THE ANTARCTICAN SOCIETY

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HONORARY PRESIDENT — MRS. PAUL A. SIPLE

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Glaciologists Just Core Deeper

WEST ANTARCTIC COLLAPSE — WILL WASHINGTON BE A REEF?

by

Dr. Richard B. Alley
Earth System Science Center
The Pennsylvania State University
University Park, Pennsylvania

on

Monday evening, 11 March 1991

8 PM

National Science Foundation
1800 G Street, N.W.

Room 540

Dr. Richard B. Alley, glaciologist, 33 years young, is a trusted member of the National Science Foundation Division of Polar Programs' Advisory Committee for Polar Programs. This committee will be meeting in early March, and Dr. Alley has graciously consented to tell us at that time what is going to happen to 1600 Pennsylvania Avenue when push comes to shove with the Antarctic Ice Sheet. Dr. Alley was quoted in The Washington Post, 3 February, as saying, "I believe the greenhouse is coming, and I believe it is going to be a serious problem ... By the time we can with confidence say it is here, it will be too late."

Dr. Alley studied under Ian Whillans at The Ohio State University, and Charlie Bentley at The University of Wisconsin, neither of whom were successful in diverting Richard to a field of exact science. His research focuses on ice-sheet stability, glacial deposits, and the physical properties of ice cores. Dr. Alley is currently active in the Greenland Ice Sheet Project II deep coring, and in the Siple Coast Project in Antarctica. Come to the greenhouse!!

NEW YORK CITY ANTARCTIC PHOTOGRAPH EXHIBITS

Neelon Crawford at Witkin Gallery, 415 West Broadway through 23 February.
Stuart Klipper at The Museum of Modern Art through February.

First Day Issue Antarctic Treaty Airmail Stamp - 21 June 1991
Washington, DC

You folks are getting a temporary respite from my manual Underwood this month. We had a meeting in late January when R. Tucker Scully of the State Department presented what transpired at the recent Special Consultative Meeting in Vina del Mar, Chile. He broke the Society's attendance record for a non-Memorial Lecture with ninety people. Because of the universal interest in the meeting in Chile, we are presenting his entire lecture for your edification. Incidentally, Tucker's presentation was our Society's 150th lecture. Starting with Ambassador Paul Daniels' lecture October 2, 1963 on "Antarctic Treaty" we have had fifteen lectures on or about the Treaty. Since 1982, we have had eight — Rutford, Swithinbank, Scully, Chapman, Barnes, Kimball, Manheim, and Scully again. Enjoy!

Preamble to R. Tucker Scully's presentation to the Antarctican Society on 31 January 1991

The Eleventh Antarctic Treaty Special Consultative Meeting (SCM XI) took place 19 November to 6 December, 1990 in Vina del Mar, Chile. Delegations participated from the twenty-six Antarctic Treaty Consultative Parties (ATCPs): Argentina, Australia, Belgium, Brazil, Chile, China, Ecuador, Finland, France, Germany, India, Italy, Japan, the Netherlands, New Zealand, Norway, Peru, Poland, the Republic of Korea, South Africa, Spain, Sweden, the U.S.S.R., the U.K., the U.S.A., and Uruguay.

Ten of the thirteen other (non-Consultative) Parties to the Antarctic Treaty also participated - Austria, Canada, Colombia, Czechoslovakia, Denmark, Greece, Hungary, the People's Democratic Republic of Korea, Romania and Switzerland - along with observers from the following international organizations: the Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR); the Scientific Committee on Antarctic Research (SCAR); the Commission of the European Communities (EC); the Intergovernmental Oceanographic Commission; the International Union for the Conservation of Nature and Natural Resources (IUCN); and the Antarctic and Southern Ocean Coalition (ASOC).

PROTECTING ANTARCTICA: PROGRESS IN CHILE

by

R. Tucker Scully

Director, Office of Ocean Affairs
Department of State

I will try tonight to discuss the most recent meeting in the quickening pace of international negotiations within the Antarctic Treaty system. The Vina del Mai meeting was the llth of the special Antarctic Treaty consultant agreements. Pursuant to the Antarctic Treaty, there are regular meetings of the consulting parties that have taken place over the 30-odd years of the Treaty's history on a biannual basis, approximately every two years.

