

Nat'l Communication Comments

12/19/2001

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12/19/2001

Comments on Chapter 6: Vulnerability
Draft 2001 U.S. Climate Action Report

General Comments:

The greatest shortcoming of this document is the nearly complete lack of attribution for data, analysis and conclusions. The area of climate change science is rich with disagreement regarding future projections when it comes to specific predictions. This document fails to treat this appropriately by citing the origin of the findings it includes. As a result, no reviewer can adequately investigate the interpretations. There is nary a paragraph for which this is not the case. Especially egregious is the use of phrases like, "Model-based projections for the 21st century indicate..." and "Model projections suggest..." with no clarification as to which models are being discussed.

Great efforts seem to be made to always present the advantageous conclusions first whenever two or more outcomes are possible. This is done even when the positive outcome is the least likely. For example in a discussion of forest fires, the idea of trees with thicker bark being more resilient is explored before the more likely loss of species and populations. However this approach also suffers from unconvincing and unsupported presentation (see comment above).

Many important habitat types are ignored, including deserts, freshwater systems, arctic/tundra, islands and alpine regions. There are some of the most sensitive systems and they are brushed aside for drawn out discussions of forestry and agriculture. Also missing is the subject of migratory species and non-tree, non-agriculture plant species.

The forest section seems to ignore public forests. Given the large amount of area covered by public forests in the U.S. there will be a need for adaptation strategies for these forests and it may be Federal gov't money, not market money that pays for it. Some discussion of these lands seems to be needed in this document.

The overall focus on the idea of "market solutions" seems to miss all of the natural resource goals. There is no market incentive to protect most natural resources. Does this mean that they are without value? Emphatically, "no." So to protect natural resources from the ravages of climate change we must adopt the "contaminant paradigm." In this approach we have realized that the only way to protect natural resources from the impacts of anthropogenic contaminants is to impose regulations and clean-up measures to limit or correct damage. The same approach must be taken with regard to climate change. Greenhouse gases are anthropogenic in source. We must limit their emissions to stop further impacts and help systems adapt to impacts that have already occurred or are committed to occur. For example, market solutions would not have removed lead from gasoline. Nor would they have cleaned up contaminated sites.

It is important to recognize the many intricate links between human success and the protection of natural resources and systems. This document seems to ignore those links and focus almost exclusively on the direct economic extractions ignoring the crucial support structure that our natural world provides.

Specific Comments:

Overview: All of the overview is in the context of societal impacts. It overlooks natural resource issues. These need equally represented in this report.

Page 2, line 7: Discussion of reductions in GHGs over the course of the 21st century without reference to the timeframe of atmospheric concentration stabilization is misleading. You must include discussion of the amount of time required to stabilize concentrations.

Weather and Climate Context introductory paragraph: This doesn't really say anything pertinent. It is a broad overview designed to minimize our interpretation of the impacts of climate change. It needs more substance.

Page 3, line 36: What is the word "what" doing in this sentence?

Page 4, lines 1 and 18: What models are being referred to in these sections? We need citations to evaluate their accuracy. This whole section actually needs many citations to support the claims made.

Page 6, line 4: How long is the "long, upward trend"? 50 years, 100 years, 1000 years.

Page 7, line 2: Discussion of "adequate supplies of nutrients" should include a discussion of the widespread issues of nitrogen pollution. There is a wealth of research on this topic out there. Some of it should be integrated here. It is a problem increasing in magnitude and is only predicted to get worse and no actions are being taken to correct it. It is very likely that there will be detrimental synergistic interactions between climate change based stresses and nitrogen based stresses on systems in the United States (possibly the dead zone in the Gulf of Mexico).

Page 7, line 16: Listing wheat and rice as crops with uncertain impacts and leaving it at that is a bit disconcerting. These are big crops for feeding the world. Not knowing their future makes one less confident that this won't be a problem for agriculture.

Page 8, lines 10-22: This section fails to mention the detrimental impacts of water use (for agriculture and municipalities) on the ecosystems from which it is extracted. For example the Owens Valley of California, and other Western water projects, some of which have required judicial action to protect endangered species water rights.

Page 8, line 19-22: No and reduced tillage farming methods have been promoted since the late 70s and early 80s in the Midwest to reduce erosion and water use. I find it highly unlikely (especially since there is a complete failure to present any compelling citations) that future efforts will be more successful, with additional buy-in.

Page 8, lines 24-34: This section is in need of myriad citations to support the many claims. Especially lines 29-31 and lines 31-33. The final lines (33-34) present a solution with no indication of whether or not such research is underway. This definitely needs a citation.

Page 9, lines 4-10: This report is happy to make random predictions in all the other topic areas. Why not make some predictions about what might be the outcome of increasing pesticide use. It will likely have ill effects. To the best of my knowledge there is no existing research that says that increased pesticide loads in nature ecosystems improves their success.

