

**Committee on the Peaceful
Uses of Outer Space***Unedited transcript***547th** Meeting

Thursday, 16 June 2005, 3 p.m.

Vienna

*Chairman: Mr. A. A. Abiodun (Nigeria)**The meeting was called to order at 3.17 p.m.***The CHAIRMAN:** Distinguished delegates and representatives, good afternoon.

As I indicated this morning when we are adjourning, I indicated that the Secretariat will respond first before we do anything else to Professor Kopal's question regarding the procedure of our work today and tomorrow, particularly in respect of the report we shall be considering.

Accordingly, I am giving the Deputy Secretary to this Committee to respond to that question that was raised this morning by Professor Kopal.

Madam, you have the floor.

Ms. N. ROGRIGUES (Deputy Secretary, Office for Outer Space Affairs): Thank you Mr. Chairman. On the status of our draft report and the draft report will be in five parts. The first part, I believe, has already been circulated to delegations this afternoon. Most of the parts will hopefully be available during the course of morning tomorrow morning and, depending on how soon the Secretariat can finalize the last few elements, possibly one section might only be available at lunch but we are hoping to advance that so we can everything else as soon as possible.

Thank you Mr. Chairman.

The CHAIRMAN: I thank you very much Madam.

Professor Kopal, are you satisfied? Do you have a question?

You have the floor Sir.

Mr. V. KOPAL (Czech Republic): Completely satisfied, Mr. Chairman, we are grateful to the Secretariat for the delivery of the first part of the draft report and, of course, we will be eager to receive the following parts because they are more substantive.

Thank you very much.

The CHAIRMAN: I thank you very much Professor Kopal for actually getting us to look ahead to finishing our work here.

Now that said, distinguished delegates, I now declare open the 547th meeting of the Committee on the Peaceful Uses of Outer Space.

This afternoon we will resume our consideration of agenda item 7, Report of the Scientific and Technical Subcommittee on its Forty-Second Session, in order that the Chairman of the Working Group on Space Debris of the Scientific and Technical Subcommittee, Mr. Claudio Portelli of Italy, can present the results of the work conducted during the intersessional meetings of the Working Group.

We will also continue and conclude our consideration of agenda item 6, Implementation of the Recommendations of UNISPACE III.

We will thereafter begin our consideration of agenda item 13, Other Matters, and item 12,

In its resolution 50/27 of 6 December 1995, the General Assembly endorsed the recommendation of the Committee on the Peaceful Uses of Outer Space that, beginning with its thirty-ninth session, the Committee would be provided with unedited transcripts in lieu of verbatim records. This record contains the texts of speeches delivered in English and interpretations of speeches delivered in the other languages as transcribed from taped recordings. The transcripts have not been edited or revised.

Corrections should be submitted to original speeches only. They should be incorporated in a copy of the record and be sent under the signature of a member of the delegation concerned, within one week of the date of publication, to the Chief, Conference Management Service, Room D0708, United Nations Office at Vienna, P.O. Box 500, A-1400, Vienna, Austria. Corrections will be issued in a consolidated corrigendum.

Composition of the Bureaux of the Committee and its Subsidiary Bodies for the Period 2006-2007.

At the end of this afternoon's meeting, there will be two technical presentations. The first by Mr. Toshihiro Ogawa of Japan, who will be addressing us on "Japan's Activities Related to Space and Water". Thereafter, Mr. Andreas Neumann of Germany will make a presentation on "Looking From Space on Oceans and Inland Waters".

So that is the schedule I am proposing for this afternoon.

Are there any questions on this schedule or any addition? Definitely _____ (*not clear*).

OK. Agreed.

Report of the Scientific and Technical Subcommittee on its forty-second session (agenda item 7)

That being said, I now open our debate on the report of the Scientific and Technical Subcommittee on its forty-second session and I hereby invite Mr. Portelli of Italy to report on the Working Group on Space Debris.

Mr. Portelli, you have the floor Sir.

Mr. C. PORTELLI (Italy): Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, I would like to provide you with the information on the results of the intersessional meeting of the Working Group on Space Debris.

