

Acceptance and avoidance of responsibility in world leaders' statements about climate change¹

Mai Kuha
Ball State University

Who is responsible for environmental problems and for finding and implementing solutions? Complex, systemic relationships between causes and results underlie the answer. The words and linguistic structures chosen to express these relationships can influence who or what we highlight as the agent carrying out an action; do we mention the agent at all? If so, do we present the agent as an individual, an unspecified group of people, an institution, a process, or a force of nature? These ways of constructing agency, together with other aspects of discourse, might affect what solutions to environmental problems occur to us.

Nominalizations – structures that express actions or processes as nouns – make processes and participants less explicit (Halliday and Martin 1993). Passive voice also allows the omission of agents (for example, “no one can say [...] what constitutes a dangerous level of warming, and therefore what level *must be avoided*”). The most obvious problem in agentless discourse is that parties responsible for unethical actions may be hidden. A less obvious risk is that responsibility may be “diffused” to a generic “we”, blaming individuals inappropriately for systemic problems caused primarily by institutions (Schleppegrell 2001).

In this paper, I investigate the construction of responsibility and agency in speeches by world leaders (particularly George W. Bush, Tony Blair, and John Howard) on their stance on climate change. I argue that, through careful use of passives or other linguistic resources that could either emphasize or background agency, most of the speakers convey a superficial sense of responsibility and commitment to action. However, investigating these structures in a larger discourse context shows that the speakers do not explicitly admit their nations' particular responsibility for global warming, and the actions they propose tend to be for others to take. It is hoped that increased awareness of relevant discourse mechanisms will give readers more tools for identifying manipulative attempts to background agents in environmental discourse.

The speeches

The speeches included in this analysis were given by the leaders of seven of eight countries identified as the top emitters of CO₂ (United Nations Statistics Division, 2007) plus Australia, which has high per capita emissions, in addition to fairly high total emissions. Together, these countries account for about 64% of the world's emissions, according to my calculations on the basis of the UN report. It seems instructive to analyze the specific wording that these leaders chose in addressing a national and global audience on the topic of global warming; even if the speeches were crafted by a speechwriter, each world leader becomes personally identified with the message and assumes responsibility for its content.

The aim of this paper is not to give a complete review of what world leaders have said about climate change. Rather, I found one speech each by the leaders of these nine countries, looking for key policy statements, as recent as possible, in which they articulate their views on the topic. The five speeches given in English are listed in Table 1.

¹ An earlier version of this paper was presented at the 13th International Interdisciplinary Conference on the Environment, Portland, Maine, July 2, 2007.

Table 1. Speeches given in English

Tony Blair	Prime Minister	UK	Comments at launch of Stern review	October 30, 2006
George W. Bush	President	USA	International development agenda (excerpt)	May 31, 2007
Stephen Harper	Prime Minister	Canada	At G8 summit (excerpt)	June 4, 2007
John Howard	Prime Minister	Australia	Weekly radio message	March 23, 2007
Manmohan Singh	Prime Minister	India	At G8 summit	June 8, 2007

English translations of speeches given in other English are listed in Table 2. It is very important to keep in mind that these languages vary greatly in discourse structure and in the use of linguistic structures considered in this paper. (See, for example, Yamamoto 2006.) Therefore, if we were to analyze the original versions of the speeches in Japanese, Chinese, Russian, and German, a different picture might emerge. Still, these English translations of the speeches seem relevant to include in this analysis; the English text can be taken as the message that the speakers wish to send to a world audience, since they were published on the official governmental website of each speaker. (The Hu speech was excerpted on Hu's official web page and appeared in its entirety on the web pages of CRI, a radio station owned and operated by the government.)

Table 2. English translations of speeches given in other languages

Shinzo Abe	Prime Minister	Japan	Addressing Asian leaders	May 24, 2007
Hu Jintao	President	The People's Republic of China	Addressing leaders of developing countries	June 7, 2007
Vladimir Putin	President	Russia	At the opening of the International Conference on Climate Change	September 29, 2003

I could not find an official translation of a comparable speech by Angela Merkel, Chancellor of Germany. On June 8, 2007, she gave a press conference in German on the G8 summit; I will comment briefly on her key points about climate change, without including this speech in the same process of analysis as the others.

In this paper, I am deliberately not taking into account the larger context of these leaders' policies and track records, but looking at each speech on its own merits: what exactly does it say, and how? These speeches could be analyzed from a variety of perspectives. I am going to limit my attention to the expression of responsibility: in talking about global warming, who (if anyone) do these world leaders present as responsible for having contributed to it, and who (if anyone) do they present as responsible for taking action?

Of particular interest is whether these world leaders recognize that the impact of global warming reflects and accentuates social inequity. Industrialized nations have high per-capita emissions, but developing nations will be the first to suffer. A World Health Organization report on the implications of global warming for human health indicates that developing countries are particularly vulnerable; mortality and homelessness resulting from extreme weather events have been increasing already

(2003). Africa, as well as South, South-East, and East Asia, are likely to see increased suffering from disease, water shortage, and reduced food security (Schneider et al. 2007).

Responsibility and agency

We can think of an **agent** of an action as an animate being with an intention who carries out actions to bring about an outcome (for more detailed discussion, see, for example, Talmy 2000:513-15). Suppose a logger cuts down a tree. The logger and the tree are key elements in this activity; the logger is the agent. We have various options for how to describe this activity and the relationships between the logger and the tree. We can foreground the logger's role:

The man cut down the tree.

Or we can include the same participants, but express them in passive voice:

The tree was cut down by the man.

This might be helpful to the reader if the sentence occurs in a paragraph about trees, rather than about loggers. There is still explicit reference to the agent of the action of cutting—he is just less prominent.

The same passive sentence allows the possibility of deleting the agent:

The tree was cut down.

Now, the agent of the action does not appear in the sentence, but listeners or readers can detect the deletion and ask: *by whom?* In fact, depending on what other elements are mentioned elsewhere in the discourse, they may even be able to infer who cut down the tree.

However, there are ways to describe the same activity that omit the agent without a trace. *The tree* can be made into the subject of a verb that presents the activity as one that the tree carried out:

The tree toppled.

Another option is **nominalization**, using a noun to refer to an activity or process. When we refer to *logging* or *forestry*, many tree-cutting events are included, but readers need not notice that the agents are not mentioned. Similarly, many participants are far in the background in nominalizations such as *habitat loss* or *extinction of species*.

These linguistic resources are not inherently positive or negative. They can certainly be used helpfully and clearly. What is of interest to us at the moment, however, is the possibility of using these linguistic resources to avoid responsibility, as in the famous example:

Mistakes were made.

The omission in the above is quite obvious, though. Detecting the missing agent is less straightforward here:

*[T]he acting director indicated to me that he was concerned about **these assets that are not subject to location**. [emphasis mine]*

Here, John Ashcroft is referring to the FBI's 449 lost guns and 184 lost laptop computers in a July 2001 interview. The nominalization *location* might have the purpose of inviting listeners to think that certain guns and laptops happen to have this property, so that they will not think to ask: *who is supposed to locate them?*

This issue of how participants in activities are represented has received considerable attention in Critical Discourse Analysis (see, for example, Fowler 1991). In the area of environmental discourse, a concern is that social agency in educational texts may be obscured (Schleppegrell 1996) and that some industry writings shift responsibility from institutions to individual consumers (Gerbig 1993). A less obvious problem is that responsibility may be diffused to a generic "we" (Schleppegrell 2001). On the other hand, Goatly argues that some elements of agentless discourse may usefully "emphasize the primacy of process" (2001:203), capturing the interconnected nature of reality.

Analysis

Following part of van Leeuwen's (1996) analytical framework, I identified every instance in which the speakers referred to an activity or process—for example, emitting greenhouse gases. Then I determined what roles the speakers allocated to the human participants (if any) involved in each activity or process. Where a human agent was involved in a process, I determined how explicitly, if at all, this agent was identified, using the following categories.

- I. **Included** agent: the agent is explicitly mentioned.

All countries must embrace ambitious absolute reduction targets. (Harper)

- II. **Excluded** agent: the agent is not mentioned. There are sub-categories:

- a. Excluded **suppressed** agent: the agent is deleted with no trace.
The ways to suppress an agent include

Deleting the agent in a passive:

It is an issue that must be tackled in a measured and practical way.
(Howard)

Nominalizations

Again, this means using a noun to refer to an activity or process. For example, *action* in this sentence does not specify who will act:

Urgent action will prevent catastrophe. (Blair)

There were many nominalizations in these speeches; I paid close attention to the ones that referred to activities most relevant to climate change:

emissions (who emits?)

action (who acts?)

development (who develops?)

use (who uses?)

- b. Excluded **backgrounded** agent: the same linguistic resources as for suppression may be used, but the agent is mentioned elsewhere in the speech in a way that makes it possible for listeners to infer who the missing agent is likely to be.

Canada's emissions were 33% above the target. (Harper)

Emissions by itself does not say who emits, but *Canada's emissions* does.