Page 9, line 21: "lower precipitation may reduce such impacts." The converse can not necessarily be assumed to be true. Drying conditions (wind erosion and episodic rain moving dusty soils) can also cause erosion. Additionally drying can limit dilution making contaminant point sources more concentrated.

Page 9, lines 30-33: The assumption that we can prepare for weather anomalies if we have sufficient prediction time fails to note that we can not even do this adequately for established weather patterns. I don't think that the predictive meteorological science exists yet for what is being asked of it here. A citation otherwise would be useful in making your point.

Page 9, line 41-43: A citation would be swell.

Page 10, lines 2-4: Landscape use of trees is not generally considered range expansion. Two major reasons: 1) often this does not include reproductively viable populations (i.e. sex selection in ginkos, lack of surrounding land for expansion of cluster) and 2) landscaping frequently uses exotic species not indigenous to even the continent on which they are planted. There are also additional issues of hybrids and genetic selection.

Page 11, line 14: What are the "some warmer scenarios" that are referred to in the text? Citations, parameters, explanations...

Page 11, lines 10-18: What about land use loss? Forest (or other wildlands) conversion to development (buildings, roads, etc...) or poor harvest practice loss of forests and "carbon."

Page 11, lines 21-22, 23-26, 27-28: All of these points need citations to support them.

Page 11, lines 32-33: Alternatively some species are very susceptible to fire, or require periodic fires regimes (of a certain intensity) to reproduce successfully. Large-scale, intense and frequent fires do no good for these types of vegetation.

Page 11, line 36: "These changes in disturbance regimes are a natural part of all ecosystems." This statement is pointless. Every parameter discussed in this entire chapter falls under this clause (precipitation, atmospheric gas concentrations, etc...). Making this statement simply ties to lessen the potential importance of the impacts.

Page 12, line 7: The title of this section should be, "Effects of Climate Change on Forest Biodiversity"

Page 12, lines 7-24: Throughout this document but especially here it should be recognized that it is not just species that need to be addressed but populations. The world of conservation biology and ecology now focuses on the importance of populations and the unique genetic composition each encompasses. Protection and adaptation to climate change impacts must focus on populations as the crucial unit of biodiversity.

Page 12, lines 7-10: What about other abiotic factors? Weather, contaminants, nutrients, etc...

Page 12, line 14: Please not that "time and space scales" are correctly referred to as "temporal and spatial scales."

Page 12, lines 15-16: Add abiotic habitat to the list of factors that determine the distribution of plants and animals.

Page 12, line 16: Again "ecological models" are mentioned with no indication of which ones.

Page 12, lines 21-24: It should also be noted that populations isolated on mountains will be lost as they can only shift up in altitude, not latitude, due to their isolation which is likened to an island. If you had a section on island populations you could also discuss populations of biota isolated on true islands, as this is another important topic.

Page 12, line 40: Rather than "weed" species the terms used are generally "weedy" or "cosmopolitan"

Page 13, lines 1-2: A citation of these assertions would be helpful.

Page 13, line 15: "Analysis indicates..." requires that the reader know what kind of analysis was done and who did it.

Page 13, line 21: An alternative approach might be to increase harvesting to make up lost revenues (due to decreased prices) this would adversely impact forest habitat.

Page 13, lines 24-29: Lots of assertions in need of citations.

Page 13, line 32: Here is a mention of the concept of benefits, yet the paragraph goes on to only describe detrimental aspects. Why include the mention of unsupported benefits? If it is to be kept in the text, I suggest the addition of a supporting citation.

Page 13, line 40: "...opportunities for some warm water species..." What does this mean? Does the extinction or extirpation of one species, or population, is not offset by the expansion of another. While a rose may be a rose, a rose is not a hydrangea. The loss of species and populations is not a net balance equation. Each one is of value and concern. I would like to think that we know a bit more about the nature of ecosystems at this point in time than is taken in the lighthearted view that one fish is just as good as any other fish. Even if you ignore the inherent value of each species and population, you need to look at what niche each fish fills to know if the new fish really is a replacement.

Page 13, lines 43-45: Economic activity and economically motivated adaptation strategies will not benefit natural resources, only economically maintained systems (agriculture, development, infrastructure, commercial forestry) not natural systems.

Page 14, line 1: "...changes in taste, and general preferences..." This disregards the idea of stewardship of national natural resources. By leaving them to the marketplace we remove governmental responsibility for all people.

Page 14, lines 4-6: Action is mandated for protected areas regardless of the cause of the threat. Once something is designated as protected there is an obligation to development mechanisms for its protection. Such actions regarding climate change protections and adaptations must be supported in the development and expansion of all protective mechanisms (reserves, parks, sustainable harvest, etc...).

