flow analysis;
 - (b) a review of the efficiency of policy measures and the impact of subsidies relating to natural resources and waste;
 - (c) establishment of goals and targets for resource efficiency and the diminished use of resources, decoupling the link between economic growth and negative environmental impacts;
 - (d) promotion of extraction and production methods and techniques to encourage eco-efficiency and the sustainable use of raw-materials, energy, water and other resources;

⁵⁴ Council Resolution of 24 February 1997 on a Community strategy for waste management (OJ C 76, 11.3.1997, p. 1).



(e) development and implementation of a broad range of instruments including research, technology transfer, market-based and economic instruments, programmes of best practice and indicators of resource efficiency;

(ii) Developing and implementing measures on waste prevention and management by, *inter alia*:
(a) developing a set of quantitative and qualitative reduction targets covering all relevant waste, to be achieved at Community level by 2010. The Commission is invited to prepare a proposal for such targets by 2002;

(b) encourage ecologically sound and sustainable product design;

(c) raising awareness of the public's potential contribution on waste reduction;

(d) the formulation of operational measures to encourage waste prevention, e.g. stimulating re-use and recovery, the phasing out of certain substances and materials through product-related measures;

(e) developing further indicators in the field of waste management;

(iii) Developing a thematic strategy on waste recycling, including *inter alia*:

(a) measures aimed at ensuring source separation, the collection and recycling of priority waste streams;

(b) further development of producer responsibility;

(c) development and transfer of environmentally sound waste recycling and treatment technology;

(iv) Developing or revising the legislation on wastes, including, *inter alia*, construction and demolition waste, sewage sludge⁵⁵, biodegradable wastes, packaging⁵⁶, batteries⁵⁷ and waste shipments⁵⁸, clarification of the distinction between waste and non-waste and development of adequate criteria for the further elaboration of Annex IIA and IIB of the framework directive on wastes⁵⁹.

Article 9 Objectives and priority areas for action on international issues

1. The aim set out in Article 2 on international issues and the international dimensions of the four environmental priority areas of this Programme involve the following objectives:

⁵⁵ Council Directive 86/278/EEC of 12 June 1986 on the protection of the environment, and in particular of the soil, when sewage sludge is used in agriculture (OJ L 181, 4.7.1986, p. 6). Directive as last amended by the 1994 Act of Accession.

⁵⁶ Directive 94/62/EC of the European Parliament and of the Council of 20 December 1994 on packaging and packaging waste (OJ L 365, 31.12.1994, p. 10). Directive as last amended by Commission Decision 1999/177/EC (OJ L 56, 4.3.1999, p. 47).

⁵⁷ Commission Directive 93/86/EEC of 4 October 1993 adapting to technical progress Council Directive 91/157/EEC on batteries and accumulators containing certain dangerous substances (OJ L 264, 23.10.1993, p. 51).

⁵⁸ Council Regulation (EEC) No 259/93 of 1 February 1993 on the supervision and control of shipments of waste within, into and out of the European Community (OJ L 30, 6.2.1993, p. 1). Regulation as last amended by Commission Decision 1999/816/EEC (OJ L 316, 10.12.1999, p. 45).

⁵⁹ Council Directive 75/442/EEC of 15 July 1975 on waste (OJ L 194, 25.7.1975, p. 39). Directive as last amended by Commission Decision 96/350/EC (OJ L 135, 6.6.1996, p. 32).



- the pursuit of ambitious environmental policies at the international level paying particular attention to the carrying capacity of the global environment;
- the further promotion of sustainable consumption and production patterns at the international level;
- making progress to ensure that trade and environment policies and measures are mutually supportive.

2. These objectives shall be pursued by means of the following priority actions:

- (a) integrating environment protection requirements into all the Community's external policies, including trade and development cooperation, in order to achieve sustainable development by *inter alia* the elaboration of guidelines;
- (b) establishing a coherent set of environment and development targets to be promoted for adoption as part of 'a new global deal or pact' at the World Summit on Sustainable Development in 2002;
- (c) work towards strengthening international environmental governance by the gradual reinforcement of the multilateral cooperation and the institutional framework including resources;
- (d) aiming for swift ratification, effective compliance and enforcement of international conventions and agreements relating to the environment where the Community is a Party;
- (e) promoting sustainable environmental practices in foreign investment and export credits;
- (f) intensify efforts at the international level to arrive at consensus on methods for the evaluation of risks to health and the environment, as well as approaches of risk management including the precautionary principle;
- (g) achieving mutual supportiveness between trade and the needs for environmental protection, by taking due account of the environmental dimension in Sustainability Impact Assessments of multilateral trade agreements to be carried out at an early stage of their negotiation and by acting accordingly;
- (h) further promoting a world trade system that fully recognizes Multilateral or Regional Environmental Agreements and the precautionary principle, enhancing opportunities for trade in sustainable and environmentally friendly products and services;
- (i) promoting cross-border environmental cooperation with neighbouring countries and regions;
- (j) promoting a better policy coherence by linking the work done within the framework of the different conventions, including the assessment of interlinkages between biodiversity and climate change, and the integration of biodiversity considerations into the implementation of the United Nations Framework Convention on Climate Change and the Kyoto Protocol.

Article 10 Environment policy making

The objectives set out in Article 2 on environment policymaking based on participation and best available scientific knowledge and the strategic approaches set out in Article 3 shall be pursued by means of the following priority actions:

- (a) development of improved mechanisms and of general rules and principles of good governance within which stakeholders are widely and extensively consulted at all stages so



as to facilitate the most effective choices for the best results for the environment and sustainable development in regard to the measures to be proposed;

(b) strengthening participation in the dialogue process by environmental NGOs through appropriate support, including Community finance;

(c) improvement of the process of policy making through:

— *ex-ante* evaluation of the possible impacts, in particular the environmental impacts, of new policies including the alternative of no action and of the proposals for legislation and publication of the results;

— *ex-post* evaluation of the effectiveness of existing measures in meeting their environmental objectives;

(d) ensuring that environment and notably the priority areas identified in this Programme are a major priority for Community research programmes. Regular reviews of environmental research needs and priorities should be undertaken within the context of the Community Framework Programme of research and technological development. Ensuring better coordination of research related to the environment conducted in Member States *inter alia* to improve the application of results; development of bridges between environmental and other actors in the fields of information, training, research, education and policies;

(e) ensuring regular information, to be provided starting from 2003, that can help to provide the basis for:

— policy decisions on the environment and sustainable development;

— the follow-up and review of sector integration strategies as well as of the Sustainable Development Strategy;

— information to the wider public. The production of this information will be supported by regular reports from the European Environment Agency and other relevant bodies. The information shall consist notably of:

— headline environmental indicators;

— indicators on the state and trends of the environment;

— integration indicators;

(f) reviewing and regularly monitoring information and reporting systems with a view to a more coherent and effective system to ensure streamlined reporting of high quality, comparable and relevant environmental data and information. The Commission is invited, as soon as possible, to provide a proposal as appropriate to this end. Monitoring, data collection and reporting requirements should be addressed efficiently in future environmental legislation;

(g) reinforcing the development and the use of earth monitoring (e.g. satellite technology) applications and tools in support of policy-making and implementation.



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Article 11 Monitoring and evaluation of results

1. In the fourth year of operation of the Programme the Commission shall evaluate the progress made in its implementation together with associated environmental trends and prospects. This should be done on the basis of a comprehensive set of indicators. The Commission shall submit this mid-term report together with any proposal for amendment that it may consider appropriate to the European Parliament and the Council.

2. The Commission shall submit to the European Parliament and the Council a final assessment of the Programme and the state and prospects for the environment in the course of the final year of the Programme.

Article 12

This Decision shall be published in the Official Journal of the European Communities.

Done at Brussels, 22 July 2002.

For the European Parliament, The President, P. COX

For the Council, The President, P. S. MØLLER



ANNEX 8: Directive 96/61 on integrated pollution prevention and control

COUNCIL DIRECTIVE 96/61/EC of 24 September 1996 concerning integrated pollution prevention and control⁶⁰

THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 130s (1) thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the Economic and Social Committee (2),

Acting in accordance with the procedure laid down in Article 189c of the Treaty (3),

1. Whereas the objectives and principles of the Community's environment policy, as set out in Article 130r of the Treaty, consist in particular of preventing, reducing and as far as possible eliminating pollution by giving priority to intervention at source and ensuring prudent management of natural resources, in compliance with the 'polluter pays' principle and the principle of pollution prevention;
2. Whereas the Fifth Environmental Action Programme, the broad outline of which was approved by the Council and the Representatives of the Governments of the Member States, meeting within the Council, in the resolution of 1 February 1993 on a Community programme of policy and action in relation to the environment and sustainable development (4), accords priority to integrated pollution control as an important part of the move towards a more sustainable balance between human activity and socio-economic development, on the one hand, and the resources and regenerative capacity of nature, on the other;
3. Whereas the implementation of an integrated approach to reduce pollution requires action at Community level in order to modify and supplement existing Community legislation concerning the prevention and control of pollution from industrial plants;
4. Whereas Council Directive 84/360/EEC of 28 June 1984 on the combating of air pollution from industrial plants (5) introduced a general framework requiring authorization prior to any operation or substantial modification of industrial installations which may cause air pollution;

⁶⁰ Council Directive 96/61 EC is available at <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31996L0061:EN:HTML> (last visited March 30, 2007). For amending and related acts, see <http://europa.eu/scadplus/leg/en/lvb/l28045.htm> (last visited March 30, 2007).



5. Whereas Council Directive 76/464/EEC of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community (6) introduced an authorization requirement for the discharge of those substances;
6. Whereas, although Community legislation exists on the combating of air pollution and the prevention or minimization of the discharge of dangerous substances into water, there is no comparable Community legislation aimed at preventing or minimizing emissions into soil;
7. Whereas different approaches to controlling emissions into the air, water or soil separately may encourage the shifting of pollution between the various environmental media rather than protecting the environment as a whole;
8. Whereas the objective of an integrated approach to pollution control is to prevent emissions into air, water or soil wherever this is practicable, taking into account waste management, and, where it is not, to minimize them in order to achieve a high level of protection for the environment as a whole;
9. Whereas this Directive establishes a general framework for integrated pollution prevention and control; whereas it lays down the measures necessary to implement integrated pollution prevention and control in order to achieve a high level of protection for the environment as a whole; whereas application of the principle of sustainable development will be promoted by an integrated approach to pollution control;
10. Whereas the provisions of this Directive apply without prejudice to the provisions of Council Directive 85/337/EEC of 27 June 1985 on the assessment of the effects of public and private projects on the environment (7); whereas, when information or conclusions obtained further to the application of that Directive have to be taken into consideration for the granting of authorization, this Directive does not affect the implementation of Directive 85/337/EEC;
11. Whereas the necessary steps must be taken by the Member States in order to ensure that the operator of the industrial activities referred to in Annex I is complying with the general principles of certain basic obligations; whereas for that purpose it would suffice for the competent authorities to take those general principles into account when laying down the authorization conditions;
12. Whereas some of the provisions adopted pursuant to this Directive must be applied to existing installations after a fixed period and others as from the date of implementation of this Directive;
13. Whereas, in order to tackle pollution problems more effectively and efficiently, environmental aspects should be taken into consideration by the operator; whereas those aspects should be communicated to the competent authority or authorities so that they can satisfy themselves, before granting a permit, that all appropriate preventive or pollution-control measures have been laid down; whereas very different application procedures may give rise to



different levels of environmental protection and public awareness; whereas, therefore, applications for permits under this Directive should include minimum data;

14. Whereas full coordination of the authorization procedure and conditions between competent authorities will make it possible to achieve the highest practicable level of protection for the environment as a whole;

15. Whereas the competent authority or authorities will grant or amend a permit only when integrated environmental protection measures for air, water and land have been laid down;

16. Whereas the permit is to include all necessary measures to fulfil the authorization conditions in order thus to achieve a high level of protection for the environment as a whole; whereas, without prejudice to the authorization procedure, those measures may also be the subject of general binding requirements;

17. Whereas emission limit values, parameters or equivalent technical measures should be based on the best available techniques, without prescribing the use of one specific technique or technology and taking into consideration the technical characteristics of the installation concerned, its geographical location and local environmental conditions; whereas in all cases the authorization conditions will lay down provisions on minimizing long-distance or transfrontier pollution and ensure a high level of protection for the environment as a whole;

18. Whereas it is for the Member States to determine how the technical characteristics of the installation concerned, its geographical location and local environmental conditions can, where appropriate, be taken into consideration;

19. Whereas, when an environmental quality standard requires more stringent conditions than those that can be achieved by using the best available techniques, supplementary conditions will in particular be required by the permit, without prejudice to other measures that may be taken to comply with the environmental quality standards;

20. Whereas, because best available techniques will change with time, particularly in the light of technical advances, the competent authorities must monitor or be informed of such progress;

21. Whereas, changes to an installation may give rise to pollution; whereas the competent authority or authorities must therefore be notified of any change which might affect the environment; whereas substantial changes to plant must be subject to the granting of prior authorization in accordance with this Directive;

22. Whereas the authorization conditions must be periodically reviewed and if necessary updated; whereas, under certain conditions, they will in any event be re-examined;

23. Whereas, in order to inform the public of the operation of installations and their potential effect on the environment, and in order to ensure the transparency of the licensing process



throughout the Community, the public must have access, before any decision is taken, to information relating to applications for permits for new installations or substantial changes and to the permits themselves, their updating and the relevant monitoring data;

24. Whereas the establishment of an inventory of principal emissions and sources responsible may be regarded as an important instrument making it possible in particular to compare pollution activities in the Community; whereas such an inventory will be prepared by the Commission, assisted by a regulatory committee;

25. Whereas the development and exchange of information at Community level about best available techniques will help to redress the technological imbalances in the Community, will promote the worldwide dissemination of limit values and techniques used in the Community and will help the Member States in the efficient implementation of this Directive;

26. Whereas reports on the implementation and effectiveness of this Directive will have to be drawn up regularly;

27. Whereas this Directive is concerned with installations whose potential for pollution, and therefore transfrontier pollution, is significant; whereas transboundary consultation is to be organized where applications relate to the licensing of new installations or substantial changes to installations which are likely to have significant negative environmental effects; whereas the applications relating to such proposals or substantial changes will be available to the public of the Member State likely to be affected;

28. Whereas the need for action may be identified at Community level to lay down emission limit values for certain categories of installation and pollutant covered by this Directive; whereas the Council will set such emission limit values in accordance with the provisions of the Treaty;

29. Whereas the provisions of this Directive apply without prejudice to Community provisions on health and safety at the workplace,

HAS ADOPTED THIS DIRECTIVE:

Article 1 Purpose and scope

The purpose of this Directive is to achieve integrated prevention and control of pollution arising from the activities listed in Annex I. It lays down measures designed to prevent or, where that is not practicable, to reduce emissions in the air, water and land from the abovementioned activities, including measures concerning waste, in order to achieve a high level of protection of the environment taken as a whole, without prejudice to Directive 85/337/EEC and other relevant Community provisions.

Article 2 Definitions

For the purposes of this Directive:



1. 'substance' shall mean any chemical element and its compounds, with the exception of radioactive substances within the meaning of Directive 80/836/Euratom (8) and genetically modified organisms within the meaning of Directive 90/219/EEC (9) and Directive 90/220/EEC (10);
2. 'pollution' shall mean the direct or indirect introduction as a result of human activity, of substances, vibrations, heat or noise into the air, water or land which may be harmful to human health or the quality of the environment, result in damage to material property, or impair or interfere with amenities and other legitimate uses of the environment;
3. 'installation' shall mean a stationary technical unit where one or more activities listed in Annex I are carried out, and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution;
4. 'existing installation' shall mean an installation in operation or, in accordance with legislation existing before the date on which this Directive is brought into effect, an installation authorized or in the view of the competent authority the subject of a full request for authorization, provided that that installation is put into operation no later than one year after the date on which this Directive is brought into effect;
5. 'emission' shall mean the direct or indirect release of substances, vibrations, heat or noise from individual or diffuse sources in the installation into the air, water or land;
6. 'emission limit values' shall mean the mass, expressed in terms of certain specific parameters, concentration and/or level of an emission, which may not be exceeded during one or more periods of time. Emission limit values may also be laid down for certain groups, families or categories of substances, in particular for those listed in Annex III.
The emission limit values for substances shall normally apply at the point where the emissions leave the installation, any dilution being disregarded when determining them. With regard to indirect releases into water, the effect of a water treatment plant may be taken into account when determining the emission limit values of the installation involved, provided that an equivalent level is guaranteed for the protection of the environment as a whole and provided this does not lead to higher levels of pollution in the environment, without prejudice to Directive 76/464/EEC or the Directives implementing it;
7. 'environmental quality standard' shall mean the set of requirements which must be fulfilled at a given time by a given environment or particular part thereof, as set out in Community legislation;
8. 'competent authority' shall mean the authority or authorities or bodies responsible under the legal provisions of the Member States for carrying out the obligations arising from this Directive;



9. 'permit' shall mean that part or the whole of a written decision (or several such decisions) granting authorization to operate all or part of an installation, subject to certain conditions which guarantee that the installation complies with the requirements of this Directive. A permit may cover one or more installations or parts of installations on the same site operated by the same operator;

10. (a) 'change in operation' shall mean a change in the nature or functioning, or an extension, of the installation which may have consequences for the environment;

(b) 'substantial change' shall mean a change in operation which, in the opinion of the competent authority, may have significant negative effects on human beings or the environment;

11. 'best available techniques' shall mean the most effective and advanced stage in the development of activities and their methods of operation which indicate the practical suitability of particular techniques for providing in principle the basis for emission limit values designed to prevent and, where that is not practicable, generally to reduce emissions and the impact on the environment as a whole:

- 'techniques' shall include both the technology used and the way in which the installation is designed, built, maintained, operated and decommissioned,

- 'available' techniques shall mean those developed on a scale which allows implementation in the relevant industrial sector, under economically and technically viable conditions, taking into consideration the costs and advantages, whether or not the techniques are used or produced inside the Member State in question, as long as they are reasonably accessible to the operator,

- 'best' shall mean most effective in achieving a high general level of protection of the environment as a whole.

In determining the best available techniques, special consideration should be given to the items listed in Annex IV;

12. 'operator' shall mean any natural or legal person who operates or controls the installation or, where this is provided for in national legislation, to whom decisive economic power over the technical functioning of the installation has been delegated.

Article 3 General principles governing the basic obligations of the operator

Member States shall take the necessary measures to provide that the competent authorities ensure that installations are operated in such a way that:

(a) all the appropriate preventive measures are taken against pollution, in particular through application of the best available techniques;

(b) no significant pollution is caused;

(c) waste production is avoided in accordance with Council Directive 75/442/EEC of 15 July 1975 on waste(11); where waste is produced, it is recovered or, where that is technically and economically impossible, it is disposed of while avoiding or reducing any impact on the environment;

(d) energy is used efficiently;

(e) the necessary measures are taken to prevent accidents and limit their consequences;



(f) the necessary measures are taken upon definitive cessation of activities to avoid any pollution risk and return the site of operation to a satisfactory state.

For the purposes of compliance with this Article, it shall be sufficient if Member States ensure that the competent authorities take account of the general principles set out in this Article when they determine the conditions of the permit.

Article 4 Permits for new installations

Member States shall take the necessary measures to ensure that no new installation is operated without a permit issued in accordance with this Directive, without prejudice to the exceptions provided for in Council Directive 88/609/EEC of 24 November 1988 on the limitation of emissions of certain pollutants into the air from large combustion plants (12).

Article 5 Requirements for the granting of permits for existing installations

1. Member States shall take the necessary measures to ensure that the competent authorities see to it, by means of permits in accordance with Articles 6 and 8 or, as appropriate, by reconsidering and, where necessary, by updating the conditions, that existing installations operate in accordance with the requirements of Articles 3, 7, 9, 10, 13, the first and second indents of 14, and 15 (2) not later than eight years after the date on which this Directive is brought into effect, without prejudice to specific Community legislation.

2. Member States shall take the necessary measures to apply the provisions of Articles 1, 2, 11, 12, 14, third indent, 15 (1), (3) and (4), 16, 17 and 18 (2) to existing installations as from the date on which this Directive is brought into effect.

Article 6 Applications for permits

1. Member States shall take the necessary measures to ensure that an application to the competent authority for a permit includes a description of:

- the installation and its activities,
- the raw and auxiliary materials, other substances and the energy used in or generated by the installation,
- the sources of emissions from the installation,
- the conditions of the site of the installation,
- the nature and quantities of foreseeable emissions from the installation into each medium as well as identification of significant effects of the emissions on the environment,
- the proposed technology and other techniques for preventing or, where this not possible, reducing emissions from the installation,
- where necessary, measures for the prevention and recovery of waste generated by the installation,
- further measures planned to comply with the general principles of the basic obligations of the operator as provided for in Article 3,
- measures planned to monitor emissions into the environment.

An application for a permit shall also include a non-technical summary of the details referred to in the above indents.



2. Where information supplied in accordance with the requirements provided for in Directive 85/337/EEC or a safety report prepared in accordance with Council Directive 82/501/EEC of 24 June 1982 on the major-accident hazards of certain industrial activities (13) or other information produced in response to other legislation fulfils any of the requirements of this Article, that information may be included in, or attached to, the application.

Article 7 Integrated approach to issuing permits

Member States shall take the measures necessary to ensure that the conditions of, and procedure for the grant of, the permit are fully coordinated where more than one competent authority is involved, in order to guarantee an effective integrated approach by all authorities competent for this procedure.

Article 8 Decisions

Without prejudice to other requirements laid down in national or Community legislation, the competent authority shall grant a permit containing conditions guaranteeing that the installation complies with the requirements of this Directive or, if it does not, shall refuse to grant the permit. All permits granted and modified permits must include details of the arrangements made for air, water and land protection as referred to in this Directive.

Article 9 Conditions of the permit

1. Member States shall ensure that the permit includes all measures necessary for compliance with the requirements of Articles 3 and 10 for the granting of permits in order to achieve a high level of protection for the environment as a whole by means of protection of the air, water and land.

2. In the case of a new installation or a substantial change where Article 4 of Directive 85/337/EEC applies, any relevant information obtained or conclusion arrived at pursuant to Articles 5, 6 and 7 of that Directive shall be taken into consideration for the purposes of granting the permit.

3. The permit shall include emission limit values for pollutants, in particular, those listed in in Annex III, likely to be emitted from the installation concerned in significant quantities, having regard to their nature and their potential to transfer pollution from one medium to another (water, air and land). If necessary, the permit shall include appropriate requirements ensuring protection of the soil and ground water and measures concerning the management of waste generated by the installation. Where appropriate, limit values may be supplemented or replaced by equivalent parameters or technical measures.

For installations under subheading 6.6 in Annex I, emission limit values laid down in accordance with this paragraph shall take into account practical considerations appropriate to these categories of installation.

4. Without prejudice to Article 10, the emission limit values and the equivalent parameters and technical measures referred to in paragraph 3 shall be based on the best available techniques, without prescribing the use of any technique or specific technology, but taking into account the



technical characteristics of the installation concerned, its geographical location and the local environmental conditions. In all circumstances, the conditions of the permit shall contain provisions on the minimization of long-distance or transboundary pollution and ensure a high level of protection for the environment as a whole.

5. The permit shall contain suitable release monitoring requirements, specifying measurement methodology and frequency, evaluation procedure and an obligation to supply the competent authority with data required for checking compliance with the permit. For installations under subheading 6.6 in Annex I, the measures referred to in this paragraph may take account of costs and benefits.

6. The permit shall contain measures relating to conditions other than normal operating conditions. Thus, where there is a risk that the environment may be affected, appropriate provision shall be made for start-up, leaks malfunctions, momentary stoppages and definitive cessation of operations.

The permit may also contain temporary derogations from the requirements of paragraph 4 if a rehabilitation plan approved by the competent authority ensures that these requirements will be met within six months and if the project leads to a reduction of pollution.

7. The permit may contain such other specific conditions for the purposes of this Directive as the Member State or competent authority may think fit.

8. Without prejudice to the obligation to implement a permit procedure pursuant to this Directive, Member States may prescribe certain requirements for certain categories of installations in general binding rules instead of including them in individual permit conditions, provided that an integrated approach and an equivalent high level of environmental protection as a whole are ensured.

Article 10 Best available techniques and environmental quality standards

Where an environmental quality standard requires stricter conditions than those achievable by the use of the best available techniques, additional measures shall in particular be required in the permit, without prejudice to other measures which might be taken to comply with environmental quality standards.

Article 11 Developments in best available techniques

Member States shall ensure that the competent authority follows or is informed of developments in best available techniques.

Article 12 Changes by operators to installations

1. Member States shall take the necessary measures to ensure that the operator informs the competent authorities of any changes planned in the operation of the installation as referred to in Article 2 (10) (a). Where appropriate, the competent authorities shall update the permit or the conditions.



2. Member States shall take the necessary measures to ensure that no substantial change in the operation of the installation within the meaning of Article 2 (10) (b) planned by the operator is made without a permit issued in accordance with this Directive. The application for a permit and the decision by the competent authority must cover those parts of the installation and those aspects listed in Article 6 that may be affected by the change. The relevant provisions of Articles 3 and 6 to 10 and Article 15 (1), (2) and (4) shall apply *mutatis mutandis*.

Article 13 Reconsideration and updating of permit conditions by the competent authority

1. Member States shall take the necessary measures to ensure that competent authorities periodically reconsider and, where necessary, update permit conditions.

2. The reconsideration shall be undertaken in any event where:

- the pollution caused by the installation is of such significance that the existing emission limit values of the permit need to be revised or new such values need to be included in the permit,
- substantial changes in the best available techniques make it possible to reduce emissions significantly without imposing excessive costs,
- the operational safety of the process or activity requires other techniques to be used,
- new provisions of Community or national legislation so dictate.

Article 14 Compliance with permit conditions

Member States shall take the necessary measures to ensure that:

- the conditions of the permit are complied with by the operator when operating the installation,
- the operator regularly informs the competent authority of the results of the monitoring of releases and without delay of any incident or accident significantly affecting the environment,
- operators of installations afford the representatives of the competent authority all necessary assistance to enable them to carry out any inspections within the installation, to take samples and to gather any information necessary for the performance of their duties for the purposes of this Directive.

Article 15 Access to information and public participation in the permit procedure

1. Without prejudice to Council Directive 90/313/EEC of 7 June 1990 on the freedom of access to information on the environment (14), Member States shall take the necessary measures to ensure that applications for permits for new installations or for substantial changes are made available for an appropriate period of time to the public, to enable it to comment on them before the competent authority reaches its decision.

That decision, including at least a copy of the permit, and any subsequent updates, must be made available to the public.

2. The results of monitoring of releases as required under the permit conditions referred to in Article 9 and held by the competent authority must be made available to the public.

3. An inventory of the principal emissions and sources responsible shall be published every three years by the Commission on the basis of the data supplied by the Member States. The



Commission shall establish the format and particulars needed for the transmission of information in accordance with the procedure laid down in Article 19.

In accordance with the same procedure, the Commission may propose measures to ensure inter-comparability and complementarity between data concerning the inventory of emissions referred to in the first subparagraph and data from other registers and sources of data on emissions.

4. Paragraphs 1, 2 and 3 shall apply subject to the restrictions laid down in Article 3 (2) and (3) of Directive 90/313/EEC.