In these speeches, agents are often presented in impersonal terms—by using *Canada* to mean *Canadians*, for example. In his framework, van Leeuwen distinguishes various ways to represent agents as individuals or groups (1996:46-54); agents can also be indeterminate or differentiated (51-52). These distinctions are important in his sample text on immigration as a power issue: there seems to be a tendency to foreground members of privileged groups as individuals, while members of less powerful social groups are often less prominent. In the speeches considered here, however, the anonymity that generic or collective presentation of an agent provides may serve a different function: to obscure responsibility for environmental damage in order to protect the more affluent social groups from blame, or to avoid a negative reaction from special interest groups who believe that sustainability runs counter to their business interests.

Results

Most human agents in each speech were either included or, being excluded but backgrounded, could be inferred by listeners. It is quite reasonable that a number of agents are backgrounded or even suppressed, as it would be awkward and wordy to specify the agent of every single action mentioned in a speech.

In general, the proportion of included or excluded agents did not seem to correlate with the eco-friendliness of the content of the speech. We need to consider **who** the included and suppressed agents are (for example, *us* or *them*) and **what actions** they are carrying out (such as *polluting* or *reversing global warming*). That is, do we perhaps suppress the agent when the activity described is *we pollute*, but include the agent when we want to say *they must sign the Kyoto protocol*?

Bush

A fairly large proportion of Bush's agents were explicitly included, and he had the lowest proportion of suppressed agents. A majority—20 out of 30—of the explicitly **included** agents were instances of *the United States* (or *we* referring to the U.S.) or government departments or agencies. That is, there is a clear sense in this speech of the U.S. taking action. However, a closer look at these actions shows that relatively few of these instances involve the U.S. actually making changes that would help reverse global warming. The U.S. as an included agent is represented as researching or investing in research:

Over the past six years, my administration has spent ... more than \$12 billion in research on clean energy technology.

...or as involved in some unspecified activity:

The United States is taking the lead...

When the U.S. is an included agent of a future action—that is, when Bush is promising to do something—these actions are also not specific ones that would directly impact global warming. Here, the U.S. tends to be represented as coordinating and helping others:

...the United States will convene a series of meetings of nations...

We'll help the world's poorest nations...

However, in the three instances in which the included agent is not the U.S., but other (unspecified) nations, Bush does have a specific action for them to take:

...nations need to get rid of their tariffs...

Bush tended to use **backgrounded** agents to suggest that other nations should eliminate tariffs or do research, and also to sketch somewhat specific things the U.S. might do. For example, the U.S. is a backgrounded agent of *produce* here (in addition to being an included agent of *invest*):

*We're investing in new technologies **to produce electricity in cleaner ways**...*

As mentioned, there were very few **suppressed** agents. They tended to be associated with slightly more specific actions than the included agents we just saw. In the following example, *we* is the included agent for the action *taking steps*, but the agent of *make sure* is excluded; the sentence could mean that *we* take some steps and then some other unnamed party makes sure that the technologies reach the market.

...we're taking steps to make sure these technologies reach the market...

Note how the message would be subtly different if Bush had said instead:

We're making sure these technologies reach the market... [constructed example]

Bush does not refer to many actions that contribute to global warming, but when he does, the agents are excluded:

...nations that produce most greenhouse gas emissions, including nations with rapidly growing economies like India and China.

Here, *emissions* does not specify who emits, but the phrase that follows identifies India and China as the emitters. That is, India and China are a backgrounded agent of emitting; their role is not directly stated, but inferrable. Note also that developing nations are highlighted among the leading polluters—without any mention, of course, of the fact that the U.S. was the world's leading CO₂ emitter at the time of this speech, both in terms of total emissions and per-capita emissions.

Interestingly, there is no agent for what is perhaps the most tangible action referred to in the speech. The U.S. (*we*) seems to be the agent here:

We want to reduce our gasoline consumption by 20 percent over the next 10 years.

However, the sentence only states that Americans have a certain cognitive or emotional state (of wishing to reduce consumption), so Americans are not an agent at all, but an **experiencer**. The following statement is the one that would have had the U.S. as an agent:

We will reduce our gasoline consumption by 20 percent over the next 10 years. [constructed example]

Overall, the speech gives the impression of great activity on the part of the U.S. However, it turns out that, when Bush specifies what exactly should be done, the agent of the action is likely to be suppressed or at least backgrounded, which means that the speech does not commit the U.S. to much after all. As we will see for most of the other speakers as well, Bush mentions emissions in a way that is implicitly connected with global warming, but without making a causal connection, so he does not take a stand on who is responsible for having contributed to global warming.

Harper

Harper also does not state who is responsible for global warming; rather, while reminding listeners that all nations emit greenhouse gases, he minimizes Canada's responsibility:

Canada may be a small contributor to global warming – our greenhouse gas emissions represent just 2% of the earth's total...

Harper's included agents are the previous government of Canada behaving irresponsibly, or the current government doing nonspecific good things or making plans:

A decade ago our predecessors in government committed our country to the Kyoto protocol. And then they did practically nothing to achieve this goal.

So we vowed to develop a real plan – with real, absolute, mandatory reductions in greenhouse gas emissions.

In the preceding example, note how the resolute sound of *real, absolute, mandatory* contrasts with the lack of clear agency in it. Harper does not actually commit to reducing emissions, or even planning to reduce emissions; he *vows to develop a plan*.

On the other hand, when the included agents are other countries, Harper names more specific actions for them:

Every year, large emitters must become more energy efficient and emit less carbon per unit of production – intensity improvements of 18% by 2010, and 2% a year beyond that each and every year.

When Harper talks about reducing emissions, the agent doing the reducing tends to be suppressed. Another reason for the lack of explicitness in his message is that the referent of *we* is often not entirely clear: some instances clearly refer to Canada's current government, but others could also refer to Canada overall, or even the entire world.

Howard

John Howard's speech is the shortest one by far (216 words, compared with an average length of 908 words for the segments of speeches analyzed here). As a brief weekly radio message, it may not be comparable to the other speeches in terms of its intended scope. In fact, Howard had dedicated two other weekly radio messages earlier in the year to the same topic, so the brevity of the

speech does not necessarily signal lack of interest in the topic. The three weekly radio messages on climate change articulate a consistent message; taking this content into account, the March 2007 speech analyzed here seems representative of Howard's views.

Howard's approach is similar to Harper's in that he also does not specify who he holds responsible for contributing to global warming, but mentions emissions for the purpose of downplaying Australia's part in the harmful activities that all nations carry out:

While Australia contributes very little to global emissions we have a responsibility to tackle the problem none-the-less.

Whenever Howard explicitly includes an agent, that agent is Australia (or its government) and the actions attributed to it are phrased as accomplishments:

We have also announced other practical measures ...

Necessary future actions are all done by suppressed agents:

It is an issue that must be tackled in a measured and practical way.

In these particular speeches, Harper and Howard do not make reference to the gap between industrialized and developing nations in terms of responsibility and risk.

Hu

Hu comes closer than the previous speakers to identifying a party responsible for global warming:

Considering both historical responsibility and current capability, developed countries should take the lead...

In this speech, included agents tend to be either *we* meaning the entire world or *we* meaning China; both agents tend to be presented as taking relatively non-specific action:

We should work together...

Similarly to the previous speakers, when Hu refers to more specific actions, such as *increasing energy efficiency* or *changing the model of economic growth*, the agents of these actions tend to be suppressed, with the result—once again—that the speaker does not necessarily commit to these actions.

Putin

Putin's speech may not be quite comparable to the others, as it dates back to 2003. Unfortunately, I could not find a more recent speech that does more than refer to sustainable development in the context of economic issues. As we know, Mr. Putin was concerned with other topics at the 2007 G8 summit. Interestingly, journalists at a concluding press conference with Putin asked him questions on a range of topics, including his wife's feelings about the prospect of his term in office ending, but nobody asked him about climate change.

Back in 2003, it was still politically feasible to voice doubt about the extent to which human activities contribute to global warming, as Putin does in this speech:

Scientists should also help to find an answer to another fundamental question. And this is what the limits are to man's impact on the climate.

Some familiar themes emerge here: the included or backgrounded agents tend to be Russia making vague improvements now, or having already accomplished something:

... since 1990, including thanks to structural improvements in the Russian economy ... the burden and emissions have been reduced by 32%.

In the preceding example, the use of the passive in *emissions have been reduced* is particularly interesting. In the context of this speech, obscuring the agent of *reduce* achieves the somewhat unusual result of implying that the government acted deliberately to reduce emissions, instead of admitting that the reductions resulted from the collapse of the Russian economy.

More specific actions have suppressed agent, and even these actions are not bold proposals for how to reverse global warming:

Limits should not be allowed to be placed on economic growth and social development.

Singh

Like Harper and Howard, Singh does not take a stand on who is responsible for having contributed to global warming, beyond downplaying India's part:

India's GHG emissions are among the lowest in per-capita terms.

In general, an analysis of included and excluded agents in Singh's speech is not very meaningful, as he tends not to mention specific actions in this speech; proposing that *we should work together* does not commit anyone to much, even if we can identify the agent. However, there was one particularly interesting statement with two excluded agents:

It is important that critical and promising clean technologies are made affordable for developing countries, where there is large reliance on fossil fuels.

