

1-1-2004

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Recommended Citation

John H. Knox, *The International Legal Framework for Addressing Climate Change*, 12 *Penn St. Env'tl. L. Rev.* 135 (2004).

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The International Legal Framework for Addressing Climate Change

John H. Knox*

This article describes the international legal framework for addressing climate change: specifically, the Framework Convention on Climate Change, the Kyoto Protocol to it, and the agreements reached after Kyoto. It also briefly describes the Bush Administration policy toward climate change.

I. The Framework Convention on Climate Change

In the mid-1980s, scientists began to warn that increasing emissions of greenhouse gases would, or at least could, cause the climate to warm. In response, governments established the Intergovernmental Panel on Climate Change (IPCC) in 1988 and charged it with assessing the magnitude, timing, and possible impact of climate change. In 1990, the IPCC published its first assessment, which concluded that if countries continued along their current path, the average temperature of the planet would rise by an average of 0.3 degrees Celsius per decade. At the same time, governments began to consider how to respond to climate change. Political support grew rapidly for some type of international agreement.

In May 1989, the U.S. government announced that it would support negotiation of a “framework convention” on climate change.¹ In December 1989, the U.N. General Assembly adopted a resolution calling on states “to prepare as a matter of urgency a framework convention on climate,” and in December 1990, after the IPCC report, the General Assembly established an inter-governmental negotiation aimed at drafting what became known as the Framework Convention on Climate

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1. Framework conventions generally set up institutional means of addressing complex issues; more-specific obligations can be added later through protocols to the initial convention. For example, in 1985 the international community had adopted a framework convention on ozone depletion, and followed it two years later with the Montreal Protocol setting binding phase-out periods for ozone-depleting substances. This approach to ozone depletion was seen as a model for climate change.

Change (FCCC). The convention was negotiated in 1991 and 1992, and was signed in 1992 as part of the package of instruments negotiated for the U.N. Conference on Environment and Development in Rio de Janeiro.² To date, the FCCC has 188 parties, including the United States, which ratified it in October 1992. It entered into force on March 21, 1994.

The FCCC contains relatively few "hard" obligations. In particular, it does not require its parties to reduce greenhouse gas emissions. Instead, like most framework agreements, the FCCC sets goals and establishes a cooperative framework designed to reach the goals. It states that the ultimate objective of the FCCC and any related legal instruments that the FCCC parties might later adopt is to achieve "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."³ To that end, it requires each party, *inter alia*, to: (a) report on its "national inventories" of sources and sinks⁴ of greenhouse gases; (b) implement national programs to mitigate climate change; (c) report on its implementation of the FCCC; and (d) cooperate with other countries in studying climate change.⁵

The FCCC imposes additional requirements on two groups of parties: developed countries such as the members of the OECD, and countries "undergoing the process of transition to a market economy," such as Russia and the Eastern European members of the old Soviet bloc. These two sets of countries are individually listed in Annex I to the FCCC and are therefore often called "Annex I parties." Each Annex I party is required to "adopt national policies and 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," and to report "detailed information on [those] policies and measures, as well as on its resulting projected anthropogenic emissions by sources and removals by sinks of greenhouse gases . . . with the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon

2. United Nations Framework Convention on Climate Change (FCCC), May 9, 1992, 31 I.L.M. 849 (1992). The best source on the negotiating history and substance of the Framework Convention on Climate Change is Daniel Bodansky, *The United Nations Framework Convention on Climate Change: A Commentary*, 18 YALE J. INT'L L. 451 (1993).

3. FCCC, *supra* note 2, art. 2.

4. The FCCC defines "sink" as "any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere." *Id.* art. 1.8.

5. *Id.* arts. 4.1, 5, 12.

dioxide and other greenhouse gases . . .”⁶ Although the argument is occasionally made that this provision binds the Annex I parties to return to their 1990 levels of greenhouse gas emissions, the better, and generally accepted, interpretation is that the italicized language is at most aspirational.