As you recall, yesterday at the 544th(?) meeting of the Committee, I informed the distinguished delegates about the intermediate progress of the activities of the Working Group. Now, I am pleased to inform the Committee that this afternoon the Working Group has successfully concluded its consideration for all items which were in its agenda at these intersessional meetings.

Our main achievement was the finalization of the first draft of the document on Space Debris Mitigation, which include _____(?) provided in the proposals received from France, Germany, India, Japan, United Kingdom, United States of America and the European Space Agency, ESA.

The proposals received are contained in the Conference Room Paper, A/AC.105/2005/CRP.8 and

Corrigendum.1 and Addendum.1 and circulated to the Committee.

I would like to draw your attention to the document, CRP.18, which has just been distributed. This document contains the text of the preliminary draft of the document on Space Debris Mitigation. Let me describes its structure and contents for you.

The document structure contains the following elements. First the background. Second, rationale. Third, the application. Fourth, the Space Debris Mitigation Guidelines, which are consisting of seven guidelines that should be considered for the mission planning, design, manufacture and operational launch and disposal phases of spacecraft and launch vehicle orbital stages.

The title of Guideline One is "Unit Debris Released During Normal Operations". Deadline Two is "Minimize the Potential for Break-Ups During Operational Phases". Guideline Three is "Limit the Probability of Accidental Collision in Orbit". Guideline Four is "Avoid Intentional Destruction and Other Harmful Activities". Guideline Five is "Minimize Potential for Post-Mission Break-Ups Resulting from Storing(?) Energy". Guideline Six is "Limit the Long-Term Presence of Spacecraft and Launch Vehicle Orbital Stages in the Long Earth Orbit Region After the End of their Mission". Guideline Seven, last, "Limit the Long-Term Interference of Spacecraft and Launch Vehicle Orbital Stages with the Geosynchronous Region After the End of their Mission".

And finally, I would like to mention to you the last section of the document which are Update and(?) Six(?), Annex or Reference. It maybe belong to that _____ (*not clear*) contained in the document CRP.18 to be further discussed and considered by the Working Group and are indicated as underlined testing(?) within square brackets.

Finally, we are planning to seek the possibility of involving the expertise of the Scientific and Technical Subcommittee Working Group on Nuclear Power Sources in Outer Space regarding "End of the Mission: Disposal of Nuclear Power Sources" and other related topics relevant to space debris. For this purpose, a letter will be sent to the Chairman of the Working Group of Nuclear Power Sources.

The Working Group has decided to continue its work at the next forty-third session of the Scientific and Technical Subcommittee, to be held in Vienna, and the dates are from 21 February to 4 March 2006.

The representatives of the following Member States and international organizations and observers took part in the intersessional meetings of the Working Group. They are Argentina, Brazil, Canada, China, Czech Republic, France, Germany, Greece, India, Italy, Japan, Russian Federation, United Kingdom, United States of America, European Space Agency and the Space Generation Advisory Council.

I would like to thank all delegations which participated in the Working Group for their valuable contributions and cooperative spirit which helped us to successful accomplish our tasks at these intersessional meetings.

Thank you Mr. Chairman.

The CHAIRMAN: I thank you Mr. Portelli, the distinguished representative of Italy, in this Committee, and the Chairman of the Working Group on Space Debris, for your report.

Distinguished delegates, the report is before you and for your comments.

I recognize France.

Mr. C. LECLERC (France) (*interpretation from French*): Thank you Mr. Chairman. My delegation would like to commend the Working Group on Space Debris for excellent work carried out during the intersessional meeting. The Working Group has made considerable headway and has duly updated us. It is in sync with its multi-annual programme of work. We would like to, in particular, emphasize and support the proposal made jointly with the Working Group on Nuclear Power Sources in Space, that the two groups work together on the issue and further clarify it in the course of future meetings.

Thank you.

The CHAIRMAN: I thank you Sir, the distinguished representative of France.

I now invite the distinguished representative of Japan to address the Committee.

Mr. M. MIYAKE (Japan): Thank you Mr. Chairman. We express our satisfaction of the results of the Working Group on Space Debris and we are much confident to finalize this document based on our working plan and finalize this document in 2007. We are now here to express our strong commitment to continue support on this activity.