The agentless passive is used to omit the agent of *make affordable*, so we do not know who should do this. The nominalization *reliance* allows Singh to background the agent (developing countries) relying on fossil fuels.

Some common themes so far are

- *We never contributed much to emissions in the first place*
- *We have already made improvements*
- *We will continue to do our part by helping other countries mend their ways*

Blair

The distribution of included and excluded agents in Blair's speech bears considerable superficial similarity to that in Bush's speech. The included agents and the backgrounded (and therefore recoverable) excluded agents tend to be the UK, presented as taking action to reverse climate change, or as having made progress already:

We have increased jobs in cutting edge green industries from 170,000 in 2001 to over 400,000 today.

Other frequently occurring included and backgrounded agents are the EU or unspecified countries making relatively specific improvements:

We must agree new EU energy efficiency standards...

*A range of policy tools ... which can be used by **countries to help create a carbon price** ...*

That is, both Bush and Blair have a theme of explicitly presenting their own government or nation as an agent that has already accomplished great things, while others are agents of various needed improvements.

Despite these similarities, Blair's stance is markedly different from what we have seen in the other speeches so far. In terms of articulating who is responsible for global warming, Blair points out the causal connection between global warming and greenhouse gas emissions (while stopping short of using included agents to specify who emits greenhouse gases):

*But what is not in doubt is that the scientific evidence of global warming **caused by greenhouse gas emissions** is now overwhelming.*

Another difference is that Blair repeatedly makes it clear in his speech that everyone should undertake the actions he outlines:

...we must be bolder at home, in Europe and internationally.

Most notably, Blair is the only one to draw attention to the unequal risks that industrialized and developing nations face:

And while we will all suffer, poor countries will be hurt most.

Abe

Abe is the only speaker in this group to explicitly state who is responsible:

*Looking back over the history of the Earth and humanity, we find that fossil resources such as coal and oil buried around the world have been accumulated (...). **We, the human beings**, however, have been rapidly burning up these precious resources in the just over 200 years since the industrial revolution, releasing enormous amounts of carbon dioxide into the atmosphere. [emphasis mine].*

Abe's speech is far longer than the others, and outlines a more detailed plan. Like the other speakers, Abe mentions ways in which his country is already doing well. However, this speech stands out from the others not only because of its length and its explicit statement that *we the human beings* are responsible for global warming, but because of the extensive list of general and specific actions attributed to Japan as an included agent—actions in progress now or to be taken up in the future.

we will promote the "Cool Biz" (casual dress code without a tie and a jacket ...)

Other (unspecified) countries are also presented as included or backgrounded agents who should make improvements in the future, but promises of Japanese actions outnumber them. Abe does not avoid responsibility.

The speech also stands out in that Abe makes several references to the need for social change

... we will call upon the people to reexamine lifestyles...

Merkel

As noted earlier, I did not do a comprehensive analysis of included and excluded agents in Merkel's press conference, as it is not comparable to the other speeches (partly because an official English translation is not available). However, since Germany is such an important player in this process, a brief note about the key statements in Merkel's summary of climate change issues at the G8 summit is in order. Her summary statement is glaringly agentless:

Wir sind uns einig, dass es langfristige Reduktionsziele geben muss.

'We agree that **there must be** long-term reduction targets.'

Wir sind uns auch einig, dass die Festlegungen, die die Europäische Union, Kanada und Japan bereits getroffen haben, nämlich dass bis zur Mitte des Jahrhunderts 50 % der CO₂-Emissionen eingespart werden müssen, ernsthaft betrachtet werden müssen...

'We also agree that the regulation that the EU, Canada, and Japan have already determined, namely, that by the middle of the century, CO₂ emissions **must be reduced** by 50%, **must be** seriously **respected**...'

So far, the statement does not specify who will do the reducing. However, the end of the sentence makes the scope of responsibility considerably clearer:

...und dass niemand mehr diesen Betrachtungen die Grundlage abspricht.

'...and that **nobody** denies the basis of these considerations any longer.'

In any case, this is a statement describing what was agreed at the summit, not a statement of Merkel's policy (another reason why the speech is not comparable to the others), so she could hardly truthfully name agents that had been agreed upon for carrying out these reductions, given the positions articulated by the other leaders in the speeches we have just considered.

Conclusion

It is perhaps understandable that these speakers do not criticize their own supporters too harshly or point fingers at their own ranks in public for having contributed to global warming. That would be bad for morale. However, concern for morale is not a plausible explanation for the degree of avoidance of responsibility in the first six speeches (Bush, Harper, Howard, Hu, Putin, and Singh). A slanted, misleading presentation results when speakers mention their own low total emissions while protesting others' high emissions, present small changes or future plans as major accomplishments, or highlight the need for the whole world to rise to action while issuing to-do lists only for other nations. The extreme risks that millions of people in poor nations face, now that industrialized nations have contributed more than their share of greenhouse gas emissions, do not play a role in these speeches. Overall, these six speeches give an impression of avoiding commitment to action.

We have seen that discourse in which agents are backgrounded or suppressed can be used to talk about how to reverse global warming, without specifying who should do it. They can also be used to avoid taking responsibility for having contributed to global warming. However, the same linguistic resources can also be used while speaking responsibly; Blair and Abe both have a fair share of agentless actions in their speeches, but they spell out responsibility (at least to some extent) in other ways. To help determine whether speakers' apparent commitments to future action are actual commitments, readers and listeners can note when agentless discourse occurs, with special attention to the identity of agents omitted and the particular actions for which these agents are responsible.

References

- Fowler, Roger. 1991. *Language in the news: Discourse and ideology in the press*. London: Routledge.
- Gerbig, Andrea. 1993. The representation of agency and control in texts on the environment. In R. Alexander, J. Bang, & J. Døør (eds.), *Language and ecology: Proceedings of the Symposium on Ecolinguistics of AILA '93*, 61-73. Amsterdam.
- Goatly, Andrew. 2001. Green grammar and grammatical metaphor, or language and myth of power, or metaphors we die by. In Alwin Fill & Peter Mühlhäusler (eds.), *The ecolinguistics reader: Language, ecology and environment*, 203-225. London: Continuum.
- Halliday, M.A.K. & J.R. Martin. 1993. *Writing science: Literacy and discursive power*. Pittsburgh: University of Pittsburgh Press.
- Leeuwen, Theo van. 1996. The representation of social actors. In Carmen R. Caldas-Coulthard & Malcolm Coulthard (eds.), *Texts and practices: Readings in Critical Discourse Analysis*, 32-70. London: Routledge.
- Schleppegrell, Mary. 1996. Abstraction and agency in middle school environmental education. In J. Bang, J. Døør, R. Alexander, A. Fill, & F. Verhagen (eds.), *Language and ecology: Proceedings of the Symposium on Ecolinguistics of AILA '96*, 27-42. Jyväskylä.

- Schleppegrell, Mary. 2001. What makes a grammar green? A reply to Goatly. In Alwin Fill & Peter Mühlhäusler (eds.), *The Ecolinguistics Reader: Language, Ecology and Environment*, 226-228. London: Continuum.
- Schneider, S.H., S. Semenov, A. Patwardhan, I. Burton, C.H.D. Magadza, M. Oppenheimer, A.B. Pittock, A. Rahman, J.B. Smith, A. Suarez, & F. Yamin. 2007. Assessing key vulnerabilities and the risk from climate change. In M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden, & C.E. Hanson (eds.), *Climate change 2007: Impacts, adaptation and vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, 779-810. Cambridge University Press, Cambridge, UK.
<http://www.gtp89.dial.pipex.com/19.pdf>
- United Nations Statistics Division. 2007. CO₂ emissions.
http://unstats.un.org/unsd/environment/air_co2_emissions.htm (29 October, 2007.)
- Talmy, Leonard. 2000. *Toward a cognitive semantics. Volume I: Concept structuring systems*. Cambridge, MA: The MIT Press.
- World Health Organization. 2003. *Climate change and human health – risks and responses. Summary*. <http://www.who.int/globalchange/publications/cchhsummary/en/> (29 October, 2007.)
- Yamamoto, Mitsumi. 2006. *Agency and impersonality: Their linguistic and cultural manifestations* (Studies in Language Companion Series 78). John Benjamins.

Appendix 1: Detailed summary

	length in words	agents							% of processes w/agents	other roles					total		
		included		suppressed		back- grounded		total agents		experiencer		beneficiary		none			
Blair		1107	39	48%	25	30%	18	22%	82	67%	20	16%	13	11%	8	7%	123
Bush	excerpt:	904	30	41%	12	16%	31	42%	73	73%	13	13%	7	7%	7	7%	100
Harper	excerpt:	973	22	36%	15	25%	24	39%	61	73%	15	18%	0	0%	7	8%	83
Howard		216	5	38%	5	38%	3	23%	13	72%	2	11%	1	6%	2	11%	18
Hu	excerpt:	349	11	27%	16	39%	14	34%	41	84%	5	10%	1	2%	2	4%	49
Putin	excerpt:	606	9	28%	10	31%	13	41%	32	84%	4	11%	0	0%	2	5%	38
Abe		2636	63	32%	55	28%	77	39%	195	82%	19	8%	1	0%	22	9%	237
Singh		475	6	18%	13	38%	15	44%	34	63%	7	13%	4	7%	9	17%	54

Appendix 2: Excerpts from speeches

The links to the complete text of the speeches were valid at the time of writing, October 2007.