Page 14-15, lines 44-1: Will this process make land cleaner or water more polluted?

Page 15, lines 2-5: This example needs a citation.

Page 15, line 7: What interactions are "these interactions?"

Page 15, line 8: Should read, "Melting of glaciers and ice sheets..." Ice sheets are included farther down the page, they should be mentioned here too.

Page 15, lines 11-13: citation required

Page 15, lines 21-23: citation required

Page 15, line 36: in addition to "fisheries", "other coastal biodiversity" should also be added to the list of factors to be affected. Perhaps there could even be some discussion of sea turtles losing breeding habitat with sea level rise.

Page 15, line 45: Filtration and water purification is also seen as a benefit of estuaries.

Page 16, line 1-4: citation required

Page 16, line 10: "blooms of algae" are more commonly referred to as "algal blooms"

Page 16, line 11: What are the "stresses" that will increase on "sea grass, fish, shellfish and other organisms..." Please be less vague.

Page 16, lines 12-14: The statement "estuary habitat susceptible to predators and pathogens of shellfish" needs a citation and greater explanation.

Estuaries section in general: Also to be included in the list of impacts on estuaries should be sea level rise induced salt-water intrusion and shifting of habitats.

Page 16, line 23: Here is discussed the idea that wetlands may be able to migrate inland. This overlooks what then happens to the inland habitat that it is moving into. You are seeing the reduction of one problem with the creation of another.

Page 16, lines 26-28: How will the impacts vary among regions? What is the citation?

Page 16, line 35: What is meant by "genetic resources"?

Page 16, line 36: How many years are the "last few years"? Be more precise.

Page 16, line 43: Perhaps it could be rewritten as: "In addition to increasing sea surface temperatures, a number of factors are likely to also be contributing to the decline...."

Page 17, line 3: Using the term "increased vulnerability to erosion" requires more detail. Are you referring to bioerosion?

Page 17, line 4: "margins of coral reef distribution" might better be described in terms of range. Also be clear about what limits are of concern (latitude, depth, currents, or any range limits).

Page 17, line 7: Artificial reef is generally employed to protect and promote fish growth, not coral growth.

Page 17, Marine fisheries section: Many citations are required.

Page 17, line 22: "sea lion" might more accurately be described as by including the actual species name, perhaps you mean the "California sea lion."

Page 17, line 36: Please further describe the "adaptation to climate change"

Page 17-18, lines 45-2: Point well made. But again, a citation would be nice.

Page 18, lines 24-27: Again, point well made.

Page 19, lines 21-30: Why isn't the issue of available water supplies linked to agricultural issues as well?

Page 19, lines 35-37: Don't forget to add local species that are reliant on water being in those waterways.

Page 20, line 1-2: Again, point well made.

Page 20, lines 1-2: Additionally reduced water can lead to concentration of contaminants in waterbodies and therefore lead to increased toxicity.

Page 20, lines 8-12: Citation required.

Page 20, line 10: See previous comments regarding the need to examine what we already know about the success of promoting no and reduced till agriculture. A citation would, as always, be nice.

Page 20, line 18: Perhaps this could be better worded as, "...U.S., gradually releasing its water in spring and even summer." The inclusion of "presently" is only necessary if the melting will no longer occur in spring and summer. Rather it seems that the point being made is that there will be less snow.

Page 20, line 18: Again, name the models. You show them in the figures, cite them in the text.

Page 20, line 25: Add "species" in addition to "natural habitats."

Page 20, lines 27-29: Point well made but a citation is required.

Page 21, line 28: "Species live in the larger context of ecosystems..." What does this mean? This is a vague assertion with no real point.

Page 21, line 29: "differing environmental needs" does this mean "unique niches"?

Page 21, lines 29-31: What existing threats could be reduced if "soil moisture increases or the incidence of freezing conditions is reduced"? Again this is looking at the bright side with no real facts to indicate why. Please provide an example and citation to support this assertion.

Page 21, lines 35-37: Citation required.

Page 21, lines 39-45: Again I point out that extinction of one species is not ameliorated by the expansion of another.

Page 22, line 2: It might be better to word this as, "...further depleting..."

Page 22, Potential adaptation options to ensure adequate water resources: There needs to be some discussion of protection of natural ecosystem water needs.

Page 22, lines 26-28: What criteria will be used to determine when and to what degree "social, equity and environmental considerations" will be addressed?

Page 23, Temperature related illness and death: Some discussion of heat stress with air pollution is needed. It has its own section later but you need to allude to it here.

Page 24, lines 31-32: A better discussion of the timing of winter death is needed, especially after the statement on page 23 which indicates that heat is the most detrimental extreme weather. Some discussion of causes (unrelated to temperature) involving winter death is made but perhaps a more thorough examination is needed.