Article 16 Exchange of information

1. With a view to exchanging information, Member States shall take the necessary measures to send the Commission every three years, and for the first time within 18 months of the date on which this Directive is brought into effect, the available representative data on the limit values laid down by specific category of activities in accordance with Annex I and, if appropriate, the best available techniques from which those values are derived in accordance with, in particular, Article 9. On subsequent occasions the data shall be supplemented in accordance with the procedures laid down in paragraph 3 of this Article.

2. The Commission shall organize an exchange of information between Member States and the industries concerned on best available techniques, associated monitoring, and developments in them. Every three years the Commission shall publish the results of the exchanges of information.

3. Reports on the implementation of this Directive and its effectiveness compared with other Community environmental instruments shall be established in accordance with the procedure laid down in Articles 5 and 6 of Directive 91/692/EEC. The first report shall cover the three years following the date on which this present Directive is brought into effect as referred to in Article 21. The Commission shall submit the report to the Council, accompanied by proposals if necessary.

4. Member States shall establish or designate the authority or authorities which are to be responsible for the exchange of information under paragraphs 1, 2 and 3 and shall inform the Commission accordingly.

Article 17 Transboundary effects

1. Where a Member State is aware that the operation of an installation is likely to have significant negative effects on the environment of another Member State, or where a Member State likely to be significantly affected so requests, the Member State in whose territory the application for a permit pursuant to Article 4 or Article 12 (2) was submitted shall forward the information provided pursuant to Article 6 to the other Member State at the same time as it makes it available to its own nationals. Such information shall serve as a basis for any consultations necessary in the framework of the bilateral relations between the two Member States on a reciprocal and equivalent basis.



2. Within the framework of their bilateral relations, Member States shall see to it that in the cases referred to in paragraph 1 the applications are also made available for an appropriate period of time to the public of the Member State likely to be affected so that it will have the right to comment on them before the competent authority reaches its decision.

Article 18 Community emission limit values

1. Acting on a proposal from the Commission, the Council will set emission limit values, in accordance with the procedures laid down in the Treaty, for:

- the categories of installations listed in Annex I except for the landfills covered by categories 5.1 and 5.4 of that Annex,
- and
- the polluting substances referred to in Annex III,

for which the need for Community action has been identified, on the basis, in particular, of the exchange of information provided for in Article 16.

2. In the absence of Community emission limit values defined pursuant to this Directive, the relevant emission limit values contained in the Directives referred to in Annex II and in other Community legislation shall be applied as minimum emission limit values pursuant to this Directive for the installations listed in Annex I.

Without prejudice to the requirements of this Directive, the technical requirements applicable for the landfills covered by categories 5.1 and 5.4 of Annex I, shall be fixed by the Council, acting on a proposal by the Commission, in accordance with the procedures laid down in the Treaty.

Article 19 Committee procedure referred to in Article 15 (3)

The Commission shall be assisted by a committee composed of the representatives of the Member States and chaired by the representative of the Commission.

The representative of the Commission shall submit to the committee a draft of the measures to be taken. The committee shall deliver its opinion on the draft within a time limit which the chairman may lay down according to the urgency of the matter. The opinion shall be delivered by the majority laid down in Article 148 (2) of the Treaty in the case of decisions which the Council is required to adopt on a proposal from the Commission. The votes of the representatives of the Member States within the committee shall be weighted in the manner set out in that Article. The chairman shall not vote.

The Commission shall adopt the measures envisaged if they are in accordance with the opinion of the committee.

If the measures are not in accordance with the opinion of the committee, or if no opinion is delivered, the Commission shall, without delay, submit to the Council a proposal relating to the measures to be taken. The Council shall act by a qualified majority.

If, on the expiry of a period of three months from the date of referral to the Council, the Council has not acted, the proposed measures shall be adopted by the Commission.

Article 20 Transitional provisions

1. The provisions of Directive 84/360/EEC, the provisions of Articles 3, 5, 6 (3) and 7 (2) of Directive 76/464/EEC and the relevant provisions concerning authorization systems in the



Directives listed in Annex II shall apply, without prejudice to the exceptions provided for in Directive 88/609/EEC, to existing installations in respect of activities listed in Annex I until the measures required pursuant to Article 5 of this Directive have been taken by the competent authorities.

2. The relevant provisions concerning authorization systems in the Directives referred to in paragraph 1 shall not apply to installations which are new in respect of the activities listed in Annex I on the date on which this Directive is brought into effect.

3. Directive 84/360/EEC shall be repealed 11 years after the date of entry into force of this Directive.

As soon as the measures provided for in Article 4, 5 or 12 have been taken in respect of an installation, the exception provided for in Article 6 (3) of Directive 76/464/EEC shall no longer apply to installations covered by this Directive.

Acting on a proposal from the Commission, the Council shall, where necessary, amend the relevant provisions of the Directives referred to in Annex II in order to adapt them to the requirements of this Directive before the date of repeal of Directive 84/360/EEC, referred to in the first subparagraph.

Article 21 Bringing into effect

1. Member States shall adopt the laws, regulations and administrative provisions necessary to comply with this Directive no later than three years after its entry into force. They shall forthwith inform the Commission thereof.

When Member States adopt these measures, they shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such reference shall be laid down by Member States.

2. Member States shall communicate to the Commission the texts of the main provisions of national law which they adopt in the field covered by this Directive.

Article 22

This Directive shall enter into force on the 20th day following its publication.

Article 23

This Directive is addressed to the Member States.

Done at Brussels, 24 September 1996.

For the Council

The President

E. FITZGERALD



Amsterdam International Law Clinic

- (1) OJ No C 311, 17. 11. 1993, p. 6 and OJ No C 165, 1. 7. 1995, p. 9.
- (2) OJ No C 195, 18. 7. 1995, p. 54.
- (3) Opinion of the European Parliament of 14 December 1994 (OJ No C 18, 23. 1. 1995, p. 96), Council common position of 27 November 1995 (OJ No C 87, 25. 3. 1996, p. 8) and Decision of the European Parliament of 22 May 1996 (OJ No C 166, 10. 6. 1996).
- (4) OJ No C 138, 17. 5. 1993, p. 1.
- (5) OJ No L 188, 16. 7. 1984, p. 20. Directive as last amended by Directive 91/692/EEC (OJ No L 377, 31. 12. 1991, p. 48).
- (6) OJ No L 129, 18. 5. 1976, p. 23. Directive as last amended by Directive 91/692/EEC.
- (7) OJ No L 175, 5. 7. 1985, p. 40.
- (8) Council Directive 80/836/Euratom of 15 July 1980 amending the Directives laying down the basic safety standards for the health protection of the general public and workers against the dangers of ionizing radiation (OJ No L 246, 17. 9. 1980, p. 1). Directive as amended by Directive 84/467/EEC (OJ No L 265, 5. 10. 1984, p. 4).
- (9) Council Directive 90/219/EEC of 23 April 1990 on the contained use of genetically modified micro-organisms (OJ No L 117, 8. 5. 90, p. 1). Directive as amended by Commission Directive 94/51/EC (OJ No L 297, 18. 11. 1994, p. 29).
- (10) Council Directive 90/220/EEC of 23 April 1990 on the deliberate release into the environment of genetically modified organisms (OJ No L 117, 8. 5. 1990, p. 15). Directive as amended by Commission Directive 94/15/EC (OJ No L 103, 22. 4. 1994, p. 20).
- (11) OJ No L 194, 25. 7. 1975, p. 39. Directive as last amended by Directive 91/692/EEC (OJ No L 377, 31. 12. 1991, p. 48).
- (12) OJ No L 336, 7. 12. 1988, p. 1. Directive as last amended by Directive 90/656/EEC (OJ No L 353, 17. 12. 1990, p. 59).
- (13) OJ No L 230, 5. 8. 1982, p. 1. Directive as last amended by Directive 91/692/EEC (OJ No L 377, 31. 12. 1991, p. 48).
- (14) OJ No L 158, 23. 6. 1990, p. 56.



ANNEX 9: Directive 93/76 to limit carbon dioxide emissions by improving energy efficiency

COUNCIL DIRECTIVE 93/76/EEC of 13 September 1993 to limit carbon dioxide emissions by improving energy efficiency⁶¹

THE COUNCIL OF THE EUROPEAN COMMUNITIES,

Having regard to the Treaty establishing the European Economic Community, and in particular Articles 130s and 235 thereof,

Having regard to the proposal from the Commission (1),

Having regard to the opinion of the European Parliament (2),

Having regard to the opinion of the Economic and Social Committee (3),

Whereas, by its resolution of 16 September 1986 (4), the Council set new Community energy policy objectives for 1995 and convergence of the policies of the Member States;

Whereas the Council of Environment and Energy Ministers agreed at their meeting on 29 October 1990 that the Community and the Member States, assuming that other leading countries undertook similar commitments, and acknowledging the targets identified by a number of Member States for stabilizing or reducing emissions by different dates, were willing to take actions aimed at reaching stabilization of the total carbon dioxide emissions by the year 2000 at the 1990 level in the Community as a whole; whereas it was also agreed that Member States which start from relatively low levels of energy consumption and therefore low emissions measured on a per capita or other appropriate basis are entitled to have carbon dioxide targets and/or strategies corresponding to their economic and social development, while improving the energy efficiency of their economic activities;

Whereas by Decision 91/565/EEC the Council adopted the SAVE programme aimed at promoting energy efficiency in the Community (5);

Whereas Article 130r of the Treaty stipulates that the objective of action by the Community relating to the environment shall be to ensure a prudent and rational utilization of natural resources; whereas these natural resources include oil products, natural gas and solid fuels, which are essential sources of energy but also the leading sources of carbon dioxide emissions;

⁶¹ Council Directive 93/76/EEC is available at http://eur-lex.europa.eu/smartapi/cgi/sga_doc?smartapi!celexapi!prod!CELEXnumdoc&lg=en&numdoc=31993L0076&model=guichett (last visited March 30, 2007).



Whereas, since the Treaty has not provided elsewhere the powers required to legislate on energy-related aspects of the programmes laid down in this Directive, recourse should be had also to Article 235 of the Treaty;

Whereas the residential and tertiary sectors account for nearly 40 % of final energy consumption in the Community and are expanding, a trend which is bound to increase their energy consumption and hence also their carbon dioxide emissions;

Whereas this Directive aims to preserve the quality of the environment and to ensure a prudent and rational utilization of natural resources, which are matters of non-exclusive Community competence;

Whereas a collective effort by all Member States, implying measures at Community level, is necessary in order to limit carbon dioxide emissions and to promote the rational use of energy;

Whereas the measures are to be determined according to the principle of subsidiarity by Member States on the basis of potential improvements in energy efficiency, cost effectiveness, technical feasibility and environmental impact;

Whereas, by providing objective information on the energy characteristics of buildings, energy certification will help to improve transparency of the property market and to encourage investment in energy savings;

Whereas the billing, to occupiers of buildings, of heating, air-conditioning and hot water costs calculated, in an appropriate proportion, on the basis of actual consumption will contribute towards energy saving in the residential sector; whereas it is desirable that occupants of such buildings should be enabled to regulate their own consumption of heat, cold and hot water; whereas the recommendations and resolutions adopted by the Council on the billing of heating and hot water costs (6) have been applied in only two Member States; whereas a significant proportion of heating, air-conditioning and hot water costs are still being billed on the basis of factors other than energy consumption;

Whereas new methods of financial support are needed to promote investments in energy saving in the public sector; whereas, with that in mind, the Member States should permit and make full use of the possibilities offered by third-party financing;

Whereas buildings will have an impact on long-term energy consumption; whereas new buildings should therefore be fitted with efficient thermal insulation tailored to the local climate; whereas this applies also to public authority buildings where the public authorities should set an example in taking environmental and energy considerations into account;

Whereas regular maintenance of boilers contributes to maintaining their correct adjustment in accordance with the product specification and in that way to an optimal performance from an environmental and energy point of view;



Whereas industry is generally willing to make more efficient use of energy to meet its own economic objectives; whereas energy audits in particular in undertakings with high energy consumption should be promoted to bring about significant improvements in energy efficiency in this sector;

Whereas improving energy efficiency in all regions of the Community will strengthen economic and social cohesion in the Community, as provided for in Article 130a of the Treaty,

HAS ADOPTED THIS DIRECTIVE:

Article 1

The purpose of this Directive is the attainment by Member States of the objective of limiting carbon dioxide emissions by improving energy efficiency, notably by means of drawing up and implementing programmes in the following fields:

- energy certification of buildings,
- the billing of heating, air-conditioning and hot water costs on the basis of actual consumption,
- third-party financing for energy efficiency investments in the public sector,
- thermal insulation of new buildings,
- regular inspection of boilers,
- energy audits of undertakings with high energy consumption.

Programmes can include laws, regulations, economic and administrative instruments, information, education and voluntary agreements whose impact can be objectively assessed.

Article 2

Member States shall draw up and implement programmes on the energy certification of buildings. Energy certification of buildings, which shall consist of a description of their energy characteristics, must provide information for prospective users concerning a building's energy efficiency.

Whereas appropriate, certification may also include options for the improvement of these energy characteristics.

Article 3

Member States shall draw up and implement programmes on the billing of heating, air-conditioning and hot water costs calculated, in an appropriate proportion, on the basis of actual consumption. These programmes shall enable the cost of these services to be apportioned among the users of all or part of a building on the basis of the specific quantities of heat, of cold and of hot water consumed by each occupier. This shall apply to buildings or parts of buildings supplied by a collective heating, air-conditioning or domestic hot water installation. Occupants of such buildings should be enabled to regulate their own consumption of heat, cold or hot water.

Article 4

Member States shall draw up and implement programmes to permit third-party financing for energy efficiency investments in the public sector.



For the purposes of this Directive, 'third-party financing' means the overall provision of auditing, installation, operation, maintenance and financing services for an energy efficiency investment, with recovery of the cost of these services being contingent, either wholly or in part, on the level of energy savings.

Article 5

Member States shall draw up and implement programmes so that new buildings receive effective thermal insulation, taking a long-term view, on the basis of standards laid down by the Member States, taking account of climatic conditions or climatic areas and the intended use of the building.

Article 6

Member States shall draw up and implement programmes on the regular inspection of heating installations of an effective rated output of more than 15 Kw with the aim of improving operating conditions from the point of view of energy consumption and of limiting carbon dioxide emissions.

Article 7

Member States shall draw up and implement programmes with the aim of promoting the regular completion of energy audits of industrial undertakings with high energy consumption to improve their energy efficiency and limit emissions of carbon dioxide, and may make similar provisions for other undertakings with high energy consumption.

Article 8

Member States shall determine the scope of the programmes referred to in Articles 1 to 7 on the basis of potential improvements in energy efficiency, cost-effectiveness, technical feasibility and environmental impact.

Article 9

Member States shall report to the Commission every two years on the results of the measures taken to implement the programmes provided for in this Directive. In so doing, they shall inform the Commission of the choices they have made in their package of measures. In addition, they shall, on request, provide the Commission with justification for the content of the programmes, taking Article 8 into account.

In considering Member States' reports, the Commission shall be assisted by the advisory committee referred to in Decision 91/565/EEC following the procedure referred to in Article 6 of that Decision.

Article 10

1. Member States shall bring into force the laws, regulations and/or other measures as mentioned in Article 1 as necessary to comply with this Directive as soon as possible and not later than 31 December 1994. Member States are required to make all the necessary provisions to enable them to fulfil the objectives of this Directive.



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When Member States adopt laws or regulations for this purpose, such laws or regulations shall contain a reference to this Directive or shall be accompanied by such reference on the occasion of their official publication. The methods of making such a reference shall be laid down by the Member States. This shall apply by analogy where the programmes are transposed in another form.

2. Member States shall communicate to the Commission the provisions of national law and/or other measures as mentioned in Article 1 which they adopt in the field covered by this Directive.

Article 11

This Directive is addressed to the Member States.

Done at Brussels, 13 September 1993.

For the Council

The President

Ph. MAYSTADT

(1) OJ No C 179, 16. 7. 1992, p. 8.

(2) OJ No C 176, 28. 6. 1993.

(3) OJ No C 19, 25. 1. 1993, p. 134.

(4) OJ No C 241, 25. 9. 1986, p. 1.

(5) OJ No L 307, 8. 11. 1991, p. 34.

(6) Recommendation 76/493/EEC (OJ No L 140, 28. 5. 1976, p. 12). Recommendation 77/712/EEC (OJ No L 295, 18. 11. 1977, p. 1). Resolution of 9. 6. 1980 (OJ No C 149, 18. 6. 1980, p. 3). Resolution of 15. 1. 1985 (OJ No C 20, 22. 1. 1985, p. 1).



ANNEX 10: Directive 2001/77 on the promotion of electricity produced from renewable energy sources in the internal electricity market

DIRECTIVE 2001/77/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 September 2001 on the promotion of electricity produced from renewable energy sources in the internal electricity market⁶²

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175(1) thereof,

Having regard to the proposal from the Commission⁶³,

Having regard to the opinion of the Economic and Social Committee⁶⁴,

Having regard to the opinion of the Committee of the Regions⁶⁵,

Acting in accordance with the procedure laid down in Article 251 of the Treaty⁶⁶,

Whereas:

(1) The potential for the exploitation of renewable energy sources is underused in the Community at present. The Community recognises the need to promote renewable energy sources as a priority measure given that their exploitation contributes to environmental protection and sustainable development. In addition this can also create local employment, have a positive impact on social cohesion, contribute to security of supply and make it possible to meet Kyoto targets more quickly. It is therefore necessary to ensure that this potential is better exploited within the framework of the internal electricity market.

(2) The promotion of electricity produced from renewable energy sources is a high Community priority as outlined in the White Paper on Renewable Energy Sources (hereinafter referred to as 'the White Paper') for reasons of security and diversification of energy supply, of environmental

⁶² Directive 2001/77/EC is available at <http://europa.eu.int/lex/pri/en/oj/dat/2001/l_283/l_28320011027en00330040.pdf> (last visited March 27, 2007).

⁶³ OJ C 311 E, 31.10.2000, p. 320 and OJ C 154 E, 29.5.2001, p. 89.

⁶⁴ OJ C 367, 20.12.2000, p. 5.

⁶⁵ OJ C 22, 24.1.2001, p. 27.

⁶⁶ Opinion of the European Parliament of 16 November 2000 (OJ C223, 8.8.2001, p. 294), Council Common Position of 23 March 2001 (OJ C 142, 15.5.2001, p. 5) and Decision of the European Parliament of 4 July 2001 (not yet published in the Official Journal). Council Decision of 7 September 2001.



protection and of social and economic cohesion. That was endorsed by the Council in its resolution of 8 June 1998 on renewable sources of energy⁶⁷, and by the European Parliament in its resolution on the White Paper⁶⁸.

(3) The increased use of electricity produced from renewable energy sources constitutes an important part of the package of measures needed to comply with the Kyoto Protocol to the United Nations Framework Convention on Climate Change, and of any policy package to meet further commitments.

(4) The Council in its conclusions of 11 May 1999 and the European Parliament in its resolution of 17 June 1998 on electricity from renewable energy sources⁶⁹ have invited the Commission to submit a concrete proposal for a Community framework on access for electricity produced from renewable energy sources to the internal market. Furthermore, the European Parliament in its resolution of 30 March 2000 on electricity from renewable energy sources and the internal electricity market⁷⁰ underlined that binding and ambitious renewable energy targets at the national level are essential for obtaining results and achieving the Community targets.

(5) To ensure increased market penetration of electricity produced from renewable energy sources in the medium term, all Member States should be required to set national indicative targets for the consumption of electricity produced from renewable sources.

(6) These national indicative targets should be consistent with any national commitment made as part of the climate change commitments accepted by the Community under the Kyoto Protocol.

(7) The Commission should assess to what extent Member States have made progress towards achieving their national indicative targets, and to what extent the national indicative targets are consistent with the global indicative target of 12 % of gross domestic energy consumption by 2010, considering that the White Paper's indicative target of 12 % for the Community as a whole by 2010 provides useful guidance for increased efforts at Community level as well as in Member States, bearing in mind the need to reflect differing national circumstances. If necessary for the achievement of the targets, the Commission should submit proposals to the European Parliament and the Council which may include mandatory targets.

(8) Where they use waste as an energy source, Member States must comply with current Community legislation on waste management. The application of this Directive is without prejudice to the definitions set out in Annex 2a and 2b to Council Directive 75/442/EEC of 15 July 1975 on waste⁷¹. Support for renewable energy sources should be consistent with other

⁶⁷ OJ C 198, 24.6.1998, p. 1.

⁶⁸ OJ C 210, 6.7.1998, p. 215.

⁶⁹ OJ C 210, 6.7.1998, p. 143.

⁷⁰ OJ C 378, 29.12.2000, p. 89.

⁷¹ OJ L 194, 25.7.1975, p. 39. Directive as last amended by Commission Decision 96/350/EC (OJ L 135, 6.6.1996,



Community objectives, in particular respect for the waste treatment hierarchy. Therefore, the incineration of non-separated municipal waste should not be promoted under a future support system for renewable energy sources, if such promotion were to undermine the hierarchy.

(9) The definition of biomass used in this Directive does not prejudice the use of a different definition in national legislation, for purposes other than those set out in this Directive.

(10) This Directive does not require Member States to recognize the purchase of a guarantee of origin from other Member States or the corresponding purchase of electricity as a contribution to the fulfilment of a national quota obligation. However, to facilitate trade in electricity produced from renewable energy sources and to increase transparency for the consumer's choice between electricity produced from non-renewable and electricity produced from renewable energy sources, the guarantee of origin of such electricity is necessary. Schemes for the guarantee of origin do not by themselves imply a right to benefit from national support mechanisms established in different Member States. It is important that all forms of electricity produced from renewable energy sources are covered by such guarantees of origin.

(11) It is important to distinguish guarantees of origin clearly from exchangeable green certificates.

(12) The need for public support in favour of renewable energy sources is recognised in the Community guidelines for State aid for environmental protection⁷², which, amongst other options, take account of the need to internalise external costs of electricity generation. However, the rules of the Treaty, and in particular Articles 87 and 88 thereof, will continue to apply to such public support.

(13) A legislative framework for the market in renewable energy sources needs to be established.

(14) Member States operate different mechanisms of support for renewable energy sources at the national level, including green certificates, investment aid, tax exemptions or reductions, tax refunds and direct price support schemes. One important means to achieve the aim of this Directive is to guarantee the proper functioning of these mechanisms, until a Community framework is put into operation, in order to maintain investor confidence.

(15) It is too early to decide on a Community-wide framework regarding support schemes, in view of the limited experience with national schemes and the current relatively low share of price supported electricity produced from renewable energy sources in the Community.

p. 32).
⁷² OJ C 37, 3.2.2001, p. 3.



(16) It is, however necessary to adapt, after a sufficient transitional period, support schemes to the developing internal electricity market. It is therefore appropriate that the Commission monitor the situation and present a report on experience gained with the application of national schemes. If necessary, the Commission should, in the light of the conclusions of this report, make a proposal for a Community framework with regard to support schemes for electricity produced from renewable energy sources. That proposal should contribute to the achievement of the national indicative targets, be compatible with the principles of the internal electricity market and take into account the characteristics of the different sources of renewable energy, together with the different technologies and geographical differences. It should also promote the use of renewable energy sources in an effective way, and be simple and at the same time as efficient as possible, particularly in terms of cost, and include sufficient transitional periods of at least seven years, maintain investors' confidence and avoid stranded costs. This framework would enable electricity from renewable energy sources to compete with electricity produced from non-renewable energy sources and limit the cost to the consumer, while, in the medium term, reduce the need for public support.

(17) Increased market penetration of electricity produced from renewable energy sources will allow for economies of scale, thereby reducing costs.

(18) It is important to utilise the strength of the market forces and the internal market and make electricity produced from renewable energy sources competitive and attractive to European citizens.

(19) When favouring the development of a market for renewable energy sources, it is necessary to take into account the positive impact on regional and local development opportunities, export prospects, social cohesion and employment opportunities, especially as concerns small and medium-sized undertakings as well as independent power producers.

(20) The specific structure of the renewable energy sources sector should be taken into account, especially when reviewing the administrative procedures for obtaining permission to construct plants producing electricity from renewable energy sources.

(21) In certain circumstances it is not possible to ensure fully transmission and distribution of electricity produced from renewable energy sources without affecting the reliability and safety of the grid system and guarantees in this context may therefore include financial compensation.

(22) The costs of connecting new producers of electricity from renewable energy sources should be objective, transparent and non-discriminatory and due account should be taken of the benefit embedded generators

(23) Since the general objectives of the proposed action cannot be sufficiently achieved by the Member States and can therefore, by reason of the scale or effects of the action, be better achieved at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. Their detailed implementation



should, however, be left to the Member States, thus allowing each Member State to choose the regime which corresponds best to its particular situation. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve those objectives,

HAVE ADOPTED THIS DIRECTIVE:

Article 1 Purpose

The purpose of this Directive is to promote an increase in the contribution of renewable energy sources to electricity production in the internal market for electricity and to create a basis for a future Community framework thereof.

Article 2 Definitions

For the purposes of this Directive, the following definitions shall apply:

- (a) '*renewable energy sources*' shall mean renewable non-fossil energy sources (wind, solar, geothermal, wave, tidal, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases);
- (b) '*biomass*' shall mean the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste;
- (c) '*electricity produced from renewable energy sources*' shall mean electricity produced by plants using only renewable energy sources, as well as the proportion of electricity produced from renewable energy sources in hybrid plants also using conventional energy sources and including renewable electricity used for filling storage systems, and excluding electricity produced as a result of storage systems;
- (d) '*consumption of electricity*' shall mean national electricity production, including autoproduction, plus imports, minus exports (gross national electricity consumption). In addition, the definitions in Directive 96/92/EC of the European Parliament and of the Council of 19 December 1996 concerning common rules for the internal market of electricity⁷³ shall apply.

Article 3 National indicative targets

1. Member States shall take appropriate steps to encourage greater consumption of electricity produced from renewable energy sources in conformity with the national indicative targets referred to in paragraph 2. These steps must be in proportion to the objective to be attained.

2. Not later than 27 October 2002 and every five years thereafter, Member States shall adopt and publish a report setting national indicative targets for future consumption of electricity produced from renewable energy sources in terms of a percentage of electricity consumption for the next 10 years. The report shall also outline the measures taken or planned, at national level, to achieve these national indicative targets. To set these targets until the year 2010, the Member States shall:

⁷³ OJ L 27, 30.1.1997, p. 20.



— take account of the reference values in the Annex,
— ensure that the targets are compatible with any national commitments accepted in the context of the climate change commitments accepted by the Community pursuant to the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

3. Member States shall publish, for the first time not later than 27 October 2003 and thereafter every two years, a report which includes an analysis of success in meeting the national indicative targets taking account, in particular, of climatic factors likely to affect the achievement of those targets and which indicates to what extent the measures taken are consistent with the national climate change commitment.

4. On the basis of the Member States' reports referred to in paragraphs 2 and 3, the Commission shall assess to what extent:

— Member States have made progress towards achieving their national indicative targets,
— the national indicative targets are consistent with the global indicative target of 12 % of gross national energy consumption by 2010 and in particular with the 22,1 % indicative share of electricity produced from renewable energy sources in total Community electricity consumption by 2010. The Commission shall publish its conclusions in a report, for the first time not later than 27 October 2004 and thereafter every two years. This report shall be accompanied, as appropriate, by proposals to the European Parliament and to the Council. If the report referred to in the second subparagraph concludes that the national indicative targets are likely to be inconsistent, for reasons that are unjustified and/or do not relate to new scientific evidence, with the global indicative target, these proposals shall address national targets, including possible mandatory targets, in the appropriate form.