Abe

http://www.kantei.go.jp/foreign/abespeech/2007/05/24speech_e.html

May 24, 2007

Invitation to "Cool Earth 50" - 3 Proposals, 3 Principles

As a political leader having responsibility for the future, I am deeply concerned with global environmental issues, and, in particular, climate change.

Asia is the center of growth in the world, and if we neglect this issue in Asia, we run the risk of giving deep negative impacts for the future of the entire world.

At the East Asia Summit in January, thanks to the superb leadership of President Arroyo, we were able to reach agreement on energy security, which plays a part in addressing this issue. I would like to take this opportunity to pay my tribute to President Arroyo once again. Subsequently, in my meetings with Chinese Premier Wen Jiabao and U.S. President George W. Bush in April, we agreed to strengthen our cooperation to resolve the issue of climate change.

Against this backdrop, today, I would like to share with you my ideas and proposals on this issue. And I will call upon the entire world with the determination that I share with you, the Asian leaders.

The Issue

Looking back over the history of the Earth and humanity, we find that fossil resources such as coal and oil buried around the world have been accumulated by living organisms through gradual fixation of carbon dioxide from the atmosphere over dozens and hundreds of million years. We, the human beings, however, have been rapidly burning up these precious resources in the just over 200 years since the industrial revolution, releasing enormous amounts of carbon dioxide into the atmosphere.

According to a report of the Intergovernmental Panel on Climate Change (IPCC), global warming is beyond doubt. There is concern that progression of global warming would increase the frequency of extreme weather events such as heavy floods and droughts, and increase health hazards by infectious diseases. It may also lead to crises in food production resulting from depletion of water resources.

Now is the time that we must act. Otherwise how could we hold ourselves accountable to our future generations?

We have been making vigorous efforts to address this issue. The Kyoto Protocol was humanity's first step to reduce greenhouse gases as a concrete measure to address global warming. Nevertheless, we must also acknowledge that there are limitations to it. Therefore, we must create a new framework which moves beyond Kyoto Protocol, in which the entire world will participate in emissions reduction.

There are, by and large, three concerns that have been raised about our endeavor. I am convinced, however, that we can overcome these concerns.

The first concern is that endeavors to reduce greenhouse gas emissions would hinder economic growth. I believe it is possible to maintain economic growth while promoting emission reduction by rallying human wisdom to develop technologies and reform social life. In particular, Japan, as a country with advanced technologies, can make a significant contribution to making them compatible.

The second concern is that even if your own country takes steps to address the issue, it will not lead to the resolution of the issue on a global scale unless other countries also take action. This is absolutely true. Global warming is an issue that should be addressed by the entire world. The entire world lives on the same Earth and breathes the same air. This is precisely why it is indispensable to establish a new framework in which both industrialized and developing countries address this issue together.

The third concern is the argument that goes: is it not unfair to ask developing countries to take steps. The reality is that some of the developing countries are emitting substantial amounts of greenhouse gases, and their participation is indispensable. I believe it is possible to establish an equitable framework by making a

mechanism which enables each country to take measures according to its responsibility and capability. At the same time, by promoting technology transfers from industrialized countries to developing countries, we must also narrow the gap between our capabilities to respond to this issue.

Japan faced serious pollution and two oil crises, and was obliged to bear "burdens" such as environmental regulations and energy conservation measures over the short term. However, they are considered today to have been wise, long-term investments: because as a result of the concerted efforts of the public and private sectors in response to the strict environmental and energy restrictions, Japan's energy efficiency has improved by 37 percent over the past 30 years and oil consumption has decreased by 8 percent even though the GDP has doubled. Moreover, we have gained strong international competitiveness by developing fuel-efficient vehicles and energy-saving electrical equipment. The keys to Japan's success were our outstanding technologies, social mechanisms and traditions harmonious with the environment, and the solid will of our people.

Overview of my Proposals

Today, I would like to extend to you all an invitation to a beautiful planet, Earth in the year 2050. The invitation that I am going to talk about will also form the centerpiece of the 21st Century Environment Nation Strategy that I am advocating. I am calling my initiative "Cool Earth 50," a strategy consisting of the following three pillars that I would like to propose as a package to address this issue.

First, a long-term strategy aimed at global reduction of greenhouse gas emissions. Second, a proposition of three principles for establishing an international framework to address global warming from 2013 onwards.

Third, launching of a national campaign to ensure that Japan achieves the Kyoto Protocol target.

Proposal 1: Long-Term Strategy

First, let me introduce the first pillar, the long-term strategy. Goal setting is a vital part in laying out a strategy. In order to achieve the objective of the United Nations Framework Convention on Climate Change to stabilize the level of greenhouse gas concentrations in the atmosphere, we must curb the global greenhouse gas emissions to the same level as the capacity of natural sinks. Bearing this in mind, I propose setting a long-term target of cutting global emissions by half from the current level by 2050 as a common goal for the entire world. Considering the fact that current global emissions are more than double the capacity of natural sinks, which means that gas concentrations in the atmosphere will only increase, it is imperative that we first share this goal internationally.

Then, what would be the means to achieve this goal?

Unfortunately, the current technology will be insufficient to achieve this goal of halving emissions by 2050. Thus, I would like to present a long-term vision for developing innovative technologies and building a low carbon society, centering on those technologies.

First, on innovative technology development, we want to develop technologies through international cooperation which enable both economic growth and reduction of greenhouse gas emissions to be achieved at the same time.

An international project is already underway to eliminate carbon dioxide emissions from coal-fired power generation, which accounts for 30 percent of global carbon dioxide emissions. Japan will contribute to this effort by world's cutting-edge technologies.

We will also enhance the reliability and safety of nuclear energy, and develop advanced nuclear power generation technologies, such as high-temperature gas-cooled reactors and small reactors, so that safe and peaceful use of nuclear power will be expanded.

We will furthermore work to reduce the cost and increase the efficiency of solar power generation and fuel cells and promote the use of next-generation automobiles as quickly as possible.

To give an example in the industrial sector, research is now being conducted on a technology that utilizes hydrogen to reduce the amount of coke used in producing iron from iron ore. We will work to make dynamic progress in technological innovation in industry, too.

By creating a low carbon society we aim to realize a society where high quality of life and reduction of carbon dioxide emissions are achieved at the same time. More specifically, we will embark on reforms that delve into our way of life and social systems, including creating lifestyles harmonious with nature such as forests, efficient transport systems including public transportation, and compact urban development.

Japan will vigorously call on countries around the world to reach an international consensus on the long-term goal of halving emissions by 2050 and the steps for achieving it. We, on our part, will make significant contributions by harnessing both our advanced technologies and traditional social systems.

In particular, Japan has long cherished the sentiment of "mottainai" (literally, "don't waste what is valuable") and that has thoroughly promoted recycling. We have fostered a good tradition of urban development committed to preserving greenery, going as far back as the Edo period. The amount of carbon dioxide emissions by GDP of Japan is the least among major industrialized countries in the world, and public transportation accounts for 47 percent of all movement of people in Japan-by far the highest among industrialized countries. We will demonstrate the "Japan model" in the world, which utilizes its traditions and advanced technologies to create a society in harmony with the environment.

Proposal 2: Mid-Term Strategy

There is only one Earth, and there are no national boundaries for the air. Even the most outstanding strategy would be meaningless unless all people living on Earth participate in it.

As the second pillar of my strategy, I propose to the world "3 principles" in designing a concrete framework for addressing global warming beyond 2013, which aims to have the participation of all people on Earth.

The first principle is that all major emitters must participate, thus moving beyond the Kyoto Protocol, leading to global reduction of emissions.

The post-2013 framework for combating global warming must make greater strides than the current Kyoto Protocol towards the global goal of halving emissions by 2050.

To that end, we must create a framework in which all major emitters of carbon dioxide participate, including the United States, the world's largest, China, the second largest, and India, the fifth largest.

The second principle is that the framework must be flexible and diverse, taking into consideration the circumstances of each country.

Each country has an obligation to reduce emissions under the principle of "common but differentiated responsibilities and respective capabilities." The measures by industrialized and developing countries do not need to be the same, and even within developing countries, capabilities and circumstances differ between emerging economies and other countries. The framework must, therefore, be flexible and diverse so as to enable each country to maximize its efforts to reduce emissions.

The third principle is that the framework must achieve compatibility between environmental protection and economic growth by utilizing energy conservation and other technologies.

A global response will require compatibility with each country's economic growth. If the framework required economic growth to be sacrificed, the participation of many countries cannot be expected.

The key to achieving compatibility is technological development and its widespread use. The participation of the entire world will become possible by creating a framework which promotes advancements in and use of cutting-edge technologies such as hybrid cars and solar batteries.