Page 25, line 25: This vague reference to "ongoing changes in technology" is not useful. It provides no real information and is nothing more than hopeful handwaving. The only example that is provided in the paragraph pertains to regulatory improvements, not technology.

Page 26, lines 1-2: Is this decline U.S. only? How large is "dramatic"? Is there a citation?

Page 26, lines 19-20: How does this increase relate to the decrease discussed in lines 1-2?

Page 27, line 15: It is customary to write the entire genus name the first time it is mentioned in a document.

Comments on Chapter 6: Vulnerability
Draft 2001 U.S. Climate Action Report

Overall the chapter is heavily weighted towards beneficial impacts of climate change and towards minimizing the importance of potential risks involved. Especially telling is a bias towards assuming that the lower end of a temperature projection is more likely to be true than the higher end when no evidence is given as to why that should be the case. The summary statements at the beginning of the chapter and at the beginning of the sections are often misleading, emphasizing beneficial aspects and either minimizing or calling into question the confidence scientists have in the negative aspects. In addition, while it is assumed that the US will be able to adapt to any changes, no analysis of the potential costs or feasibility of the adaptation is described. Some discussion of the more negative aspects is included in the body of the chapter though not reflected adequately in the summary portions.

Page 2. Lines 5-7 "However, recent trends ..." What studies are being referred to here? In fact "The projected rate of warming is much larger than the observed changes during the 20th century ..." page 69, IPCC, Third Assessment Report Volume I, therefore recent trends are not a good indication of warming in the 21st century. In terms of projections, the temperature projections are based on The Emissions Scenarios of the Special Report on Emissions Scenarios (SRES), which consist of 6 scenario groups, and 35 total scenarios. "All should be considered equally sound." There is therefore no "best estimate" and the lower range is definitely not highlighted as more likely.

Page 2, Lines 7-9. This sentence makes a large assumption that is not based on model evidence, namely, that "future changes in mean and extreme conditions will be similar to past variations". On the contrary the models project much greater changes in both mean and extreme conditions than that experienced during the 20th century.

Page 4 and 5. The description of the El Niño cycle fails to mention that while modeling of El Niño with climate change is complex and still evolving, the IPCC TAR I (page 73) does state that "... global warming is likely to lead to greater extremes of drying and heavy rainfall and increase the risk of droughts and floods that occur with El Niño events in many regions." In addition, many models point to a mean El Niño-like response in the tropical Pacific, which would make an increase in El Niño-like conditions over the 21st century likely.

Page 6, line 39-40. "...the rising concentration of carbon dioxide (CO₂) and continuing climate change are projected, on average, to contribute to the long, upward trend in crop yields." While increased temperature and CO₂ concentration could contribute to increased crop yields, the other factors listed in the paragraph, especially increased climate variability (more droughts and floods), water quantity and quality issues, and increased need for fertilizers could lower crop yields. The paragraph is written in a misleading fashion.

Page 7, line 24-25 "The crop models that were used in these studies assume that the CO2 fertilization effect will be strongly beneficial ..." While the CO2 fertilization effect has been shown for certain species under controlled conditions, many studies have shown that the effect may not be long-lasting, that species adapt to higher CO2 concentrations after as little as a few years, saturate in terms of productivity (do not increase beyond a certain point), and require large increases in fertilizers to realize increased CO2 benefits. Therefore if increased crop model yields are dependent on the CO2 fertilization effect, their projections are likely to be in error.

Page 7, line 34-35. "... unless there is inadequate or poorly distributed precipitation ..." This is precisely what is projected by the climate models, as stated in this report as well as the IPCC and National Assessment, that periods of drought and heavy precipitation events will increase. Therefore economic studies that predict positive benefits to the agricultural sector are based on studies that do not include likely climate consequences, namely increased extreme events and weather variability.

Page 9, line 23-33. As in comment above (re Page 4 and 5), models project that El Niño-like conditions are likely to increase, exacerbating the climate variability projected here. This should be mentioned in the context of this discussion.

Page 12, line 23. The economic impact is decline and eventual loss of syrup production in New York and New England. This should be stated explicitly. (see New England Regional Assessment)

Page 20, line 17-18. Snowpacks provide a natural reservoir for water storage for the western and northern portions of the US. The site of the storage is in mountainous regions and northern portions of the US. The wording needs to be improved here for clarity.

Page 20, line 22-25. "...have implications..." change to "... have many serious and negative implications ..."

Page 23, line 20. "While analyses suggest ..." This sentence does not make logical sense. If we have no confidence in our estimated projections of the potential impacts of climate change on health how can we be confident that the problems can be dealt with?