Article 4 Support schemes

1. Without prejudice to Articles 87 and 88 of the Treaty, the Commission shall evaluate the application of mechanisms used in Member States according to which a producer of electricity, on the basis of regulations issued by the public authorities, receives direct or indirect support, and which could have the effect of restricting trade, on the basis that these contribute to the objectives set out in Articles 6 and 174 of the Treaty.

2. The Commission shall, not later than 27 October 2005, present a well-documented report on experience gained with the application and coexistence of the different mechanisms referred to in paragraph 1. The report shall assess the success, including cost-effectiveness, of the support systems referred to in paragraph 1 in promoting the consumption of electricity produced from renewable energy sources in conformity with the national indicative targets referred to in Article 3(2). This report shall, if necessary, be accompanied by a proposal for a Community framework with regard to support schemes for electricity produced from renewable energy sources. Any proposal for a framework should:

- (a) contribute to the achievement of the national indicative targets;
- (b) be compatible with the principles of the internal electricity market;
- (c) take into account the characteristics of different sources of renewable energy, together with the different technologies, and geographical differences;



- (d) promote the use of renewable energy sources in an effective way, and be simple and, at the same time, as efficient as possible, particularly in terms of cost;
- (e) include sufficient transitional periods for national support systems of at least seven years and maintain investor confidence.

Article 5 Guarantee of origin of electricity produced from renewable energy sources

1. Member States shall, not later than 27 October 2003, ensure that the origin of electricity produced from renewable energy sources can be guaranteed as such within the meaning of this Directive according to objective, transparent and nondiscriminatory criteria laid down by each Member State. They shall ensure that a guarantee of origin is issued to this effect in response to a request.
2. Member States may designate one or more competent bodies, independent of generation and distribution activities, to supervise the issue of such guarantees of origin.
3. A guarantee of origin shall:
 - specify the energy source from which the electricity was produced, specifying the dates and places of production, and in the case of hydroelectric installations, indicate the capacity;
 - serve to enable producers of electricity from renewable energy sources to demonstrate that the electricity they sell is produced from renewable energy sources within the meaning of this Directive.
4. Such guarantees of origin, issued according to paragraph 2, should be mutually recognised by the Member States, exclusively as proof of the elements referred to in paragraph 3. Any refusal to recognise a guarantee of origin as such proof, in particular for reasons relating to the prevention of fraud, must be based on objective, transparent and non-discriminatory criteria. In the event of refusal to recognise a guarantee of origin, the Commission may compel the refusing party to recognise it, particularly with regard to objective, transparent and non-discriminatory criteria on which such recognition is based.
5. Member States or the competent bodies shall put in place appropriate mechanisms to ensure that guarantees of origin are both accurate and reliable and they shall outline in the report referred to in Article 3(3) the measures taken to ensure the reliability of the guarantee system.
6. After having consulted the Member States, the Commission shall, in the report referred to in Article 8, consider the form and methods that Member States could follow in order to guarantee the origin of electricity produced from renewable energy sources. If necessary, the Commission shall propose to the European Parliament and the Council the adoption of common rules in this respect.

Article 6 Administrative procedures

1. Member States or the competent bodies appointed by the Member States shall evaluate the existing legislative and regulatory framework with regard to authorisation procedures or the



other procedures laid down in Article 4 of Directive 96/92/EC, which are applicable to production plants for electricity produced from renewable energy sources, with a view to:

- reducing the regulatory and non-regulatory barriers to the increase in electricity production from renewable energy sources,
- streamlining and expediting procedures at the appropriate administrative level, and
- ensuring that the rules are objective, transparent and nondiscriminatory, and take fully into account the particularities of the various renewable energy source technologies.

2. Member States shall publish, not later than 27 October 2003, a report on the evaluation referred to in paragraph 1, indicating, where appropriate, the actions taken. The purpose of this report is to provide, where this is appropriate in the context of national legislation, an indication of the stage reached specifically in:

- coordination between the different administrative bodies as regards deadlines, reception and treatment of applications for authorisations,
- drawing up possible guidelines for the activities referred to in paragraph 1, and the feasibility of a fast-track planning procedure for producers of electricity from renewable energy sources, and
- the designation of authorities to act as mediators in disputes between authorities responsible for issuing authorizations and applicants for authorisations.

3. The Commission shall, in the report referred to in Article 8 and on the basis of the Member States' reports referred to in paragraph 2 of this Article, assess best practices with a view to achieving the objectives referred to in paragraph 1.

Article 7 Grid system issues

1. Without prejudice to the maintenance of the reliability and safety of the grid, Member States shall take the necessary measures to ensure that transmission system operators and distribution system operators in their territory guarantee the transmission and distribution of electricity produced from renewable energy sources. They may also provide for priority access to the grid system of electricity produced from renewable energy sources. When dispatching generating installations, transmission system operators shall give priority to generating installations using renewable energy sources insofar as the operation of the national electricity system permits.

2. Member States shall put into place a legal framework or require transmission system operators and distribution system operators to set up and publish their standard rules relating to the bearing of costs of technical adaptations, such as grid connections and grid reinforcements, which are necessary in order to integrate new producers feeding electricity produced from renewable energy sources into the interconnected grid. These rules shall be based on objective, transparent and nondiscriminatory criteria taking particular account of all the costs and benefits associated with the connection of these producers to the grid. The rules may provide for different types of connection.

3. Where appropriate, Member States may require transmission system operators and distribution system operators to bear, in full or in part, the costs referred to in paragraph 2.



4. Transmission system operators and distribution system operators shall be required to provide any new producer wishing to be connected with a comprehensive and detailed estimate of the costs associated with the connection. Member States may allow producers of electricity from renewable energy sources wishing to be connected to the grid to issue a call for tender for the connection work.

5. Member States shall put into place a legal framework or require transmission system operators and distribution system operators to set up and publish their standard rules relating to the sharing of costs of system installations, such as grid connections and reinforcements, between all producers benefiting from them. The sharing shall be enforced by a mechanism based on objective, transparent and non-discriminatory criteria taking into account the benefits which initially and subsequently connected producers as well as transmission system operators and distribution system operators derive from the connections.

6. Member States shall ensure that the charging of transmission and distribution fees does not discriminate against electricity from renewable energy sources, including in particular electricity from renewable energy sources produced in peripheral regions, such as island regions and regions of low population density. Where appropriate, Member States shall put in place a legal framework or require transmission system operators and distribution system operators to ensure that fees charged for the transmission and distribution of electricity from plants using renewable energy sources reflect realisable cost benefits resulting from the plant's connection to the network. Such cost benefits could arise from the direct use of the low-voltage grid.

7. Member States shall, in the report referred to in Article 6(2), also consider the measures to be taken to facilitate access to the grid system of electricity produced from renewable energy sources. That report shall examine, *inter alia*, the feasibility of introducing two-way metering.

Article 8 Summary report

On the basis of the reports by Member States pursuant to Article 3(3) and Article 6(2), the Commission shall present to the European Parliament and the Council, no later than 31 December 2005 and thereafter every five years, a summary report on the implementation of this Directive.

This report shall:

- consider the progress made in reflecting the external costs of electricity produced from non-renewable energy sources and the impact of public support granted to electricity production,
- take into account the possibility for Member States to meet the national indicative targets established in Article 3(2), the global indicative target referred to in Article 3(4) and the existence of discrimination between different energy sources. If appropriate, the Commission shall submit with the report further proposals to the European Parliament and the Council.

Article 9 Transposition

Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive not later than 27 October 2003. They shall forthwith inform the Commission thereof. When Member States adopt these measures, they shall contain a



reference to this Directive or shall be accompanied by such a reference on the occasion of their official publication. The methods of making such reference shall be laid down by the Member States.

Article 10 Entry into force

This Directive shall enter into force on the day of its publication in the *Official Journal of the European Communities*.

Article 11 Addressees

This Directive is addressed to the Member States.

Done at Brussels, 27 September 2001.

For the European Parliament, The President, N. FONTAINE

For the Council, The President, C. PICQUÉ

ANNEX

Reference values for Member States' national indicative targets for the contribution of electricity produced from renewable energy sources to gross electricity consumption by 2010 (*)

This Annex gives reference values for the fixing of national indicative targets for electricity produced from renewable energy sources ('RES-E'), as referred to in Article 3(2):

	RES-E TWh 1997 (**)	RES-E % 1997 (***)	RES-E % 2010 (***)
Belgium	0,86	1,1	6,0
Denmark	3,21	8,7	29,0
Germany	24,91	4,5	12,5
Greece	3,94	8,6	20,1
Spain	37,15	19,9	29,4
France	66,00	15,0	21,0
Ireland	0,84	3,6	13,2
Italy	46,46	16,0	25,0 (1)
Luxembourg	0,14	2,1	5,7 (2)
Netherlands	3,45	3,5	9,0
Austria	39,05	70,0	78,1 (3)
Portugal	1 14,30	38,5	39,0 (4)
Finland	19,03	24,7	31,5 (5)
Sweden	72,03	49,1	60,0 (6)
United Kingdom	7,04	1,7	10,0
Community	338,41	13,9 %	22 % (****)

(*) In taking into account the reference values set out in this Annex, Member States make the necessary assumption that the State aid guidelines for environmental protection allow for the existence of national support schemes for the promotion of electricity produced from renewable energy sources.



(**) Data refer to the national production of RES-E in 1997.

(***) The percentage contributions of RES-E in 1997 and 2010 are based on the national production of RES-E divided by the gross national electricity consumption. In the case of internal trade of RES-E (with recognised certification or origin registered) the calculation of these percentages will influence 2010 figures by Member State but not the Community total.

(****) Rounded figure resulting from the reference values above.

(1) *Italy* states that 22 % would be a realistic figure, on the assumption that in 2010 gross national electricity consumption will be 340 TWh. When taking into account the reference values set out in this Annex, Italy has assumed that gross national electricity production from renewable energy sources will attain up to 76 TWh in 2010. This figure includes the contribution of the non-biodegradable fraction of municipal and industrial waste used in compliance with Community legislation on waste management. In this respect, the capability to reach the indicative target as referred to in this Annex, is contingent, *inter alia*, upon the effective level of the national demand for electric energy in 2010.

(2) Taking into account the indicative reference values set out in this Annex, *Luxembourg* takes the view that the objective set for 2010 can be achieved only if:

- total electricity consumption in 2010 does not exceed that of 1997,
- wind-generated electricity can be multiplied by a factor of 15,
- biogas-generated electricity can be multiplied by a factor of 208,
- electricity produced from the only municipal waste incinerator in Luxembourg, which in 1997 accounted for half the electricity produced from renewable energy sources, can be taken into account in its entirety,
- photovoltaically generated electricity can be raised to 80 GWh, and in so far as the above points can be achieved from the technical standpoint in the time allowed. In the absence of natural resources, an additional increase in electricity generated by hydroelectric power stations is ruled out.

(3) *Austria* states that 78,1 % would be a realistic figure, on the assumption that in 2010 gross national electricity consumption will be 56,1 TWh. Due to the fact that the production of electricity from renewable sources is highly dependent on hydropower and therefore on the annual rainfall, the figures for 1997 and 2010 should be calculated on a long-range model based on hydrologic and climatic conditions.

(4) *Portugal*, when taking into account the reference values, set out in this Annex, states that to maintain the 1997 share of electricity produced from renewable sources as an indicative target for 2010 it was assumed that:

- it will be possible to continue the national electricity plan building new hydro capacity higher than 10 MW,
- other renewable capacity, only possible with financial state aid, will increase at an annual rate eight times higher than has occurred recently. These assumptions imply that new capacity for producing electricity from renewable sources, excluding large hydro, will increase at a rate twice as high as the rate of increase of gross national electricity consumption.



(5) In the *Finnish* action plan for renewable energy sources, objectives are set for the volume of renewable energy sources used in 2010. These objectives have been set on the basis of extensive background studies. The action plan was approved within the Government in October 1999. According to the Finnish action plan, the share of electricity produced from renewable energy sources by 2010 would be 31 %. This indicative target is very ambitious and its realisation would require extensive promotion measures in Finland.

(6) When taking into account the reference values set out in this Annex, *Sweden* notes that the possibility of reaching the target is highly dependent upon climatic factors heavily affecting the level of hydropower production, in particular variations in pluviometry, timing of rainfall during the year and inflow. The electricity produced from hydropower can vary substantially. During extremely dry years production may amount to 51 TWh, whereas in wet years it could amount to 78 TWh. The figure for 1997 should thus be calculated with a long-range model based on scientific facts on hydrology and climatic change. It is a generally applied method in countries with important shares of hydropower production to use water inflow statistics covering a time span of 30 to 60 years. Thus, according to the Swedish methodology and based on conditions during the period 1950-1999, correcting for differences in total hydropower production capacity and inflow over the years, average hydropower production amounts to 64 TWh which corresponds to a figure for 1997 of 46 %, and in this context Sweden considers 52 % to be a more realistic figure for 2010. Furthermore, the ability of Sweden to achieve the target is limited by the fact that the remaining unexploited rivers are protected by law. Moreover, the ability of Sweden to reach the target is heavily contingent upon:

- the expansion of combined heat and power (CHP) depending on population density, demand for heat and technology development, in particular for black liquor gasification, and
- authorisation for wind power plants in accordance with national laws, public acceptance, technology development and expansion of grids.



ANNEX 11: Directive 2003/30 on the promotion of the use of bio-fuels or other renewable fuels

DIRECTIVE 2003/30/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 8 May 2003 on the promotion of the use of biofuels or other renewable fuels for transport⁷⁴

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175(1) thereof, Having regard to the proposal from the Commission (1), Having regard to the opinion of the European Economic and Social Committee (2), Having regard to the opinion of the Committee of the Regions (3), Acting in accordance with the procedure laid down in Article 251 of the Treaty (4),

Whereas:

(1) The European Council meeting at Gothenburg on 15 and 16 June 2001 agreed on a Community strategy for sustainable development consisting in a set of measures, which include the development of biofuels.

(2) Natural resources, and their prudent and rational utilisation as referred to in Article 174(1) of the Treaty, include oil, natural gas and solid fuels, which are essential sources of energy but also the leading sources of carbon dioxide emissions.

(3) However, there is a wide range of biomass that could be used to produce biofuels, deriving from agricultural and forestry products, as well as from residues and waste from forestry and the forestry and agrifoodstuffs industry.

(4) The transport sector accounts for more than 30 % of final energy consumption in the Community and is expanding, a trend which is bound to increase, along with carbon dioxide emissions and this expansion will be greater in percentage terms in the candidate countries following their accession to the European Union.

(5) The Commission White Paper 'European transport policy for 2010: time to decide' expects CO₂ emissions from transport to rise by 50 % between 1990 and 2010, to around 1 113 million tonnes, the main responsibility resting with road transport, which accounts for 84 % of transport-related CO₂ emissions. From an ecological point of view, the White Paper therefore calls for dependence on oil (currently 98 %) in the transport sector to be reduced by using alternative fuels such as biofuels.

⁷⁴ Directive 2003/30/EC is available at http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_123/l_12320030517en00420046.pdf (last visited March 30, 2007).



(6) Greater use of biofuels for transport forms a part of the package of measures needed to comply with the Kyoto Protocol, and of any policy package to meet further commitments in this respect.

(7) Increased use of biofuels for transport, without ruling out other possible alternative fuels, including automotive LPG and CNG, is one of the tools by which the Community can reduce its dependence on imported energy and influence the fuel market for transport and hence the security of energy supply in the medium and long term. However, this consideration should not detract in any way from the importance of compliance with Community legislation on fuel quality, vehicle emissions and air quality.

(8) As a result of technological advances, most vehicles currently in circulation in the European Union are capable of using a low biofuel blend without any problem. The most recent technological developments make it possible to use higher percentages of biofuel in the blend. Some countries are already using biofuel blends of 10 % and higher.

(9) Captive fleets offer the potential of using a higher concentration of biofuels. In some cities captive fleets are already operating on pure biofuels and, in some cases, this has helped to improve air quality in urban areas. Member States could therefore further promote the use of biofuels in public transport modes.

(10) Promoting the use of biofuels in transport constitutes a step towards a wider application of biomass which will enable biofuel to be more extensively developed in the future, whilst not excluding other options and, in particular, the hydrogen option.

(11) The research policy pursued by the Member States relating to increased use of biofuels should incorporate the hydrogen sector to a significant degree and promote this option, taking into account the relevant Community framework programmes.

(12) Pure vegetable oil from oil plants produced through pressing, extraction or comparable procedures, crude or refined but chemically unmodified, can also be used as biofuel in specific cases where its use is compatible with the type of engines involved and the corresponding emission requirements.

(13) New types of fuel should conform to recognised technical standards if they are to be accepted to a greater extent by customers and vehicle manufacturers and hence penetrate the market. Technical standards also form the basis for requirements concerning emissions and the monitoring of emissions. Difficulties may be encountered in ensuring that new types of fuel meet current technical standards, which, to a large extent, have been developed for conventional fossil fuels. The Commission and standardisation bodies should monitor developments and adapt and develop actively standards, particularly volatility aspects, so that new types of fuel can be introduced, whilst maintaining environmental performance requirements.



(14) Bioethanol and biodiesel, when used for vehicles in pure form or as a blend, should comply with the quality standards laid down to ensure optimum engine performance. It is noted that in the case of biodiesel for diesel engines, where the processing option is esterification, the standard prEN 14214 of the European Committee for Standardisation (CEN) on fatty acid methyl esters (FAME) could be applied. Accordingly, the CEN should establish appropriate standards for other transport biofuel products in the European Union.

(15) Promoting the use of biofuels in keeping with sustainable farming and forestry practices laid down in the rules governing the common agricultural policy could create new opportunities for sustainable rural development in a more market-orientated common agriculture policy geared more to the European market and to respect for flourishing country life and multifunctional agriculture, and could open a new market for innovative agricultural products with regard to present and future Member States.

(16) In its resolution of 8 June 1998 (1), the Council endorsed the Commission's strategy and action plan for renewable energy sources and requested specific measures in the biofuels sector.

(17) The Commission Green Paper 'Towards a European strategy for the security of energy supply' sets the objective of 20 % substitution of conventional fuels by alternative fuels in the road transport sector by the year 2020.

(18) Alternative fuels will only be able to achieve market penetration if they are widely available and competitive.

(19) In its resolution of 18 June 1998 (2), the European Parliament called for an increase in the market share of biofuels to 2 % over five years through a package of measures, including tax exemption, financial assistance for the processing industry and the establishment of a compulsory rate of biofuels for oil companies.

(20) The optimum method for increasing the share of biofuels in the national and Community markets depends on the availability of resources and raw materials, on national and Community policies to promote biofuels and on tax arrangements, and on the appropriate involvement of all stakeholders/parties.

(21) National policies to promote the use of biofuels should not lead to prohibition of the free movement of fuels that meet the harmonised environmental specifications as laid down in Community legislation.

(22) Promotion of the production and use of biofuels could contribute to a reduction in energy import dependency and in emissions of greenhouse gases. In addition, biofuels, in pure form or as a blend, may in principle be used in existing motor vehicles and use the current motor vehicle fuel distribution system. The blending of biofuel with fossil fuels could facilitate a potential cost reduction in the distribution system in the Community.



(23) Since the objective of the proposed action, namely the introduction of general principles providing for a minimum percentage of biofuels to be marketed and distributed, cannot be achieved sufficiently by the Member States by reason of the scale of the action, and can therefore be achieved better at Community level, the Community may adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve that objective.

(24) Research and technological development in the field of the sustainability of biofuels should be promoted.

(25) An increase in the use of biofuels should be accompanied by a detailed analysis of the environmental, economic and social impact in order to decide whether it is advisable to increase the proportion of biofuels in relation to conventional fuels.

(26) Provision should be made for the possibility of adapting rapidly the list of biofuels, the percentage of renewable contents, and the schedule for introducing biofuels in the transport fuel market, to technical progress and to the results of an environmental impact assessment of the first phase of introduction.

(27) Measures should be introduced for developing rapidly the quality standards for the biofuels to be used in the automotive sector, both as pure biofuels and as a blending component in the conventional fuels. Although the biodegradable fraction of waste is a potentially useful source for producing biofuels, the quality standard has to take into account the possible contamination present in the waste to avoid special components damaging the vehicle or causing emissions to deteriorate.

(28) Encouragement of the promotion of biofuels should be consistent with security of supply and environmental objectives and related policy objectives and measures within each Member State. In doing so, Member States may consider cost-effective ways of publicising the possibilities of using biofuels.

(29) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission (1),

HAVE ADOPTED THIS DIRECTIVE:

Article 1

This Directive aims at promoting the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes in each Member State, with a view to contributing to objectives such as meeting climate change commitments, environmentally friendly security of supply and promoting renewable energy sources.



Article 2

1. For the purpose of this Directive, the following definitions shall apply:

- (a) 'biofuels' means liquid or gaseous fuel for transport produced from biomass;
- (b) 'biomass' means the biodegradable fraction of products, waste and residues from agriculture (including vegetal and animal substances), forestry and related industries, as well as the biodegradable fraction of industrial and municipal waste;
- (c) 'other renewable fuels' means renewable fuels, other than biofuels, which originate from renewable energy sources as defined in Directive 2001/77/EC (2) and used for transport purposes;
- (d) 'energy content' means the lower calorific value of a fuel.

2. At least the products listed below shall be considered biofuels:

- (a) 'bioethanol': ethanol produced from biomass and/or the biodegradable fraction of waste, to be used as biofuel;
- (b) 'biodiesel': a methyl-ester produced from vegetable or animal oil, of diesel quality, to be used as biofuel;
- (c) 'biogas': a fuel gas produced from biomass and/or from the biodegradable fraction of waste, that can be purified to natural gas quality, to be used as biofuel, or woodgas;
- (d) 'biomethanol': methanol produced from biomass, to be used as biofuel;
- (e) 'biodimethylether': dimethylether produced from biomass, to be used as biofuel;
- (f) 'bio-ETBE (ethyl-tertio-butyl-ether)': ETBE produced on the basis of bioethanol. The percentage by volume of bio-ETBE that is calculated as biofuel is 47 %;
- (g) 'bio-MTBE (methyl-tertio-butyl-ether)': a fuel produced on the basis of biomethanol. The percentage by volume of bio- MTBE that is calculated as biofuel is 36 %;
- (h) 'synthetic biofuels': synthetic hydrocarbons or mixtures of synthetic hydrocarbons, which have been produced from biomass;
- (i) 'biohydrogen': hydrogen produced from biomass, and/or from the biodegradable fraction of waste, to be used as biofuel;
- (j) 'pure vegetable oil': oil produced from oil plants through pressing, extraction or comparable procedures, crude or refined but chemically unmodified, when compatible with the type of engines involved and the corresponding emission requirements.

Article 3

1. (a) Member States should ensure that a minimum proportion of biofuels and other renewable fuels is placed on their markets, and, to that effect, shall set national indicative targets.

(b) (i) A reference value for these targets shall be 2 %, calculated on the basis of energy content, of all petrol and diesel for transport purposes placed on their markets by 31 December 2005.

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(ii) A reference value for these targets shall be 5,75 %, calculated on the basis of energy content, of all petrol and diesel for transport purposes placed on their markets by 31 December 2010.

2. Biofuels may be made available in any of the following forms:

- (a) as pure biofuels or at high concentration in mineral oil derivatives, in accordance with specific quality standards for transport applications;



(b) as biofuels blended in mineral oil derivatives, in accordance with the appropriate European norms describing the technical specifications for transport fuels (EN 228 and EN 590);
(c) as liquids derived from biofuels, such as ETBE (ethyl-tertiobutyl-ether), where the percentage of biofuel is as specified in Article 2(2).

3. Member States shall monitor the effect of the use of biofuels in diesel blends above 5 % by non-adapted vehicles and shall, where appropriate, take measures to ensure compliance with the relevant Community legislation on emission standards.

4. In the measures that they take, the Member States should consider the overall climate and environmental balance of the various types of biofuels and other renewable fuels and may give priority to the promotion of those fuels showing a very good cost-effective environmental balance, while also taking into account competitiveness and security of supply.

5. Member States shall ensure that information is given to the public on the availability of biofuels and other renewable fuels. For percentages of biofuels, blended in mineral oil derivatives, exceeding the limit value of 5 % of fatty acid methyl ester (FAME) or of 5 % of bioethanol, a specific labelling at the sales points shall be imposed.

Article 4

1. Member States shall report to the Commission, before 1 July each year, on:

- the measures taken to promote the use of biofuels or other renewable fuels to replace diesel or petrol for transport purposes,
- the national resources allocated to the production of biomass for energy uses other than transport, and
- the total sales of transport fuel and the share of biofuels, pure or blended, and other renewable fuels placed on the market for the preceding year.

Where appropriate, Member States shall report on any exceptional conditions in the supply of crude oil or oil products that have affected the marketing of biofuels and other renewable fuels. In their first report following the entry into force of this Directive, Member States shall indicate the level of their national indicative targets for the first phase. In the report covering the year 2006, Member States shall indicate their national indicative targets for the second phase. In these reports, differentiation of the national targets, as compared to the reference values referred to in Article 3(1)(b), shall be motivated and could be based on the following elements:

- (a) objective factors such as the limited national potential for production of biofuels from biomass;
- (b) the amount of resources allocated to the production of biomass for energy uses other than transport and the specific technical or climatic characteristics of the national market for transport fuels;
- (c) national policies allocating comparable resources to the production of other transport fuels based on renewable energy sources and consistent with the objectives of this Directive.



2. By 31 December 2006 at the latest, and every two years thereafter, the Commission shall draw up an evaluation report for the European Parliament and for the Council on the progress made in the use of biofuels and other renewable fuels in the Member States. This report shall cover at least the following:

- (a) the cost-effectiveness of the measures taken by Member States in order to promote the use of biofuels and other renewable fuels;
- (b) the economic aspects and the environmental impact of further increasing the share of biofuels and other renewable fuels;
- (c) the life-cycle perspective of biofuels and other renewable fuels, with a view to indicating possible measures for the future promotion of those fuels that are climate and environmentally friendly, and that have the potential of becoming competitive and cost-efficient;
- (d) the sustainability of crops used for the production of biofuels, particularly land use, degree of intensity of cultivation, crop rotation and use of pesticides;
- (e) the assessment of the use of biofuels and other renewable fuels with respect to their differentiating effects on climate change and their impact on CO₂ emissions reduction;
- (f) a review of further more long-term options concerning energy efficiency measures in transport.

On the basis of this report, the Commission shall submit, where appropriate, proposals to the European Parliament and to the Council on the adaptation of the system of targets, as laid down in Article 3(1). If this report concludes that the indicative targets are not likely to be achieved for reasons that are unjustified and/or do not relate to new scientific evidence, these proposals shall address national targets, including possible mandatory targets, in the appropriate form.

Article 5

The list contained in Article 2(2) may be adapted to technical progress in accordance with the procedure referred to in Article 6(2). When adapting this list, the environmental impact of biofuels shall be taken into account.

Article 6

1. The Commission shall be assisted by a Committee.

2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof. The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.

3. The Committee shall adopt its Rules of Procedure.

Article 7

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 31 December 2004 at the latest. They shall forthwith inform the Commission thereof. When Member States adopt these measures, they shall contain a reference to this Directive or be accompanied by such reference on the occasion of their official publication. The methods of making such a reference shall be laid down by the Member States.



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2. Member States shall communicate to the Commission the provisions of national law which they adopt in the field covered by this Directive.

Article 8

This Directive shall enter into force on the day of its publication in the Official Journal of the European Union.

Article 9

This Directive is addressed to the Member States.

Done at Brussels, 8 May 2003.