(Financial Mechanism)

In realizing these principles, I hereby announce that Japan will extend wide-ranging support to developing countries with high aspirations that say "No" to further global warming, make efforts to reduce greenhouse gas emissions and achieve economic growth in a compatible way. Japan will provide assistance utilizing its technology and experience, in areas such as reduction of greenhouse gas emission, forest conservation; measures for regions vulnerable to effects of global warming such as rises in sea level and droughts; promotion of use of clean energy, while taking into consideration various circumstances of developing countries.

It is our intention to provide such assistance to the developing countries which stand ready to coordinate their policies actively in response to Japan's proposals. Thus, these will be a new type of assistance in which Japan will present proposals based on policies which will lead to cooperation. Japan will pay special attention to developing countries, and in particular, to the LLDCs, that are exposed to dangers such as submersion of land and desertification as a result of emissions by other countries.

And we will be creating a new financial mechanism for these assistances. Instead of diverting the funds for assistance to developing countries that has been traditionally extended, Japan is ready to look into the possibility of creating a new financial mechanism with substantial size of funds for relatively long-term, and call on other industrialized countries and international organizations such as the World Bank and United Nations to

respond and take part in international cooperation.

(Measures on Energy)

We will also approach the issue from the viewpoint of energy measures, which are inseparably linked with the issue of climate change. We will develop the Cebu Declaration which formulates energy conservation goals among other things, and expand this endeavor for improving energy efficiency to the entire world. Furthermore, we will actively promote international efforts to expand the safe and peaceful use of nuclear power, as well as providing assistance such as infrastructure development for the introduction of nuclear power to developing countries.

(Examination of Other Methods)

In addition to all these, various other methods are being discussed in order to implement the mid-term strategy, such as an integrated approach to fight pollution and global warming in developing countries; emissions trading; and economic incentives. We will study these methods from wide aspects, including the effectiveness of measures and impact on the economy, based on our own experience and the experience of other countries.

Proposal 3: Launching a National Campaign for Achieving the Kyoto Protocol Target

The third pillar of my proposal is to launch a national campaign for achieving Japan's Kyoto Protocol target.

We are determined to exert all efforts by the entire nation to ensure that Japan achieves its commitment to reduce emissions by 6 percent. We will add new measures, in particular, for offices and households with significant increases in emissions. We will complete our review of the Kyoto Protocol Target Achievement Plan by the end of this fiscal year.

The Government, for its part, has already produced substantial results by taking the lead in reducing the greenhouse gases, such as replacing all official government vehicles with low-emission vehicles. We will request municipalities and major business entities to make their reduction plans public, and urge them to accelerate their actions.

We will launch a national campaign and strengthen our endeavors, including systematic response. With the motto of "1 person, 1 day, 1 kg" for reducing greenhouse gases, we will call upon the people to reexamine lifestyles and call for efforts and creative ideas at home and workplace. Specifically, we will promote the "Cool Biz" (casual dress code without a tie and a jacket to reduce air-conditioning during the summer) to make it a standard practice in summer, as well as the reduction of the amount of garbage, the replacement of incandescent light bulbs with fluorescent lights, and advisory services to conserve energy.

Furthermore, we will solicit new proposals from the people for expanding the national campaign, and will actively adopt new proposals, once their effectiveness are proven.

Conclusion

Through the measures I have described, I am determined to exert my utmost efforts to tackle the issue of global warming together with the people of Japan. It is my sincere hope that each and every country, be it an industrialized or developing country, will accept my invitation and walk together towards the "Cool Earth" in 2050.

I will continue my efforts based on my proposals, and aim to produce fruit at the G8 Summit in Toyako, Hokkaido, next year. I ask for your understanding and cooperation in this endeavor.

My vision of "a beautiful country" is also about raising a question: should we not transform our civilization in order for humanity to continue its path of development while striking harmony with the global environment. I am convinced that Japan can definitely make a significant contribution to the human civilization by fully harnessing our good traditions and world cutting-edge technologies, and making wholehearted efforts. So, let us join hands and work together to make "Cool Earth" a reality.

Blair

<http://www.number-10.gov.uk/output/Page10300.asp>

30 October 2006

PM's comments at launch of Stern Review

This is the most important report on the future published by the Government in our time in office. Some

will always make a case for doubt in an issue such as this, partly because its implications are so frightening. But what is not in doubt is that the scientific evidence of global warming caused by greenhouse gas emissions is now overwhelming. It is not in doubt that if the science is right, the consequences for our planet are literally disastrous. And this disaster is not set to happen in some science fiction future, many years ahead, but in our lifetime.

What is more, unless we act now, not some time distant but now, these consequences, disastrous as they are, will be irreversible. So there is nothing more serious, more urgent or more demanding of leadership, here of course but most importantly, in the global community.

Britain is more than playing its part. But it is 2% of worldwide emissions. Close down all, all of Britain's emissions and in less than two years just the growth in China's emissions would wipe out the difference. So this issue is the definition of global interdependence. We have to act together. This is an international challenge. Only an international solution will meet it.

It's why we put so much effort in getting agreement on Kyoto. It's why I put it top of our G8 and EU agenda. That is why the G8 + 5 dialogue began last year at Gleneagles is utterly critical. It involves all the leading players responsible for 70% of emissions. It is the key to getting a binding framework of action after the Kyoto Protocol expires in 2012.

This report will be seen as a landmark in the struggle against climate change. It offers a stark warning but also hope over climate change. It also gives us the clearest evidence yet that bold and decisive action can still prevent it. But without radical international measures to reduce carbon emissions within the next 10 to 15 years, there is compelling evidence to suggest we might lose the chance to control temperature rises. Failure to act will make an increase of between 2 and 5 degrees in average temperatures almost inevitable. The consequences are stark, for our planet and for the people who live on it, threatening the basic elements of life - access to water, food production, health and our environment.

A rise of between two and three degrees means:

Disappearing glaciers will significantly reduce water supply to over a billion people.

Rising sea levels could lead to 200 million people being displaced

Declining crops yields will lead to famine and death particularly in Africa.

Diseases like Malaria will spread.

As many as 40% of species could face extinction

And while we will all suffer, poor countries will be hurt most.

But what the Stern Review shows is how the economic benefits of strong early action easily outweighs any costs. It proves tackling climate change is the pro growth strategy. Stern shows that if we fail to act, the cost of tackling the disruption to people and economies would cost at least five per cent - and possible as much as 20% - of the world's output. In contrast, the cost of action to halt and reverse climate change would cost just 1%.

Or put another way for every £1 we invest now, we can save at least £5 and possibly much more. And it shows how this can be done without capping the aspirations of rich or poor countries. In the UK, we have already exposed the false choice between growth and the environment. Our economy has grown by 25% since 1997 while cutting our emissions by 7%. We have increased jobs in cutting edge green industries from 170,000 in 2001 to over 400,000 today. The review sets out a framework for international action that is both ambitious and realistic - one that creates certainty and a carbon price. This framework includes:

A goal to stabilise concentrations of emissions in the atmosphere.

A range of policy tools, including a global cap and trade scheme, regulation and tax which can be used by countries to help create a carbon price and encourage investment in the low-carbon technologies that we already have. Accelerating technological innovation through R and D and demonstration projects and allowing new technologies to come to market.

Stronger measures to help poor countries adapt

So it offers us hope and the way forward. But we can't wait the 5 years it took to negotiate Kyoto. We simply don't have the luxury of time. We need to accelerate the international discussions on a future framework for after 2012. During the coming year, we must take major steps to agreeing the elements of this future framework. The German G8 in 2007 will be vital. This report will form the essential context for such

discussion. And in Europe we must go further too. We should extend the EU Emissions Trading Scheme beyond 2012 and bring aviation into the heart of it. We should find ways to join this EU trading scheme up with others around the world including the one I helped launch with Governor Schwarzenegger and his Democrat colleagues in California a few weeks ago. We must agree new EU energy efficiency standards and launch a new initiative to make all new coal power stations carbon neutral. And at home we must do more too. Already we are on track to achieve double our Kyoto target, a record no other country in the world can match. But we must go further. We must implement the energy review to get on trajectory to our 2050 target.

We must develop new measures to encourage individuals to take action. We are looking at carbon budgets and a climate change bill. I accept we should be bolder at home - it gives us international influence - but let's be honest, it is only international action that will really address the problem on the scale needed.

Gordon will set in more detail the governments response to the Stern review but it is clear we must be bolder at home, in Europe and internationally. The Stern Review has done a crucial job. And I thank Nick and his team for all their hard work. It has demolished the last remaining argument for inaction in the face of climate change. We know it is happening. We know the consequences for the planet.

We now know urgent action will prevent catastrophe and investment in preventing it, will pay us back many times over. We will not be able to explain ourselves to future generations if we fail.

Bush

<http://www.whitehouse.gov/news/releases/2007/05/20070531-9.html>

Video of the relevant segment: <http://youtube.com/watch?v=GoeDEV8H7L8>

May 31, 2007

President Bush's Remarks on the World Agenda (addressing the U.S. Global Leadership Campaign). Bringing progress and prosperity to struggling nations requires growing amounts of energy. It's hard to grow your economy if you don't have energy. Yet, producing that energy can create environmental challenges for the world. We need to harness the power of technology to help nations meet their growing energy needs while protecting the environment and addressing the challenge of global climate change.