And finally, we would like to express our sincere appreciation for Mr. Claudio Portelli for his excellent chairmanship of this Working Group.

Thank you very much.

The CHAIRMAN: I thank you Sir, the distinguished representative of Japan, for that statement.

And I invite Mr. Ken Hodgkins, the distinguished representative of the United States.

Mr. K. HODGKINS (United States of America): Thank you Mr. Chairman. I would like to join the other delegations in congratulating the Chairman of the Space Debris Working Group on excellent work that was undertaken by the Working Group and also express our appreciation to the work that Mr. Portelli has personally put into moving this issue forward.

I did have one question, which is, the process between now and February. Does the Working Group expect to meet again on an intersessional basis or will they working electronically to resolve some of the questions that have been bracketed in the text? Or are we going to wait until next February before this text is taken up again by the members of the Working Group? I think it would probably be informative for all members here today to have an idea of the next steps in case there are some delegations that have not participated directly in the Working Group but may wish to do so between now and February.

Thank you.

The CHAIRMAN: I thank the distinguished representative of the United States for his statement.

In reply, in reference to your question, and if you do not mind, and if the house will allow, I would like Mr. Portelli to hear all comments and questions and then at the end respond to all of them collectively.

Is this agreeable to you Mr. Portelli? OK.

I, therefore, recognize Germany to speak on this issue. You have the floor Sir.

Mr. R. BRÄUCKER (Germany): Thank you Mr. Chairman. I would like to thank too for the excellent work of the Working Group but since nuclear power sources were mentioned, I would like to reiterate, for the record, the well-known German

position that had been expressed on numerous occasions and we will continue to do so as this position is that Germany is basically opposed to the use of nuclear power sources in outer space. Nuclear power sources should not be used in the Earth's orbit and, if ever, the use of nuclear power sources should be limited to deep space where other power sources cannot be at life.

And on a technical note, the limit of one million _____(?) should not be exceeded.

Thank you Mr. Chairman.

The CHAIRMAN: I thank you Sir for that intervention on behalf of Germany.

Professor Cassapoglou of Greece, you have the floor.

Mr. V. CASSAPOGLOU (Greece) (*interpretation from French*): Thank you Mr. Chairman. I, for my part, would also like to congratulate and thank our Italian colleague, Claudio Portelli, and the other colleagues from various countries that participated in drafting this text.

Indeed, this is a great achievement, both in terms of the technical and in terms of the content. I would like to underscore the importance of the United States contribution with their proposal. Their proposal made it possible to find an excellent solution, which is not a compromise solution, and which constitutes the perfect resolution of the problem posed by space debris. And, thus, I think that we can use this text in our upcoming meetings and sessions. And I further believe that it constitutes the basis of an evolutionary process that will take place over 10, 20 years and it will help us clarify the principles in United Nations resolutions and help us with a Declaration of Principle on the issue of space debris.

Thank you Sir.

The CHAIRMAN: I thank the distinguished representative of Greece.

The distinguished representative of India has the floor.

Mr. B. N. SURESH (India): Thank you Mr. Chairman. The Indian delegation expresses its appreciation for the excellent work done by this Working Group on Space Debris, under the chairmanship of Claudio Portelli of Italy. In fact, they have brought out the various guidelines very lucidly in

the report and also highlighted the areas which require further consideration which I am sure will be taken up for discussion during the Scientific and Technical Subcommittee's Committee Meeting next year. So we would like to congratulate for the good work done by this Working Group.

Thank you Mr. Chairman.

The CHAIRMAN: Thank you Sir for that intervention on behalf of India on the work of the Working Group on Nuclear Power Sources.

Professor Kopal, you have the floor.

Mr. V. KOPAL (Czech Republic): Thank you very much Mr. Chairman. Our delegation, as well, appreciates very much the work done by the Working Group and by the outcome of these considerations. My country has participated in these discussions, through its Expert, Dr. Petr Lála, who is present here. And I believe that we can assess the results of these discussions and informal considerations as the first step on the way to mitigation of space debris and to the protection of the space environment against the generation of space debris. Of course, this proposal includes but recommendations, recommendations that should be _____(?) implemented and that should not be legally binding, as I understood from the documents and from the report of the Scientific and Technical Subcommittee from its last session. As you certainly know, my country, of course, is in favour of consideration of legal aspects as well and we are convinced that sooner or later it will be quite indispensable. Therefore, we are looking forward to the moment when the Scientific and Technical Subcommittee will address the Legal Subcommittee, bringing this document and the successful results of its work to its attention, requesting at the same time the consideration of legal aspects of this issue.