For the European Parliament

The President

P. COX

For the Council

The President

M. CHRISOCHOÏDIS

17.5.2003 L 123/46 Official Journal of the European Union EN



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ANNEX 12: BUND (Unofficial English Translation)

VG 10 A 215.04

Verwaltungsgericht Berlin

ORDER

(Beschluss)

In the Administrative Law Dispute

1. Bund für Umwelt und Naturschutz Deutschland e.V. , represented by the Board, Dr. Angelika Zahrnt, Am Köllnischen Park 1, 10179 Berlin

2. Germanwatch e.V. , represented by the Board, Klaus Milke, Haakestraße 83, 21075 Hamburg
Applicants

Counsel:

Rechtsanwalt Dr. Wilhelm Mecklenburg, Häschenkamp 7, 25421 Pinneberg

against

the Federal Republic of Germany, represented by the (Federal Ministry of Economics and Labour (BMWA), Scharnhorststraße 34-37, 10115 Berlin

Defendant

Counsel:

Rechtsanwälte Redeker, Sellner, Dahs & Widmaier, Kurfürstendamm 218, 10719 Berlin

the 10th chamber of the Administrative Court Berlin (Verwaltungsgericht) has, through Judge Gaudernack, decided on 10th January 2006 as follows:

The following settlement is proposed to the Parties to the dispute to fully and entirely resolve the dispute:

Without prejudice to the different opinions on the legal obligation, and without setting a legal precedent, the following settlement is approved:

1. The defendant agrees to make the following information available to the applicants:

a) A list of projects in the field of energy production beginning with a value of € 15 Mio and a duration of more than 2 years, for which the defendant has granted export credit support /guarantees since January 1st 2003.

"Project" is deemed to mean the supply of installations/plants or parts of installations/plants.

b) This list is to be arranged according to the kind of respective sources of energy: coal, oil, gas, nuclear, sun, water, terrestrial heat, wind.

c) For each item in the list described in a) above the total sum of credit supported by the defendant's export credit support/guarantee is to be supplied.



d) The projects in the list referred to in a) which have been subject to the "Screening" exercise are to be categorized into the pertinent categories of relevance to the environment A, B, or C.

e) In as far as such information is held, the list referred to in a) is to be complemented on a project basis with the following information:

- the kind of fuel,
- the origin of the fuel,
- the fuel input per year in tons; with mixed combustion, if necessary classification by the kinds of fuel used and their origin,
- the output in kilowatt-hours per year,
- the efficiency of the plant in percent (when necessary given new conditions),
- the installed capacity in megawatts,
- the degree of capacity utilization in percentages,
- the projected period of operation by the plant.

f) Names and other details of the operators of the projects must be made unreadable.

2. Of the costs of this settlement, the applicants bear 1/3, defendant 2/3.

Reasons:

This proposal is complemented by an Annex which contains the deliberations of the Court of 21st July 2005. To avoid duplication, this Annex is herewith referred to.

This proposal has the legal status of a court settlement in the sense of § 106 2nd sentence of the Administrative Court Procedural Statute (Verwaltungsgerichtsordnung) if both Parties accept it by way of written consent, delivered to the Administrative Court Berlin, by 31st January 2006. [This written consent was duly submitted by the parties.]

Signature: Gaudernack

Annex

In the oral hearing on 29th June 2005, Parties and the court discussed the legal and factual issues involved in this dispute in depth. The Parties both wished for the court to develop a written proposal for a settlement, which should be based on and contain the court's preliminary assessment of the legal situation and rights. After deliberations of the chamber the settlement proposal is based on the following legal opinion:

1. Applicable Law

For the purposes of a preliminary assessment, the chamber assumes that the German Access to Environmental Information Act "UIG" (Umweltinformationsgesetz) in the version of December 22, 2004 as amended on February 14, 2005 applies to the dispute. This is based on the consideration that according to the settled case law of the Federal Administrative Court (Bundesverwaltungsgericht), the substantive law alone determines which rules are applicable



and form the basis of a legal claim. In the case of a judicial review asking the Government to undertake a specific action (Verpflichtungsklage) the pertinent point in time for the determination of the applicable law is usually the time of the last oral hearing. The court is not convinced by the defendant's argument that it was not the intention of the amendment to the UIG to allow for a re-assessment of old claims for access to information that were legally declined under the old Act. On the one hand, the denial of access to information to the applicants by the defendant has not become legally binding [because it was challenged by commencing the law suit, comment by the translator]. On the other hand, the new UIG is based on an EU directive that consciously expands access to environmental information. Since the new Act lacks any provision relating to its transitional application to "old" claims, it may be assumed that the pending "old cases" are to be judged in accordance with the new substantive law, i.e. the new UIG.

2. Legal Basis for the Claim

§ 3 paragraph 1 of the UIG may be used as the basis of claim for the plaintiff's right to have access to information. In contrast, relying on the Emissions Trading Directive (2003/87/EC), in particular article 17 that allows for public availability of decisions relating to the allocation of allowances and to the reports of emissions, does not seem a promising approach. These emissions reports, whose required content is set out in addendum 2, section 2 of the German Greenhouse Gas Emission Trading Act (Treibhausgas-Emissionshandelsgesetz, TEHG), only concern purely national (i.e. German) facts and data in connection with the allocation of emission permits to industrial installations on the basis of the national allocation plans.

§ 3.1 of the UIG stipulates that it is the right of every person, in accordance with the provisions of the UIG, to have free access to environmental information held by or for public authorities ("the obliged entity"). On the basis of the amended UIG § 2.1, the Ministry of Economic Affairs and Labour, BMWA, seems generally to be an obliged entity and obliged to make available information requested on the basis of the UIG as a section of the German Federal Government.

3. Environmental Information

The main issue in dispute between the parties to these proceedings is whether the information requested constitutes "environmental information" within the meaning of § 2.3 of the UIG, particularly under subparagraph 3 a) and/or b).

a) Environmental Information in the sense of § 2.3 subparagraph 3 a):

According to UIG § 2.3 subparagraph 3 a), environmental information is "independently of the form in which it is stored or kept, all information and data about measures and activities that affect, or likely affect, elements of the environment, as referred to in subparagraph 1 (i.e. air and atmosphere, water, soil, land, landscape and natural sites including wetlands, coastal and marine areas, biological diversity and its components, including genetically modified organisms) or factors as referred to in subparagraph 2 (such as substances, energy, noise, radiation or waste, including radioactive waste, emissions, discharges and other releases into the environment, affecting or likely to affect the elements of the environment referred to in Nr. 1)".



In its preliminary assessment, the chamber assumes that the granting of export credits in the area of energy production, at least in part, constitutes measures or activities that are likely to affect elements of the environment. It cannot be disputed that the supported projects themselves can potentially affect elements of the environment, such as the atmosphere. This general assumption is shared by the defendant, as shown in the defendant's own publication (see p. 28 of the 2004 Annual Report: "Environmental Effects of Projects" or Jahresbericht 2004: "Umweltauswirkungen von Projekten").

It is also the preliminary opinion of the chamber that granting or denying export credit support/guarantees will positively or negatively affect the implementation of a project and therewith will, with some probability, also affect the environment. This assessment is evidently shared by the OECD, which states in their guideline "Common Approaches":

"Noting that OECD Ministers in 2001 have recognized that export credit policy can contribute positively to sustainable development and should be coherent with its objectives."
(Recommendation on common approaches on environment and officially supported export credits, TD/ECG (2005) 3, February 25, 2005)

Considering that extensive/sympathetic interpretation of domestic law is generally necessary to fully and adequately implement European law, it seems sufficient that a state activity tends generally to compromise the environment (see on the general potential of environmental protection in the context of the old UIG BVerwGE 108, 369 et seq.). Even if a situation should arise where a project is carried out with the assistance of another country, regardless of the policy of the defendant, this would not change this general assessment because, based on a first assessment by the chamber, the wording of the UIG does not necessarily require direct causation without intermediate steps. In this respect, it goes without saying that the main responsibility for a project and its environmental effects rests on the operator of a project and not the defendant. However, already for the old version of UIG § 2.3 subparagraph 3 a), the Federal Administrative Court ruled that this provision did not include a requirement of "immediateness" (Unmittelbarkeit) (BVerwGE 108, 369 et seq.). This interpretation may be transferable to the new version of UIG § 2.3 subparagraph 3 a).

The above reasoning may apply where export credit support is granted for the construction or provision of entire energy production plants. However, the plaintiff's claim for information about every support provided for mere plant components seems problematic in this context because, where the smallest components are supplied, the effects on the environment do not seem evident. If every small component were to be covered by the right to information, this would lead to inadequate extension of the causation chain criterion as well as of the intention of the UIG – even when interpreted broadly. Yet, it is difficult to delineate exactly in which cases an effect on the environment could be assumed.

b) Environmental Information in terms of § 2 paragraph 3 subparagraph 3 b):
According to UIG § 2 paragraph 3 subparagraph 3 b), environmental information is



"independently of the form in which it is stored or kept, all information and data about measures and activities designed to protect elements of the environment referred to in Nr. 1 (see above), including policies, legislation (statutory and administrative regulations), treaties, environmental agreements, plans and programmes. "

The chamber recognizes that the primary purpose of export credit support/guarantees is to support the German economy and not environmental protection. However, in line with its preliminary assessment, the chamber is of the opinion that, at least for those supported projects where an environmental assessment is carried out, these also constitute measures and activities that aim to protect the environment. This finding is based on the following considerations: The wording of the UIG fundamentally corresponds to Directive 2003/4/EC and is – due to its relatively vague formulations – subject to interpretation. To enable the most effective implementation of European law, such an interpretation must be broad. Therefore, measures and activities, whose primary purpose is not the protection of the environment, may also fall under UIG § 2.3 subparagraph 3 b) because they nevertheless follow an important secondary or intermediate purpose. According to the defendant's own statements found in many of its publications, as well as in the international agreements on the granting of export credits, environmental aspects do play a notable role in the process of granting export credit support/guarantees. In the defendant's own words, environmental aspects constitute a "definite component of the decision process" (2003 Annual Report, p. 26) and are "responsibly tested and accounted for" (2004 Annual Report, p.28) in the context of a decision on the granting of an export credit guarantee. In one report to the OECD, the defendant even speaks of the central importance of environmental aspects ("central importance", OECD-Paper TD/ECG (2004)3/FINAL, p. 35).

With respect to the need for a chain of causation or "immediateness criterion", the reasoning under 3 a) above is applicable.

As a preliminary assessment, the chamber is also of the opinion that a comparison with the old UIG judgments on subsidies pertaining to the environment (see BVerwGE 108, 369 et seq.) with export credit guarantees is not far fetched. As well as in this case, these cases assumed that the final responsibility for environmental effects of an operation is vested with the operating firms, however the courts considered the contributions granted by state subsidies sufficient in terms of the UIG. This is also due to the fact that economic instruments of environmental protection continuously gain in importance compared to the classic instruments of command and control. This reasoning applies, however – after a first assessment by the chamber – only for those projects for which an environmental assessment is conducted, based on the OECD "Common Approaches" transposed by the German "Guidelines for the consideration of ecological, social and development matters" (Leitlinien für die Berücksichtigung von ökologischen, sozialen und entwicklungspolitischen Gesichtspunkten). In respect of export credit support for less than € 15 Million and of less than 2 years duration, the duty of the state with respect to the environment seems not to go beyond the general duty of the state to make sustainable decisions. It seems therefore questionable whether information relating to projects that do not require an



environmental impact assessment can qualify as environmental information in terms of § 2.3 subparagraph 3 b).

4. Environmental Information "Held" by an authority

There is disagreement between the parties as to whether the defendant "holds" (possesses) the information requested. According to UIG § 2.4 this is the case if the information is available through the public authorities or held ready for them.

In its preliminary assessment, the chamber assumes that, at minimum, the following information must be disclosed by the defendants and Euler Hermes AG:

- a list of projects, in the field of energy production, for which export credit support/ guarantees have been granted and for which an environmental impact assessment (EIA) was conducted. This is based on the fact that in the 2003 annual report (see p. 27) as well as the 2004 annual report (see p. 28) a figure for all projects with an EIA is given. From these totals of 152 projects in 2003 and 123 projects in 2004, it must be possible to select the projects in the field of energy production,
- the energy source for these projects should be easily identified from the application documents,
- the guarantee limit (erhobene Deckungssumme), which is reported for statistical reasons anyway, may likewise be obtained from existing documentation without any problems,
- this is also the case because of the international reporting commitment to the OECD for the categorizing of the projects.

However, the availability of the information requested under Nr. 3.) of the present claim, which pertains to details of projects using fossil fuels, seems problematic. In the opinion of the chamber, there is no specific obligation on the defendant to hold or request this type of information from the private operators. However, should such information be available in the submitted Environmental Impact Assessment Reports or otherwise in the files, it would fall within the obligation to be released.

5. Disqualifying claim

After a first assessment the chamber considers that no exception such as referred to in §§ 8, 9 UIG is presently applicable. For this assessment, the chamber has taken into account the fact that any grounds for refusal of information must – according to Art. 4.2, 2nd sentence, of Directive 2003/4/EC – be interpreted in a restrictive way. On this basis, the chamber does not follow the defendant's argument that, by disclosing the information requested by the applicants, international relations in terms of § 8. 1 Nr. 1 UIG could be compromised. A comparison with the other grounds for exceptions contained in § 8.1 Nr. 1 (such as national defence) shows that claimed effects on international relations must reach a certain degree of seriousness. The fact that host countries might themselves be under an obligation to report on greenhouse gas emissions under international treaties seems to be irrelevant for this assessment.

Neither is the information to be denied on the basis of § 8.2 Nr. 1 (request manifestly unreasonable). The applicants do not already have access to the data requested. The internet-



presentation [of Hermes] does not seem to be all-encompassing, and does not contain any data on projects where the relevant operators have not consented to publication. The increased effort necessary to make the information available is, as long as the request for information is a serious one, no reason as such to find that the request is manifestly unreasonable. Rather, the effort must be taken into account in calculating the charges due.

Another contentious matter between the parties to this dispute is whether the request can be denied on the grounds of § 9 .1 Nr. 3 UIG because the confidentiality of commercial or industrial information is at stake. In this context it is important to note that the new UIG allows for discretion, i.e. a weighing between the public interest in the disclosure of the information and the effects on confidentiality of commercial or industrial information. It is the opinion of the chamber that § 203 of the Criminal Code (Strafgesetzbuch) is not applicable in this constellation: if the UIG allows for information to be disclosed, its disclosure cannot be "unauthorized" (unbefugt) in the terms of this provision. Overall, the chamber considers that commercial interests (confidentiality, competition) can be sufficiently taken into account by making the names of companies etc. in the disclosed information unreadable.

6. Proposals for an amicable settlement

a) Limitations of the time period for the requested information

The chamber proposes that the starting point for the information to be provided for the past should be moved from 1997 [as requested by the applicants] to 2003. This is based on the consideration that the Kyoto Protocol was signed in 1997, but only entered into force on 16th February 2005 after the Russian ratification. The applicants have – in the oral hearing – already suggested that they might consent to the later starting date of 2001. This year marks the beginning of environmental assessments by the defendant on the basis of the OECD's Common Approach. However, the chamber is of the opinion that the other relevant date is the entry into force of the new UIG: It is doubtful whether the defendant (BMWA) would have been a possible addressee authority for environmental information in terms of § 3.1, 1st sentence UIG in the old version. Moreover, even if the defendant was generally obliged under the UIG in the old version, the wide obligations of § 7 UIG in the new version definitely would not have applied. Thus, the defendant might not have been obliged to store information of the type requested, and making available the information now might require very intensive efforts.

2003 seems to the chamber to be a good starting point for practical reasons: Since the beginning of 2003 the defendant reports to the OECD on environmentally relevant projects, categories A and B (Nr.19) in the framework of the OECD guidelines. In this context, the defendant must report on all projects in these categories that have received final authorisation for export credit support. Entire energy production plants will in any case fall under category A (see Annex I of the Common Approaches).



b) Limitations regarding the volume of information

Since a settlement must always be characterised by compromise on both sides, a limitation of the scope/volume of information to be provided is justified taking into account the following considerations:

As discussed above under 3. it seems that an obligation to disclose every tiny detail or small part covered by export credit support as environmental information is problematic. Moreover, the defendant might not have been obliged, under the old UIG, to disclose information at all, or at least not as broadly as now foreseen in the new § 7 UIG. Lastly, in the interest of an amicable and full settlement with the objective of providing as much transparency as possible, a practical solution must be found that also takes into account the effort required on the part of the defendant to accumulate and make available the information.

The chamber does not ignore the fact that the effort to make available information on the past is probably quite large. This was also the opinion of the Legislature (BT-Drs. [parliamentary records] 15/3406, p.2). Yet, this effort seems adequate, given the reduced time period and volume suggested. This is even more the case as the number of projects for which a screening was undertaken in 2003 and 2004 only comes to 152 and 123. Of these, the area of energy production is only a small fraction. Moreover, the type of information now to be made available according to the settlement is largely identical to the data that has to be communicated to the OECD. Lastly, the defendant will, under § 7 UIG, be obliged to enable and support the access to this type information in an adequate form, for example by storing it electronically.

Gaudernack

INTERNATIONAL LIABILITY AS AN INSTRUMENT TO PREVENT AND COMPENSATE FOR CLIMATE CHANGE

Michael G. Faure* & André Nollkaemper†

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* Professor of Comparative and International Environmental Law, Maastricht University, and Academic Director of the Ius Commune Research School.

† Professor of Public International Law, Amsterdam Center for International Law, University of Amsterdam.

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I. INTRODUCTION

When the Framework Convention on Climate Change was signed in 1992, four small island states (Fiji, Kiribati, Nauru, and Tuvalu) entered the following declaration: “Understanding that signature of the convention shall in no way constitute a renunciation of any rights under international law concerning state responsibility for the adverse effects of climate change and that no provisions in the convention can be interpreted as derogating from the principles of general international law.”¹ All four states, especially the island of Tuvalu, are often mentioned as among the potential first victims of climate change. With rising sea levels, the homes and infrastructure of the population of Tuvalu could quickly become uninhabitable and unusable so that immigration would be their only option.²

The possibility that a small island state, or another injured party, would bring a liability claim against states responsible for climate change no longer is a topic for fiction³ or a theoretical prospect. There is a rise in plans for litigation worldwide for

¹ United Nations Framework Convention on Climate Change, May 9, 1992, 1771 U.N.T.S. 107.

² Richard S.J. Tol & Roda Verheyen, *State Responsibility and Compensation for Climate Change Damages— A Legal and Economic Assessment*, 32 ENERGY POL’Y 1109, 1109 (2004).

³ MICHAEL CRICHTON, STATE OF FEAR (2004). In this book, *Jurassic Park* author Michael Crichton used the hypothesis that the fictional Pacific Island nation of Vanuatu would prepare a lawsuit against the Environmental Protection Agency of the United States over global warming as the basis for a fiction novel.

consequences of global warming.⁴ Though a majority of the cases appears to be public or administrative law cases, there is also an increase in the number of liability cases. One example is a lawsuit brought in Nigeria by local communities against oil companies and the government to stop the flaring of gas that contributes to greenhouse gases (GHGs) and local air pollution.⁵

Such cases raise a string of fundamental questions: Can actors be held liable for contributions to climate change if there may be hundreds, thousands or perhaps millions of other actors who also have contributed? How can liability law deal with the uncertainties of causation between emissions, climate change, and harmful effects? Is liability law an option at all now that both domestic and international public law regulate climate change? Can liability have significant effects, not only for providing compensation for victims, but also for influencing the behavior of potential emitters? Though these issues arise primarily in civil law cases, some issues, such as causation, will be equally relevant to administrative law cases.⁶

In this Article, we will examine some of the fundamental questions that would arise in litigation on liability for climate change. We will sketch some of the questions and issues that would have to be dealt with when a potential liability suit is brought (without suggesting that such a suit could successfully be brought, which is rather difficult to predict). On a practical level, this Article is an attempt to explore the issues and set the agenda for those who wish to pursue such a liability suit. On a more fundamental level, our

⁴ For an overview of the legal actions in different parts of the world, see JOYEETA GUPTA, WHO'S AFRAID OF CLIMATE CHANGE? 43 (2005). Examples of such actions include: *Friends of the Earth, Inc. v. Watson* 35 Env't. L. Rep. 20, 179 (N.D. Cal. 2005); *Center for Biological Diversity v. Spencer Abraham*, 218 F. Supp. 2d 1143 (N.D. Cal. 2002); *Bund für Umwelt und Naturschutz Deutschland e.V. (BUND) (German section of NGO Friends of the Earth) and Germanwatch e.V. v. Federal Republic of Germany represented by the Minister of Economy and Labour (BMWA), Verwaltungsgericht [VG] [Administrative Court Berlin]* Jan. 10, 2006, 10A 215.04. For an unofficial translation to English, see <http://www.climatelaw.org/media/Germany/de.export.decision.eng.doc>.

GUPTA, *supra* note 4, at 41–42. In April 2006, the Federal High Court of Nigeria ordered the Shell Petroleum Development Company of Nigeria Limited (Shell Nigeria) and the Nigerian National Petroleum Corporation (NNPC) to end flaring in the Iwherek community (Nigeria) by April 2007 and to appear in court in person on May 31 with a detailed plan to this effect. Press Release, Climate Justice Programme, Legal Action to Stop Nigeria Gas Flaring, June 20, 2005, available at <http://climatelaw.org/media/gas.flaring.suit/#release>. [hereinafter Press Release, *Shell Nigeria Case*].

⁶ *E.g.*, *Friends of the Earth, Inc. v. Watson*, No. C 02-4106, 2005 WL 2035596 (N.D. Cal. 2005) (holding that the plaintiffs' evidence was sufficient to demonstrate it was reasonably probable that emissions from projects supported by the defendants would threaten plaintiffs' concrete interests).

paper examines the power and limits of liability law to address such a highly complex and transnational issue as climate change.

We recognize that the answers to some of these questions will differ among jurisdictions and between international law⁷ and domestic law.⁸ However, we seek to transcend these differences and aim for an integrated approach to the topic. It is in that respect that we seek to contribute or add to existing literature.⁹

We seek to straddle the boundary between different domestic jurisdictions by identifying general concepts that are common to several systems. In our examples, we will focus in particular on approaches taken in Europe, but we believe that these may be of interest for other jurisdictions. When addressing the possibilities of national tort law, we also will make use of some harmonization projects that have attempted to identify general principles of tort law either in the United States¹⁰ or in Europe¹¹ and that thus transcend particular jurisdictions.

We also will straddle the boundary between international and domestic liability law. While we recognize that these bodies of law in many respects are different, there are good reasons for considering them in an integrated manner. Questions of liability for climate change often involve both domestic and international law.¹² Moreover, the general principles of liability law will be common to

⁷ Tol & Verheyen, *supra* note 2, at 1109–30.

⁸ See, e.g., David A. Grossman, *Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 COLUM. J. ENVTL. L. 1 (2003) (discussing the possibility of tort liability for climate change).

⁹ Earlier studies include: RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW: PREVENTION DUTIES AND STATE RESPONSIBILITY 137–224 (2005); Myles Allen, *Liability for climate change: Will it ever be possible to sue anyone for damaging the climate?*, 421 NATURE 891, 891–92 (2003). See also GUPTA, *supra* note 4, at 40–44; Jaap Spier, *Legal Aspects of Global Climate Change and Sustainable Development*, REVISTA PARA EL ANALISIS DEL DERECHO 346 (Apr. 2006), available at http://www.indret.com./pdf/346_en.pdf.

¹⁰ RESTATEMENT OF THE LAW ON TORTS—TORTS: GENERAL PRINCIPLES (Discussion Draft 1999).

¹¹ EUROPEAN GROUP ON TORT LAW, PRINCIPLES OF EUROPEAN TORT LAW (2005).

¹² We use the terms “state liability” and “state responsibility” interchangeably to refer to the consequences of a wrongful act committed by a state and more specifically to the obligation to provide reparation for damage caused by a wrongful act. Though the term “state liability” is often used to refer to the consequences of injury caused by lawful acts, with a view to terminological coherence between national and international concepts, we use the term here in a broader manner, more akin to the concept as used in national law. For more discussion of this difference between the concepts of liability and responsibility, see RENÉ J.M. LEFEBER, TRANSBOUNDARY ENVIRONMENTAL INTERFERENCE AND THE ORIGIN OF STATE LIABILITY 13–15 (1996); Alan E. Boyle, *State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction?*, 39 INT’L & COMP. L.Q. 1, 1–26 (1990).

both domestic law and international law. Domestic (private) law often influences international principles of liability¹³ and, in turn, international law can influence domestic law.¹⁴

Our approach will also be integrated as we will make use of the economic analysis of tort law. We believe that this approach is particularly useful because it allows us to pay attention to the difficult issues regarding how tort liability could or should be established in case of uncertainty concerning the causal relationship,¹⁵ as well as cases of multiple tortfeasors—both highly relevant issues within the context of climate change litigation. Thus, our ultimate aim is to connect the approaches in international law and domestic law with the additional insights from economic analysis of tort law, in an attempt to enhance our understanding of the powers and limitations of liability law in relation to climate change.

We do not discuss the scientific questions relating to the existence, causes, and effects of climate change. However, we recognize that there is scientific evidence that damage to the environment, by individuals and by groups, has occurred and may occur. This can—at least in part—be attributed to climate change which would be the result of anthropogenic emissions.¹⁶ Some

¹³ HERSCH LAUTERPACHT, *PRIVATE LAW SOURCES AND ANALOGIES OF INTERNATIONAL LAW* 38–42 (1927) (discussing that many rules and concepts of international law stemmed from private law and that international courts and tribunals often resort to private law analogies to fill gaps in the law).

¹⁴ Frederick Alexander Mann, *The Consequences of an International Wrong in International and National Law*, BRIT. Y.B. INT'L L. 1 (1977). For an earlier discussion, see also FREDERICK ALEXANDER MANN, *STUDIES IN INTERNATIONAL LAW* 366–91 (1973) (discussing how domestic courts should give effect to international wrongs).

¹⁵ See, e.g., ARIEL PORAT & ALEX STEIN, *TORT LIABILITY UNDER UNCERTAINTY* (2001). Economic analysis is now increasingly also applied to international law, including state liability. See, e.g., JACK L. GOLDSMITH & ERIC A. POSNER, *THE LIMITS OF INTERNATIONAL LAW* (2005); Eric A. Posner & Alan O. Sykes, *An Economic Analysis of State and Individual Responsibility Under International Law* (Univ. of Chicago Law Sch., John M. Olin Law and Econ., Working Paper No. 279, 2006).

¹⁶ The Intergovernmental Panel on Climate Change (IPCC) finds that “there is new and stronger evidence that most of the warming observed over the last fifty years is attributable to human activities. Detection and attribution studies consistently find evidence for an anthropogenic signal in the climate record of the last 35 to 50 years.” The report equally holds that “the estimated rate and magnitude of warming due to increasing greenhouse gases alone are comparable with, or larger than, the observed warming.” IPCC, *Climate Change 2001: Synthesis Report, Summary for Policy Makers* 5–6 (2001), available at <http://www.ipcc.ch/pub/un/syrcng/spm.pdf>. These findings have been confirmed since their original publication. IPCC, *Climate Change 2007: The Physical Science Basis, Summary for Policymakers* 10 (2007), available at http://ipcc-wg1.ucar.edu/wg1/docs/WG1AR4_SPM_Approved_05Feb.pdf (stating that “[m]ost of the observed increase in globally averaged temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations.”).

certainties and uncertainties surrounding climate change are relevant to liability and will be considered later.