In recent years, science has deepened our understanding of climate change and opened new possibilities for confronting it. The United States takes this issue seriously. The new initiative I am outlining today will contribute to the important dialogue that will take place in Germany next week. The United States will work with other nations to establish a new framework on greenhouse gas emissions for when the Kyoto Protocol expires in 2012.

So my proposal is this: By the end of next year, America and other nations will set a long-term global goal for reducing greenhouse gases. To help develop this goal, the United States will convene a series of meetings of nations that produce most greenhouse gas emissions, including nations with rapidly growing economies like India and China.

In addition to this long-term global goal, each country would establish midterm national targets, and programs that reflect their own mix of energy sources and future energy needs. Over the course of the next 18 months, our nations would bring together industry leaders from different sectors of our economies, such as power generation and alternative fuels and transportation. These leaders will form working groups that will cooperate on ways to share clean energy technology and best practices.

It's important to ensure that we get results, and so we will create a strong and transparent system for measuring each country's performance. This new framework would help our nations fulfill our responsibilities under the U.N. Framework Convention on Climate Change. The United States will work with all nations that are part of this convention to adapt to the impacts of climate change, gain access to clean and more energy-efficient technologies, and promote sustainable forestry and agriculture.

The way to meet this challenge of energy and global climate change is through technology, and the United States is in the lead. The world is on the verge of great breakthroughs that will help us become better stewards of the environment. Over the past six years, my administration has spent, along with the Congress, more than \$12 billion in research on clean energy technology. We're the world's leader when it comes to figuring out new ways to power our economy and be good stewards of the environment.

We're investing in new technologies to produce electricity in cleaner ways, including solar and wind energy, clean coal technologies. If we can get a breakthrough in clean coal technologies, it's going to help the

developing world immeasurably, and at the same time, help protect our environment.

We're spending a lot of money on clean, safe nuclear power. If you're truly interested in cleaning up the environment, or interested in renewable sources of energy, the best way to do so is through safe nuclear power. We're investing in new technologies that transform the way we fuel our cars and trucks. We're expanding the use of hybrid and clean diesel vehicles and biodiesel fuel.

We're spending a lot of your money in figuring out ways to produce ethanol from products other than corn. One of these days, we'll be making fuel to power our automobiles from wood chips, to switchgrasses, to agricultural wastes. I think it makes sense to have our farmers growing energy, so that we don't have to import it from parts of the world where they may not like us too much. And it's good for our environment, as well.

We're pressing on with battery research for plug-in hybrid vehicles that can be powered by electricity from a wall socket, instead of gasoline. We're continuing to research and to advance hydrogen-powered vehicles that emit pure water instead of exhaust fumes; we're taking steps to make sure these technologies reach the market, setting new mandatory fuel standards that require 35 billion gallons of renewable and alternative fuels by the year 2017. It's a mandatory fuel standard. We want to reduce our gasoline consumption by 20 percent over the next 10 years, which will not only help our national security, it will make us better stewards of the environment. The United States is taking the lead, and that's the message I'm going to take to the G8.

Last week, the Department of Energy announced that in 2006, our carbon emissions decreased by 1.3 percent while our economy grew by 3.3 percent. This experience shows that a strong and growing economy can deliver both a better life for its people and a cleaner environment at the same time.

At the G8 summit, I'm going to encourage world leaders to increase their own investments in research and development. I'm looking forward to working with them. I'm looking forward to discussing ways to encourage more investment in developing nations by making low-cost financing options for clean energy a priority of the international development banks.

We're also going to work to conclude talks with other nations on eliminating tariffs and other barriers to clean energy technologies and services by the end of year. If you are truly committed to helping the environment, nations need to get rid of their tariffs, need to get rid of those barriers that prevent new technologies from coming into their countries. We'll help the world's poorest nations reduce emissions by giving them government-developed technologies at low cost, or in some case, no cost at all.

Harper

<http://www.ecoaction.gc.ca/speeches-discours/20070604-eng.cfm>

June 4, 2007

Prime Minister Stephen Harper calls for international consensus on climate change (addressing a meeting at the G8 summit)

Canada may be a small contributor to global warming – our greenhouse gas emissions represent just 2% of the earth's total – but we owe it to future generations to do whatever we can to address this world problem. And Canadians, blessed as we are, should make a substantial contribution to confronting this challenge.

At this Summit, for the first time ever, Canada will arrive at a G-8 meeting with a real and realistic action plan on climate change. Normally, Canada is a country that prides itself on living up to its international obligations and commitments. But frankly, up to now, our country has been engaged in a lot of “talking the talk” but not “walking the walk” when it has come to greenhouse gases. A decade ago our predecessors in government committed our country to the Kyoto protocol. They said Canada would reduce its emissions to 6% below 1990 levels beginning in 2008. And then they did practically nothing to achieve this goal. Instead, they maintained policies that pushed emissions in the other direction. In fact, when we came to office last year, Canada's emissions were 33% above the target and rising. Which meant, with only months before the targets kicked in, it had become impossible to meet the Kyoto commitment without crippling our economy.

So we vowed to develop a real plan – with real, absolute, mandatory reductions in greenhouse gas emissions. A plan that's practical, affordable and achievable. A plan that's balanced and market-driven. A plan that deals with our growing economy and population. But also a plan that achieves real, absolute, mandatory reductions in greenhouse gases and positions Canada as a leader in fighting climate change.

There are elements of our plan that could work not just for Canada, but for many countries in the world –

including some of the large emitters that did not accept targets under the Kyoto protocol. After all, the countries that did accept targets under Kyoto account for less than 30% of global emissions. The outsiders included major, growing emitters like China, India and the United States. Obviously, if we really want to stop climate change, all the big emitters need to step up to the plate and must accept real targets. It is urgent that we start work now – and this week's Summit is the perfect opportunity – to develop a new universal consensus on how to prevent global warming in the post-2012 period.

Our own domestic plan of action has mandatory greenhouse gas reduction targets for large emitters. Every year, large emitters must become more energy efficient and emit less carbon per unit of production – intensity improvements of 18% by 2010, and 2% a year beyond that each and every year. And let me stress that this plan will not allow emissions to continue to grow indefinitely. Improvements in emissions intensity of this magnitude mean that there will be real, absolute reductions in emissions levels by at least 2012 and as early as 2010. It will put us on track to absolute greenhouse gas reductions of 20% by 2020.

And, let me be clear, Canada's long-term target of a 60 to 70% reduction of 2006 emissions by 2050 is consistent with cutting global greenhouse gas emissions by half over 1990 levels – a goal sought by the European Union.

The approach we have chosen, basing emissions reduction targets on units of production in the short run, allows growing and developing economies to engage in significant greenhouse gas reductions without putting themselves at immediate risk. And in the long run, I believe Chancellor Merkel and I are on the same page on this point at least: all countries must embrace ambitious absolute reduction targets, so that the International Panel on Climate Change's goal of cutting emissions in half by 2050 can be met.

Of course, it may not be possible for all countries, or all industries and firms within all countries, to reduce their emissions by the same amount on the same time line. That is why other compliance measures such as carbon offsets and carbon trading are also necessary. They are part of Canada's plan and, provided they are not just an accounting shell game, they must be part of a universal, international regime.

Ladies and gentlemen, it is time for all countries – especially the large emitters represented this week at the meetings of the G8 and the five major developing countries – to come together and cooperate as we move towards a post-2012 regime. We cannot afford to have the world divided on this issue, to pit right against left, Europe against America, or the developed countries against the developing world. We need a plan that takes into account both different starting points and different national circumstances, but that moves us all towards a common destination. There will be much debate in the weeks and months ahead over the best course of action for the world after the end of the Kyoto Protocol in 2012.

In the meantime, there is much else we can do. We're involved in a number of international partnerships that are working to develop new technologies – from carbon sequestration to renewable fuels to clean coal - that will lead to significant emission reductions. Indeed, the agreement signed today between Canada's National Research Council and Germany's Helmholtz Association will bring together some of the world's best researchers in the fields of alternative energy, bio-fuels and other environmentally friendly energy sources. Technology is the key. Just as the Stone Age did not end because the world ran out of stones, the Carbon Age will not end because the world runs out of fossil fuels. Instead, human ingenuity will develop alternative forms of energy as well as cleaner, greener ways to use carbon. And Canada will be at the forefront, as a green energy superpower.

Howard

<http://www.pm.gov.au/media/Speech/2007/Speech24212.cfm>

23 March 2007

theradio.com Weekly Message - Climate Change

Climate change is a major issue facing both Australia and the world. It is an issue that must be tackled in a measured and practical way. While Australia contributes very little to global emissions we have a responsibility to tackle the problem none-the-less. Talkfests, debates and purely symbolic gestures won't remove a gram of greenhouse gas from the atmosphere.