In addition, when the Treaty parties have identified particular issues of concern or particular issues that require some sort of priority attention, they have frequently resorted to the technique of a special meeting, to create a negotiating forum devoted to a particular set of issues. This is the case in the meeting that took place recently in Vina del Mar, Chile. It is the llth of the special consultative meetings. There have also been 15 of the regular meetings. So that over the 30 years, if one looks at the average, there has been a meeting almost every year — a negotiating session almost every year on the average — since the Treaty entered into force in 1961.

The precursor to the meeting that took place in Vina del Mar was the Fifteenth Antarctic Treaty Consultative Meeting in Paris in October of 1989. That meeting saw the coalescence of a wide variety of strands of concern regarding the Antarctic environment. The meeting in Paris — which itself was an extremely productive meeting — focused its attention on the environmental needs, the needs for environmental management in Antarctica. It adopted a number of very significant measures aimed at ensuring that human activities in Antarctica do not cause adverse impacts.

Building upon the wide range of measures and recommendations to protect the Antarcti environment, the feeling that emerged from the Paris meeting in October of 1989 was that it was time for the Treaty parties to take an overall look at how best to achieve integrated measures to ensure across-the-board that human activities did not pose unreasonable risk to the Antarctic environment.

Therefore, a major item for discussion at the Paris meeting was one entitled "The Comprehensive Protection of the Antarctic Environment." And though significant steps were taken in that direction in Paris, it was agreed that a special meeting should be held, one of the special consultative meetings to create a specific negotiating forum to address those subjects.

Obviously one of the issues that was a primary motivation in seeking the development of such a forum was the differences that emerged among the Antarctic Treaty consultative parties over the Antarctic minerals convention, an agreement that had been negotiated the year previous, in 1988, and concluded by consensus. But following its conclusion, which had become the subject of controversy, several nations which had originally participated in its adoption reversed their views and chose to seek an alternative to the convention, to seek a ban on mineral activities in Antarctica instead of pursuing the convention which was a mechanism for deciding whether or not mineral resource activity should ever take place. So the issues for the meeting in Vina del Mar were, in a formal sense, comprehensive measures for the protection of the environment. They also involved, obviously because of the emphasis placed upon the question of minerals, discussions on the future fate of the Antarctic minerals convention. And, in fact, a number of the proposals put on the table for discussion in Vina del Mar did address that subject.

So it was against that background that the meeting, lasting approximately three week took place in Chile. To be more specific about the terms of reference, the meeting in Paris which set the terms of reference, and, in effect, set a rough agenda for the Vina del Mar meeting, called for an objective for the Treaty parties, which was described as the further elaboration of a comprehensive system of protection of the Antarctic environment.

Now the term "further elaboration" was used to make the point that there already is a large body of environmental regulations which had evolved and been elaborated within the Treaty system. The recommendation looked not only to the elaboration, but also to the maintenance and implementation of such a comprehensive system, drawing attention to two of the needs that were perceived at the time of the Paris meeting, and then items that were identified for important work in Chile.

With respect to implementation, one of the primary questions that has been raised about the Antarctic Treaty is the degree and the effectiveness with which it is being enforced, which compliance is being achieved with regard to these measures, and the consistency with which governments who have committed themselves to these measures carry them out.

And secondly, the question of maintenance raised, and was essentially a symbol for, the question of whether or not it was time for the Antarctic Treaty consultative system to develop more formal machinery. And specifically, whether it was time for the system to develop a secretariat which would provide a full-time institution, a full-time mechanism for providing for the needs, and providing for the information that the Treaty mechanism, in its annual meetings, generated.

So the terms of reference for the meeting in Chile identified a number of issues that would be set forth in the program of work that was also elaborated for the meeting. Specifically, the terms of reference for the Vina del Mar meeting identified three areas of emphasis: first, the need to develop further principles for environmental protection, based upon those principles which had already been articulated within the Antarctic Treaty system; second, to initiate and carry out a review of those existing environmental protection measures that were already on the books, with a view to identifying where such mechanisms should be strengthened, where such measure should be clarified, in terms of the nature of the legal obligation, and than, how to ensure more effective compliance with such regulations and measures; and third, the need for new institutional and legal arrangements to ensure the maintenance, integration, consistency and comprehensiveness of the system of Antarctic environmental protection.