After this introduction, we will discuss two preliminary issues pertaining to climate change litigation: In Part II, we sketch various basic models of international climate change litigation in which liability claims could be made; we then address the potential goals of liability in regard to climate change in Part III. The core of our Article consists of a discussion of six central issues for the determination of liability: the basis of liability (Part IV), the potential effects of following regulations or conventions (Part V), causal uncertainty (Part VI), liability in case of multiple tortfeasors (Part VII), the problem of retrospectivity (Part VIII), and the potential remedies in case of liability (Part IX). The paper concludes by addressing a few policy consequences from the analysis (Part X).

II. BASIC MODELS

Our aim is to transcend differences between particular jurisdictions, including the difference between international and domestic law, and to focus on more general conceptions of liability law. However, in actual litigation, such general conceptions of liability have to be brought down to the nature of the parties, the applicable law, the powers of courts and so forth. Some conceptions of liability will be more relevant in certain settings than in others. It is therefore useful to sketch some basic models in which liability claims may be brought. We will distinguish between interstate claims, claims between private persons and states, and claims between private persons.

A. *Interstate Claims*

The scenario in which a state-victim of climate change seeks to bring a liability claim in an international court against one or more other states that allegedly contributed to climate change is a rather unlikely prospect. States do not usually present their complaints about other states' climate change policies in terms of liability claims. Even if they were to do that, states usually do not present such claims in court. Though the Climate Change Convention envisages

resorting to the International Court of Justice or arbitration, contingent on further declarations by states,¹⁷ thus far very few states have made a declaration accepting a mode of compulsory dispute settlement under Article 14 of the Convention.¹⁸ However, a state may still be prepared to present an interstate claim and perhaps even find a forum to present such a claim. As mentioned above, some small island states have expressly reserved the right to bring such a claim.

Such claims would have a number of features that are relevant for our purposes. They would generally concern an international claim, not only in terms of the forum (states do not usually litigate against each other in domestic courts) but also in terms of the basis of the claim. That is, the claim would be based on an alleged violation of an international obligation, engaging the international responsibility of the wrongdoing state. The principles of liability that would be applied are principles of international law, rather than domestic law. However, domestic liability principles may influence the contents of international liability law. For instance, domestic principles on such issues as joint and several liability and causation may, through the concept of general principles of law, inform the content of international principles of liability.¹⁹ It is in this respect that some of our analysis below on domestic liability may be relevant to such interstate claims.

¹⁷ Article 14(2) provides that when ratifying, accepting, approving or acceding to the Convention, or at any time thereafter, a party (which is not a regional economic integration organization) may declare in a written instrument submitted to the Depositary that in respect to any dispute concerning the interpretation or application of the Convention, it recognizes as compulsory *ipso facto* and without special agreement the submission of the dispute to the ICJ and this in relation to any other party accepting the same obligation. Article 14(2)(b) of the Framework Convention on Climate Change provides that under the same conditions mentioned above parties can also refer a dispute to arbitration “in accordance with procedures to be adopted by the conference of the parties as soon as practicable, in an annex on arbitration.” United Nations Framework Convention on Climate Change *supra* note 1, art. 14.

¹⁸ United Nations Framework Convention on Climate Change, Status of Ratification (Apr. 11, 2007), available at http://unfccc.int/files/essential_background/convention/status_of_ratification/application/pdf/unfccc_rat_130407.pdf (noting that only two countries made a declaration with regard to Article 14(2), Cuba and the Solomon Islands.)

¹⁹ See, e.g., *Oil Platforms (Iran v. U.S.)*, 2003 I.C.J. 90 (Nov. 6) (separate opinion of Judge Simma); *Certain Phosphate Lands in Nauru (Nauru v. Austl.)*, 1993 I.J.C. 80 (Sept. 13) (separate opinion of Judge Shahabuddeen) (both finding support for the existence of a general principle of law on joint and several liability in domestic law).

B. *Claims by Private Persons Against States*

In a second scenario, private persons who are (potentially) injured by climate change would hold a state liable that allegedly caused or contributed to the damage. This indeed has happened on a number of occasions.²⁰ An alternative is that sub-state entities would bring claims against states. For instance, it has been suggested that the state of Alaska could claim compensation against the U.S. federal government.²¹

Such claims may have a substantial international law component if the affected interests are protected under human rights law (e.g., right to life, right to health, right to home). Individuals then could, under international law, have a claim against the state under whose jurisdiction they are. However, the requirement that the victims should be under the jurisdiction of the wrongdoing state substantially limits the relevance of this scenario for “transboundary” climate change cases.²²

Assuming that a competent international body is available, individuals could file a human rights-based claim at the international level.²³ There has been at least one failed attempt to do so, when the Inuit Circumpolar Conference, which represents 150,000 people in northern Alaska, Canada, Russia and Greenland, filed a claim against the United States with the Inter-American Human Rights Commission. The claim was based, inter alia, on alleged breach of rights of indigenous peoples, the right to a healthy environment, and the rights of people to freely dispose of their natural wealth and resources under the Inter-American Convention on Human Rights (IACHR). However, the claim was not considered by the

²⁰ On human right claims related to environmental harm, see generally ALAN E. BOYLE & MICHAEL R. ANDERSON, *HUMAN RIGHTS APPROACHES TO ENVIRONMENTAL PROTECTION* (1996).

²¹ It is the hypothesis examined by Grossman, *supra* note 8, at 1. There are already examples of states filing administrative law case against the central government, e.g., *Mass. v. EPA*, 549 U.S. ___ (2007), *rev'g* *Mass. v. EPA*, 415 F.3d 50 (D.C. Cir. 2005).

²² For a critical assessment of the use of human rights law in regard of climate change, see Eric A. Posner, *Climate Change and International Human Rights Litigation: A Critical Appraisal* (Univ. of Chicago Law Sch. John M. Olin Law & Econ., Working Paper No. 329, 2007) (arguing that, because the health of the global climate is a public good, and domestic courts have limited ability to control the behavior of corporations on foreign territory, and because optimal climate policy varies greatly across countries, it is unlikely that domestic courts can, in human rights cases, provide remedies that are economically sound and politically acceptable) *available at* <http://ssrn.com/abstract=959748>.

²³ That would hold primarily for the European Court of Human Rights, the Inter-American Court of Human Rights and in the future the African Court on Human Rights.

Commission, because it found that the information submitted did not enable the Commission to determine whether the alleged facts could be characterized as a violation of the IACHR.²⁴

International claims such as these would be governed by international law. This holds for the liability principles as well,²⁵ though the application of principles of liability to relationships between individuals and states need not be identical to the law of state responsibility that applies between states. As in the first scenario concerning interstate claims, domestic tort law is only indirectly relevant.²⁶

If no human rights are at issue, the claim can only be presented before a domestic court as a domestic tort law issue. In this scenario, we can distinguish two alternatives: The victim could litigate against her own state or against a foreign state. As to the former, claims by individuals against the state itself were impossible in many countries for a long time and for a variety of reasons.²⁷ It was often held that the state was immune from tort claims and that the sovereignty of the state made it impossible to file tort claims against it. Today, as a result of jurisprudential and legislative evolutions, state liability is possible in many jurisdictions,²⁸ opening an opportunity for climate change-related litigation against the state. One example where this opportunity has been used is the liability claim relating to climate change against the governments of Nigeria.²⁹

²⁴ Letter from Ariel Dulitzky, Assistant Executive Secretary, Inter-American Commission of Human Rights, to Paul Crowley, Legal Representative, Barrister and Solicitor, Canada (Nov. 16, 2006), available at http://graphics8.nytimes.com/packages/pdf/science/16commission_letter.pdf.

²⁵ International Law Commission, Draft Articles on Responsibility of States for Internationally Wrongful Acts art. 33, ¶ 2, G.A. Res. 56/83, 56th Sess., Supp. No. 10, U.N. Doc. A/56/10(SUPP) (Dec. 12, 2001) [hereinafter Draft Articles], reprinted in JAMES CRAWFORD, *THE INTERNATIONAL LAW COMMISSION'S ARTICLE ON STATE RESPONSIBILITY: INTRODUCTION, TEXT AND COMMENTARIES* (2002) (arguing that Article 33 (2) indicates that states not only owe an obligation to provide reparation to states but also to individuals). See also James Crawford, *Third Report on State Responsibility*, UN Doc. A/CN.4/507 (Mar. 15, 2000).

²⁶ Luzius Wildhaber, *The Role of Comparative Law in the Case Law of the European Court of Human Rights*, in *INTERNATIONALE GEMEINSCHAFT UND MENSCHENRECHTE: FESTSCHRIFT FÜR GEORG FESS ZUM 70. GEBURTSTAG AM 21. (Jan. 2005)* (discussing how the European Court of Human Rights resorts to comparative law in its legal reasoning).

²⁷ See generally BASIL S. MARKESINIS ET AL., *TORTIOUS LIABILITY OF STATUTORY BODIES: A COMPARATIVE AND ECONOMIC ANALYSIS OF FIVE ENGLISH CASES* (1999) (exploring whether statutory bodies should be liable in tort towards persons harmed by their negligent actions).

²⁸ WALTER VAN GERVEN, JEREMY LEVER & PIERRE LAROCHE, *CASES, MATERIALS AND TEXT ON NATIONAL, SUPRANATIONAL AND INTERNATIONAL TORT LAW* 358–94 (2000) (providing a comparative overview of the law of tort in English, German and Belgian jurisprudence).

²⁹ Press Release, *Shell Nigeria Case*, *supra* note 5.

The latter situation, concerning claims against a foreign state on the basis of national tort law, presents separate issues.³⁰ Such claims will mostly be brought in the courts of the defendant state. Cases in the courts of a foreign (victim) state will normally be blocked by state immunity. The 2004 U.N. Convention on Jurisdictional Immunities of States and their Property has not changed this. Its exception for extraterritorial torts only applies if the tortfeasor was present in the territory at the time of the act—for instance, torts caused by traffic accidents. The exception does not seem applicable to transfrontier harm like climate change.³¹ The key question, then, is whether the plaintiff has access to the courts of the foreign state. This question applies similarly to litigation against private actors in foreign courts and will be considered in Part II.C.

A climate change claim against a state under domestic tort law presumes that the domestic law of that state allows for such liability claims. Whether this is the case is not governed by international law. There exists no treaty on civil liability for transboundary damage that would apply to climate change damage and that would provide for liability on the part of the state. The International Law Commission's (ILC) 1996 proposals for making states strictly liable for significant transboundary harm proved to be too progressive and have not been included in the 2006 draft articles.³² The general availability of civil law remedies in a procedure against the state that allegedly caused climate change damage, cannot, therefore, be assumed.³³ As such, everything depends on the applicable domestic law.

³⁰ GERRIT BETLEM, CIVIL LIABILITY FOR TRANSFRONTIER POLLUTION: DUTCH ENVIRONMENTAL TORT LAW IN INTERNATIONAL CASES IN THE LIGHT OF COMMUNITY LAW (1993).

³¹ United Nations Convention on Jurisdictional Immunities of States and Their Property art. 12, U.N. Doc. A/RES/59/38 (Dec. 16, 2004), 44 I.L.M. 803 (“Unless otherwise agreed between the States concerned, a State cannot invoke immunity from jurisdiction before a court of another State which is otherwise competent in a proceeding which relates to pecuniary compensation for death or injury to the person, or damage to or loss of tangible property, caused by an act or omission which is alleged to be attributable to the State, if the act or omission occurred in whole or in part in the territory of that other State and if the author of the act or omission was present in that territory at the time of the act or omission.”); see also Gerhard Hafner & Ulrike Kohler, *The United Nations Convention on Jurisdictional Immunities of States and Their Property*, 35 NETH. Y.B. INT’L L. 3 (2004) (discussing the scope of the extraterritorial tort exception in the U.N. Convention). See generally HAZEL FOX, *THE LAW OF STATE IMMUNITY* (2002) (analyzing the extraterritorial tort exception).

³² For the full text of the 1996 draft see International Law Commission, *Report of the Working Group on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law* 235, Supp. No. 10, Annex I, U.N. Doc. A/51/10(SUPP) (Jan. 1, 1996).

³³ Alan E. Boyle, *Globalising Environmental Liability, The Interplay Between National and International Law*, in MULTILEVEL GOVERNANCE OF GLOBAL ENVIRONMENTAL CHANGE: PERSPECTIVES FROM SCIENCE, SOCIOLOGY AND THE LAW 559 (Gerd Winter ed., 2006).

C. *Claims Between Private Persons*

In a third scenario, private plaintiffs present a liability claim against individual GHG emitters. One example is *Connecticut v. American Electric Power Co.* in which the plaintiffs sought under federal common law of the United States or, in the alternative, state law, to abate what plaintiffs described as the “public nuisance” of “global warming.”³⁴ In *Northwest Environmental Defense Center v. Owens Corning Corp.*, environmental groups brought an action alleging that the manufacturer was constructing a facility without having obtained the preconstruction permit required under the U.S. Clean Air Act. One of their arguments was that emissions from defendant’s Gresham facility would contribute to global warming which, in turn, would harm environmental resources in Oregon used or enjoyed by members of the plaintiff organizations.³⁵ An alternative to this type of claim would be a product liability claim against petroleum companies.³⁶ Additionally, a state or sub-state entity could bring a claim against individual emitters of greenhouse gases. An example of the latter situation could be claims by U.S. victims, such as coastal states, island states and Alaskan villages, against U.S. defendants such as automobile and gasoline manufacturers.³⁷

Whereas in the previous scenario (claims by private parties against the state) there was a possibility that claims might end up in an international court (if human rights violations were involved), in this scenario that option does not exist and claims will have to be brought in domestic courts. As in the previous situation, a distinction can be drawn between a national tort suit—wherein both victim and defendant are located within one country—and the transboundary tort suit. In contrast to the previous situation, in the case of transboundary torts, the plaintiff need not confine him or herself to the courts of the defendant state; because the claim will be filed against a private party, issues of immunity will not arise.

In the European system, both options are open and the plaintiff can choose the forum. Council Regulation (EC) 44/2001 on

³⁴ *Conn. v. Am. Elec. Power Co.*, 406 F. Supp.2d 265, 268 (S.D.N.Y. 2005).

³⁵ *Nw. Env'tl. Def. Ctr. v. Owens Corning Corp.*, 434 F. Supp.2d 957, 961 (D. Or. 2006).

³⁶ For the possibility of a product liability claim see Grossman, *supra* note 8, at 39–51.

³⁷ *Id.* at 14, 28.

jurisdiction and the recognition and enforcement of judgments in civil and commercial matters provides that a person domiciled in a Member State may be sued in another Member State “in matters relating to tort, delict or *quasi* delict, in the courts for the place where the harmful event occurred or may occur.”³⁸ This means that, if one were to consider wrongful GHG emissions a tort, a victim of climate change could bring a suit against the defendant for this tort “in the court for the place where the harmful event occurred or may occur.” Following the judgment of the European Court of Justice in *Bier*, it is clear that the defendant may be sued, at the option of the plaintiff, either in the courts of the place where the damage occurred or in the courts of the place where the source of the damage originated.³⁹ The court held:

Where the place of the happening of the event which may give rise to liability in tort, delict or *quasi* delict and the place where that event results in damage are not identical, the expression “place where the harmful event occurred,” in article 5(3) of the Convention . . . must be understood as being intended to cover both the place where the damage occurred and the place of the event giving rise to it.⁴⁰

For our climate change case, this means that if both victim and defendant fall within the framework of Council Regulation 44/2001, the victim could choose where to bring his lawsuit.⁴¹

If the plaintiff chooses to litigate in the foreign state, a whole range of issues arise that deserve a brief discussion. First, there is the question of whether victims of climate change would have access to a court in the state where the damage is caused. This is primarily a matter of domestic law. Some legal systems, such as that of the

³⁸ Council Regulation 44/2001 art. 5, ¶ 3, 2001 O.J. (L 12) 1.

³⁹ Case 21/76, *Bier v. Mines de Potasse d’Alsace*, 1976 E.C.R. 1735, 1748–49 (interpreting the meaning of “the place where the harmful event occurred” in article 4(3) of the Convention of 27 September 1968).

⁴⁰ *Id.*

⁴¹ On the basis of the *Bier* case, many claims were brought by victims based in the Netherlands against defendants in France and Belgium for claims of transboundary water pollution. For a brief overview, see J.G. Lammers, *The Rhine: Legal Aspects of the Management of a Transboundary River*, in *NATURE MANAGEMENT AND SUSTAINABLE DEVELOPMENT* 440, 451–53 (Wil D. Verwey ed., 1989).

United States, have very broad provisions allowing foreign victims to bring claims in U.S. courts. Under their “diversity jurisdiction,” U.S. courts may have jurisdiction over cases between foreign states or foreign citizens and citizens of the United States as long as the amount in controversy exceeds \$75,000. But the access of transboundary claimants is not only a matter of domestic law. International law recognizes the principle of non-discriminatory access to remedies in the state where the source of the harm is located.⁴²

A second question is whether we can assume in such cases that a foreign plaintiff will find a liability regime applicable to climate change. Access is irrelevant if the state chooses to make no provision for liability, denies any remedy, or confers immunity on defendants. The situation here is slightly more favorable than in the scenario of claims of private parties against foreign states. Building upon the 1992 Rio Declaration⁴³ and work of the International Law Association (ILA),⁴⁴ the Draft Principles on the Allocation of Loss adopted by the ILC propose a minimum standard of timely and effective redress. Principle 3 sets out that the Draft Principles aim “to ensure prompt and adequate compensation to victims of transboundary damage,” including damage to the environment.⁴⁵

If the barriers in a foreign legal system prove to be too many or to create too many uncertainties, the victim can bring suit in his own state against a foreign defendant. There may be many practical reasons why individual plaintiffs will prefer to bring a suit in their own state. Not only will the costs be substantially lower (there is then no need to call on a foreign counsel), but the victim may also expect his own courts to be more sympathetic towards his climate change

⁴² International Law Commission, Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising out of Hazardous Activities, Principle 6, ¶ 2, in *Report of the International Law Commission on the Work of its Fifty-Eighth Session* 106, at 109, U.N. Doc. A/61/10 (Oct. 1, 2006) (providing that victims of transboundary damage should have access to remedies in the state of origin that are no less prompt, adequate and effective than those available to victims that suffer damage, from the same incident, within the territory of that state); see also U.N. Watercourses Convention, G.A. Res. 51/229, art. 32, U.N. Doc. A/RES/51/229 (May 21, 1997); Boyle, *supra* note 33.

⁴³ United Nations Conference on Environment and Development, Rio Declaration on Environment and Development, June 14, 1992, Annex 1, U.N. Doc. A/CONF.151/26/Rev.1 (Vol. 1), available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>.

⁴⁴ International Law Association London Conference (2000), Committee on Water Resources Law, *Campione Consolidation of the International Law Association Rules on International Water Resources 1966-1999*, art. 51 (2000), available at <http://www.ila-hq.org/pdf/Water%20Resources/Water%20Res%20Report%202000.pdf>.

⁴⁵ Draft Principles on the Allocation of Loss, *supra* note 42, at Principle 3.

claim than a foreign defendant's court would, particularly since the claim relates to damage occurring within the victim's home territory. In addition, it will often be the *lex fori* that will determine the applicable law. This may also be a reason why victims might prefer to bring a suit in their own state rather than in the defendant state.⁴⁶ On the other hand, we have to reckon with the problems of execution of judgments that will arise in this scenario.

While the possibility that a plaintiff may sue in her own courts is available when a specific treaty or other international instrument like Council Regulation 44/2001 is applicable, in the absence of such a treaty or other international instrument, the victim will often have no other choice than to sue the defendant before the courts of the defendant state. In many cases the domestic conflict of laws rules will determine that only the courts of the state where the defendant resides or is registered are competent.

One final aspect of claims brought by private parties, applicable both to claims against a state and claims against private persons, is that both scenarios presume that particular victims have a sufficient interest to file such a suit. Many legal systems require that the victim's subjective rights be either infringed or endangered and do not allow the victim to act on behalf of the general interest if she cannot prove any personal interest. Since the damage caused by climate change is so widespread, this may be an important restriction as far as the use of tort law is concerned. It is possible that the individual loss suffered by each individual victim is so small that no particular victim has a sufficient interest to bring a claim. This proved fatal in a number of domestic cases⁴⁷ and also in the claim of the Inuits in the Inter-American Commission on Human Rights.⁴⁸

Some countries have awarded the right to file suits for climate change damage to specific administrative agencies.⁴⁹ If this is the

⁴⁶ Of course, this should not necessarily always be the case. In some cases, the material tort law in the defendant state may be more generous to the plaintiff. That explains why many victims (including European and Asian victims) try to bring their suits before U.S. courts in cases of damage caused by U.S. companies on foreign territories; they wish to enjoy the application of what are often more generous U.S. tort rules.

⁴⁷ See, e.g., *Ctr. for Biological Diversity v. Abraham*, 218 F. Supp.2d 1143, 1155 (N.D. Cal. 2002) (holding that the concerns regarding global warming were "too general, too unsubstantiated, too unlikely to be caused by defendants' conduct, and/or too unlikely to be redressed by the relief sought to confer standing."). *But see* *Nw. Env'tl. Def. Ctr.*, 434 F. Supp. at 961 (finding that the criteria for standing were satisfied); *Friends of the Earth, Inc.*, *supra* note 6, at *2 (granting standing to the plaintiff).

⁴⁸ Letter from Ariel Dulitzky, *supra* note 24.

⁴⁹ Grossman, *supra* note 8, at 55.

case, national tort law could hold that administrative law has preempted the victim's right to bring suit. That would effectively mean that the victim could only petition the agency to take action towards GHG emitters to reduce emissions. Depending upon the specific administrative agency's competence or willingness to respond to such citizen petitions, this could effectively bar the right of victims to claims. Of course, it is largely a matter of national tort law whether this construction is followed.

Precisely because the damage is widespread, one could imagine that it would not be an individual victim but a non-governmental organization (NGO) that would represent all those who suffer a loss from climate change. This has indeed been done in a number of climate related cases.⁵⁰ Two distinct solutions may exist here: Either the victims can collectively act together in a so-called class action (provided that national law allows this) or an NGO defending particular public interests may file a claim. Many national and international legal documents now recognize the right of NGOs to file such claims, but usually strict conditions apply.⁵¹ For instance, if national law allows NGO claims in civil law at all, the NGO often must demonstrate that it has existed for a substantial number of years and that it clearly stipulated the specific protected interest as a goal in its articles of incorporation.⁵² Moreover, most national laws hold that the NGO may make claims for injunctions, but not for damages.⁵³ Hence, the choice of the victim has relevance for the remedy as well. In the case of transboundary litigation in a foreign court, separate questions arise. In that case the question will be whether the foreign legal system recognizes the legal status⁵⁴ and procedural rights that have been accorded by the state in which the NGO was set up.

⁵⁰ See, e.g., *Nw. Env'tl Def. Ctr.*, 434 F. Supp. at 961.

⁵¹ John McCormick, *The Role of Environmental NGO's*, in *THE GLOBAL ENVIRONMENT: INSTITUTIONS, LAW AND POLICY*, 252-71, (Regina S. Axelrod, David L. Downie & Norman J. Vig eds., 2005) (discussing NGO litigation and monitoring of environmental law implementation).

⁵² For the *locus standi* of environmental organizations, see *BETLEM*, *supra* note 30, at 305-34.

⁵³ *Id.* at 497 (discussing a few exceptional cases in which NGO's were also awarded damages, for instance with respect to "bird clean-up" costs).

⁵⁴ In Europe some harmonization is now achieved through the European Convention on the Recognition of the Legal Personality of International Non-Governmental Organizations, Strasbourg, Fr., Apr. 24, 1986, *Explanatory Report*, Doc No. 124 (1986), available at <http://conventions.coe.int/Treaty/en/Treaties/Html/124.htm>.

D. Combination of International and Domestic Law

We noted above that both in claims by private parties against states and in claims between private parties, claims would normally be brought in a domestic court under domestic tort law. However, in both scenarios international environmental law may well be relevant in civil litigation.⁵⁵

The general rule in this respect is relatively clear: International obligations to protect the environment apply between states. Citizens in principle cannot bring a claim based on a breach of a treaty obligation by a defendant state, nor could the victim of climate change directly base tort liability of GHG emitters on the violation of treaty obligations since these only bind states. However, the influence of international law on domestic liability is not to be excluded.

Theoretically, a court dealing with a civil law action has two opportunities to apply a norm of international law in a tort case. One rather revolutionary solution would be to bypass national law and to provide redress for violations of international law in a tort case on the basis of international law. However, this appears to be very rare. The literature only reports one example of a case where this was accepted: the District Court of Rotterdam in a suit by Dutch farmers against the French Mines de Potasse d'Alsace⁵⁶ considered the violations of the French enterprise on the basis of a violation of an international norm.⁵⁷

The more common and elegant way is to provide redress for violations of international law in transboundary civil litigations through the application of domestic law and to give effect to international law in the application of domestic liability law. Whether and how this is possible of course differs between states. For instance, in the Netherlands, there are basically three constructions that can be followed in this respect: the court can examine whether the act constitutes a violation of a statutory duty (which could be the result of the implementation of international law); the act could have violated

⁵⁵ André Nollkaemper, *How Public (International) Environmental Law Can Furnish a Rule of Decision in Civil Litigation*, 12 *TJDSCHRIFT VOOR MILIEUAANSPRAKELIJKHEID* 3–11 (1998).

⁵⁶ *Handelskwekerij Firma Gebr. Strik B.V. & Handelskwekerij Jac. Valstar B.V./MDPA* [District Court of Rotterdam], Jan. 8, 1979, NJ 113 (Neth.) in 11 *NETH. Y.B. INT'L L.* 326–33 (1980).

⁵⁷ For a discussion on this case, see Nollkaemper, *supra* note 55, at 4.

a right (that can be based on or interpreted in accordance with international law); or the act could have violated a rule of unwritten duty of care. In the latter scenario, international law arguably may be relevant in giving substance to what “due care” requires.⁵⁸

III. GOALS OF LIABILITY

In any of the above scenarios the question is why a plaintiff, whether a state, a sub-state entity, or a private person, would seek to hold either emitters of greenhouse gasses or states liable for such emissions. Addressing the causes of climate change may be said to be primarily a regulatory problem. However, as yet that challenge has not been taken up across the world with much success. What is the residual role that liability may serve?

The answers to this question are similar irrespective of whether one approaches this from the perspective of domestic tort law⁵⁹ or liability under international law.⁶⁰ In all systems, liability serves essentially two purposes: compensation and prevention.⁶¹

The primary aim of liability is to secure redress for victims, whether for states faced with the consequences of the prospect of flooding, communities or individuals in low-lying areas faced with flooding or other adverse consequences of climate change, or the environment itself. A liability rule should lead to compensation or to other forms of reparation (such as restitution) that make good for the harm inflicted. This aim applies to domestic law no less than international law. This is an objective that at best is at the outer margins of regulatory schemes and thus remains an obvious rationale and justification of the resort to liability with regard to climate change.⁶²

⁵⁸ *Id.*

⁵⁹ For a discussion of the various goals of tort law in national law see VAN GERVEN, LEVER & LAROUCHE, *supra* note 28, at 13–32; *see generally* UNIFICATION OF TORT LAW: WRONGFULNESS (Helmut Koziol ed., 1998).

⁶⁰ For a discussion of the goals of state liability, see RENÉ J.M. LEFEBER, *TRANSBOUNDARY ENVIRONMENTAL INTERFERENCE AND THE ORIGIN OF STATE LIABILITY* 1–4 (1996).