Thank you very much.

The CHAIRMAN: Professor Kopal, thank you. There are two comments I want to make on your intervention. One, I think I have made a slip of the tongue. I said Working Group on Nuclear Power Sources and on listening to you, I said, wait a minute, he is talking about space debris. You are right and I am wrong.

And number two, I think the recommendation you made at the end of your intervention, I will hope the house will accept it and it should appear in our report whereby the Working Group presents its report to the Scientific and Technical Subcommittee so that

the Scientific and Technical Subcommittee can now, our recommendation that will be at the Scientific and Technical Subcommittee to look at this, prior to coming back to COPUOS to be transmitted to the Legal Subcommittee for consideration. This would be my interpretation of what you have just said.

Is that agreeable to you Sir? OK.

Professor Cassapoglou. Wait a minute, I have made a mistake. The United States of America first, point of order.

Mr. K. HODGKINS (United States of America): Mr. Chairman, I appreciate your proposal. However, I have to remind you and the Committee that we have a work plan and it is very specific on what will happen with these guidelines so we would hate to re-open an agreement that we have reached at the Scientific and Technical Subcommittee what happens to these Debris Mitigation Guidelines next year or the year after. And we have talked about the possibility of the Legal Subcommittee doing something but that is not part of the work plan at this stage. And if you are suggesting we need to re-open the work plan from February, that is a completely different matter. In any case, I just wanted to point out that we do have the work plan for this.

The CHAIRMAN: ... work plan, whatever I might have said with that work plan, I withdraw what I have said because I do not want to affect that work plan in any way to perform. I was just reacting to a statement I had but necessarily to derail whatever work plan is already in place and agreed to by the Committee.

I give the floor to Greece.

Mr. V. CASSAPOGLOU (Greece) (*interpretation from French*): Thank you Mr. Chairman. I must join in the proposal put forth by our eminent colleague from the Czech Republic, Professor Kopal. The follow-up of this document is something that Greece and both the Czech Republic presented a proposal one which was the study, the simple study of legal principles that might possibly be applicable in the area of space law if we look at the subject of space debris in this light.

And as I have the floor, Mr. Chairman, I would also like to say that, while I understand the point made by our colleague from the United States, still no one is preventing the Legal Subcommittee from beginning the study of the text, even unofficially. It is something which has been achieved, which is important, politically and technically, and to some

extent, we are free to begin studying it, even from a legal point of view.

Thank you Sir.

The CHAIRMAN: I thank Professor Cassapoglou for that intervention.

I invite the distinguished representative of Canada.

Mr. D. ALDWORTH (Canada): Thank you Mr. Chairman. Canada would like to congratulate the Chairman, Claudio Portelli of Italy, for the sterling work he did harnessing the good will in the Working Group on Space Debris and to the other members of the Working Group for the diligence in finding common ground on these guidelines. The guidelines will help as a first step to preserve the space environment, thus allowing for the continued access to these benefits that space provides all countries for peaceful purposes.

Thank you Mr. Chairman.

The CHAIRMAN: Thank you very much Sir.

Distinguished delegates, are there any further comments on the work of the Working Group on Space Debris?

If not, I will invite Mr. Portelli to respond to some of the comments and questions raised.

You have the floor Sir.

Mr. C. PORTELLI (Italy): Thank you Mr. Chairman. As far as I understood from the comments that Member States made, _____(?) which is applicable to our working and our work plan is the comment that I received from the United States of America regarding the activities that follow until February 2006. Maybe I can reply to this comment, giving an explanation of what should be done in the meantime. In the CRP.18, a number of parts which are in square brackets, these parts will be working in the meantime, even electronically, if possible, in order to have the document prepared for the next session of the Scientific and Technical Subcommittee. However, some Member States may require a deep analysis on those parts and I would like to have a day to examine everything in order to be ready to further it _____(?) to adjust the document and formalize it as a second first version but without possibly all the square bracket parts.