A number of specific proposals, aimed at comprehensive protection by Treaty parties were articulated. Prior to the meeting, there was a draft for the comprehensive protection of the Antarctic environment, sponsored jointly by Australia, France, Belgium, and Italy. That four-power draft convention included provisions dealing with Antarctic mineral resources and called for a permanent ban on Antarctic mineral resource activity which France and Australia, particularly, have advocated.

Secondly, there was a draft protocol to the Antarctic Treaty dealing with comprehensive measures for environmental protection submitted by the government of New Zealand That proposal also included, as did the four-power convention, the proposed prohibition on mineral resource activities, a proposed permanent ban on such activities as an alternative to the Antarctic minerals convention.

Finally, there was an outline of a draft protocol submitted jointly by the United States, Argentina, Norway, the United Kingdom, and Uruguay. That draft protocol to the Treaty was a document that included institutional provisions and principles, and then foresaw, as annexes or appendices to the text, the specific sectoral, specific sets of measures to deal with environmental protection with respect to particular kinds of activities — marine pollution, waste disposal, the environmental impact assessment procedures and the question of agreed measures for the conservation of flora and fauna.

So there were, circulated among the Treaty parties prior to the convening of the meeting in Vina del Mar, three formal proposals: one in fairly exact Treaty language tabled by New Zealand; the draft convention, tabled by the four-powers, led by Australia, was labelled an indicative draft; and then an outline, which indicated the types of provisions that would be suggested, but not in Treaty language, by the five-powers: U.S., U.K., Argentina, Norway, and Uruguay.

At the beginning of the meeting itself, three additional proposals were put on the table. Two were the Treaty texts, based upon the outline submitted by the five-power One of those was the United States' text. The United States decided to take the

outline, which we were cosponsoring, and convert it into an actual, formal proposal, in Treaty language. That was tabled at the opening of the meeting.

U.K., one of our cosponsors, did the same thing. And the government of India put forward a proposal on comprehensive measures in the form of a suggested series of components, in outline form.

Now, let me try to describe briefly, as a lead-in to what the results of the meeting were, the differences and the issues that emerged with regard to these various proposals. As I have mentioned, there was a very significant difference in the approach with regard to what has become one of the more visible issues relating to Antarctica of late, Antarctic mineral resources.

The convention tabled by the four powers, Australia, France, Belgium, and Italy, called for a permanent ban on mineral resource activities, and therefore, was premised on the replacement of the Antarctic minerals convention. The same was true for the protocol drafted by New Zealand. The five-power proposals, including the specific texts that were developed on the basis of that, did not address mineral resource activities, and thus rested on the premise that the Antarctic minerals convention was the appropriate legal instrument to deal with the question of whether or not mineral resource activities in Antarctica should ever take place.

So the issue of minerals, then, was one of the major differences between the drafts, and indicated one of the issues that was under particular discussion at the meeting in Vina.

There were, however, a number of other very significant divergences in approach between the texts that were submitted. One was in the form of the proposals themselves. The four-power proposal, as a separate convention, implied that a separate, legal framework was required to deal with environmental protection in Antarctica.

The proposal submitted by New Zealand, a draft protocol to the Antarctic Treaty, and by the five powers, including the United States — again, on protocol to the Antarctic Treaty — rested on the premise that the Antarctic Treaty mechanism itself, offers not only a necessary, but a desirable basis for achieving environmental regulation in Antarctica, a mechanism which can be improved. And there are certain steps, i.e., for example, the establishment of a secretariat that should be taken to improve the operation of the Antarctic Treaty mechanism. So there was that difference, in that there was a separate convention proposal, and then there were proposals for a protocol supplementing the Antarctic Treaty.

With respect to specific differences between the texts that were put forward, I would cite two primary differences: the first is that the convention approach, taken by the four powers, called for the application of a set of decision-making procedures, collective decision-making procedures at the end of the day for all activities in Antarctica. Those provisions, therefore, would, in fact, have meant, taken to their logical conclusion, that scientific research activities in Antarctica could have been subject to some form of collective decision-making.