⁶¹ *See e.g.*, IAN BROWNLIE, *THE RULE OF LAW IN INTERNATIONAL AFFAIRS* 79–80 (1998); *compare generally* Institut de Droit International, *Resolution on Responsibility and Liability under International Law for Environmental Damage*, 67 *ANNUAIRE* 486 (1998) (common to both objectives, and thus arguably an overarching objective, is that state liability, or responsibility fulfils an essential function for the maintenance of the rule of law).

⁶² *But see* Tullio Scovazzi, *Some Remarks on International Responsibility in the Field of Environmental Protection*, in *INTERNATIONAL RESPONSIBILITY TODAY: ESSAYS IN MEMORY OF*

The second aim is to change behaviors of the actors that cause greenhouse gas emissions. That may be a direct aim (for instance when plaintiffs ask for injunctive relief) or may be an intended or unintended side-effect of the first aim. This aim is based on the economic theory which holds that liability provides incentives for preventive action.⁶³ The simple economic logic is that when a potential tortfeasor is confronted with economic costs of his action, or when he is only aware of the fact that he may be confronted with the costs of his action, he will take a sufficient amount of care in order to reduce or avoid the damage.⁶⁴ Economists, of course, would not hold that liability rules should give incentives for a complete termination of the damage, but only for a minimization up to the point where marginal costs of pollution abatement equal marginal benefits in damage reduction.⁶⁵ Applied to climate change liability, if states or GHG emitters were confronted with the marginal costs of their GHG emissions⁶⁶ they would, so economic theory holds, have incentives to reduce the damage to efficient levels.

In this respect, liability would supplement regulatory action aimed at curbing emissions. Indeed, both under domestic and international law, regulatory schemes aimed at prevention (for instance by providing for emission reductions) and principles of liability should be considered as two alternative, but complementary means that may assist in achieving the overall aim of reducing emissions that may contribute to climate change.⁶⁷ In the context of this Article, for instance, this is reflected in the dual role of the precautionary principle: playing a role aimed at preventing emissions

OSCAR SCHACHTER 213 (Maurizio Ragazzi ed., 2005) (stating that with respect to global concerns, “the very idea of compensation becomes meaningless, as the damage, if it really occurs, would exceed any capacity to provide remedies”).

⁶³ The preventive function of state liability is also stressed by LEFEBER, *supra* note 60, at 313–15.

⁶⁴ A “classic” in this domain is STEVEN SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW* (1987) [hereinafter SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW*]; see also STEVEN SHAVELL, *FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW* 175–288 (2004).

⁶⁵ See, e.g., Steven Shavell, *Strict Liability versus Negligence*, 9 J. LEGAL STUD. 1–25 (1980). Also as far as state responsibility is concerned, Posner and Sykes hold that the goal should be efficient deterrence of harmful acts, based on an appropriate balancing of costs and benefits of deterrent measures. Posner & Sykes, *supra* note 15, at 5.

⁶⁶ This of course assumes that it would be possible to identify the marginal contribution to the damage suffered by the victims of each particular defendant.

⁶⁷ Institut de Droit International, *supra* note 61, art. 13 (stating that “[e]nvironmental regimes should consider the appropriate connections between the preventive function of responsibility and liability and other preventive mechanisms such as notification and consultation, regular exchange of information and the increased utilization of environmental impact assessments”).

as well as a role in determining the degree of predictability required for a finding of causation and, consequently, liability.⁶⁸

Whether the possibility of liability has any such effects is uncertain. None of the liability claims that have been brought have resulted in an award for damages, making the application of economic theory somewhat speculative. As far as international liability is concerned, the deterrence theory is indeed feeble, as significant awards of compensation have been extremely rare. That holds both for interstate liability and for international civil liability schemes. As to the latter, Boyle notes that skeptics rightly question whether these schemes have had much impact on industry or have contributed to improving standards and that the principal purpose of liability therefore is not necessarily to influence the behavior of defendants.⁶⁹ However, there is at least anecdotal evidence that, at the domestic level, liability claims pertaining to environmental harm have led to changes in behavior, in particular when such claims were directed against corporations (rather than states).⁷⁰ The possibility of a successful claim might well drive corporations into emission-reducing policies and also be accorded due weight by states where such corporations are located.

It is often said that an additional goal of liability is the implementation of the polluter-pays principle. This principle requires that the cost of pollution be borne by the one responsible for causing it.⁷¹ Liability would thus guarantee that costs of polluting activities (like GHG emissions) would be borne by the actor who is the source of this action.⁷² The polluter-pays principle can be seen as a variant of the prevention-objective, since cost-internalization would

⁶⁸ See *infra* Part VI.A.

⁶⁹ See Boyle, *supra* note 33; see also LUCAS BERGKAMP, *LIABILITY AND THE ENVIRONMENT: PRIVATE AND PUBLIC LAW ASPECTS OF CIVIL LIABILITY FOR ENVIRONMENTAL HARM IN AN INTERNATIONAL CONTEXT* (2001); Jutta Brunnée, *Of Sense and Sensibility: Reflections on International Liability Regimes as Tools for Environmental Protection*, 53 *INT'L & COMP. L.Q.* 351, 367 (2004) (stating that it is unlikely that liability regimes will play a significant role as tools for environmental protection).

⁷⁰ For differences in application of the economic theory to corporations and states, see Posner & Sykes, *supra* note 15.

⁷¹ On the consequences of the polluter-pays principle see, e.g., PHILIPPE SANDS, *PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW* 279–85 (2d ed. 2003); NICOLAS DE SADELEER, *ENVIRONMENTAL PRINCIPLES. FROM POLITICAL SLOGANS TO LEGAL RULES* 21–60 (2002).

⁷² This is also the common interpretation of the polluter-pays principle in European environmental law. See, e.g., ALEXANDRE C. KISS & DINAH SHELTON, *MANUAL OF EUROPEAN ENVIRONMENTAL LAW*, 43–44, (2d ed. 1997).

lead to a change in behavior.⁷³ However, the polluter-pays principle also has the distinct objective of allocating costs away from the victim and to the polluter. In that respect it can also contribute to a fair allocation of benefits and costs between polluters and victims. As is the case for deterrence, for the time being the power of liability law to achieve any redistribution of costs between relevant actors remains theoretical, but at the same time the prospect thereof may be a driving force for attempts to initiate liability litigation.

IV. BASES OF LIABILITY

Liability claims may be grounded on a variety of bases. These will of course depend on the jurisdiction in which a claim is brought. Claims brought in domestic courts will rely primarily on sources of domestic liability law (either the law of the forum or foreign law, depending on the *lex fori*).⁷⁴ Parallel sources may be found in international law.⁷⁵ Economics may be helpful as well in identifying the appropriate liability rule for climate change damage.⁷⁶

A. *International Law*

The liability of a state under international law rests essentially on the commission of a prohibited act. In addition, there may be a narrow role for strict liability.

First, liability can be based on the commission of a prohibited act. This can either be the violation of a treaty obligation or of a rule of customary international law. As to the first option, one could envisage a situation where there would be state liability simply because the obligations of the United Nations Framework Convention on Climate Change (UNFCCC) or the Kyoto Protocol had been violated. Many writers have indeed already examined whether climate change constitutes a violation of international commitments, not only under UNFCCC or the Kyoto Protocol, but

⁷³ MICHAEL FAURE & GÖRAN SKOGH, *THE ECONOMIC ANALYSIS OF ENVIRONMENTAL POLICY AND LAW* 26–30 (2003).

⁷⁴ *See infra* Part IV.B.

⁷⁵ *See infra* Part IV.A.

⁷⁶ *See infra* Part IV.C.

potentially also under world trade law or even the United Nations Convention on the Law of the Sea (UNCLOS).⁷⁷

Some particular scenarios can be distinguished. If the defendant state were a signatory to the UNFCCC, but not the Kyoto Protocol (a hypothesis which was examined in the literature with respect to Canada before the entry into force of the Kyoto Protocol⁷⁸), a question would arise as to whether the state violated its commitments under Article 4 of the UNFCCC, and whether that breach could be the basis of a liability claim. The latter may not be obvious, as the requirements of Article 4(1) are rather vague. For instance, it refers to the obligation to promote and cooperate in the development and transfer of technologies that control, reduce or prevent anthropogenic emissions,⁷⁹ as well as the obligation to promote sustainable management of sinks and reservoirs of all greenhouse gases.⁸⁰ These obligations are so vague that it is doubtful that violating these obligations would constitute a sufficient basis for state liability.

However, states (like Canada or the United States) that are Annex I countries also have committed themselves to “take corresponding measures on the mitigation of climate change, by limiting its anthropogenic emissions of greenhouse gases and protecting and enhancing its greenhouse gas sinks and reservoirs.”⁸¹ This obligation is still rather vague, but does stipulate a commitment for Annex I countries to at least take corresponding measures for the mitigation of climate change by limiting their anthropogenic emissions of greenhouse gases and arguably could be the basis of a liability claim.

The situation is different in the case of a country that has committed to the obligations of both the UNFCCC and the Kyoto Protocol. Annex B to the Kyoto Protocol contains very specific quantified emission limitation or reduction commitments for every separate country specified in a percentage of the base year or period.

⁷⁷ See e.g., A.L. Strauss, *The Legal Option: Suing the United States in International Forums for Global Warming Emissions*, 33 ENVTL. L. REP. 1085 1087–89 (2003).

⁷⁸ Patrick Hamilton, *Can't Unring the Bell: Canada's Obligations and International Law Pending Entry into Force of the Kyoto Protocol* 24–25 (unpublished winning essay, 2004 Department of Justice/Canadian Bar Association National Law School Essay Contest), available at <http://www.cba.org/CBA/News/pdf/kyotoessay.pdf>.

⁷⁹ United Nations Framework Convention on Climate Change, *supra* note 1, art. 4(1)(c).

⁸⁰ *Id.* art. 4(1)(d).

⁸¹ *Id.* art. 4(2)(a).

For instance, for Australia, this is 108 percent, and for the United States it is 93 percent⁸² (note, however, that neither Australia nor the United States are parties to the Protocol). Article 3(1) provides that Annex I parties shall individually or jointly ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments inscribed in Annex B.⁸³ The objective is to reduce the overall emissions of such gases by at least five percent below 1999 levels in the commitment period 2008 to 2012. In this case, there is a clear obligation on the parties that have accepted the Kyoto Protocol. A breach of these very specific quantified emission limitation and reduction commitments could thus be considered a breach of a treaty obligation that potentially could give rise to state liability (provided other conditions are met).

The main rule of customary international law that is relevant as a basis for responsibility for climate change is the obligation of states not to cause damage to the environment of other states or of areas beyond national jurisdiction.⁸⁴ This basis for liability can be relevant if the climate change were caused by a state, whether or not it has made commitments to reduce emissions under the UNFCCC or any other specific treaty. This would be relevant if a victim state would like to direct the claim against, for example, China and/or India. Even though they equally have accepted commitments as parties to the UNFCCC, their commitments as formulated in Article 4(1) mainly relate to the provision of information, cooperation and promoting sustainable development. Hence, a claim of state liability against those parties could hardly be based on a breach of the UNFCCC or the Kyoto Protocol. In that case, the basis of liability would be the good neighbor principle as incorporated in customary international law.

⁸² Kyoto Protocol to the United Nations Framework Convention on Climate Change, Annex B, Dec. 10, 1997, U.N. Doc. FCCC/CP/1997/CRP.6; for a final version with quantified emission limitation or reduction commitments, see <http://unfccc.int/resource/docs/convkp/kpeng.pdf>.

⁸³ *Id.* art. 3(1).

⁸⁴ Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 29 (July 8) (stating that “[t]he existence of the general obligation of States to ensure that activities within their jurisdiction and control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment”); see also RODA VERHEYEN, CLIMATE CHANGE DAMAGE AND INTERNATIONAL LAW 147 (2005).

The obligation of states to prevent transboundary pollution extends not only to state entities, but also to emissions by private actors within the state—usually enterprises that emit from the state’s territory. Such emissions are not, as such, attributable to the state. Nonetheless, the state may incur liability since it may have been obliged to prevent or control such “private emissions.”⁸⁵ Since a state can control the emission of GHGs through government regulation or licensing procedures, even emissions by private actors can result in state responsibility (even when they are not attributable). In terms of civil law, one would hold that there is a type of vicarious liability of the state for wrongful acts committed by actors within the particular state.⁸⁶ In international law, the term vicarious liability is generally considered inapplicable, but the result is largely the same.⁸⁷

In international law, liability does not depend on fault and is established on the basis of attribution and breach alone.⁸⁸ Thus, a plaintiff would “only” have to show that an obligation of the Kyoto Protocol was breached. The situation is different when the primary obligation that is breached provides for a requirement of fault. Such is the case for the customary obligation that states should prevent transboundary damage. This is a due diligence obligation and breach depends on what the state could reasonably have done. Under this standard, liability will not cover damage resulting from events that are either unforeseeable or unavoidable using reasonable diligence.⁸⁹ In these circumstances the loss will not be recoverable in international law.⁹⁰ If the state has been diligent in regulating and controlling the harmful activity, yet transboundary damage still occurs, recourse

⁸⁵ This construction could already be found in the *Trail Smelter* case holding that, under principles of international law, no state has the right to use or permit the use of territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence. *Trail Smelter Arbitration (U.S. v. Canada)*, 3 R. Int’l Arb. Awards 1911 (1938). The aspect of “permitting the use of territory” consists precisely of the fact that the emission of greenhouse gases will usually have been the subject of a licensing procedure of the state or related public authorities. SANDS, *supra* note 71, at 241–42.

⁸⁶ Also Posner and Sykes construct state responsibility as “vicarious liability.” See Posner & Sykes, *supra* note 15, at n.6.

⁸⁷ SANDS, *supra* note 71, at 241–46. On the historical background of the theory of vicarious responsibility in international law, see J.A. Hessbruegge, *The Historical Development of the Doctrines of Attribution and Due Diligence in International Law*, 36 N.Y.U.J. INT’L L. & POL. 295 (2004).

⁸⁸ Draft Articles, *supra* note 25, arts. 1 & 2.

⁸⁹ See *e.g.*, *Corfu Channel (U.K. v. Albania)*, 1949 I.C.J. 4 (Apr. 9).

⁹⁰ Draft Principles on the Allocation of Loss *supra* note 42, commentary to Principle 1, ¶¶ 7–9.

against private actors is the only option left. That avenue, as indicated above, depends on domestic law, though emerging international law now provides for a minimum standard of liability.⁹¹

Much has been said on the possibility or desirability of holding a state liable for damage arising out of a perfectly lawful activity, without any wrong having been done.⁹² This form of liability mostly has been reserved for so-called ultrahazardous activities.⁹³ This complies with findings in the economic literature which, as we will argue below, equally holds that the ultrahazardous character of an activity is considered as a criterion for a strict liability rule.⁹⁴

However, state support for a general rule of strict liability of states for ultrahazardous activities seems modest at best. The development of the ILC Draft Articles on the Allocation of Loss presented a new chance to test support for the idea of strict state liability, but it was clear that few governments had any enthusiasm for accepting that no-fault liability for damage caused by activities within their jurisdiction should fall on states themselves. Special Rapporteur Rao concluded:

The hesitation to peg State liability to strict liability is also understandable. It is mainly due to an assessment that in international practice, as between States, that form of liability is not accepted for activities that are considered as lawful to pursue in their domestic jurisdiction in accordance with their sovereign rights.⁹⁵

⁹¹ *Id.*

⁹² NATHALIE L.J.T. HORBACH, LIABILITY VERSUS RESPONSIBILITY UNDER INTERNATIONAL LAW. DEFENDING STRICT STATE RESPONSIBILITY FOR TRANSBOUNDARY DAMAGE 420–24 (1996) (arguing that there is a gradual acceptance of a type of state responsibility based upon the mere occurrence of transboundary damage, especially as far as ultrahazardous activities are concerned, but increasingly so for other sources of transboundary damage as well). For an older but still useful discussion, see Gunther Handl, *State Liability for Accidental Transnational Environmental Damage by Private Persons*, 74 AM. J. INT'L L. 525 (1980). See also Institut de Droit International, *supra* note 61, at art. 4 (stating that “[t]he rules of international law may also provide for the engagement of strict responsibility of the State on the basis of harm or injury alone. This type of responsibility is most appropriate in case of ultrahazardous activities, and activities entailing risk or having other similar characteristics”).

⁹³ SANDS, *supra* note 71, at 881–82. See also HORBACH, *supra* note 92, at 420–24.

⁹⁴ See *infra* Part IV.C.

⁹⁵ International Law Commission, *Second Report on the Legal Regime for the Allocation of Loss in Case of Transboundary Harm Arising out of Hazardous Activities*, ¶ 22, U.N. Doc A/4/540 (2004).

In any case, even if a general exception for ultrahazardous activities were accepted, it is doubtful that it would be applicable to climate change emissions under positive law.

B. *Domestic Tort Law*

Although the basis of a tort claim in domestic law will largely differ between legal systems, we can notice harmonizing tendencies both in the United States and in Europe. In the United States, we can point at the work of the American Law Institute in the Restatement of Torts.⁹⁶ In Europe, we can point at some harmonization efforts of the European Commission (although modest) in the areas of products liability⁹⁷ and environmental liability.⁹⁸ Even though in both cases the European systems are superimposed upon existing national laws (limiting the resulting harmonization), these efforts identify a few similar tendencies within national tort laws. These tendencies (for instance, a trend towards imposing strict liability for ultrahazardous activities) can also be found in the harmonization attempt made by the European Group on Tort Law, which presented in 2005 its Principles of European Tort Law.⁹⁹ Even though these Principles have no force of law, they provide a kind of common denominator of tendencies in tort law in many jurisdictions and provide a useful indication of the state of tort law.

As far as the European Union is concerned, we can point in particular to the recent Directive 2004/35/CE on environmental liability as an example of one approach to the prevention and remedying of environmental damage.¹⁰⁰ Of course, the territorial scope of this document is limited to the European Union and the scope of application is relatively limited as a result of the given

⁹⁶ RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM (Tenative Draft No. 1, 2001); RESTATEMENT (THIRD) OF TORTS: GENERAL PRINCIPLES (Discussion Draft 1999).

⁹⁷ Council Directive 85/374/EEC, 1985 O.J. (L 210) 29. For a comment, see Michael Faure, *Product Liability and Product Safety in Europe: Harmonization or Differentiation?*, 53 KYKLOS 467 (2000).

⁹⁸ Council Directive 2004/35/CE, 2004 O.J. (L 143) 56. For a comment, see, *inter alia*, DETERRENCE, INSURABILITY, AND COMPENSATION IN ENVIRONMENTAL LIABILITY: FUTURE DEVELOPMENTS IN THE EUROPEAN UNION (Michael Faure, ed., 2003) and ENVIRONMENTAL LIABILITY IN THE EU: THE 2004 DIRECTIVE COMPARED WITH US AND MEMBER STATE LAW (Gerrit Betlem and Edward Brans, eds, 2006).

⁹⁹ PRINCIPLES OF EUROPEAN TORT LAW, *supra* note 11.

¹⁰⁰ Council Directive 2004/35/CE, *supra* note 98.

definitions. However, some aspects of climate change damage may under certain circumstances fall within the scope of the Directive.

The Directive's practical application may seem limited since individuals and states within the European Union are not likely to use the Directive as a source for civil litigation for climate change damage. Most of the heavy emitters do not seem to be based in Europe, while most of the primary victims of climate change damage are probably located outside the continent. However, the application of the Directive to climate change is not to be discounted. Particular European emitters (or states) may fail to reach their Kyoto targets (an outcome that is in fact very likely) and European states, too, may suffer from climate change related damage (for example from a sea level rise).¹⁰¹ In those cases, the European Liability Directive may play a role. Moreover, one could well imagine that national legislation implementing the Directive would play a role in an additional set of possible scenarios, for example if non-European victims should bring a lawsuit within Europe for GHG emissions by European industry.

Directive 2004/35/CE on environmental liability applies to environmental damage caused by any of the occupational activities listed in Annex III and to any imminent threat of such damage occurring as a result of any of those activities.¹⁰² Damage to protected species and natural habitats caused by occupational activities other than those listed in Annex III will give rise to liability only where the operator has been at fault or negligent.¹⁰³ This means that when environmental damage as defined in the Directive is caused by an activity listed in Annex III, a strict liability rule applies. The activities listed in Annex III contain, *inter alia*, the operation of installations subject to a permit in pursuance of the Directive concerning Integrated Pollution Prevention and Control.¹⁰⁴ Many of the GHG emitters will also fall under the scope of the IPPC Directive and will hence in principle be subject to the strict liability regime. Note, however, that this only applies to environmental damage as defined in article 2(1) of the Directive, including, *inter alia*, damage to protected species and natural habitats, water damage, and land

¹⁰¹ This may particularly be threatening for countries which are already, to a large extent, located below sea level and will thus face substantial costs, such as the Netherlands' need to fortify dikes to protect against inundation by sea water.

¹⁰² Council Directive 2004/35/CE, *supra* note 98, at art. 3(1)(a).

¹⁰³ *Id.* art. 3(1)(b).

¹⁰⁴ Council Directive 96/61/EC, 1996 O.J. (L 257) 26.

contamination creating a significant risk of adverse effects to human health.¹⁰⁵ It is therefore doubtful that economic loss resulting from climate change, for example, would fall under the scope of the Directive. Nonetheless, the importance of the Directive is that it confirms a trend in national tort laws to apply a strict liability rule to environmental damage originating from ultrahazardous activities.

Harmonization attempts have also been undertaken by various groups that have attempted to draft overarching principles of tort law.¹⁰⁶ Recently, the European Group on Tort Law presented its Principles of European Tort Law. Even though these principles do not specifically focus on transboundary problems like climate change damage, they contain a few interesting indications for the standard of liability.¹⁰⁷

These Principles of European Tort Law also support the application of a strict liability rule. According to article 5:101, “[a] person who carries on an abnormally dangerous activity is strictly liable for damage characteristic to the risk presented by the activity and resulting from it.”¹⁰⁸ The article defines an activity as abnormally dangerous if “a) it creates a foreseeable and highly significant risk of damage even when all due care is exercised in its management and b) it is not a matter of common usage.”¹⁰⁹ Article 5:101(3) provides that “[a] risk of damage may be significant having regard to the seriousness or the likelihood of the damage.”¹¹⁰ According to the commentary, strict liability is triggered under the Principles “if a highly significant risk of harm remains despite all proper precautions taken by the defendant.”¹¹¹ The commentary adds that the “failure to exercise reasonable care when pursuing an abnormally dangerous activity within the meaning of the article may also lead to an additional basis of liability” under the Principles.¹¹² One could well hold that GHG emissions create a “foreseeable and highly significant risk of damage even when all due care is exercised in [their]

¹⁰⁵ Council Directive 2004/35/CE, *supra* note 98, art. 2(1).

¹⁰⁶ For a summary of these harmonization projects, see Gerhard Wagner, *The Project of Harmonizing European Tort Law*, 42 COMMON MKT. L. REV. 1269 (2005); CHRISTIAN VON BAR, *THE COMMON EUROPEAN LAW OF TORTS* (2000).

¹⁰⁷ PRINCIPLES OF EUROPEAN TORT LAW, *supra* note 11.

¹⁰⁸ *Id.* art. 5.101.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

¹¹¹ Bernhard Koch, *Strict Liability*, in PRINCIPLES OF EUROPEAN TORT LAW 105 (2005).

¹¹² *Id.*

management” and thus that they should trigger strict liability under the Principles of European Tort Law.

Finally, we can reiterate that the ILC Draft Articles on Allocation of Loss aim to harmonize domestic tort law, with a view to ensuring prompt and adequate compensation to natural or legal persons—including states—that are victims of transboundary damage, including damage to the environment. The ILC Draft, like most of the ¹¹³civil liability treaties, proposes a strict liability scheme in national law.

C. *Economic analysis.*

The development of the principle of strict liability for environmental harm caused by ultrahazardous activities is supported by harmonizing developments at the international and European levels, as well as economic analysis. Economists generally favor strict liability when harm is caused by an ultrahazardous activity, because only this standard gives a potential injurer incentive for optimal internalization of the externality.¹¹⁴

Strict liability would be especially useful in cases where victims can have no influence on the accident risk—so called unilateral accidents.¹¹⁵ Even though some may argue that victims of climate change may be in a position to take precautionary measures, the most significant influence on the damage caused by climate change is undoubtedly created by GHG emissions. Hence, economists would argue that it is most important to control the injurer’s activity and that therefore a strict liability rule should apply.¹¹⁶

¹¹³ Similarly, see Institut de Droit International, *supra* note 61, art. 5 (“[E]nvironmental regimes should prefer the strict liability of operators as the normal standard applicable under such regimes, thereby relying on the objective fact of harm and also allowing for the appropriate exceptions and limits to liability.”).

¹¹⁴ L.E.E. Goldie, *Concepts of Strict and Absolute Liability and the Ranking of Liability in Terms of Relative Exposure to Risk*, in 16 NETH. Y.B. INT’L L. 175 (1985).

¹¹⁵ Faure, *supra* note 98, at 29–32; Hans-Bernd Schäfer & A. Schönenberger, *Strict liability versus negligence*, in II ENCYCLOPEDIA OF LAW AND ECONOMICS, CIVIL LAW AND ECONOMICS 597–624 (Boudewijn Bouckaert & Gerrit De Geest eds., 2000); Hans-Bernd Schäfer & A. Schönenberger, *Strict Liability Versus Negligence: An Economic Analysis*, in THE BOUNDARIES OF STRICT LIABILITY IN EUROPEAN TORT LAW 37, 39–46 (Franz Werro & Vernon V. Palmer eds., 2004); Shavell, *supra* note 65, at 2–6 (1980).

¹¹⁶ The classic contribution in this respect is SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW, *supra* note 64, at 1–25.

Even if a strict liability rule does not apply under some domestic legal systems, GHG emissions could still be governed by a fault regime that would not necessarily preclude liability. The argument could be made that excessive emissions of those GHGs responsible for climate change should be considered as wrongful and should thus give rise to liability on the basis of fault. The reasoning would be that the marginal costs of measures to reduce GHG emissions may be minor¹¹⁷ relative to the marginal benefits in reducing the climate change damage which results from GHG emissions. Not taking cost-effective precautionary measures could thus be qualified as fault.

V. EFFECT OF FOLLOWING REGULATION / INTERNATIONAL STANDARDS

To a large extent, the problem of climate change is being tackled by imposing GHG emission reductions through either general regulations and/or the issuance of specific permits to large emitters. The question is whether these permits have an influence on the liability issue. Can it be argued that as long as a state or company follows regulatory conditions, no finding of negligence in tort is possible—in other words, that large emitters would have a “regulatory compliance defense”? This problem can play a role in international liability since it could be argued that compliance with the Kyoto obligations precludes liability. At the domestic level, it could likewise be argued that as long as emitters follow the standards mandated by a regulation or a permit, they should be freed from liability.

This question is heavily debated in legal doctrine. Some argue strongly in favor of a “regulatory compliance defense.”¹¹⁸ Others are strong opponents of such a regulatory compliance defense, arguing that it could completely reduce the effectiveness of environmental liability.¹¹⁹

¹¹⁷ Of course, a lot will depend on the amount of measures already taken by the particular industry and hence on the level of development in the particular country.