Page 23, line 26. While it is true that "...uncertainties remain about how the climate will change and how environmental conditions may change", it is also true that many estimates and projections about climate change have been made and a consensus by scientists of a range of plausible outcomes for future climate has been reached (IPCC TAR 2001). Therefore projections of the extent and direction of potential impacts of climate variability and change on health, while difficult, are by no means impossible and have in fact been made in the documents this report refers to. This paragraph is unnecessarily emphasizing the "uncertainties" and not fairly reporting the scientific conclusions.

Page 23, line 27 to 30. This conclusion – that the balance between increased risk of heat-related illness and decreased risk of cold-related illness cannot be confidently assessed, does not adequately summarize what is discussed later in the chapter, namely that extreme heat causes more deaths than any other category of deaths attributable to extreme weather. In addition, as discussed later in the chapter (page 24), while some winter deaths are related to cold weather (e.g., slipping on the ice), many are related to infectious disease, which may or may not decrease with milder winters. This would suggest that increased heat would have more negative effect than decreased cold.

Page 36, Item #5. The current crop models which form the basis of the statement that climate change will be beneficial to US agriculture here do not adequately incorporate the effect of extreme events (floods, droughts), pests and pathogens, and other factors as described in the body of the National Assessment and this summary. In addition, the models assume that increased carbon dioxide will translate into sustained increases in productivity, an assumption that cannot be supported by the short-term studies done to date.

**Comments on Chapter 4: Policies and Measures & 5: Projections
Draft 2001 U.S. Climate Action Report**

Failure to Make Progress in Meeting UNFCCC Obligations

Chapter 1 makes the claim that “the United States intends to continue to be a constructive and active Party to the United Nations Framework Convention on Climate Change.” Yet Chapters 4 and 5 make it clear that the United States is ignoring its obligations under the UNFCCC to implement policies and measures with the aim of returning emissions to 1990 levels.¹ In fact, the draft report estimates that United States emissions will rise 55 percent above 1990 emissions levels by the year 2020. Anything short of a major overhaul to include meaningful greenhouse gas measures that seek to fulfill the United States’ UNFCCC obligations will make this communication the latest national embarrassment and a further abdication of responsibility by the world’s largest polluter of greenhouse gases.

Failure to Recognize Importance of Near-Term Action

The introduction to Chapter 4 states: “And because global warming is a long-term problem, solutions need to be long-lasting, but may be discovered and implemented over a long period.” This perhaps is the Administration’s rationale for not forwarding any proposals to stop the radical growth in greenhouse gas emissions. The implication that we need to wait to discover long-term solutions before we act is inaccurate on two fronts. First, solutions to global warming already exist. From energy efficient home appliances and automobiles to more efficient, cleaner power plants and renewable energy technologies, we have the tools today to make significant reductions in greenhouse gas emissions. Second, the greenhouse gases emitted today will remain in the atmosphere for decades or centuries, increasing the impacts of global warming over time and making the impact of our emissions today effectively irreversible in our lifetimes. Further, the effects of global warming are already being felt here in the United States and throughout the world. The prudent way to manage the risks of global warming is to take action today to reduce U.S. emissions and to lead other nations, including developing countries, through export of advanced technologies.

¹ Article 4(2)(b) of the UNFCCC states: “[Each of these Parties shall communicate, within six months of the entry into force of the Convention for it and periodically thereafter, and in accordance with Article 12, detailed information on its policies and measures referred to in subparagraph (a) above, as well as on its resulting projected anthropogenic emissions by sources and removals by sinks of greenhouse gases not controlled by the Montreal Protocol for the period referred to in subparagraph (a), with the aim of returning individually or jointly to their 1990 levels these anthropogenic emissions of carbon dioxide and other greenhouse gases controlled by the Montreal Protocol.]”

Inaccurate Statements on the National Energy Plan

Chapters 4 and 5 include boldly inaccurate and unsubstantiated statements about the President's National Energy Policy (NEP), claiming that "... the net impact of the NEP will likely result in appreciable future reductions in U.S. greenhouse gas emissions...." Exactly the opposite is true: the NEP is a "How To" plan for making the 55% increase in the nation's greenhouse gases a reality.

The assertions in the National Communication that the NEP is a robust strategy for energy efficiency and renewable energy improvements is false. The most basic of readings of the NEP demonstrates that its recommendations are intended to increase fossil fuel and electricity supplies to meet forecasted demand levels based on business-as-usual estimates of energy demand. In the NEP itself, the Administration assumed that the energy efficiency and clean energy recommendations would do little if anything to reduce the need for ever-increasing fossil fuel consumption. For example, if, in fact, the Administration were confident that the NEP would significantly improve energy efficiency, then it certainly would help alleviate the need for more power plants. But, to the contrary, the NEP states that "America must have in place between 1,300 and 1,900 new electric plants," a number derived from business-as-usual demand estimates.