Developed countries (not including countries in transition, like Russia) are subject to some additional requirements. The FCCC provides that they shall: (a) pay the developing countries’ costs of reporting; (b) assist the developing countries “that are particularly vulnerable to the adverse effects of climate change” (e.g., small island states) in meeting the costs of adapting to those effects; and (c) “take all practicable steps to promote, facilitate and finance, as appropriate, the transfer of, or access to, environmentally sound technologies and know-how to other Parties.”⁷

The FCCC also establishes an institutional structure designed to facilitate a continuing dialogue among the parties on climate change, which was understood to include the possibility of negotiating protocols to the original Convention that would contain binding obligations. Specifically, the FCCC establishes a “conference of the parties” (known as the COP), composed of all parties to the FCCC, whose mandate includes “keep[ing] under regular review the implementation of the Convention and any related legal instruments that the [COP] may adopt.”⁸ Each national party to the FCCC has one vote in the COP,⁹ which meets every year unless the parties otherwise decide.¹⁰ To support the COP, the FCCC also establishes a secretariat composed of international civil servants and two subsidiary bodies: one to provide the COP scientific and technological advice, and one to assist the COP in assessing the implementation of the FCCC.¹¹ Both subsidiary bodies are composed of government representatives. Finally, the FCCC describes, and instructs the first meeting of the COP to create, a “financial mechanism” to provide financial resources “on a grant or concessional basis.”¹²

Article 14 of the FCCC provides for resolution of disputes. It requires the parties involved in a dispute concerning the application or interpretation of the FCCC to seek settlement through negotiation “or any other peaceful means of their own choice.” If the dispute is not

6. *Id.* art. 4.2 (emphasis added).

7. *Id.* arts. 4.3, 4.4, 4.5.

8. *Id.* art. 7.

9. *Id.* art. 18.

10. *Id.* art. 7.4.

11. *Id.* arts. 8, 9, 10.

12. *Id.* art. 11.

resolved within one year, any party may refer the dispute to a conciliation commission, which “shall render a recommendatory award, which the parties shall consider in good faith.” Article 14 also allows parties to accept compulsory jurisdiction of the International Court of Justice or of an arbitration procedure to be created by the FCCC parties, but it does not require them to do so, and very few parties have filed notices of acceptance. As a result, for practical purposes, disputes between parties over the FCCC are not subject to binding resolution.

II. The Kyoto Protocol

The FCCC expressly contemplates that the COP may adopt protocols at any ordinary session of the COP.¹³ At the third session of the COP (called COP-3), held in Kyoto in December 1997, the parties adopted the Kyoto Protocol to the FCCC.¹⁴ The most important provision of the Protocol is Article 3.1, which requires Annex I parties to reduce their emissions of greenhouse gases. Specifically, it provides:

The Parties included in Annex I 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 and in accordance with the provisions of this Article, with a view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels in the commitment period 2008 to 2012.

Several of the terms in this provision may not be immediately clear. *The Parties included in Annex I* refers to Annex I to the FCCC, which, as noted above, includes the developed countries and the “countries in transition.” Neither this provision nor any other in the Kyoto Protocol requires developing countries to reduce their emissions.

The *greenhouse gases listed in Annex A* are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride. Carbon dioxide accounts for most warming – over 80% in 1990. The latter three gases are used for industrial purposes and as yet exist in relatively tiny amounts, but on a unit-by-unit basis they have a far greater warming effect than carbon dioxide.

13. *Id.* art. 17.

14. Kyoto Protocol to the Framework Convention on Climate Change, Dec. 10, 1997, 37 I.L.M. 22 (1998). Two excellent books on the Protocol, on which this description generally draws, are MICHAEL GRUBB ET AL., *THE KYOTO PROTOCOL: A GUIDE AND ASSESSMENT* (1999); and SEBASTIAN OBERTHUR & HERMANN E. OTT, *THE KYOTO PROTOCOL: INTERNATIONAL CLIMATE POLICY FOR THE 21ST CENTURY* (1999).

The *assigned amounts, calculated pursuant to their quantified emission limitation and reduction commitments* are set forth in Annex B as a percentage of the base year. For most Annex I parties and most greenhouse gases, the base year is 1990.¹⁵ But countries in transition can use as a base year 1988 or 1989 – years in which their emissions were higher than they were in 1990.¹⁶ And any Annex I party can use 1995 as its base year for the three industrial gases.¹⁷ Since the levels of use of those gases were much higher in 1995 than in 1990, the effect is again to raise the amount allowed to be emitted.