¹¹⁸ For instance, the Dutch legal scholar Lucas Bergkamp argues that if polluters first have to comply with the conditions of a license and subsequently still can be held liable for damages, they have to “pay twice.” See BERGKAMP, *supra* note 69 at 239–58; see generally LUCAS BERGKAMP, *DE VERVUILER BETAALT DUBBEL: OVER DE VERHOUDING TUSSEN PRIVAAT- EN PUBLIEKRECHT* [THE POLLUTER PAYS TWICE: ON THE RELATIONSHIP BETWEEN PRIVATE AND PUBLIC ENVIRONMENTAL LAW] (1998).

¹¹⁹ See, e.g., Pål Wenneras, *Permit Defenses in Environmental Liability Regimes – Subsidizing Environmental Damage in the EC?*, in 4 Y.B. EUR. ENVTL. L. 149 (Thys F.M. Ety & Han Somsen eds., 2005).

A. *Compliance with Kyoto Obligations: Defense to a Claim?*

The first scenario to consider is one where a state has ratified both the UNFCCC and the Kyoto Protocol and is in compliance with all of the applicable provisions of both agreements. An example would be the case of a European Union country like the Netherlands meeting its obligation to reduce its emissions to ninety-two percent of its former levels as provided in Annex B to the Kyoto Protocol. Could a victim state still hold the defendant state liable even though the latter state has complied with its treaty obligations?

The victim state (or other plaintiff) could argue that following the requirements from the Kyoto Protocol is just a minimum that does not free an Annex I country from taking further measures if this would be necessary to meet another obligation—for instance, the obligation to prevent transboundary harm under customary international law. Indeed, there seems to be increasing evidence that even if all Kyoto Protocol commitments are met, climate change would not be reduced in an effective manner. For instance, it has been estimated that even with the execution of the Kyoto Protocol, the world energy-related carbon dioxide emissions will still increase by fifty-two percent by 2030 unless further countermeasures are taken.¹²⁰

The question of whether compliance with Kyoto Protocol obligations could present a defense to a claim in principle is only relevant to relations between two or more states when each is a party to the Protocol. If they are indeed parties, it might be argued that between them, the obligations of the Protocol would replace a pre-existing rule of customary law.¹²¹ However, that argument is not compelling. There seems to be little or no evidence that the parties intended to replace customary law on this point with the Protocol's obligations. It also is questionable whether preexisting legal obligations really overlap with the Protocol's requirements. The

¹²⁰ It is a warning that was formulated by the International Energy Agency (IEA) in a press release issued in Nov. 2005. See *World CO₂ to Increase by 52% by 2030*, ENDS EUROPE DAILY, Nov. 7, 2005, available at <http://www.ends.europedaily.com/articles/index.cfm?action=article&ref=19762&searchtext=mondain&sterachtige=All>.

¹²¹ On the relationship between treaties and customary law, see generally MARK E. VILLIGER, *CUSTOMARY INTERNATIONAL LAW AND TREATIES: A STUDY OF THEIR INTERACTIONS AND INTERRELATIONS WITH SPECIAL CONSIDERATION OF THE 1969 VIENNA CONVENTION ON THE LAW OF TREATIES* (1985).

Kyoto obligations are not concerned with interstate damage. Given the global effects of climate change, it is also very doubtful whether states could opt out of their obligations by bilateral or even multilateral (but not worldwide) agreements. In any case, such interstate agreements would not apply to a state not party to the Kyoto Protocol. In sum, the general proposition that compliance with the Protocol does not necessarily present a defense to liability claims seems reasonable.

B. *Domestic Law*

A similar issue can arise under domestic law: Does compliance with the emission standards contained in a domestically issued permit constitute an excuse under tort law? The answer to this question varies widely among legal systems. For instance, the notion that industry would be freed from liability as long as a regulatory standard is followed is firmly rejected in Belgium.¹²² The basic idea is that the administrative authority, when granting a license and setting permit conditions, cannot take into account the possible harm that the licensed activity might cause to all possible third parties. Third party rights to compensation for damages, therefore, may not be impaired simply because the operator of a plant followed the conditions of a license. Legal doctrine and case law in Belgium clearly state that meeting the conditions of a permit is just a minimum.¹²³ In addition, a plant owner has to take all possible precautions as required by tort law in order to avoid causing harm to third parties through his licensed activity.

In the Netherlands, the question of whether following the conditions of a license would have a justificative effect in tort has been extensively debated and has been firmly answered in the negative. In Dutch case law, it is generally accepted that following the conditions of a license does not release a plant owner from potential

¹²² Mario Deketelaere, *Milieu aansprakelijkheid, burgerrechtelijke aansprakelijkheid voor milieuschade, strafrechtelijke aansprakelijkheid voor milieumisdrijven, administratieve sancties en veiligheidsmaatregelen, en verzekering voor milieuschade*, in *MILIEURECHT IN BELGIË, STATUS QUESTIONIS ANNO 1997*, 682 (Kurt Deketelaere ed., 1997); A. van Oevelen, *Civielrechtelijke aansprakelijkheid voor milieuschade*, in *RECHT PRAKTIJK EN MILIEUBESCHERMING* 138–39 (1991).

¹²³ For further details see Michael Faure, *Environmental Liability in Belgium*, in *ENVIRONMENTAL LAW IN THE UNITED KINGDOM AND BELGIUM FROM A COMPARATIVE PERSPECTIVE* 203 (Kurt Deketelaere & Michael Faure eds., 1999).

liability.¹²⁴ An exception would only exist if the interests of the potential victims were clearly taken into account when the conditions of the permit were set.¹²⁵ This point is made very clear in a famous case in the Dutch Supreme Court that dealt with pollution caused by the French potassium mines in the Alsace region.¹²⁶ The potassium mines argued that the emissions were within the limits set by their permit and, therefore, not illegal. The court, however, judged that the license had not taken into account the potential harmful effects of the emissions for third parties and thus could not release the potassium mines from liability.

In Germany, the governing 1990 German Environmental Liability Act contains several limitations. While the Act otherwise alleviates the burden of proof in cases of environmental harm, Article 6.2 provides that causation must still be proved if the establishment has operated in accordance with the relevant legislative, regulatory, and permit requirements.¹²⁷ Moreover, the operator must also prove that there has not been a disturbance in the operation of the installation. In such a case, the victim will have to prove the causal link without being able to rely upon the principle of presumption of liability—propensity. The objective of such a provision is to create an incentive for German industries to comply with laws and regulations. Note, however, that compliance with regulation does not free the operator from liability; it merely has an influence on the burden of proof.

This brief overview shows that although regulatory compliance may play some role in assessing liability, several legal systems hold that following regulations is merely a minimum. Thus, there is not

¹²⁴ Banketbakker Krul/Joostens, Hoge Raad der Nederlanden [HR] [Supreme Court of the Netherlands], Jan. 30, 1914, NJ 497 (Neth.); Vermeulen/ Lekkerkerker, Hoge Raad der Nederlanden [HR] [Supreme Court of the Netherlands], Mar. 10, 1972, NJ 278 (ann. G.J. Scholten) (Neth.).

¹²⁵ M. Rus-Van der Velde, *Onrechtmatige daad en vergunning*, in *CIVIELRECHTELIJKE AANSPRAKELIJKHEID VOOR MILIEUSCHADE* 111 (N.S.J. Koeman, W.J. Ouwerkerk & J.M. van Dunné eds., 1989); J.H. Nieuwenhuis, *Blinddoek en balans in het milieurecht. Drie manieren om belangen af te wegen*, in *DILEMMA'S VAN AANSPRAKELIJKHEID* 44–47 (A.M. Hol & M.A. Loth eds., 1991).

¹²⁶ Mines de Potasse d'Alsace S.A. (MDPA) v. Onroerend Goed Maatschappij Bier B.V. et al., Hoge Raad der Nederlanden [HR] [Supreme Court of the Netherlands], Sept. 23, 1988, 21 NETH. Y.B. INT'L L. 434 (1990); MICHAEL FAURE, (G)EEN SCHIJN VAN KANS. BESCHOUWINGEN OVER HET STATISTISCH CAUSALITEITBEWIJS BIJ MILIEUGEZONDHEIDSCHADE 128–29 (1993).

¹²⁷ Environmental Liability Act, Dec. 10, 1990, BGBl. I 1990, 2634 (as amended) (translation by the Cologne Re), available at http://www.ucl.ac.uk/laws/global_law/german-statutes/print_statute.shtml?environment_1990.

generally a “regulatory compliance defense.” Such a defense might rather play a role in exceptional cases where all the interests have been weighed *ex ante* and the potential victim’s damage was taken into account when the administrative conditions were set. Such an application should not, however, be regulated in a general matter, but should be left to the discretion of the courts. As a general rule, compliance with regulation should not preclude liability in the absence of special exceptions to be applied by a judge.

An interesting issue which we cannot discuss further within the scope of this Article is whether domestic and foreign licenses would have different effects on a regulatory compliance defense. The Supreme Court in the Netherlands held in the well-known Alsacian potassium mine case that the influence of the license on the liability issue (in the particular case it was a French license) will depend upon the nature of the license, the interest it is intended to protect, and the circumstances of the case. In that particular case, it appeared that the French license itself made an express reservation regarding the rights of third parties. Thus the French license did not free the French operator from liability towards Dutch victims.¹²⁸

C. *European Directive on Environmental Liability: Justificative Effect of License Not Regulated*

The drafters of the European Environmental Liability Directive of April 21, 2004 apparently could not reach unanimity on the sensitive topic of the justificative effect of regulatory compliance. Hence, Article 8(4) of the Directive provides that:

Member States may allow the operator not to bear the cost of remedial actions taken pursuant to [the] Directive where he demonstrates that he was not at fault or negligent and that the environmental damage was caused by: (a) an emission or event expressly authorised by, and fully in accordance with the conditions of, an authorisation conferred by or given under applicable national laws and regulations which implement those

¹²⁸ For a detailed discussion of the effect of a foreign license see BETLEM, *supra* note 30, at 424–40.

legislative measures adopted by the Community . . . as applied at the date of the emission or event.¹²⁹

The Directive thus provides Member States with the option to allow a “compliance with permit” defense on the basis of national law.

D. *Law and Economics*

There can be some support for this point of view from an economic perspective. Economics usually holds that the injurer should still be held liable even though the regulatory standard was followed. The basis for this reasoning is that following the regulatory standard is often merely a minimum. Exposure to liability will give the potential injurer incentives to take all precautions, even if doing so requires more than just following the regulation.¹³⁰ Allowing a regulatory compliance defense would largely remove the beneficial effects from a liability rule. Economists thus argue that a compliance defense would prevent any precaution in excess of the regulatory standard. An additional argument is that there is often serious under-enforcement of standards, and thus the role of liability as an incentive for injurers to take precautions remains important. To that, the argument is added that the regulatory standard may often be too lenient as a result of lobbying by interest groups. Therefore, regulatory standards are not always set efficiently. If the optimal care level is higher than the regulatory standard, liability will provide additional incentives efficiently.¹³¹

These arguments apply equally to the case of state liability for climate change. One may certainly hold that there seems to be evidence that the standard laid down in the Kyoto Protocol is merely a minimum, but that it is not likely to be the efficient standard in order to mitigate the problem of climate change. Thus, if scientific evidence would prove that the efficient standard would be higher

¹²⁹ Council Directive 2004/35/CE, *supra* note 98, art. 8(4).

¹³⁰ Paul Burrows, *Combining Regulation and Liability for the Control of External Costs*, 19 INT'L REV. L. & ECON. 227, 236–39 (1999); Susan Rose-Ackerman, *Public Law Versus Private Law in Environmental Regulation: European Union Proposals in the Light of United States and German Experiences*, in LAW AND ECONOMICS OF THE ENVIRONMENT 13–39 (Erling Eide & Roger Vanden Bergh eds., 1996); Steven Shavell, *Liability for Harm Versus Regulation of Safety*, 13 J. LEGAL STUD., 357, 365–71 (1984).

¹³¹ ALESSANDRA ARCURI, GOVERNING THE RISKS OF ULTRAHAZARDOUS ACTIVITIES. CHALLENGES FOR CONTEMPORARY LEGAL SYSTEMS 137–54 (2005).

than the standard laid down in the Kyoto Protocol, allowing state liability would give states incentives to go beyond the regulatory requirements as laid down in the Kyoto Protocol. Moreover, international documents like the Kyoto Protocol are undoubtedly more likely to be the result of lobbying and competition between interest groups. A suboptimal standard may thus be the result. Allowing state liability, even though the standard in the Kyoto Protocol is followed, will force states to take precautionary measures beyond the minimum requirements contained in the Protocol. Thus, liability can achieve its goal of prevention of pollution and implement the polluter-pays principle.

The situation is the same for the question of whether compliance with regulation could free individual emitters from liability. This could be the case if, for instance, a state were to have implemented the Kyoto obligations in national measures and consequently imposed emission standards in environmental permits. From an economic perspective, one would argue that it depends whether the emission standard as imposed in the permit corresponds with the efficient standard or whether additional cost-effective measures could be taken. If the regulator has already set the emission standard at the optimal level, a judge in a civil liability case should not “second guess” efficient agency decisions. However, when the efficient emission standard is higher than the regulatory norm (in the sense that GHG emissions could be further reduced in a cost-effective manner), economics teaches that the GHG emitter should still be held liable since it will provide additional incentives for a cost-effective reduction of GHG emissions.¹³²

VI. UNCERTAINTY OVER CAUSATION

The most difficult issue in a liability claim, either state liability under international law or “simple” tort liability based on national law for climate change damage, is undoubtedly the issue of causation. The primary question is whether a clear and causal link exists between anthropogenic emissions and climate change. Even though scientists, especially the experts gathered in the IPCC, seem to be increasingly convinced of an effect of anthropogenic emissions on the likelihood of climate change, they also indicate that a large

¹³² Faure, *supra* note 98, at 57.

degree of uncertainty still exists. The second type of uncertainty relates to the question of whether the particular damage suffered by one victim is effectively caused by CO₂ emissions from one particular source. Even if a causal link between the damage and anthropogenic emissions could be accepted, problems of causation will still arise. Since climate change is a combination of natural sources and CO₂ emissions from various emitters, it can be caused by many sources.

A large body of literature—much of it economic—addresses issues of technical causality and how this may lead to legal causation even in cases of uncertainty.¹³³

A. *International Law*

In international law, the starting point is that a responsible state needs only to compensate for damage that is *caused* by the wrongful act. This requires a link between emissions, climate change, and harmful effects. Whether damage is “caused” by an act is primarily determined by the criteria of normality and predictability (or foreseeability).¹³⁴ Under the criterion of normality, an injury is sufficiently linked to an unlawful act whenever the normal and natural course of events indicates that the injury is a logical consequence of the act. Under the criterion of predictability, an injury is linked to an unlawful act whenever the author of the unlawful act could have foreseen the damage it caused. The important question thus is whether a state emitting carbon dioxide could foresee the damage, or whether emissions would cause the harm in the “normal course of events.”

A pertinent question in this context is whether the precautionary principle may have an effect on the application and interpretation of causality.¹³⁵ This principle increasingly has influenced the way the law reacts to issues of causal uncertainty, especially concerning the question of whether regulation is required notwithstanding causal uncertainty. The UNFCCC preamble

¹³³ See Rob Young, Michael Faure, & Paul Fenn, *Causation and Causality*, 24 INT’L REV. L. & ECON. 507, 508–17 (2004).

¹³⁴ *Report on International Liability for Injurious Consequences*, *supra* note **Error! Bookmark not defined.**, art. 44; *Report of the Commission to the General Assembly on the Work of the Forty-Eighth Session*, Y.B. INT’L COMM’N at 68–79, U.N. Doc. A/48/10* (1993); Draft Articles, *supra* note 25, art. 31; IAN BROWNLIE, SYSTEM OF THE LAW OF NATIONS: STATE RESPONSIBILITY, PART I 225–26 (1983) (briefly discussing causation in the law of state responsibility).

¹³⁵ Spier, *supra* note 9, at 16.

recognizes that “there are many uncertainties in predictions of climate change, particularly with regard to the timing, magnitude and regional patterns thereof.”¹³⁶ Under the heading of principles, Article 3(3) further provides that “the parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.” The UNFCCC defines the principle in the following terms:

Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.¹³⁷

One could argue that the precautionary principle might be used to construct a liability suit against a state by arguing, for example, that not taking adequate measures to reduce the risks of climate change could be considered a breach of the precautionary principle or, more properly, of the obligation to refrain from harmful activities, as interpreted by the precautionary principle.¹³⁸ Moreover, one might argue that once an international wrong has been determined, the precautionary principle can be relevant for determining what damage should be compensated by the wrongdoing state, thus influencing the traditional requirement of foreseeability.

B. *Domestic Law*

There are still substantial differences in the way the issue of causation, and more specifically, uncertainty over causation are dealt with in various legal systems.¹³⁹ When causal uncertainty exists, some

¹³⁶ United Nations Framework Convention on Climate Change *supra* note 1, art. 3(3).

¹³⁷ *Id.* Preamble.

¹³⁸ Miriam Haritz, faculty member at the law school of Maastricht University, is undertaking Ph.D. research addressing this question. See Miriam Haritz, *The Application of the Precautionary Principle and Liability with Respect to Climate Change* (forthcoming Sept. 2009).

¹³⁹ For a comparative overview, see UNIFICATION OF TORT LAW: CAUSATION (Jaap Spier ed. 2000); VON BAR, *supra* note 106, at 433–98; VAN GERVEN, LEVER, & LAROUCHE, *supra* note 28, at 452–66.

legal systems adopt a kind of a threshold liability rule, which often amounts to an all-or-nothing approach. This means that the victim either gets full compensation if she can prove the causal link, or no compensation at all if the court is not convinced of a causal relationship between wrongfulness and damage. Other systems have an intermediate solution by applying a proportionate liability rule.¹⁴⁰

Strikingly, Directive 2004/35/CE, concerning environmental liability, has not taken care of the causation issue.¹⁴¹ Article 9 refers to cost allocation in cases of multiple party causation and simply mentions that the Directive is without prejudice to national regulations concerning cost allocation among multiple parties, especially between producers and users of products.

The Principles of European Tort Law explicitly deal with the issue of uncertainty over causation. Article 3:105 addresses uncertain partial causation and holds:

In the case of multiple activities, when it is certain that none of them has caused the entire damage or any determinable part thereof, those that are likely to have (minimally) contributed to the damage are presumed to have caused equal shares thereof.¹⁴²

This article could well be applied to the GHG emissions leading to climate change damage of the type discussed in this Article. Climate change damage is undoubtedly caused by multiple activities, and no single one has caused the entire damage. Although the commentary makes clear that there is still uncertainty as to the interpretation of this provision,¹⁴³ it seems that the article amounts to a proportionate liability rule. From an economic perspective, it can also be held that the most efficient solution to the issue of causal uncertainty is to apply a proportionate liability rule. The result would be that GHG emitters are held liable for the climate change damage in proportion to the amount to which they contributed to the loss, assuming that this equals their GHG emissions.

¹⁴⁰ See generally Spier, *supra* note 9 (discussing proportionate liability rules).

¹⁴¹ See generally Betlem & Brans, *supra* note 98 (concerning the Directive and the issue of causation).

¹⁴² PRINCIPLES OF EUROPEAN TORT LAW, *supra* note 11, art. 3:105; Jaap Spier, *Causation, in PRINCIPLES OF EUROPEAN TORT LAW, supra* note 11, at 54–5.

¹⁴³ *Id.* at 43–64.

C. Exclusion of the Background Risk

Two particular questions arise in cases of uncertainty concerning the causal link between GHG emissions by a certain (group of) state(s) and climate change. First, experts may indicate (the argument that will probably be used by the defendant state(s)) that climate change has many causes other than anthropogenic emissions and that there is a background risk for which the defendant state cannot be held liable. Second, experts may still be uncertain as to the likelihood that the anthropogenic emissions contributed to climate change. Third, there may be uncertainty as to which emitters caused the climate change damage. Let us address the first two issues; the issue of multiple actors will be discussed in further detail in the next part.

The literature indicates that potential polluters (like GHG emitters) should not be held liable for the background risk that they have not caused. Indeed, the liability should only extend to the amount to which the GHG emitter has actually contributed to the damage. Hence, a formula for liability ought to ensure that the emitting state or enterprise is held liable only for the excess risk (caused by the GHG emissions from its territory) and not for the background risk.

In international law literature, this is a somewhat underdeveloped topic. It is well recognized that damage may not be caused simply by the wrongful act but also by one or more other causes, such as acts of third states, acts of private actors or indeed natural causes.¹⁴⁴ Still, there has been little comprehensive analysis of how these causes can be isolated.

This issue has been examined at length with respect to liability for radiation, especially since natural radiation is a contributing factor to diseases, such as lung cancer. Hence, the liability rule has to be constructed in such a way that statistical and scientific evidence is used to examine the probability that the specific activity (in our case GHG emissions from one state) caused the damage (in our case climate change). This is referred to as the “probability of

¹⁴⁴ CRAWFORD, *supra* note 25, at 203–06 (discussing Article 31 of the Draft Articles).

causation.”¹⁴⁵ This probability of causation can be found by dividing the excess risk by the background risk and the excess risk:

$$\frac{\text{Excess risk}}{\text{Background risk} + \text{excess risk}}$$

This probability of causation formula excludes background risk (i.e., climate change due to natural causes) and focuses solely on the probability that the wrongful act (GHG emissions) caused the climate change damage.¹⁴⁶

D. Causal uncertainty: four options

The second problem is that after excluding the background risk, scientific expertise (e.g., that provided by IPCC) may attempt to establish the probability of causation, with all of the inherent uncertainties this involves. They may indicate that there is, for example, a thirty, fifty, or seventy percent probability that the aggregate GHG emissions from particular defendant states would have caused the climate change damage suffered by the victim state. The question then obviously arises of how to deal with this uncertainty within the legal system if expert opinion cannot provide certainty on causation. In this hypothesis, we assume that scientists agree that there is a likelihood (of say thirty percent) that a certain activity causes certain damage, but no absolute scientific certainty. The question then arises of how the law should deal with this information.

Using an economic approach, four options exist. First, one could determine that as soon as there is any statistical chance that a certain activity, like GHG emissions, may cause certain damage, the

¹⁴⁵ D. Kaye, *The Limits of the Preponderance of the Evidence Standard: Justifiably Naked Statistical Evidence and Multiple Causation*, AM. BAR FOUND. RES. J. 487 (1982); G. Robinson, *Probabilistic Causation and Compensation for Tortuous Risk*, 14 J. LEGAL STUD. 779 (1985); see also David Rosenberg, *The Causal Connection in Mass Exposure Cases: A “Public Law” Vision of the Tort System*, 97 HARV. L. REV. 849 (1984).

¹⁴⁶ This formula for determining the probability of causation has also extensively been used in radiobiology and radiation protection, inter alia, to determine, e.g. the amount of radiation to which an employee in a nuclear facility can be exposed. See, e.g., V. Bond, *Cancer Risk Attributable to Radiation Exposure: Some Practical Problems*, in HEALTH PHYSICS 108–11 (1981); L. Ketchum, *Epidemiologic Tables. Law Groundwork for Future Radiogenic Cancer Claims*, J. NUCLEAR MED. 967–72 (1985).

victim receives one hundred percent compensation for all damage. A second possibility is to refuse the claim of the victim unless there is one hundred percent certainty that the act caused the damage.

The third possibility is to award compensation only when the probability that the damage was caused by the act passes a certain threshold of, say, fifty percent. This threshold rule is a kind of “all or nothing” approach: If the probability is lower than the threshold, the victim receives no compensation at all; if the probability is higher than the threshold, the victim receives full compensation. This threshold rule is known in U.S. literature as the “more probable than not” standard, referring to the fact that the plaintiff must convince the finder of fact that it is “more probable than not” that the damage was caused by the tort.

The final possibility takes into account the probability that the emission caused a certain damage and awards compensation accordingly. This would mean that if the scientific expertise indicates that the likelihood of damage is forty percent, the victim would receive compensation for forty percent of its damage.

E. *An Economic Approach: Proportional Liability as a Solution?*

Without going into a detailed discussion of the four possible solutions to causal uncertainty,¹⁴⁷ one can easily see that both the all-or-nothing approach and the threshold liability have major disadvantages. The first solution, simply arguing that in case of causal uncertainty the victims can claim full compensation, is inefficient and unjust. The same is true for the second solution, in which the victim would be required to prove with one hundred percent certainty that his damage was caused by the tort. That requirement would mean that in many cases injurers would escape the clutches of the law when their activities have effectively created an additional risk. That solution would lead to under-deterrence.

However, the same disadvantage applies to a threshold liability rule that would require that a probability of causation passes a threshold of, say, fifty percent. The disadvantages of this hard and fast rule are obvious. If the probability of causation were

¹⁴⁷ See Michael Faure, *Causal Uncertainty, Joint and Several Liability and Insurance*, in LIBER AMICORUM PIERRE WIDMER 78–98 (Helmut Koziol & Jaap Spier eds., 2003) (discussing literature on causal uncertainty).

systematically lower than the threshold, for example forty percent, both under-deterrence and under-compensation would arise.

A more fine-tuned alternative can be found by awarding the victim a proportionate amount of its damage based upon the probability of causation. In practice, this would mean that if the probability that the victim's damage was caused by the injurer's activity was forty percent, the victim would be compensated forty percent of her damage. From an economic perspective, the advantage of this proportionate liability is that it exposes the injurer to precisely the excess risk that was caused by the (assumed wrongful) activity of the injurer. The enterprise will then have to compensate forty percent of all the damage of every particular victim, which amounts at the aggregate level to the same as compensating forty out of one hundred victims whose illness would have been caused by the enterprise.¹⁴⁸

The result of this proportionate liability is that the injurer will receive optimal incentives for prevention, since he is exposed to precisely the liability for the risk which was caused by his activity.¹⁴⁹ A proportionate liability rule therefore provides optimal incentives for accident reduction, so it is generally held in the economic literature.¹⁵⁰

Much more could be said about this complicated issue, but at least this economic approach to causal uncertainty shows that if a proportionate liability rule is applied, uncertainty over causation should not necessarily exclude state liability for climate change. The only consequence may be that if the victim state could aggregate the group of defendant states' emissions responsible for, say, thirty percent of climate change (excluding the background risk), the consequence would be that the victim state could claim thirty percent compensation from this group of defendants. Of course, applying proportionate liability is far easier in theory than in practice, given all the uncertainties surrounding climate change. One obvious difficulty is that there needs to be some scientific evidence (although certainty is obviously not required) concerning the assessment of the probability of causation. Scientific difficulties in assessing the

¹⁴⁸ SHAVELL, *ECONOMIC ANALYSIS OF ACCIDENT LAW*, *supra* note 64, at 116.

¹⁴⁹ BERGKAMP, *supra* note 69, at 290–91.

¹⁵⁰ John Makdisi, *Proportional Liability: A Comprehensive Rule to Apportion Tort Damages Based on Probability*, 67 N.C. L. REV. 1063 (1989) (discussing proportionate liability); William M. Landes & Richard Posner, *Tort Law as a Regulatory Regime for Catastrophic Personal Injuries*, 13 J. LEGAL STUD. 417 (1984); Robinson, *supra* note 145, at 797–98.

probability of causation will, of course, always exist, no matter what type of approach one follows regarding causal uncertainty. Moreover, notwithstanding the difficulties, the IPCC has provided some modest indications on the likelihood that anthropogenic emissions have caused climate change (so some exclusion of the background risk may be possible). Moreover, the amounts of GHG emissions from the different states are relatively well-known, not only because of the work of the IPCC but as a result of the inventories drafted as a result of the implementation of the UNFCCC.