While the NEP did include chapters and recommendations on renewable energy and energy efficiency, the quantity of recommendations in this regard was undermined by the fact that they were at best toothless, and at worst counterproductive. For example, while the NEP calls on the Department of Energy to promulgate new efficiency standards for appliances, the first such action by the Department was to roll back a new standard for air conditioners, effectively increasing the energy consumption of new models. Further, the claim in Chapter 5 that the NEP "supports increased funding for research and development of renewable energy resources" is belied by the fact that the President's proposed budget slashed funding for renewable energy programs, and the Administration still has not stated that it supports increasing the budget of renewable energy program R&D above historic levels.

Failure to Report on Policies and Measures that Increase Greenhouse Gas Emissions

A further shortcoming in chapter 4 is that it fails to report on action taken to implement commitments under Article 4.2(e)(ii) of the Convention, as required by the reporting guidelines (#16). Under Article 4.2(e)(ii), Parties must identify policies and practices that increase greenhouse gas emissions. In 1998, Greenpeace commissioned Industrial Economics, Inc., to produce a peer-reviewed report on U.S. government subsidies to the oil industry (enclosed). The study, *Fueling Global Warming: Federal Subsidies to Oil in the United States*, found net subsidies totaled between \$5.2 and \$11.9 billion in 1995, excluding the \$10.5 to \$23.3 billion cost of defending Persian Gulf oil supplies. The government provided \$5.4 billion to maintain the Strategic Petroleum Reserve, \$2.3

billion in tax breaks for domestic oil exploration and production, and \$1.6 billion to support oil-related exports and foreign production. Under President Bush's National Energy Policy and subsequent energy legislation recently passed by the House of Representatives (HR 4), subsidies and other policies to increase fossil fuel consumption would increase.

Likewise, by subsidizing carbon-intensive industries overseas with export credits, guarantees and concessionary loans benefiting American corporations, the U.S. is locking developing countries into a path of fossil fuel dependency rather than actively promoting the transfer of clean technologies. Overseas Private Investment Corporation and the U.S. Export-Import Bank spent about \$23 billion dollars between 1992 and 1998 on fossil fuel projects in developing countries and economies in transition (including coal-fired power plants and oil and gas extraction projects) according to a study by the Institute for Policy Studies, Friends of the Earth and International Trade Information Service (enclosed). These projects will release approximately 25 billion tons of carbon dioxide over their lifetimes. The U.S. has also failed to provide leadership within international financial institutions on climate change. The World Bank, funded in large part by US tax dollars, spent nearly \$10 billion on fossil fuel projects around the world between the Rio Summit and mid-1997.

Characterization of Existing Voluntary and R&D Programs

Some of the government's long-standing voluntary programs, such as Energy Star, are already having a positive impact on energy efficiency and, consequently, on greenhouse gas emissions. However, these programs have not been sufficient to offset the dramatic growth in U.S. emissions during the past decade, and they would be more useful as complements to meaningful mandatory reductions. The characterization of the "reductions" from these programs in Chapter 4 and elsewhere must be clarified to acknowledge that greenhouse gas emissions continue to climb, and that the reductions attributed to the programs are not relative to any absolute target (such as 1990 emission levels), but are instead relative to what would have happened in the absence of the programs (e.g., even more rapid emissions growth).

In addition, the funding picture of the ongoing voluntary and R&D programs must be clarified. In the last national communication, the United States stated that it was seeking to increase funding for the voluntary reduction programs and for research and development. In its FY 02 budget, President Bush proposed significantly reduced funding for renewable energy and energy efficiency R&D, and the President froze the budgets for voluntary programs such as Energy Star at last year's funding levels.

Characterization of Voluntary Reporting under EPAct 1605(b)

Chapter 4 states that "more than 200 companies voluntarily reported to DOE more than 1,715 voluntary projects to reduce, avoid, or sequester greenhouse gas emissions. In fact,

as detailed in the enclosed report by the Natural Resources Defense Council, voluntary pledges by electric power companies to cut heat-trapping carbon dioxide (CO2) pollution have been an abject failure. NRDC reviewed the Department of Energy's voluntary Climate Challenge program and emissions reporting system established by section 1605(b) of the 1992 Energy Policy Act. DOE launched the Climate Challenge in 1993 with the goal of reducing electric power industry CO2 emissions to 1990 levels by the year 2000. Power plants produce 40 percent of U.S. CO2 emissions -- more than any other source. The study found that electric power companies used inflated baselines and other dubious accounting practices to claim large emission "reductions" when in fact they did little or nothing to change emissions trends. Emissions rose at about the same rate that power generation increased. For example, seventy percent of the pollution "reductions" the utilities claimed were based on the routine operation of nuclear plants. Companies simply credited themselves for avoiding emissions that would have occurred had that power been generated by hypothetical coal-fired plants.