The approach taken in the proposals put forward by the five powers, and largely reflected in the text put forward by New Zealand, was that the decision-making competence of the parties should not extend to the prior authorization of scientific research activities; that the freedom of scientific research, guaranteed under the Antarctic Treaty, should not be affected by new agreements. While measures needed to be applied to ensure that proper regulations were applied to science — and in particular, logistic support activities — there was quite a difference in approach between the convention approach on the one side, and the protocol approaches on the other, in that the protocol approaches did not foresee the application of prior authorization to science.

The second major difference between the two approaches (where the differences were between the convention approach and the various protocol approaches) was the question of institutions, and what sort of new institutional evolution should be reflected within the Antarctic Treaty system to perfect its ability to deal with environmental protection.

Now, the convention approach called for a number of new institutions. There were common elements with regard to the need for a secretariat, there were also common elements with regard to the need for some sort of advisory body on environmental matters. These common elements existed in all the drafts.

The convention approach suggested by the four powers called for a standing committee on the protection of the Antarctic environment, which would, in fact, be a new institution with decision-making powers, that would be additional to the regular consultative meetings (which is the mechanism called for in the Antarctic Treaty), perhaps meeting more frequently, and, if necessary, operate on a more full-time basis than the biannual set of meetings that have taken place under the Treaty mechanism.

On the other hand, the proposals put forward by the proponents of a protocol supplementing the Treaty, called for the Antarctic Treaty mechanism, the regular consultative meetings, to remain the sole decision-making mechanism within the Antarctic Treaty system, and called for the consultative meetings to take place on a more regular basis, specifically to take place on an annual, rather than a biannual basis.

So, there were significant differences in approach between the proposals that were put on the table. It was clear from the outset that there were quite a number of common elements, and quite a number of common objectives, but there were very significant differences on how to get there.

I should mention one other element, because it relates to the way in which the work was organized, and to the work product of the meeting. There were different approaches to the protocols themselves. The five-power approach, the U.S., U.K., et cetera, called for a protocol with specific annexes, and those annexes would include the mandatory measures that would apply the human activities in Antarctica to achieve environmental protection. That approach was premised on the basis that the question of achieving comprehensive measures, the question of achieving a comprehensive system for environmental protection was, in fact, an ongoing process. It was not an activity that one could ever say that at any given point in time was completed.

It reflected the fact that one started with a wide and broad body of measures which needed an effective system for continual updating, continual assessment of effectiveness, et cetera, and therefore, a system of annexes. The binding, legally-mandatory measures which could be updated and assessed on a rapid basis, would be the most effective approach in terms of achieving the objectives of the Vina meeting.

The New Zealand approach, on the other hand, called for the inclusion of all of the measures in the text of the protocol itself. The New Zealand approach was one which looked toward the rapid updating of measures; and in some ways, the range of measures that was included in the New Zealand protocol was broader than that which was included in the proposals made by others. But the New Zealand proposal did suffer the difficulty of a series of practical, and in some cases, legal problems with respect to how government would implement such an agreement. It was more difficult to rapidly bring up-to-date a mechanism which requires the amendment of the Treaty, and an amendment of the agreement itself.

So there were substantive differences that were minerals; there were substantive differences that were environmental protection measures; there were differences in the forms of the proponents; and participants in Vina del Mar would have incorporated these measures.

On the other hand, I think there was quite a significant convergence in view, quite a convergence in the objective of seeking to ensure that the Antarctic Treaty system and mechanism were updated, and improved as a mechanism for dealing with the increased scale and kind of human activities in the area south of 60 degrees south latitude.

Now, the organization of work — and I'll touch only briefly on this — at the meeting involved a threefold division of labor. Two formal working groups were created: the first, chaired by Dietrich Granow, head of the German delegation, looked at the legal agreements, the specific proposals that were put forward, in terms of their basic provisions — the environmental principles they included, institutional arrangements, any provisions relating to decision-making, questions relating to compliance and enforcement, questions relating to dispute settlement, how disputes over the observance of provisions might be dealt with, and questions relating to the issues of, at least in some instances, liability or responsibility for damages that might be caused as a result of activities in Antarctica.