The commitments vary from country to country, from a low of 92% to a high of 110%. The commitment assigned to the United States is 93% – in other words, the commitment is to decrease greenhouse gas emissions by 7% from the base year level. The commitment assigned to Japan is 94% (a 6% reduction), and the commitment assigned to the European Union as a whole is 92% (an 8% reduction).¹⁸

The period during which the commitment is to be met is 2008-2012.¹⁹ The requirement is that each party's level of emissions during that period *average* its commitment amount. For example, Japan would be required to emit 94% of its base-year greenhouse gases as an average from 2008-2012. It would not be required to emit 94% in 2008, or in any other specific year in the commitment period. Even if it were still well above 94% in 2008, for example, it could argue that it would be premature to accuse it of failing to meet its commitment until and unless it had failed at the end of 2012 to maintain an average of 94% of its base-year levels over the five-year period.

The language expressing a “*view to reducing their overall emissions of such gases by at least 5 per cent below 1990 levels*” is aspirational. Studies have estimated that if all of the Annex I parties met the commitments set out in Annex B, their total emissions would decrease by about 5.2%.

Article 3.1 is silent on how Annex I parties should or must meet their commitments. The negotiators rejected EU proposals to mandate specific types of emission-reducing actions. But the negotiators were unable to agree on exactly how the Annex I parties could take sinks and various forms of joint action (such as emissions trading) into account in meeting their commitment targets.

With respect to sinks, the parties were strongly divided in the negotiations. The most important natural sinks are plants and oceans,

15. Kyoto Protocol, *supra* note 14, art. 3.7.

16. *Id.* art. 3.5.

17. *Id.* art. 3.8.

18. *Id.* annex B.

19. *Id.* art. 3.7.

which reabsorb much of the carbon dioxide emitted every year. Countries such as the United States, Canada, and Russia, which have large forests, would benefit from a rule allowing their forests to count as a credit toward their commitment target. On the other hand, many countries in Europe and Asia lack such sinks and were reluctant to allow credit for them. In addition to political difficulties, there are practical and technical obstacles to measuring sinks. For example, everyone agreed that “natural” sinks should not be counted, but how could one distinguish “anthropogenic” sinks from natural ones? In the end, the negotiators agreed to allow Annex I parties to take credit for certain types of anthropogenic sinks – “afforestation, reforestation, and deforestation since 1990” – and left open the possibility that “additional human-induced activities” could be included if the meeting of the parties to the Protocol so decided.²⁰ The Protocol did not state what percentage of the commitment could be reached through forestry or other activities, which later proved to be a contentious issue.

The negotiations were particularly difficult with respect to joint action, with some countries, such as the United States, strongly arguing that mechanisms such as emissions trading had to be included, and others, including many developing countries, resisting. In the end, the negotiators included four joint-action mechanisms in the Protocol, but left almost all of the details concerning their implementation to later negotiations.

First, the Protocol allows Annex I parties to fulfill their Article 3 commitments jointly, provided that their total combined emissions do not exceed the amounts assigned to them in Annex B.²¹ Although this provision is open to any group of countries, only the EU is expected to take advantage of it, and this is known as the “EU bubble.” EU countries have agreed on a division of responsibility that includes a wide variation in countries’ target emissions, from -28% for Luxembourg and -21% for Denmark and Germany, to +25% for Greece, and +27% for Portugal.

Second, the Protocol provides for emissions trading among Annex I parties that have undertaken commitments pursuant to Article 3, effectively allowing any two parties to trade part of their emission commitment.²² The Protocol says next to nothing, however, about how emissions trading is to be implemented. Moreover, it states that “[a]ny such trading shall be supplemental to domestic actions” for the purpose of meeting Article 3 commitments, which leaves ambiguous the degree to which countries may meet their commitment through purchasing

20. *Id.* art. 3.4.

21. *Id.* art. 4.1.

22. *Id.* art. 17.

emissions rights from other parties.

Third, the Protocol provides for “joint implementation” at the project level between Annex I parties. Specifically, it allows any Annex I party to transfer to or acquire from any other Annex I party “emission reduction units resulting from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases,” provided that the project’s benefit with respect to greenhouse gases “is additional to any that would otherwise occur” and that certain other requirements are met.²³ This was the least controversial of the “joint-action” mechanisms.