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Mr. Harvey: Please find attached comments on chapter 7 of the draft US National Communication prepared and reviewed by several US CAN groups. In addition, I have listed the links for the reports that were referenced in the comments on chapters 4 & 5 that I submitted in a previous email. As I mentioned when we spoke, if you do post these comments on the web please refer to them as being submitted by "several USCAN members".

Thanks.

NRDC Report: Reported "Reductions," Rising Emissions The Failure of Voluntary Commitments and Reporting to Reduce U.S. Electric Industry CO2 Emissions
www.nrdc.org/globalwarming/reductions/execsum.asp

IPS/FoE/International Trade Information Service Report, April 1999:
OPIC, Ex-Im and Climate Change: Business and Usual?
<http://www.foe.org/international/climatesummary.pdf>

Greenpeace Report, June 1998: "Fueling Global Warming: Federal Subsidies to Oil in the United States"

<http://www.greenpeace.org/%7Eclimate/oil/fdsuiloil.pdf>

If you need additional information, please feel free to contact me.

Happy holidays,
Jo

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(See attached file: chapter 7 Comments.doc)



- chapter 7 Comments.doc

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Comments on Chapter 7 of the 2001 U.S. Climate Action Report

General Comments

In *Chapter 7: Financial Resources and Transfer of Technology* the United States takes credit for spending more than \$15 billion in the years 1997 to 2000 on overseas climate change mitigation and adaptation projects. This seems like a highly inflated figure, but it is not possible to say with certainty what part of the claim is legitimate without doing substantial outside research. The chapter itself gives precious little information as to how the money was actually spent, by whom, and for what purposes. Tables and figures give some broad insight, and raise some troubling questions, but don't tie issues together in a way that allows the reader to track financial flows from the provider to the recipient. The report should list all the projects for which the U.S. is claiming credit, along with a brief description of each project and the amount of money it represents.

The largest category of activity (\$10.5 billion) is "water supply," which is listed as a capacity building activity. Only a few examples are given, mostly construction and rehabilitation of water treatment facilities. Quite frankly, it is hard to believe that climate change concerns played any part in the decision to implement and fund these projects. If they did, we would like to see evidence of that fact. The report should state explicitly, for each project, how it relates to climate change mitigation or adaptation and how climate change factored into the decision to implement the project.

The report also should provide more information on the different types of financial flows included. Figure 2 lists six categories, but the report gives only minimal descriptions of them. The largest category, "commercial sales," is not described at all (as far as we can see), despite the fact that it accounts for more than two-thirds of total financial flows. The name seems to suggest that it represents the sale, on commercial terms, of technology by private U.S. firms to entities overseas. If this description is correct, we think the characterization of this category, as "direct funding to climate-related activities," is inappropriate and misleading. It should either be treated as a separate category, unrelated to U.S. funding efforts, or excluded altogether. More generally, the report needs to clearly describe the different types of financial flows included. *For each project or activity*, it needs to distinguish between government and private sector contributions and specify whether funding was in the form of a grant, loan, guarantee or other. If a loan, it should state whether terms were commercial or concessional, and give the value of the concession in dollars.

Specific Comments

OPIC and Ex-Im Bank

The report states that, since 1997, Ex-Im has provided approximately \$509 million in global climate change-related project loans, guarantees, and insurance to developing and transition countries. No figure is given for OPIC. This gives a very one-sided view of

how these institutions have contributed to the problem of climate change and/or its solution. Together, these two agencies have financed over 60 times as much (\$28 billion) in fossil fuels since 1992 as they have in renewables (\$460 million). Until last year, OPIC had not funded a single renewable energy project. (Last year OPIC completed at least two solar deals, a solar ovens project in Uganda and a deal with the Solar Electric Light Company in Sri Lanka.) According to a study by the Institute for Policy Studies, Friends of the Earth and International Trade Information Service, between 1992 and 1998 OPIC and Ex-Im together approved fossil fuel extraction and consumption projects that, if fully implemented, will result in emissions of 8 Gt of carbon over their lifetimes. This means that the U.S. is both the number one greenhouse gas emitter and the number one financier of fossil fuel development.

Financial Contributions to the GEF

This section provides figures for U.S. contribution to the GEF for 1997-2000. It should also state that the U.S. is substantially in arrears (by about \$200 million). While this may be unpleasant information for the U.S. to provide, it is important to give the reader a complete and accurate picture of U.S. support to the GEF. If the U.S. is planning on paying its arrears, the report should say so.