A second working group, chaired by Robert Puceiro of Uruguay, dealt with the review of specific measures that had been called for, in terms of reference, in the previous meeting in Paris. That group essentially dealt with the annexes that were proposed by the United States and others, and the equivalent provisions that were included in the New Zealand text.

That working group considered four specific proposals: 1) measures to deal with marine pollution, based in large part on measures that had been adopted at the Paris meeting; 2) measures in waste disposal, how to handle wastes generated within Antarctica, again based on a number of important steps that had been taken at the meeting in Paris; 3) how to deal with the question of environmental impact assessment, which has become one of the important procedural devices for ensuring that activities, or those making decisions about scientific and non-scientific activities in Antarctica examine the potential consequences of those activities before decisions are made about them, building upon Environmental Impact Statement (EIS) procedures, and 4) the question of measures to protect fauna and flora.

The Antarctic Treaty parties developed a very far-reaching set of provisions back in the mid-1960's to deal with habitat protection, to identify protected species, to ensure that the scientific and other activities that were taking place at that time did not result in unwarranted and unacceptable impact upon the critters and their habitats in Antarctica. Because of the nature of activity, changes in the nature of activities, the scale of activities, there was perceived a need to significantly update and revise what are known as the agreed measures for the conservation of Antarctic fauna and flora. So the fourth major area dealt with specific measures to improve and deal with measures to protect fauna and flora.

So there were two working groups: the first on the actual proposed new agreements; the second on the measures, but concentrating on the kinds of things that were suggested for inclusion in annexes. The third component in this division of labor was informal discussions which were episodic, over dinners and things of that sort, of Antarctic minerals and how the consensus that had existed among Antarctic Treaty parties in 1988 over the question of minerals might be restored. And this was a much less structured and much less formal kind of discussion, but those discussions at the heads of delegation level took place during the course of the meeting as well.

I don't think I'll try to describe to-ing and fro-ing, or the specific nature of the discussions in the working groups. But let me return to the differences that I have mentioned with regard to the specific proposals.

As a result of the discussions, and in certain instances it took place suddenly, and in certain instances it took place by accretion during the course of the meeting, a number of elements of convergence began to arise, began to emerge during the

course of the meeting.

First, it was clear that there was a strong preference in terms of form, that a new agreement to deal with environmental protection in Antarctica be a protocol to the Antarctic Treaty, rather than a new, separate convention. The primary reason for that, in addition to the substantive differences, was that it was a very strong view that the Antarctic Treaty — with the accommodations that it contains on the issue of sovereignty, with the consensus decision-making system — has evolved and operated successfully, and with its provision on freedom of scientific research, should in no way be affected by a new, supplementary agreement. And therefore, a protocol was seen as a more appropriate way of not only achieving that, but also of achieving the commitment not to seek to be amending, not to seek to be undermining what has been probably one of the most successful international cooperative mechanisms that has existed in the post-WWII era. So, early on, a convergence of view toward a protocol emerged.

Second, there was a general view — and here I think it was not as clear a sentiment — that a protocol with annexes that could be rapidly updated would be the most effective means of achieving the objectives of an effective system, of an implementable system for environmental protection in Antarctica. So, a convergence of view began to emerge with regard to a protocol with annexes.

With respect to the other two issues that I have mentioned as being of particular concern, the question of decision-making, prior authorization — particularly with respect to science and to institutions — a convergence of view began to be hammered out in the discussions as well.

With respect to decision-making, it was recognized that there was a potential contradiction between subjecting scientific research or activities essential for scientific research, to prior authorization, to prior collective decision, and the freedom of scientific research provisions in the Treaty. This did not mean that science would be unregulated. It did not mean that there was not a strong commitment to ensure that activities related to science would be subject to strong controls.

But what I think it meant was that there was a fear, a widespread fear, that if one began to subject scientific research and science priorities to political decisions, one would create a situation which ran counter to the very success, to the very purposes of the Antarctic Treaty itself.

So there was, as I say, this strong view against that kind of a decision-making provision. And what emerged was a view — a preponderant view — that the elaboration and effective implementation of environmental impact assessment procedures would be a potential basis for consensus, and a basis upon which those who were concerned over or seeking some way of additional control over science-supported activities, could, in fact, reach agreement with those who were afraid that the Treaty could be undermined.