Much more controversial was the proposal that Annex I parties be able to obtain similar “emission reduction units” from developing countries. This idea of global joint implementation was strongly pushed by the United States and some other developed countries, and opposed during much of the negotiations by the EU and many developing countries. In the end, the Kyoto Protocol provides for global joint implementation under the name of a “clean development mechanism.”²⁴ Specifically, the Protocol allows Annex I parties to use emission reductions accruing from projects in developing countries, “as determined by the Conference of the [FCCC] Parties serving as the meeting of the Parties to this Protocol.” In other words, the degree to which Annex I parties can actually use these emissions reductions to meet their commitment is up to the Kyoto parties to decide. Moreover, the Protocol says that the reductions must be “certified” by “operational entities” to be named by the first meeting of the parties to the Protocol. The first meeting of the parties to the Protocol is also charged with working out the “modalities and procedures” of the clean development mechanism.

Another difficult issue facing the negotiators was how to ensure compliance by the parties with Kyoto’s requirements. The Protocol requires Annex I parties to report annually on its implementation of the agreement and contemplates that the first meeting of the parties to the Protocol will adopt guidelines specifying what the reports must include.²⁵ The Protocol also subjects these reports to review by experts nominated by the parties and coordinated by the secretariat, who are required to “provide a thorough and comprehensive technical assessment of all aspects of the implementation by a Party of this Protocol.”²⁶ The expert review teams are to report to the meeting of the parties to the Protocol,

23. *Id.* art. 6.1.

24. *Id.* art. 12.

25. *Id.* art. 7.

26. *Id.* art. 8.

“assessing the implementation of the commitments of the Party and identifying any potential problems in, and factors influencing, the fulfillment of commitments.”²⁷ More generally, the COP, acting as the meeting of the parties to the Protocol, is charged with regularly reviewing the implementation of the Protocol “and the extent to which progress towards the objective of the Convention [i.e., stabilization of greenhouse gases at a safe level] is being achieved.”²⁸ This review could conceivably result in an agreement among developing countries to commit to greenhouse gas reductions, but nothing in the Protocol explicitly says so. In contrast, the COP is required to begin considering commitments for Annex I parties for subsequent periods – that is, after the 2008-2012 commitment period – no later than 2005.²⁹

In contrast to the Protocol’s relatively strong and clear provisions on reporting and assessing Annex I parties’ implementation of their commitments, its provisions on enforcement are weak. Article 18 charges the first meeting of the parties to the Protocol with approving “appropriate and effective procedures and mechanisms to determine and to address cases of non-compliance with the provisions of this Protocol.” And Article 19 states that FCCC Article 14, the toothless dispute-resolution provision described above, will also apply to the Protocol.

The final important point about the Protocol is its requirement for entry into force. Article 25 provides that it will enter into force 90 days after at least 55 countries, including Annex I parties that account for at least 55% of the total carbon dioxide emissions in 1990 of Annex I countries, have formally ratified it. The 55-country mark has been relatively easy to reach, since ratifications by developing countries count towards it. As of late 2003, more than 100 countries had ratified the Protocol. The 55% requirement is much more difficult. The United States emitted about 36% of all Annex I carbon dioxide emissions in 1990; therefore, entry into force without the United States requires participation by virtually all other major Annex I countries.

III. After Kyoto: From The Hague to Bonn to Marrakech

The Kyoto negotiators expected that the post-Kyoto COPs would have to resolve many of the outstanding issues regarding sinks, joint action, and enforcement before countries would be willing to ratify it. The COPs in 1998 and 1999 made some progress toward addressing those issues, but most of the issues were still unresolved by November 2000, when COP-6 met in The Hague. COP-6 had been identified by

27. *Id.* art. 8.3.

28. *Id.* art. 13.

29. *Id.* art. 3.9.

COP-4 in 1998 as the meeting that would resolve the issues necessary to allow countries to begin implementation of the Protocol, so the meeting was under intense pressure to reach an agreement.