Aggregated U.S. Government Funding for Multilateral Institutions

The next decade or two are critical ones in determining the energy resources that will be used by over one-half of the world's population, those who live in developing countries. The U.S. government is the largest government investor, multilaterally and bilaterally, in the energy sector and energy infrastructure of countries around the world. For example, the U.S. is the largest shareholder in the World Bank and the European Bank for Reconstruction and Development (EBRD). These two MDBs, like the others, are heavily invested in fossil fuels. U.S. taxpayer investments could help shape a clean energy future for the planet. However, the U.S. government, through its funding of international financial institutions, is doing the exact opposite. The reader should be made aware that the nominal amounts being spent by these institutions on clean energy is swamped by their contribution to global consumption of fossil fuels

The report states that, in the period 1997-2000, the U.S. provided over \$4.46 billion to multilateral institutions. It does not state how much of this went to climate change-related funding, or how much of it contributed to *increases in* greenhouse gas emissions. In fact, The World Bank has invested 25 times as much in fossil fuel projects (over \$20 billion) as it has in renewables and energy efficiency (\$900 million) since 1992. While the World Bank ensured that 40,000 megawatts of power generated by dirty fossil fuels came online since 1992, the total solar power being generated worldwide (most without World Bank backing) comes to roughly 300 megawatts. World Bank fossil fuel projects financed since 1992 will release over their lifetimes CO₂ emissions that are equivalent to almost two years' worth of global emissions. Over 76% of the World Bank's energy and power sector lending is devoted to projects that support fossil fuels. And its export credit agencies which are, combined, the largest in the world, show a similar preference for

fossil fuels. The report should give a balanced picture of climate change-related funding by multilateral institutions. To do so, it must give the reader the other half of the picture—the extent to which such funding contributes to climate change rather than its solution.

Summary of Financial Flow Information

This section begins with the following statement: "From 1997 to 2000, the U.S. provided more than \$15 billion in direct funding to climate-related activities in other countries...." More than two-thirds of this amount (nearly \$11 billion), is attributable to commercial sales, which, in our view, is not "direct funding" provided by the U.S. The category of commercial sales needs to be treated separately, so as not to mislead the reader. As noted above, more detail needs to be provided generally on the funding types included in the report. Amounts that were provided through government grants and loans need to be distinguished from private sector funding, especially funding provided on commercial terms. The concessional component of loans should also be identified.

Mitigation Activities

The report states that the U.S. spent \$2.4 billion on climate change mitigation overall, but fails to say what contribution came from each funding type (see previous comment). The report also needs to provide more detail on the types of activities funded, including the name and type of each project or activity and the type and amount of financing involved for each. For mitigation projects, the anticipated reduction in GHG emissions should also be specified for each project.

Energy is central to the climate change problem, both its causes and solutions. Thus, if the U.S. is to claim spending of \$1.9 billion for the period 1997-2000, it should be more explicit as to how this money was spent and what the sources were. It appears from an earlier statement (p. 19, para. 4) that most energy funding was in the form of loans. It is important to note how much was provided by the government and how much by the private sector. How much of the total was made up of commercial loans, and how much was concessional? The amount provided in grants, either through ODA or OA, should also be specified. Loans, particularly on commercial terms, probably should not be characterized as "spending."

The report should say how much GHG emissions reduction was achieved overall through U.S. funded activity. Taxpayers have a right to know how much they are paying for GHG reductions *on a per ton basis*. A quick calculation shows that, if the tons identified were all that was achieved or anticipated, the U.S. would have spent over \$1,000/ton (assuming a 20 year lifetime for the Mexico Steam and Combustion Efficiency Pilot Project)!

The report should also indicate the amounts spent by U.S. agencies and the private sector on activities that *increase* greenhouse gas emissions overseas. Clearly, this funding swamps the amounts that are spent on mitigation. This is important information, and

should be provided to give a balanced picture of how U.S. investment overseas is affecting the problem of climate change.

Adaptation Activities

This section is the most difficult to understand. Although it claims huge sums have been spent by the U.S. (more than \$12 billion from 1997 to 2000), it gives almost no supporting facts. What were the activities? How much was spent on each? How do they link to climate change, and how do they promote capacity building? It seems clear that the activities themselves were in most cases not intended as climate adaptation projects. Rather, they may appear to fit the reporting guidelines, as an afterthought. We question the appropriateness of reporting activities that were not intended to provide climate benefits as climate change projects. Specifically, the report should explain how financing water treatment facilities, which appears to be the largest category of spending, contributes to adaptation and capacity building, as the report claims. Similar information should be provided for any disaster relief money spent in the wake of Hurricane Mitch and other major climate events. We are not disputing that these activities may have links to climate change; we are merely requesting more information on what the activities were, how they were funded, and what the climate justification is.