That is all I have to say.

Thank you Mr. Chairman.

The CHAIRMAN: I thank you Mr. Portelli for your comments. With those comments, can we accept the report and the work plan that Mr. Portelli has proposed?

Agreed.

Distinguished delegates, that concludes our consideration of agenda item number 7 for this particular session of the Committee.

Implementation of the recommendations of UNISPACE III (agenda item 6)

I would now like to open our consideration and continue our consideration of agenda item number 6, Implementation of the Recommendations of UNISPACE III.

Excuse me please.

In this connection, I would like to return to our discussion on CRP.17 this morning and, at that time, we look at that CRP and the CRP itself contains the proposed text to be included in the draft report of the Committee on the Strategy of the Office for Outer Space Affairs to implement the recommendations of UNISPACE III, as requested by the General Assembly.

You have before you a paper that has been prepared by the Office, a non-paper, U-III/Np/2, and this particular new CRP reflects modifications to CRP.17 as a result of our discussions this morning.

We ran out of time this morning. Therefore, we could not conclude our deliberation on that CRP. Now I am inviting delegates to look at that new modification and with the amendments and if there are any comments from delegates on this.

Before we say anything, I give the floor to the distinguished Director of the Office for Outer Space Affairs.

Mr. S. CAMACHO (Director, Office for Outer Space Affairs): Thank you Mr. Chairman. It is something that was prepared quite quickly. If you look at the first paragraph that has the bold, bold and _____ (?), there is a small mistake, a typo, it should be small (a) at the beginning. That is not the reason I

wanted the floor. It should read "... increase its extra-budgetary funding sources".

Thank you Mr. Chairman.

The CHAIRMAN: ... five, the bold and that is on the fifth line, "... increase its ..." and you add the word "extra-budgetary" before the word "funding", so that it would read "... increases extra-budgetary funding sources".

With that modification, let me just give the Committee about two minutes to go through. You have read the whole text before. What you have now is a correction.

OK, I give the floor to the distinguished Ambassador of Colombia.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Thank you Mr. Chairman. First, I would like to thank Dr. Camacho for having taking into account the views that were expressed during the discussion with regard to the different Centres. And we also appreciate that he took into account views relating to the workshops.

I have a simple suggestion, Mr. Chairman. It seems to me that in the sixth paragraph, almost at the end, when it says, and I will read in English because I am obliged to (*continued in English*) "... activities with the Pro Tempore Secretariat of the Fourth Space Conference". (*Continued in Spanish*) It would be better to say there "of the Pro Tempore Secretariat of the Space Conference of the Americas" and delete the word "Fourth". Because naturally in the next year we will holding the Conference in Quito and they will then take their turn as Secretariat so that affects the Centre and the Secretariat. It all falls upon the country that is hosting.

Thank you.

The CHAIRMAN: I thank the distinguished Ambassador of Colombia for that intervention.

I think the only thing I really want to say is that not only in the case of Latin America, because there are equally a number of regional programmes going on in other regions where there are Centres and, therefore, this sentence, in the case of the Centre for Latin America, I wonder, I do not know whether I want to leave it like that but I know that in other regions also, there are regional programmes, that the Centres in their particular regions ought to take cognizance of and not just in Latin America alone. That is the point I just

wanted to make. This is a good example but I am with the Secretariat. We take that sentence and adjust it. I do not think we need to have any debate on this but adjust it to accommodate all other Centres as well in other regions.

Yes, you have the floor Sir.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Mr. Chairman, I see no problem in including other regions. That is fine. But what was very clear in the discussion this morning was the difficulties in linking the Centre and the Space Conference of the Americas. That was clearly defined as a specific case. Now, if the same type of problem arises in other regions or where there is a need to address this in other regions, then that would be fine, but we would prefer to leave the sentence as is.

Thank you Sir.

The CHAIRMAN: ... hands of the Committee on that.

Are there any other delegations wishing to speak?

Brazil. You have the floor Sir.