My Government is investing in tangible projects that will deliver major cuts to Australia's emissions. The Government has announced seed-funding for more than \$3 billion worth of projects that will help significantly cut the amount of climate-changing carbon dioxide entering the atmosphere. These include a \$750 million clean coal power station in Victoria's La Trobe Valley, an \$841 million carbon burying project in Western

Australia, the world's largest solar power station near Mildura and a \$445 million methane-based power plant in Queensland. We have also announced other practical measures like the phasing out of incandescent light bulbs for more energy efficient globes. Australia was the first country to do this and is now being followed by many others around the world. These are all practical and sensible measures to deal with the problem of climate change, not dangerous knee-jerk responses to the issue which could damage our economy, reduce our competitive advantage and, most importantly, cost jobs.

Hu

<http://en1.chinabroadcast.cn/3126/2007/06/08/48@236130.htm>

Website of China Radio International, "owned and operated by the state"
Berlin, 7 June 2007

Remarks at Collective Meeting of Leaders of Developing Countries

Climate change concerns the sustainable development of the entire humanity and the future development of all developing countries. We need to maintain close coordination and cooperation to address the challenges posed by climate change and uphold our common interests. We should work together and call on the international community to uphold the goals and framework established in the United Nations Framework Convention on Climate Change and its Kyoto Protocol and the principle of common but differentiated responsibilities, and carry out active, practical and effective cooperation. Considering both historical responsibility and current capability, developed countries should take the lead in reducing carbon emission and help developing countries ease and adapt to climate change. For us developing countries, economic development and improving the life of our people are top priorities. But we also need to make every effort to pursue sustainable development in light of our national conditions.

China gives high priority to environmental protection and sustainable development. We follow a scientific thinking of development which is people-oriented and calls for all-round, coordinated and sustainable development. We strictly comply with relevant international conventions and have adopted a series of policies and measures, such as readjusting the economic structure, changing the model of economic growth, conserving energy, increasing energy efficiency, developing renewable energy and launching ecological projects, to contribute our share to mitigating the impact of global climate change. To more effectively tackle climate change, the Chinese Government has formulated and released China's National Climate Change Program. We will fully implement this program. In so doing, we are not only living up to our responsibilities to our own people, but also contributing our share to the global cause of sustainable development.

In addition to taking these steps at home, China is ready to carry out extensive cooperation with other developing countries and the international community. Our five countries share much in common and each has its own strength in tackling climate change. China is ready to enhance exchanges with other countries and draw upon their strengths in the framework of South-South cooperation and do what it can to help other developing countries.

Merkel

http://www.bundesregierung.de/nn_1516/Content/DE/Mitschrift/Pressekonferenzen/2007/06/2007-06-08-pk-merkel-g8-abschluss.html

Pressekonferenz zum G8-Gipfel vom 6. bis 8. Juni 2007 in Heiligendamm
June 8, 2007

Sprecherin: Bundeskanzlerin Dr. Angela Merkel

Wir haben Fortschritte beim Thema Klimaschutz gemacht. Wir haben gestern darüber sehr ausführlich gesprochen. Die Fortschritte liegen darin, dass ein klarer Verhandlungsauftrag auf der Basis des UN-Mechanismus vorhanden ist. Es ist heute vom UNO-Generalsekretär noch einmal sehr herausgehoben worden. Auch die Länder, die heute bei uns zu Gast waren - sowohl die afrikanischen Länder als auch Indien, China, Mexiko, Brasilien und Südafrika, haben sehr deutlich gemacht, dass sie sich diesem Prozess verpflichtet fühlen, aber dass er im Rahmen der UNO stattfinden muss. Alles andere wäre aus meiner Sicht nicht erfolgversprechend gewesen.

Zweitens. Die wichtigen Arbeiten des Klimaschutzberichts, also der wissenschaftlichen Erkenntnisse,

sind hier nicht nur gewürdigt, sondern auch als Grundlage anerkannt worden. Wir sind uns einig, dass es langfristige Reduktionsziele geben muss. Wir sind uns auch einig, dass die Festlegungen, die die Europäische Union, Kanada und Japan bereits getroffen haben, nämlich dass bis zur Mitte des Jahrhunderts 50 % der CO₂-Emissionen eingespart werden müssen, ernsthaft betrachtet werden müssen und dass niemand mehr diesen Betrachtungen die Grundlage abspricht.

Wir haben heute das Treffen mit den afrikanischen Vertretern gehabt. Hier ist sehr klar geworden, dass wir natürlich in einer großen Verpflichtung stehen, die Millenniumsziele einzuhalten. Die Phasen sind 2010, 2015. Wir haben im Umfeld dieses Gipfels und in den Abschlussdokumenten noch einmal zusätzliche Kraftanstrengungen fixiert, was die Bekämpfung von AIDS und anderen Infektionskrankheiten anbelangt. Es gab eine amerikanische Initiative, der sich viele Länder angeschlossen haben, sodass wir sagen können, dass wir in den nächsten Jahren 60 Milliarden Dollar zusätzlich mobilisieren können.

Es ist aber heute bei dem Treffen mit den afrikanischen Vertretern auch deutlich geworden, dass das alleine nicht reicht, sondern dass man erwartet, dass wir auch unsere Beiträge leisten, was die Verbesserung der Institutionen anbelangt, dass man sich auch eine stärkere institutionelle Zusammenarbeit wünscht - das ist auch mit den Japanern verabredet worden -, wo man überprüft, wie weit die jeweiligen Versprechungen umgesetzt sind. Es ist von der afrikanischen Seite auch wieder sehr deutlich gesagt worden, dass auch sie weiß, dass Afrika im Rahmen der Millenniumsziele Verantwortung hat. Es ist also keine Einbahnstraße, sondern es ist ein intensiver Prozess. Einer der Vertreter hat das auch sehr schön gesagt. Er hat gesagt, dass Afrika nicht nur ein Kontinent ist, der so viele Krankheiten hat - leider ist das auch so -, sondern dass Afrika ein Kontinent ist, der eine Zukunft haben will, der sich entwickeln will, der Bildung braucht, der junge Leute hat, die motiviert sind, und dass das eigentlich die Dinge sind, die die afrikanischen Politiker umtreiben. Also unser Blick auf Afrika muss breiter werden. Das ist auch durch viele Aktionen hier im Umfeld sichtbar geworden.

(...)

Wir haben dann über das Thema Klimaschutz gesprochen, also gemeinsame, aber unterschiedliche Verantwortung. Hier gehen die Meinungen schon noch ein Stück auseinander, wie die Verpflichtungen auszusehen haben. Aber auch hier habe ich wieder darauf hingewiesen, dass wir uns die Ziele gar nicht richtig aussuchen können, sondern die Ziele sind durch objektive Dinge gegeben. In diesem Geist werden wir dann auch weiter miteinander reden.

(...)

FRAGE: Frau Bundeskanzlerin, Sie haben heute mit den O5-Ländern über den Klimaschutz geredet. Sind denn die G8 bereit, den Schwellenländern eine Art Privilegierung einzuräumen, also eine Art Nachholeffekt anzuerkennen? Oder sagen sie "Wir müssen hier alle an einem Strang ziehen und versuchen, möglichst effektiv gemeinsam vorzugehen"?

BK'IN DR. MERKEL: Ich habe ja gesagt, dass wir uns ausdrücklich in unserem gestrigen Dokument dazu bekannt haben, dass wir gemeinsame, aber unterschiedliche Verantwortung haben. So wird auch jedes Abkommen aussehen. Es ist nur so, dass in einer nächsten Zeitperiode, also jenseits von 2012, natürlich die Emissionen der Schwellenländer einen gewaltigen Anteil an den Gesamtemissionen einnehmen werden. Es wird wahrscheinlich nur noch 30 % Emissionen aus den klassischen Industrieländern geben. Sie können natürlich (die Gesamtemissionen) schlecht bekämpfen, wenn Sie praktisch von 30 % alles verlangen und die anderen dürfen weiter wachsen. Das heißt, dass man natürlich an die Entwicklungs- und Schwellenländer andere Anforderungen stellen wird. Aber der chinesische Präsident hat heute darauf hingewiesen, dass die Emissionen pro Kopf im Durchschnitt in China heute wohl bei einem Drittel der Emissionen der entwickelten Industrieländer liegen.

Was heißt das? Wenn die Emissionen für 1,3 Milliarden Menschen auf der Welt 30 % pro Kopf betragen, dann werden wir natürlich jedem einräumen müssen, dass die Pro-Kopf-Emissionen in Europa nicht höher sein dürfen als die in China. Aber wenn wir sehr stark reduzieren, kommen wir natürlich auch sehr schnell in die Richtung der Hälfte. Wenn wir halbieren - und wir müssen das alleine schaffen -, dann sind wir schon bei der Hälfte. Dann bedeutet das natürlich, dass China noch wachsen kann; aber auch nicht unbegrenzt. Das Ziel, das wir im Auge haben, orientiert sich an den Gegebenheiten des Wissenschaftsberichts der UN. Das heißt, wir haben gar keine Spielräume. Es geht nicht darum, wer wem was gönnt, sondern es geht darum, eine globale Gefahr zu verhindern. Diese globale Gefahr kann nur verhindert werden, wenn wir den objektiven Tatsachen Rechnung tragen.