In the end, however, the parties failed to do so. Particularly intractable issues were: financial aid (the developing countries wanted more than the developed countries wanted to provide); the joint-action or “flexibility” mechanisms (the EU wanted to allow no more than 50% of the commitment to be reached through those mechanisms; the United States, Russia, and others wanted no cap); sinks (the United States wanted unlimited credit for its management of its domestic sinks, and the ability to include developing-country sink projects in the “clean development mechanism”; the EU again wanted to limit how much credit was available for sinks); and enforcement mechanisms (the developed countries were deeply divided on how strong to make the mechanisms).

The COP met again in Bonn, in July 2001, in a special session dubbed COP-6.5. In March 2001, President Bush had announced that the United States would not ratify Kyoto. This significantly raised the stakes at Bonn, since it was widely assumed that failure among the other countries to agree on the outstanding issues there would mean the death of the Protocol. It also greatly increased the bargaining power of Japan and Russia, since their ratification was as a result required for entry into force.

The parties reached agreement on enough of the outstanding issues at Bonn to declare the meeting a success. (Technically, the Bonn “agreement” is not an international agreement in the same sense as the FCCC and the Kyoto Protocol, but instead a decision by the parties to the FCCC on how to implement the Protocol.) Essentially, the parties, whose ratification was considered necessary to the Protocol’s entry into force (which included the major developing countries, as well as virtually all of the developed countries and countries in transition), were able to obtain whatever concessions they demanded as a condition of their ratification. For example, the developing countries were able to obtain renewed assurances of financial aid, including the creation of a new “climate change fund” to finance adaptation to climate change by, and technology transfer to, developing countries. The Bonn agreement is much less specific as to levels of funding.

With respect to flexibility mechanisms such as emissions trading, joint implementation, and the clean development mechanism, the countries such as Russia, Australia, and Canada that insisted on the maximum degree of flexibility won. Although the Bonn agreement says that “the use of the mechanisms shall be supplemental to domestic action and domestic action shall thus constitute a significant element of the effort made” by each Annex I party to reach its emission reduction

commitments, Bonn does not set a cap on the percentage of reductions that Annex I parties can obtain through the mechanisms. Bonn does set limits on the use of these mechanisms, however. First, it says that Annex I parties are eligible to participate in the mechanisms only if they are in compliance with Kyoto's reporting requirements. Second, it prohibits the use in either joint implementation or the clean development mechanism of emission reductions generated from nuclear facilities.

With respect to sinks, Bonn adds four additional activities to reforestation and afforestation (the sinks already allowed by Article 3.3 of Kyoto): (a) forest management; (b) cropland management; (c) grazing land management, and (d) revegetation. To be eligible, these activities must have occurred since 1990 and be "human-induced." The agreement includes some limits on the degree to which sinks may be used to offset credits. Reforestation and afforestation are the only sink projects for which parties can receive credit through the clean development mechanism; the credit available to an Annex I party for such sinks through the clean development mechanism is capped at 1% of the party's base-year emissions; and the credit for forest management cannot exceed country-specific negotiated caps included in an annex to the Bonn agreement. (For example, Russia's cap is 17.6 million tons of carbon dioxide per year; Japan's cap is 13 million; Canada's cap is 12 million.) But on the whole, Bonn opens the door to an enormous amount of credit for sinks, thus making it easier for many countries to meet their Kyoto emissions reduction commitments. The World Wildlife Fund estimates that the result will be that the Kyoto target of an overall reduction of emissions from Annex I parties of 5.2% has been softened to about 1.8%.

Finally, COP-6.5 agreed that there will be a compliance committee with a facilitative branch and an enforcement branch, which will each be composed of four members from Annex I countries and six from developing countries. The facilitative branch will provide advice to parties with an aim of facilitating compliance, and provide early warnings of potential non-compliance. The enforcement branch will be responsible for determining whether an Annex I party is not in compliance with its emission commitments under Kyoto Article 3.1, its various reporting requirements, and its eligibility requirements for participating in the flexibility mechanisms. Bonn also lists the consequences of non-compliance, which include: (a) for every ton of emissions by which an Annex I party exceeds its emission commitment, a deduction of 1.3 tons from its assigned amount for the next commitment period; (b) development of a "compliance action plan" to be reviewed by the enforcement branch; and (c) suspension of the party's eligibility to participate in emissions trading under Kyoto Article 17. Decisions by the enforcement branch may only be made by a three-

quarters vote of the Annex I members and a majority vote of the non-Annex I members. Appeals from decisions by the enforcement branch may be taken to the COP meeting, which may only override the decisions by a three-quarters vote.