So what emerged was a general view that if one gave proper attention and proper commitment to the fact that activities that involved the possibility of significant impacts would be subject to environmental impact assessment procedures by those who were undertaking the activities — not only government science programs, but also tour operators and others active there — and that could be a basis for resolving the differences over decision-making.

With respect to institutions, I think there are two general problems. One is related to decision-making. There were difficulties with the idea of dividing decision-making authority between the consultative mechanism and subsidiary bodies, or in giving to advisory bodies, scientific bodies, political decision-making authority.

And on the other hand there was, particularly among some of the Latin American countries, a reservation over establishing costly and extensive new machinery. Those two strands I think came together with a view that what would be needed for the Treaty system at this stage would be a scientific advisory body. Let me qualify that, not a scientific advisory body, but an environmental advisory body, not duplicative of SCAR, but to provide advice on how to implement, how to assess the effects of environmental regulation, and a secretariat that would serve the information needs and the data support functions for an effective system of environmental protection. So there was a consensus towards these kinds of institutions, or a convergence towards these kinds of institutions.

Now that convergence, however, was impeded by the other issue that was being discussed in full, and remains impeded — the issue of Antarctic mineral resources. Those who were pushing for a permanent ban on Antarctic mineral resources, or those, in other words, who were seeking an alternative to the Antarctic Minerals Convention, pushed and sought very strongly — or called very strongly — for the inclusion in a new environmental protection and a written agreement of such a ban.

Those who did not take that view, of course, resisted. And that dispute, that difference, represented in many ways a greater gap than the gap that existed in terms of the measures and in terms of the new instrument that might be needed to deal with environmental protection.

The result of the meeting was, in this sense, one in which both sides — if that's the right word — both sides achieved a significant part of their position. Those who were pushing the protocol with annex approach achieved, largely in terms of the negotiating text that now exists, their objectives. Those who were pushing for a permanent ban on mineral resource activities, who at least wished to see that issue linked to the comprehensive measures agreement, achieved their objective in the sense that there was no consensus, there was no agreement at all of the mineral resource issue. There was acceptance of the premise that the issue should be resolved in the same time frame as resolving the issue of whether or not one needed a new protocol or a new convention to deal with environmental protection measures in Antarctica.

Now, the Antarctic Treaty has relied frequently in the past — because it operates by consensus — on a somewhat strange style of negotiations. Because it often appears that — and this is not, hopefully not too bad a pun, but — progress, in a formal sense, is very glacial in the meetings, et cetera. And somehow, after the meetings, which appear to be unproductive and frequently contentious, strangely documents appear that seem to draw a large degree of support.

And this is what happened in Vina del Mar. The meetings were sometimes contentious, sometimes excruciatingly boring, but never in the formal sense seemingly very productive. And yet, just before the end, out of somewhere came a draft text which nobody agreed to, had no formal status, and yet everyone sees as the basis for agreement in the reasonably near future.

The consensus system places a great emphasis upon the "if you don't ask me to say yes, I won't say no" philosophy and style of discussion. And what, in fact, happened, as had been the case often in the Antarctic Treaty mechanism, is that while the formal discussions which have a certain ritualistic character where governments are essentially reciting their instructions for their own capitals, the informal discussions resulted in an individual taking a lead to take a shot at a negotiating text. And in this case, one of the old Antarctic Treaty hands, Ambassador Rolf Trolle Andersen of Norway, was, I guess, cajoled, in an informal sense, to do so. And Rolf produced — the weekend before the meeting ended — a draft protocol with annexes, a non-paper which is now known as the Andersen Text.

The Andersen Text was discussed in an informal session. It was then revised and laid on the table. And though it has no status, it was recognized. And in the report of the meeting, recognized as a basis for future work. And I think most people at the meeting in Vina believed that an agreement is possible on that basis, in the reasonably-near future.

Now the reasonably-near future could be 1991 in that the parties committed themselves to pick up the cudgels, to take up the work of Vina del Mar again, in Spain in April. So another negotiating session on this subject will take place in Madrid in April.