Wir kommen dann an einen Punkt, wo man gedanklich das Problem nicht bekämpft hätte, selbst wenn

die Industrieländer gar keine CO₂-Emissionen mehr hätten. Es ist also eine objektive Notwendigkeit, dass wir Wachstum und CO₂-Minderung zusammenbringen. Dass wir, was Geld, Technologietransfer und all diese Dinge anbelangt, eine viele höhere Verantwortung haben, ist vollkommen klar. Aber dass wir das gemeinsam besprechen müssen, ist auch klar.

FRAGE: Frau Bundeskanzlerin, noch zum Klima. Gab es in den Diskussionen - beispielsweise mit dem amerikanischen Präsidenten - Diskussionen darüber, ob das Ziel der Emissionsreduzierung mit dem gleichzeitigen Ausstieg aus der Kernkraft vereinbar ist? (...)

BK'IN DR. MERKEL: Erstens. Die deutsche Haltung zur Kernenergie ist unter den G8-Staaten eine absolute Minderheit. Insofern hat das natürlich am Rande eine Rolle gespielt. Die Positionen dazu sind aber gerade im vorigen Jahr in St. Petersburg sehr umfänglich ausgetauscht worden, weil es da mehr um Energiesicherheit und die Energieversorgung ging. Insofern hat es hier keinen weiten Raum eingenommen. Aber wir dürfen nicht glauben, dass wir damit sozusagen auf dem Hauptweg der Weltentwicklung sind, sondern wir gehören eher zu den Wenigeren. (...)

ZUSATZFRAGE: Zu den Emissionen: Man sieht die Ausbreitung der Wüsten, die Abholzung und andere Probleme. Afrika hat unter diesen Problemen besonders zu leiden. Was stellen Sie sich diesbezüglich für die Zukunft vor?

BK'IN DR. MERKEL: Das hat heute eine sehr große Rolle gespielt, z. B. die Bildung eines "Grünen Gürtels" in den Wüstenregionen, um die weitere Wüstenbildung zu verhindern. Wir waren uns einig, dass wir hierbei auch durch unsere Entwicklungshilfe helfen müssen. Präsident Wade aus Senegal hat eben darauf hingewiesen, dass wir sehr oft und viel über Aids sprechen, was wichtig ist, aber er hat anhand dieses Projekts deutlich gemacht, dass hiermit auch wirkliche Lebenschancen verbunden sind.

FRAGE: (...) noch einmal kurz um das Klima. Sie haben heute mit den O5-Ländern gesprochen. Inwieweit haben die sich konkret dazu bereit erklärt, in einer nächsten Runde konkrete, wenn auch andere Beiträge zum Klimaschutz zu leisten?

BK'IN DR. MERKEL: Ich habe es gestern schon einmal gesagt: Das ist hier kein Klimaverhandlungsgipfel, auf dem wir Verhandlungen führen. Die O5-Länder haben heute gesagt, dass sie bereit sind, auch für sich Verpflichtungen zu akzeptieren. Das ist aber nicht mit Reduktionsverpflichtungen gleichzusetzen, sondern sie haben ein Wirtschaftswachstum und wollen dieses Wirtschaftswachstum natürlich auch nicht eindämmen. Ich denke, man muss mit ihnen darüber reden. Aber diese Verhandlungen habe ich heute, wie gesagt, nicht geführt, darüber, dass man - ähnlich, wie es bei uns geklappt hat - eine Entkoppelung von Wirtschaftswachstum und der Frage der CO₂-Emissionen und deren Anstieg hinbekommt. Es gibt viele Industrieländer, in denen sich das Bruttoinlandsprodukt in den letzten 20 Jahren vielleicht verdoppelt hat und in denen trotzdem nicht mehr CO₂ ausgestoßen wird. Das heißt, man kann sehr viel schaffen, einfach durch eine höhere Energieeffizienz. Die Chinesen haben z. B. noch einmal darauf hingewiesen, dass sie sich vorgenommen haben, die Energieeffizienz bis 2020 um 20 % zu verbessern. Das heißt, das ist auch eine quantitative Vorgabe, die in diesem Zusammenhang schon sehr interessant ist und über die man sicherlich auch weiterhin sprechen kann.

Putin

http://2004.kremlin.ru/eng/text/speeches/2003/09/291942_53028.shtml

September 29, 2003

Speech at the opening of the International Conference on Climate Change

Your forum unites scientists, entrepreneurs, representatives of conservation departments and social organizations from many countries from around the world. I believe that this is a good opportunity to discuss the problem of global changes to the climate in detail. This is why we so actively supported the initiative of the Russian community, of Russian scientists to hold today's meetings. This problem, the problem of climate changes, has for a long time had not only scientific significance, but also serious practical significance. In this connection, it is important for modern science to determine the degree of real danger of global climate change. Scientists should also help to find an answer to another fundamental question. And this is what the limits are to man's impact on the climate.

It is clear that the scale of the tasks ahead of us require the joint efforts of the entire scientific community. Over the last few decades, scientists and representatives of social organizations from many countries around the world – including Russia – have accumulated considerable experience of cooperation. This is information exchange, joint research, and participation in multi-lateral ecological and climate

programmes. I am certain that it is necessary to develop this cooperation actively. And Russia intends to assist this in any way it can. I would also like to note the role of international climate organizations and UN programmes, such as the Intergovernmental group of experts on climate change. They will make an important contribution to coordinating the work of scientists of different countries of the world who study climate programmes.

I am certain: comprehensive scientific analysis, findings by lawyers, economists and sociologists and wide support from the community are the necessary basis to create a universal international legal basis in the area of climate change. The juridical norms developed should take into account the interests of every nation. Limits should not be allowed to be placed on economic growth and social development. And there should also be an efficient mechanism to control the implementation of decisions and agreements made.

Ladies and gentlemen. It is no coincidence that Russia was the initiator of holding the International conference on climate change in Moscow. Our country has significant intellectual potential in the area of climatology. The achievements of Russian scientific schools and tendencies, and the accomplishments of Russian scientists are acknowledged by the international community. Furthermore, a quarter of the planet's forests are located on Russian territory. Over many years, Russia has made a serious practical contribution in reducing man's impact on the climate.

Of course, we know, and all over the world it is a well-known fact: over the last decade there has been a serious economic decline in Russia. At the same time, since 1990, including thanks to structural improvements in the Russian economy – I would like to pay particular attention to this – the burden and emissions have been reduced by 32%. Thanks to this, in the period from 1991 to 2002, almost 40% of the growth of emission of greenhouse gases in other countries has been compensated for, if records are started from 1990. In connection with this, I would like to say that Russia is being actively called on to ratify the Kyoto protocol as soon as possible. I am certain that these appeals will also be heard many times at your meeting. I want to say that the Government of the Russian Federation is carefully examining and studying this issue, studying the entire range of complex problems connected with this. A decision will be made after this work is finished. And, of course, it will be made in accordance with the national interests of the Russian Federation.

Singh

http://pmindia.nic.in/GermanyG-8_visit.htm

June 8, 2007

PM's Intervention on Climate Change at Heiligendamm Meeting of G8 plus 5

I must thank you for raising this issue, of such significance for us and our future generations. We all have a vested interest in making our planet secure for our children and grandchildren.

India's GHG emissions are among the lowest in per-capita terms. Moreover, being only around 4% of the world's emissions, action by us will have a marginal effect on overall emissions.

Nonetheless we recognize wholeheartedly our responsibilities as a developing country. We wish to engage constructively and productively with the international community and to add our weight to global efforts to preserve and protect the environment. We are determined that India's per-capita GHG emissions are not going to exceed those of developed countries even while pursuing policies of development and economic growth.

We must work together to find pragmatic, practical solutions, which are for the benefit of entire humankind. These should include mitigation and adaptation strategies with fair burden sharing and measures to realize sustainable patterns of consumption and production.

The process of burden sharing must be fair. It should take into account where the primary responsibility for the present levels of GHG concentration rests and not perpetuate poverty among the developing countries. No strategy should foreclose for them the possibilities of accelerated social and economic development. The principle of common but differentiated responsibility and respective capability is very important. The time is not ripe for developing countries to take quantitative targets as these would be counter-productive on their development processes.

Adaptation is the key for developing countries. It needs to be adequately resourced without detracting funds meant for development, which, in any case, is the best form of adaptation.

The determination of any particular stabilization goal and the time-frame in which it should be achieved

needs to be made at the United Nations Framework Convention on Climate Change. This should be preceded by a scientific consensus on impacts at different levels of GHG going beyond the current IPCC findings, which still document many uncertainties.

It is important that critical and promising clean technologies are made affordable for developing countries, where there is large reliance on fossil fuels. The IPR regime should balance rewards for innovators with the common good of humankind. We also believe that the carbon market has a significant role to play in tackling climate change and that we should spur private sector involvement in climate related technologies and investment. The Clean Development Mechanism (CDM) has worked well and needs to be expanded to include approvals for programmatic approaches. Enhanced level of GHG abatement commitments by the developed countries would significantly stimulate CDM projects.

Let us leave Heiligendamm determined to continue our exchanges and to invigorate the existing fora where these issues are being negotiated. In the meantime, our representatives could continue informal discussions way [*sic*] to carry forward our dialogue and build on what we believe in common.