VII. MULTIPLE ACTORS

A. *Individual or Joint and Several Liability?*

A difficulty which is largely related to the issue of causal uncertainty is that anthropogenic emissions which allegedly are the source of climate change are caused by large groups of states and enterprises, some having emitted large quantities in the past, others still emitting today. Excluding the issue of past emissions for a moment,¹⁵¹ the question is whether the mere fact that multiple states or enterprises have contributed—and continue to contribute—to anthropogenic emissions is a reason to exclude (state) liability. A related question is whether states or enterprises will only be held liable individually for the amount of their own GHG emissions or whether a joint and several liability rule could be applied. An issue of causal uncertainty may exist here since there could be uncertainties concerning the contribution of each particular state to climate change. That may be a problem for the past in the sense that it may be unknown which state emitted what amounts of GHGs over time. Today the amounts of GHG emissions from different states are relatively well documented. This can therefore limit the uncertainty concerning the present contribution of each particular state to the total contribution of anthropogenic emissions to climate change. Even if the causal uncertainty problem discussed in the previous Part can be handled by assuming that the damage to the victim is proportional to the emissions by particular states or actors, the question still arises of what the consequence will be when the particular contribution of each actor has been determined: Is each

¹⁵¹ See *infra* Part VIII.

held liable separately for his own emissions (with the consequence that the victim has to bring a high number of lawsuits) or can a joint and several liability rule be applied?

Though there are variations between legal systems, a joint and several liability rule generally amounts to this: if it cannot be established who of the many tortfeasors contributed to a certain loss to a specific extent, all of them will be held jointly and severally liable. The effect is that the victim can choose to sue any of the injurers falling within the joint and several liability regime and claim full compensation from any of them. The injurer who had to fully compensate the victim can then in turn reclaim from the other tortfeasors the amount which they contributed to the loss. In this recourse action, the amount which the individual tortfeasors contributed to the loss may then play a role again.

The question of whether several states or enterprises can be seen as acting together to create climate change can be addressed from an international law, domestic law, and economic perspective.

B. *Joint and Several State Liability in International Law*

International law recognizes that two or more states may commit identical offenses in concert or simultaneously. An example is a case where two states bordering an international river each causes pollution harming a third, downstream state. The two upstream states may act independently, or may act in concert—for example on the basis of a bilateral agreement that stipulates that both states are allowed to discharge polluting wastes in the river. Can the injured downstream state hold both upstream states responsible, can it sue only one upstream state and claim the entire damage, or can it only claim that part of the damage caused by either of the states?¹⁵²

The general principle that applies to such cases is that when two or more states commit separate wrongful acts that result in a single injury, in principle, each state is separately responsible for its acts. In the above example, each of the riparian states will be responsible for its own acts and for the damage caused by its own acts.

These types of situations, where causal links are unclear, are not normally examined under the principle of joint and several liability as it exists in many national systems. Crawford has noted

¹⁵² James Crawford, *Third Report of State Responsibility*, *supra* note 25.

that there is no need to resort to the principle of joint and several liability, since the same result could be achieved under normal rules of attribution.¹⁵³ For instance, in the *Corfu Channel* case the ICJ did not suggest that Albania's responsibility for failure to warn was reduced, let alone precluded, by reason of the possible concurrent responsibility of a third State (Yugoslavia).¹⁵⁴ This suggests that the claimant state could obtain the entirety of the damage from one state, based on the operation of the normal rules of attribution. However, it is questionable if that applies in case of complex factual scenarios with multiple responsible states, as in climate change. Arguably it is fruitful to examine these under the principle of joint and several liability.¹⁵⁵ Liability would be "joint" in that two or more states can be responsible for each other's wrongful conduct vis-à-vis third states. It would be "several" insofar as each state can be held separately responsible, yet there is no need to hold both responsible.¹⁵⁶

In his separate opinion in *Oil Platforms*, Judge Simma argued that joint and several liability is a general principle of law recognized by major domestic legal systems. In U.S. law, for instance, Simma found that the principle of joint and several liability would apply when three conditions are met. First, each of the participants must have engaged in the activity leading to loss or damage (irrespective of causality); second, one of the participants must necessarily have caused such loss or damage; but, third, it is impossible to determine which one of the participants did so, in whole or in part. He suggested that this principle can be elevated to international law.¹⁵⁷

However, even if one would accept the existence of the principle of joint and several liability, this does not necessarily mean that one state indeed could be burdened with the entire costs of climate change. It is noteworthy that Judge Simma, in the separate opinion mentioned above, was concerned with apportionment of responsibility, not with damages. The development of such a

¹⁵³ *Id.*

¹⁵⁴ *Corfu Channel*, *supra* note 89, at 16–18, 36; *see also* CRAWFORD, *supra* 25, art. 31, at 205.

¹⁵⁵ Institut de Droit International, *supra* note 61, art. 11.

¹⁵⁶ CRAWFORD, *supra* 25, art. 31.

¹⁵⁷ *Oil Platforms*, *supra* note 19, ¶¶ 66–77 (separate opinion of Judge Simma); *but see* *Construction and Operation by Private Concessionaires of a Channel Fixed Link (Channel Tunnel Group Ltd. v. Sec. of State for Transport (U.K.))*, Partial Award, ¶¶ 173–87, Jan. 30, 2007 (Perm. Ct. Arb. 2007) (indicating that unless an agreement specifically provides otherwise, international law does not provide for joint and several liability), *available at* http://www.pca-cpa.org/PDF/ET_PAen.pdf.

principle would require further development of the criteria that could be used to determine contribution and allocation.

It has been suggested that such criteria should include causation, blameworthiness, the character of each state's intent in breaching its international obligation (specific intent to cause a wrong would likely be treated more harshly than negligence), the measure of each state's legal authority or jurisdiction over the injury-producing conduct, and, directly related to this, causality: the state with the greater measure of jurisdiction to control conduct is deemed to possess a greater causal connection to the consequences of such conduct. Such apportionment on the basis of authority to control would also contribute to deterrence by imposing the burden of compensation in proportion to the relative capacities of the states to prevent repetition of the injurious event.¹⁵⁸

C. *Domestic Law*

The solutions proffered by the various legal systems for dealing with multiple tortfeasors also diverge significantly.¹⁵⁹ As mentioned in the previous section, Directive 2004/35/CE on environmental liability does not provide a solution either, since cost allocation in cases of multiple party causation has been left to national regulations.¹⁶⁰

Strikingly, the Principles of European Tort Law indicate divergent solutions to the issues of multiple tortfeasors and the causal uncertainty issue. Whereas in cases of causal uncertainty, a proportionate liability rule was chosen, in cases of damage caused by multiple tortfeasors Article 9:101 of the Principles of European Tort Law proposes "solidary" liability.¹⁶¹ This applies where the whole or a distinct part of the damage suffered by the victim is attributable to two or more persons. According to this provision, the liability is *inter alia* "solidary" where one person's independent behavior or activity causes damage to the victim and the same damage is also attributable

¹⁵⁸ John E. Noyes & Brian D. Smith, *State Responsibility and the Principle of Joint and Several Liability*, 13 YALE J. INT'L L. 225, 237-38 (1988) (discussing the criteria relevant to apportionment of damage).

¹⁵⁹ BETLEM, *supra* note 30, at 471-78 (discussing the Dutch tort law approach to dealing with multiple tortfeasors). See generally UNIFICATION OF TORT LAW: LIABILITY FOR DAMAGE CAUSED BY OTHERS (Jaap Spier ed., 2003).

¹⁶⁰ Council Directive 2004/35/CE, *supra* note 98.

¹⁶¹ PRINCIPLES OF EUROPEAN TORT LAW, *supra* note 11, art. 9:101.

to another person. Article 9:101(2) of the Principles makes clear that where persons are subject to “solidary” liability, the victim may claim full compensation from any or all tortfeasors, provided that the victim does not recover more than the full amount of the damage suffered by him. It is, as the commentary makes clear, to be applied in situations where there are “several concurrent tortfeasors”—parties whose independent acts cause indivisible damage.¹⁶² On the basis of this reasoning, one can easily hold that all emitters of GHGs have, through their independent acts, caused the indivisible damage of climate change. The consequence for the one GHG emitter who is sued by the victim of climate change damage is dramatic; the victim may on the basis of the mentioned principle claim full compensation from anyone or more of the multiple tortfeasors. Only afterwards, as article 9:102 of the Principles provides, may a person subject to “solidary” liability recover from any other party liable to the victim with respect to the same damage.

D. *Economic Perspective*

A joint and several liability rule looks at first blush like a regime whereby the legal system deviates from the principle that a tortfeasor should only be liable for the damage caused by its own behavior. Under joint and several liability, the tortfeasor is also held liable in full for damage which was not caused by its own behavior.

One could therefore argue that joint and several liability may be inefficient insofar as it leads to over-deterrence: The state or enterprise liability is not limited to the climate change created by its own emissions. However, such a conclusion is too simple. One may argue that a distinction should be made between the situations where all contributing tortfeasors are fully solvent and those in which one or more of them are insolvent.¹⁶³ In cases where all actors are fully solvent, one can argue that there is no efficiency loss caused by joint and several liability.¹⁶⁴ In that case, the liable state that has to

¹⁶² Horton W.V. Rogers, *Multiple Tortfeasors*, in *PRINCIPLES OF EUROPEAN TORT LAW* 143 (2005).

¹⁶³ Pierre Widmer, *Causation Under Swiss Law*, in *UNIFICATION OF TORT LAW: CAUSATION* 105, 112–13 (Jaap Spier ed., 2000) (arguing that joint and several liability amounts to a shifting of the risk of insolvency to the joint tortfeasors).

¹⁶⁴ Lewis A. Kornhauser & Richard L. Revesz, *Sharing Damages Among Multiple Tortfeasors*, 98 *YALE L.J.* 831 (1989) (providing a detailed analysis of joint and several liability when all defendants are fully solvent). *See also* Lewis A. Kornhauser & Richard L. Revesz, *Apportioning*

compensate the victim can in turn exercise a redress against the other state that contributed to the loss in proportion to its contribution. Assuming that the other states are fully solvent, the one that first paid merely prefinances the compensation of the victim and will be able to recover a part of the damage paid. Thus, in the end, joint and several liability also permits an equitable outcome in which every contributor pays in proportion to its contribution to the risk—more specifically, in proportion to its GHG emissions. In that sense, a joint and several liability rule, combined with a right of recourse and solvent actors, amounts to a proportionate solution. The exposure to liability of every state in this model is limited to its own GHG emissions and thus optimal incentives will follow.

One may wonder what the additional benefit is of a joint and several liability rule compared to the situation requiring the victim to sue every individual state or tortfeasor separately. One could make a victim protection argument on the basis of the difficulty the victim will face in proving a causal link with the action of one particular actor. Thus, it certainly makes the life of the victim easier if the victim can claim full compensation from one defendant who then has to exercise the right of redress against the other states who contributed to the loss. In addition to this distributional argument, there are undoubtedly efficiency arguments as well. One can argue that the joint and several liability may give ex ante incentives for mutual monitoring between potential joint tortfeasors.¹⁶⁵ Indeed, a victim may well encounter difficulties in proving a causal link between the action of every particular tortfeasor and the climate change damage she suffered. That may result in too few claims and hence in under-deterrence. Shifting the risk to the defendant states would mean that they have an excellent ex ante incentive to mutually monitor their activities. Joint and several liability in fact shifts the risks of uncertainty concerning the proof of the causal link to the defendants. The victim can sue just one of the many potentially liable states and claim full compensation. If the one defendant who is sued does not succeed in proving that others contributed to the loss, the damage will ultimately fall on him.

Damages Among Potentially Insolvent Actors, 19 J. LEGAL STUD. 617 (1990) (providing an analysis of joint and several liability in cases of limited solvency).

¹⁶⁵ See generally Tom H. Tietenberg, *Indivisible Toxic Torts: The Economics of Joint and Several Liability*, 65 LAND ECON. 305 (1989) (arguing that joint and several liability may give ex ante incentives for potential joint tortfeasors to “take efficient levels of precaution” and monitor each other’s conduct).

VIII. RETROSPECTIVITY

A difficult issue in constructing liability for climate change is that due to the cumulative effect of greenhouse gas emissions, one would not only have to take into account current emissions today, but also emissions that occurred in the past and thus contributed to climate change. One problem in this respect is simply evidentiary: One would have to be able to acquire evidence on the amounts by which the various defendant states contributed to climate change in the past. That problem may not be easy to solve since data on past emissions may be lacking.

Another issue is whether holding emitters of today liable for past pollution would amount to retrospective liability. Retrospective liability would mean that emissions which were lawful in the past would be considered wrongful today. Retrospectivity may be hard to reconcile with state liability under international law and with economic starting points of liability.

Article 13 of the Draft Articles on State Responsibility states: “An act of a State does not constitute a breach of an international obligation unless the State is bound by the obligation in question at the time the act occurs.”¹⁶⁶ As the Commentary points out, this is but the application of the general principle of intertemporal law to the field of state responsibility.¹⁶⁷ As stated by Judge Huber in the *Island of Palmas* case: “A juridical fact must be appreciated in the light of the law contemporary with it, and not of the law in force at the time when a dispute in regard to it arises or falls to be settled.”¹⁶⁸ This holds true not only for primary, but also for secondary liability rules.¹⁶⁹ There thus exists a guarantee against the retrospective application of international law in matters of State responsibility. On the other hand, one might argue that the emission of carbon dioxide and resultant climate change is a “composite act” that only becomes wrongful after a long series of emissions. The wrongful act occurs when the emissions occur. In the case of climate change it will be

¹⁶⁶ Draft Articles, *supra* note 25, art. 13.

¹⁶⁷ *Id.* at commentary to art. 13, ¶ 1.

¹⁶⁸ *Island of Palmas* (Neth. v. U.S.), 2 R. Int'l Arb. Awards 829, 845 (Perm. Ct. Arb. 1928).

¹⁶⁹ *In Re Bouterse, Hoge Raad der Nederlanden* [HR] [Supreme Court of the Netherlands], 18 Sept. 2001, NJ 2001 (Neth.) (indicating that the legality principle also applies to principles of jurisdiction).

impossible to pinpoint that moment, but the effect will be that past emissions will only be subjected to a responsibility regime at the date when they become cumulatively wrongful.¹⁷⁰

Also, in economic analysis, some arguments can be found against retrospective liability. Liability should, in principle, give incentives to correct future behavior. If a certain type of behavior (like GHG emissions) would only be considered wrongful ex post whereas it was considered lawful ex ante, a finding of liability would not affect the future incentives of that particular wrongdoer. Retroactive liability can therefore not serve any purpose as far as the prevention of damage is concerned.¹⁷¹ However, in the particular case of climate change, this should not necessarily be a serious problem. Tol and Verheyen rightly indicate that as early as 1827, a scientific study showed a relationship between concentration of GHGs (particularly CO₂) and warming of the atmosphere. Moreover, since the IPCC presented its first assessment report in 1990, states cannot now argue a lack of awareness of the fact that GHG emissions may lead to climate change.¹⁷²

In sum, the fact that many anthropogenic emissions took place in the past, and that this accumulation caused climate change and the resulting damage should not necessarily exclude state liability. Rather, the task will be to assess when, on the one hand, the legal obligation came into existence and, on the other hand, climate change with all its adverse effects was foreseeable. The only effect of the importance of past emissions may be that the proportional contribution of industrialized states to the damage will likely be significantly larger than that of developing countries, even though the amount of emissions of countries like China and India may have increased considerably today. This is recognized in the preamble to the UNFCCC which states:

Noting that the largest share of historical and current global emissions of greenhouse gases has originated in developed countries, that *per capita* emissions in developing countries are still relatively low and that the

¹⁷⁰ CRAWFORD, *supra* note 25, art. 15.

¹⁷¹ Michael Faure & Paul Fenn, *Retroactive Liability and the Insurability of Long-Tail Risks*, 19 INT'L REV. L. & ECON. 487 (1999). See also Jim Boyd & Howard Kunreuther, *Retroactive Liability or the Public Purse?*, 11 J. REG. ECON 79 (1997).

¹⁷² Tol & Verheyen, *supra* note 2, at 1117–18.

share of global emissions originating in developing countries will grow to meet their social and development needs.¹⁷³

This has not only led to the construction of commitments in the UNFCCC and the Kyoto Protocol where commitments to reduce anthropogenic emissions are only imposed upon Annex I countries, but it may also have an impact on the liability issue. If a claim were to be brought against China or India, for instance, on the basis of the significant amount of emissions today, the defense would probably (correctly) be that the apportionment of liability should not take into account actual emissions but the amount to which the various states have contributed to climate change through their emissions, taking into account their cumulative affect. In that respect, the likelihood of a finding of liability against developing countries is significantly lower—or at least their share of the liability will be lower.

IX. REMEDIES

A. *International Law*

Sands noted that “The rules of international law relating to reparation for environmental damage remain undeveloped.”¹⁷⁴ This remains true for the difficulty in assessing environmental damage, though substantial work has been done to develop the issues involved.¹⁷⁵ Apart from environmental damage, the principles on reparation are relatively well-developed. The perpetrator of an internationally wrongful act is under an obligation to make reparation for the consequences of the violation. In the *Factory at Chorzów* case, the Permanent Court of International Justice said in 1927:

¹⁷³ United Nations Framework Convention on Climate Change, *supra* note 1, Preamble.

¹⁷⁴ SANDS, *supra* note 71, at 884.

¹⁷⁵ Scovazzi, *supra* note 62, at 221 (stating that “rules of customary international [law] do not address the problems posed by the so-called ecological damage”). *See generally* ENVIRONMENTAL DAMAGE IN INTERNATIONAL AND COMPARATIVE LAW: PROBLEMS OF DEFINITION AND VALUATION (Michael Bowman & Alan Boyle eds., 2002).

Reparation must, as far as possible, wipe out all the consequences of the illegal act and reestablish the situation which would, in all probability, have existed if that act had not been committed. Restitution in kind, or, if this is not possible, payment of a sum corresponding to the value which a restitution in kind would bear; the award, if need be, of damages for loss sustained which would not be covered by restitution in kind or payment in place of it – such are the principles which should serve to determine the amount of compensation due for an act contrary to international law.¹⁷⁶

Applying this principle to climate change damage, a victim state (e.g. a small island) could thus claim restitution or, more likely, monetary compensation for damage. Applying the proportional liability rule discussed above, the liability would arguably be equal to the probability that the defendant states contributed to the climate change that damaged the victim state. Precisely because of the proportional character of the liability, monetary compensation seems the most appropriate remedy. Restitution in kind may be more difficult since the defendant state(s) will only have contributed proportionally to the climate change that caused the damage.

In addition to reparation for harm done in the past (in the form of monetary damages), claims can also relate to measures to be taken in the future to prevent the damage from continuing. Indeed, this is the primary consequence of an international wrong.¹⁷⁷ It may make little sense for the victim states to sue for a proportion of monetary damages representing the value of the damage caused by climate change if GHG emissions were to continue unabated.¹⁷⁸ Thus, a claim could appropriately include both a duty to mitigate and liability for the residual climate change damage.

Though state responsibility vis-à-vis other states and state responsibility vis-à-vis private persons are not necessarily identical, largely the same remedial principles would apply to claims brought against states by private persons on the basis of international law and, in particular, human rights law. However, to the extent that such

¹⁷⁶ Factory at Chorzów (F.R.G. v. Pol.), 1928 P.C.I.J. (ser. A) No.17, at 47 (Sept. 13).

¹⁷⁷ Draft Articles, *supra* note 25, art. 29.

¹⁷⁸ Tol & Verheyen, *supra* note 2, at 11–13 (arguing that climate change liability could also amount to a duty for the liable state to mitigate the damage by preventing a risk of damage from anthropogenic climate change).

claims would come within the scope of the European Court of Human Rights (ECHR) or the IACRH, *lex specialis* would prevail,¹⁷⁹ and remedies may take the idiosyncratic forms that have developed in these institutions.¹⁸⁰

B. *Domestic Law*

As far as the transboundary civil tort suit for climate change damage is concerned, the question again arises: What remedy could the victim potentially claim?¹⁸¹ Again, depending upon national legal systems, a distinction can be made between claims for compensatory damages for harms already suffered (e.g., compensation for costs incurred for fortifying dikes) and claims to stop further harm from occurring.¹⁸²

In this respect, the European Directive 2004/35/CE on environmental liability provides some help since both remedies seem to be included in the Directive.¹⁸³ Article 5 provides the possibility of taking preventive action when environmental damage has not yet occurred but there is an imminent threat of such damage occurring.¹⁸⁴ Article 6 refers to the situation where remedial action needs to be taken because environmental damage has occurred in the past.¹⁸⁵ Article 8 goes on to provide that the operator shall bear the costs of both the preventive and the remedial action taken pursuant to the Directive.¹⁸⁶ The recovery of these costs shall in principle be taken on the initiative of a competent authority. However, natural or legal persons (and under some circumstances NGOs) can, on the basis of Article 12, submit a request for action to the competent authority when there is environmental damage or an imminent threat of such damage.¹⁸⁷

¹⁷⁹ Draft Articles, *supra* note 25, art. 55.

¹⁸⁰ *See generally* DINAH SHELTON, REMEDIES IN INTERNATIONAL HUMAN RIGHTS LAW (2d. ed. 2005).

¹⁸¹ *Id.*

¹⁸² *See supra* Part III for more on this distinction and the goals of liability.

¹⁸³ Council Directive 2004/35/CE, *supra* note 98.

¹⁸⁴ *Id.* art. 5.

¹⁸⁵ *Id.* art. 6.

¹⁸⁶ *Id.* art. 8.

¹⁸⁷ *Id.* art. 12.

Many Member States' laws also make a distinction, as far as remedies are concerned, between victims suffering a personal damage on the one hand and plaintiffs acting in the public interest on the other hand. The first category consists, for instance, of citizens living on the small island state endangered by the climate change and who, as a result, suffer severe economic and other losses. Depending upon national law, they can usually both claim compensatory damages for damage already suffered as well as seek an injunction to prevent the harm from continuing in the future. More difficulties arise when the damage is not suffered personally by the victim, but when damage is caused to collective goods. National laws in those cases often award the right to government authorities (in the words of the European Directive, "the competent authority") to bring an action on behalf of the group, allowing them again to claim either compensation or an injunction. Others, such as NGOs acting in the public interest, can, in the cases where national laws have granted them standing, usually seek only an injunction rather than compensatory damages. Only in the exceptional case where the NGO has itself suffered a personal loss would national law award it the right to claim compensatory damages as well.

X. CONCLUDING REMARKS

The aim of this Article was relatively modest: We merely tried to highlight some of the issues that would have to be addressed in (international) climate change litigation. In that sense, our Article was more an attempt towards agenda-setting than an attempt to provide final answers.¹⁸⁸ The analysis also showed that this domain is so complex that even an attempt to provide final answers would undoubtedly fail. Although climate change litigation has recently received increasing attention in legal doctrine, we hoped to show with this contribution that the debate on the possibility of climate change liability can benefit from both the input of domestic civil law and international law as well as law and economics. Indeed, many issues that are of importance in (international) state liability for climate change, like the roles of causal uncertainty, multi-actor causation, or remedies have been less debated in international law

¹⁸⁸ See generally VERHEYEN, *supra* note 84 (providing a more comprehensive analysis of the subject of international climate change litigation).

but have received some attention in domestic civil law and law and economics. Moreover, we believe that this integrative approach may generally also be a promising road for developing the methodology of the study of international law.

Of course, many issues could only briefly be touched upon in this Article and other issues have not been addressed at all. For instance, traditional tort law (or state liability in international law) always assumes the existence of a damage. With climate change, many costs may already be incurred by victims today, anticipating climate change, even though one could question whether there is already damage in the traditional sense. This raises the question of whether state liability could also exist, for instance, when costs are incurred as a result of a risk of damage. Also, we discussed many potential liability constellations both in domestic and international law and with many potential victims and defendants. In reality, combination of those may well be possible. This raises the question of how an attribution should take place in case of such a combination of various liability suits. Finally, we briefly touched upon the evidence of climate change. In a specific liability case, it will, of course, be this evidence that will be the decisive issue.

However, notwithstanding the many uncertainties, we equally indicated that both in international law and in tort principles of national law, indications can be found that climate change litigation should not per se fail. To a large extent, the success of those claims will depend upon their technical expertise and upon whether victims can substantiate their claim that defendant (states) have significantly contributed to the climate change damage they suffer.

We also showed that to some extent, the economic analysis of tort law can be used in a helpful way to provide indications, not only concerning the type of liability rule that should govern climate change damage (e.g., negligence or strict liability), but also concerning the way in which the law could deal with causal uncertainty. Economic analysis, legal doctrine, and numerous legal systems are increasingly applying proportionate liability. Of course, even though proportionate liability may help to some extent to solve the issue of causal uncertainty, the proportions in which the various sources have contributed to the climate change damage will still have to be substantiated by means of technical evidence.

In sum, even though there are still many questions to be answered and many legal uncertainties, we have indicated that, depending upon the different scenarios (more particularly of the

defendant state(s)) there are ways to construct a liability regime for climate change, provided that sufficient proof exists of some relationship between the anthropogenic emissions from the defendant state(s) and climate change. At the same time, we have indicated that scientific uncertainty should not necessarily limit the possibilities of a claim for state liability. If a proportional liability rule were to be applied, first the probability of causation (excluding the background risk) would have to be established scientifically. Next, the contribution of the particular state to man-made climate change would have to be established so that liability could be apportioned accordingly. However, we equally indicated that this liability should not only be established on the basis of current emissions, but on the basis of the total contribution of the particular state to climate change via anthropogenic emissions. This should not necessarily amount to an inefficient retrospective liability, since many emissions took place after there was at least some evidence of a relationship between CO₂ emissions and warming of the atmosphere. When all of these conditions for state liability are met, the victim could not only claim monetary damages for its adaptation measures and for residual climate change damage, but it could equally claim mitigation measures from the defendant state(s). To the extent that many states have contributed to climate change, we argue that at least when economic analysis is used, there may be an argument in favor of joint and several liability of various defendant states.

Climate change litigation—and more particularly, liability suits—are not the panacea that will bring about a miraculous solution to the enormous problems that the world faces as a result of global warming. Undoubtedly, regulatory solutions and economic instruments like emissions trading will play a far more important role in reducing GHG emissions than liability suits ever will. Even though the goal of our Article was to discuss the possibilities of climate change litigation, we also made clear that victims will face significant hurdles in effectuating such a claim. Hence, the reduction of GHG emissions will undoubtedly not result primarily from liability suits. On the other hand, this does not mean that liability suits can play no role at all. The international arena has shown how increasingly difficult it is to reach consensus to reduce GHG emissions to acceptable levels. The discussions on the steps to be taken after the implementation of the Kyoto Protocol show that many consider the Kyoto Protocol merely as a first step towards an effective reduction of GHG emissions. In that respect, the well-known doctrine that “liability rules,” (i.e. that threats of liability may play an important

back-up role in cases of regulatory failure) may be valid in this context as well.¹⁸⁹ That is probably where one could see the most important role of international climate change litigation. It is not very likely that the litigation will itself lead to decisions whereby plaintiffs would be directly compensated for climate change damage suffered. However, the threat of such litigation may have an important effect on the negotiations concerning further reductions of GHG emissions. Thus, exploring the possibilities of such international climate change litigation can be seen as a useful device for furthering the international process and negotiations aiming at the reduction of GHG emissions.

¹⁸⁹ See generally SUSAN ROSE-ACKERMAN, *RETHINKING THE PROGRESSIVE AGENDA: THE REFORM OF THE AMERICAN REGULATORY STATE* 123 (1992) (suggesting that tort law is sometimes considered a “stop gap” for situations not dealt with by statutes).