Also, later in the year, a regular meeting of the Treaty parties, one of the regular biannual meetings, will take place in Germany in October. And I think there is some view among parties that in the remainder of this year, that by October, it might well be possible to include a protocol supplementing the Antarctic Treaty.

The Andersen Text is, I think, a fairly clever and fair blending of the various proposals that were on the table. Let me summarize, simply, the kinds of provisions that are in it, and then refer to the cloud that may be hanging over it. The Andersen Text sets forth a set of environmental — a set of legally-binding, environmental principles. I won't go into these principles in any detail. But they are based, in large part, in one of those ironies that arise in international negotiations from the principles that were included in the Antarctic minerals proposal. These principles are already being used as models in other international forums. They are an extremely, I think, innovative and forward-looking set of principles which recognize - and I think this is an important element — that scientific research is, perhaps, the most important environmental value of Antarctica. Scientific research, itself, in Antarctica is of immense environmental importance, both to understanding the place, but also in terms of global processes. It's one of the important, and in the long run, may be one of the most important things that began to emerge at this meeting. What one has seen in some of the discussions in recent times is somewhat of a divergence, and somewhat of a bifurcation in perspective between scientists and those who are representing environmental perspectives.

The Andersen Text establishes a set of legally binding principles to ensure that the protection of the Antarctic environment and dependent and associated ecosystems, are fundamental considerations in the planning and conduct of all activities in Antarctica These principles include: 1) obligations to meet specific environmental standards, with an additional general obligation to limit, insofar as is practicable, all adverse impacts; 2) obligations to accord priority to scientific research in Antarctica and to preserve its value for such research, including research essential to understanding the global environment; 3) obligations to ensure that human activities are planned and conducted on the basis of information sufficient to enable prior assessments of, and informed judgments about, their possible environmental impacts; and 4) obligations to undertake environmental monitoring.

The agreement, with respect to institutions, deals only with the establishment of what is called a Committee on Environmental Protection, a standing committee on environmental protection, which would be an advisory body. Again, not to duplicate the work of SCAR, but to provide advice to the Treaty parties on a regular basis with respect to environmental protection measures, how they might be updated, how they might be operating, and how effective their operation might be.

The secretariat issue was not included and was not addressed in the agreement itself, in this non-paper, this negotiating text. But there was a consensus that a secretariat should be established. Since the secretariat should be designed to serve the Treaty system as a whole, with a consultative mechanism as a whole, and not simply to serve the function of providing support for the environmental protection aspects, the secretariat should be established and should be addressed at a regular consultative meeting.

While the issue of the secretariat was not dealt with in the draft agreement, there was a commitment to get at that issue and to resolve it, beginning at the regular meeting in October. So there was a commitment to establish these two new forms of institution for the Antarctic consultative mechanism.

One of the innovative aspects of the Andersen Text is the provision for inclusion of bonding measures in annexes, legally-binding measures, specific measures for protection of the environment in annexes. There were four areas in which four candidate annexes were identified. In all of those annexes (marine pollution, waste disposal, environmental impact assessment and fauna and flora protection) the remaining issues are largely drafting issues, simply wording issues. And it is quite clear that those annexes will be ready for conclusion when the text of the agreement or the text of the protocol itself is ready for conclusion.

But the annexes do several things. First, they provide a mechanism for rapid updating and rapid amendment. And there is a provision that an annex can, itself, include provisions for accelerated entry into forced acceleration implementation of new measures, as necessary. This deals with one of the long-standing problems of the Antarctic Treaty consultative mechanism — adopted measures have taken an awfully long time to become effective, because every country must implement them before they become effective.

A system envisioned for the annexes that have been elaborated is a one-year tacit acceptance procedure. In other words, if no objection is received within a year, they are presumed to have achieved the acceptance of all and enter in the force on that basis.

There could also be a mechanism for emergency provisions to allow measures to be adopted even more rapidly. But that's the approach that has been taken, to allow the mechanism to operate more effectively without requiring an amendment, without requiring an overall change in the political mechanism itself.

The agreement includes new provisions with regard to compliance, spelling out clearly the obligations of States to ensure compliance with measures. It spells out that these measures are designed to be mandatory and apply to all activities. They are designed not to be limited, as has been the case with some measures in the past national programs, and they are designed to apply to all individuals, all activities, across-the-board.