The seventh meeting of the FCCC Conference of the Parties (COP-7) was held in Marrakech, Morocco, in November 2001. Essentially, the decisions reached by COP-7 added details to the agreement struck in Bonn. For example, the parties agreed on a transparent accounting system to keep track of the credits transferred through the flexibility mechanisms. The parties also fleshed out the compliance procedure by deciding that questions of implementation can be raised by any party (including parties reporting problems with their own implementation), to either the facilitation or enforcement branch of the compliance mechanism, which is required to investigate the submission. In the course of its investigation, the compliance mechanism may consider information from expert review teams, the submitting and examined party, intergovernmental organizations, and "competent" non-government organizations. The investigating branch will issue a preliminary finding, after which the concerned party has an opportunity to make another submission. The branch will then issue its final decision.

In a few cases, Marrakech changed the Bonn agreement. For example, Russia successfully demanded that its cap on credit for forest management be raised from 17.6 million tons of carbon to 33 million tons.

Bonn and Marrakech removed the obstacles many countries had said stood in the way of their ratification of the Kyoto Protocol. As a result, many Annex I countries, including the EU countries, Japan, Canada, and New Zealand, ratified the Protocol in 2002. To meet the 55%-of-carbon-dioxide-emissions requirement without the United States, however, Russia must also ratify the Protocol, and it has not yet done so. The fate of Kyoto is therefore still in doubt.

IV. The U.S. Proposal

In March 2001, when President Bush announced that he did not support ratification of Kyoto, he said that his administration would propose an alternative to Kyoto. On February 14, 2002, President Bush announced a "new approach for meeting the long-term challenge of climate change." The centerpiece of the proposal is the idea that the United States would reduce the "greenhouse gas intensity of the U.S. economy" by 18% by 2012. Greenhouse gas intensity is the rate of

greenhouse gas emissions per unit of Gross Domestic Product. The U.S. goal is to lower the rate from 183 metric tons per million dollars of GDP in 2002 to 151 metric tons per million dollars of GDP in 2012. Since current trends are expected to reduce emission intensity by about 14%, the national goal is to reduce it by an additional 4%. It is important to distinguish emissions intensity from emissions themselves. Assuming a growing economy, absolute levels of emissions could still increase even if the economy became more “greenhouse-gas efficient.”

The Bush proposal does not actually require anyone to reduce emissions. Instead, it would seek to improve the Emission Reduction Registry (a voluntary program through which businesses can register their emission reductions), to spend money on basic research on climate change and developing technologies, to encourage voluntary action by business, and to include some tax incentives to spur incentives in renewable energy.

Finally, the Bush proposal states: “If, in 2012, we find that we are not on track toward meeting our goal, and sound science justifies further policy action, the United States will respond with additional measures that may include a broad, market-based program as well as additional incentives and voluntary measures designed to accelerate technology development and deployment.”

This proposal has met with criticism. The Pew Center for Climate Change, a think-tank specializing in climate change issues, estimates that the 18% target will allow actual emissions to increase by 12% over the same period – nearly the same rate as they are presently growing. The Pew Center report points out that U.S. greenhouse-gas intensity fell by 21% in the 1980s and by 16% in the 1990s. As of 2000, total U.S. emissions were nevertheless 14% above 1990 levels. If emissions grow by 12% over the next ten years, the report says that emissions in 2012 would be 30% above 1990 levels. By extension, emissions in 2012 would be about 37% above the Kyoto target for the United States.

Similarly, *The Economist* (which has not been an uncritical supporter of the Kyoto Protocol) calls the Bush proposal’s goal of an 18% reduction in greenhouse-gas intensity “utterly inadequate as a target . . . since it is a virtual guarantee of much higher absolute levels of GHG emissions in a decade.”³⁰ It states that “his proposal does not include either of the two things that would commend it as a serious effort: taxes on carbon emissions or mandatory limits on them.”³¹

30. *United States: Blowing Smoke; Climate Change*, THE ECONOMIST, Feb. 16, 2002, at 49.

31. *Finance and Economics: Tax or Trade; Economics Focus*, THE ECONOMIST, Feb. 16, 2002, at 90.