The Andersen Text provides for a compulsory dispute settlement, again, with regard to the mandatory measures that are included in the annex. This represents a substantial evolution of the dispute settlement procedures that exist in the Antarctic Treaty, which are voluntary, optional, rather than mandatory, rather than compulsory.

It calls for response action. It obligates parties to undertake response action in respect to the threat of pollution, the threat of environmental damage deriving from activities in Antarctica. It obligates the parties to undertake contingency planning

The Andersen Text calls for annual reporting to provide a better record, a public record of measures taken to ensure compliance and other steps under the agreement; and calls for a system in which the parties would address and develop measures to deal with liability in addition to the provisions relating to response action.

It will include not only principles on environmental impact assessment, but will include specific obligations to deal with the issue of the decision-making. It would include a flat requirement that activities be subject to prior assessment of their environmental impacts. Again, that will be included in the body of the protocol itself. The specific procedures may be in the annex, or they may be all rolled into the protocol itself. But the agreement — the Andersen Text — rests on the premise that the environmental impact assessment procedures will be a major aspect for

dealing with the issue of decision-making.

Finally, the issue of mineral resources is linked in this non-paper body inclusion of a provision which calls for a prohibition on mineral resource activities. That provision, however, is formulated in such a fashion as to make clear that it is incomplete. And it holds open three options: 1) that mineral resources activities be prohibited permanently; 2) that mineral resource activities be prohibited in accordance with the Antarctic Minerals Convention; and 3) that mineral resource activities be prohibited on the basis of some middle ground between the two.

In other words, it does not resolve the issue, but as I mentioned earlier, establishes the linkage that would require the issue to be resolved prior to resolving the agreement itself. Whether or not that provision stays in, it does represent that linkage on the mineral resource issue.

Let me say that there was not a consensus, and it was clear that there was not a consensus from the outset in Vina del Mar on how to resolve the issue, how to restore consensus on the mineral resource issue. Several of the participants in the negotiations entered the discussions by indicating that there simply was no flexibility on their part to move toward a middle ground. So while there was exploration, and while there was a lot of informal discussion, much of it had a somewhat hypothetical ring in the sense that it was clear from the beginning that there was not a sufficient basis to finding a middle ground.

On the other hand, I think it is clear that the elements of a middle ground are beginning to emerge. And in my view, those elements would be the agreement on a moratorium on mineral resource activities for a significant period of time. But a moratorium would mean an agreement that mineral resource activities would not take place for that period time, coupled with something that would ensure that at the end of that moratorium — because a moratorium, by definition is, if you will, a self-destructing mechanism — to deal with the situation of what would happen if interest ever emerged in mineral resource activities. We're not there yet. But there was clearly some — quite a bit of — discussion of that possibility as a middle ground.

There was not, however, sufficient flexibility on all sides to be able to begin to move in a concrete fashion toward that middle ground. Whether or not, and when, that disposition will emerge, I think is the cloud that hangs over the disagreement, which, otherwise, I think, could easily be concluded in 1991.

The parties will meet again. However, I don't want to leave with the impression that everything is beautiful. With regard to the agreement, there are issues. There are issues relating to the environmental impact assessment. There is still an issue as to whether institutions — the advisory institutions — might have some role in suspending activities on the basis of a review of an environmental impact assessment.

But in my view, those issues are resolvable, and will, I think, tell the tale whether or not the Treaty parties can find a solution to that most visible, most hypothetical issue, from an environmental point of view — the question of Antarctic resources.

I should end, perhaps, on a personal note. I'm reasonably confident that the Treaty parties will be able to do it. The Treaty system has worked too well, and there is too much of a stake in the broader issue of ensuring that Antarctica continues to be managed in the way — in the rather innovative way that it has been — not to succeed in this operation. But nothing is certain in this world..... Thanks.

Ray Heer III, son of a former DPP Program Manager at NSF, transcribed the presentation. Tucker thinks and talks legally, and to the layman it's a bit "heavy", So Ruth and I have made some minor editorial changes, and bear full responsibility for any inadvertent changes in meaning.