Mr. C. E. DA CUNHA OLIVEIRA (Brazil) (*interpretation from Spanish*): Thank you Mr. Chairman. Mr. Chairman, no doubt it is important to reflect in the report on this meeting that various views were expressed by delegations. We must reflect that, of course. But with regard to a specific issue which has to do directly with countries in my region, i.e. Latin America and the Caribbean, it seems to me that it is rather peculiar that the Committee would take a decision that would only affect part of its constituent countries. So I am having some difficulty with this, that is specifically the Centre for Latin America and the Caribbean be singled out in this context. To my mind, it would be more appropriate to make this reference in the final report. This should be reflected in the report of the Committee.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Brazil for that statement.

Any further comments?

OK, Sir, Brazil, can you explain exactly what you mean for the benefit of the Secretariat in particular?

Mr. C. E. DA CUNHA OLIVEIRA (Brazil) (*interpretation from Spanish*): What is being requested specifically of the Office is the following. We are requesting action here and the action is being requested on behalf of the Committee, not just some specific country. So I think it needs to be clarified. Is this an opinion of the entire Committee or does it only reflect the views of some specific States? If it only reflects the views of a group of specific States, and here I am not saying that these are not legitimate views, but if it is only a group of States' view, I would ask that these views be reflected not in this document but rather that it be reflected in the report on the discussions that were held in this Committee.

Thank you.

The CHAIRMAN: The understanding of the Chair and the Secretariat is that where you say "in the case of the Centre", in that paragraph 6, probably what the Secretariat will do, after consulting with them now, is that we will begin a new 6 bis and by saying "some delegations". This is what you are asking for rather than the Committee.

Mr. C. E. DA CUNHA OLIVEIRA (Brazil) (*interpreter: microphone please for Brazil*): Thank you Mr. Chairman. ... accommodate the concern that I have just expressed.

The CHAIRMAN: Thank you very much.

Now I invite the distinguished representative of Ecuador.

Ms. R. VASQUES DE MESSMER (Ecuador) (*interpretation from Spanish*): Thank you Mr. Chairman for giving me the floor. I would just like to endorse what was said by the Ambassador of Colombia. We fully support that this clarification be reflected in the document. We firmly support this because we think it is necessary to call attention to this so that the Centre will coordinate its activities with the Space Conference of the Americas.

Thank you Sir.

The CHAIRMAN: Thank you very much Madam for that intervention.

I give the floor now to the distinguished representative of Mexico.

Mr. A. VIVANCO CASTELLANOS (Mexico) (*interpretation from Spanish*): Thank you

Mr. Chairman. I would just like to endorse what was said by the delegation of Brazil and we believe that the Secretariat's proposal is appropriate. Thank you.

The CHAIRMAN: I thank the distinguished of Mexico.

I now give the floor to Professor Cassapoglou of Greece.

Mr. V. CASSAPOGLOU (Greece): Thank you Mr. Chairman. I am a little bit confused. If I well understood the intervention of our distinguished colleague from Brazil, it is preferable because if this sentence is with the _____(?) letters reflects only, it is not the opinion of the whole Committee, it reflects only the views of the Latin American and Caribbean countries, should be written "some delegations" because I think it may that this document will be included as part of the report, some paragraphs of the report, under the _____(?) chapter. It may be to bypass(?) this complication, it is better to be "some delegations" as usually we do.

Thank you.

And by the way, I would like to know please at the very end of this new paragraph 6, what is the meaning of "relevant companies"? "The Office would also launch a support campaign for the Centres amongst space-related institutions and relevant companies". Companies is a commercial term.

The CHAIRMAN: You do not want the big companies to participate?

Mr. V. CASSAPOGLOU (Greece): Yes, we, how can I say, discover companies. ... relevant companies to space-related commercial companies. That is my question.

Thank you.

The CHAIRMAN: OK, your point has been received.

Brazil is asking for the floor.

Mr. C. E. DA CUNHA OLIVEIRA (Brazil) (*interpretation from Spanish*): Mr. Chairman, I just would like to acknowledge my error. This is part of the report then. So the comment I made was unclear because of that. I would just like to acknowledge that and thank the delegate of Greece for his observation because it clarified things for me.

Thank you.

The CHAIRMAN: Thank you Sir.

Canada, you have the floor.

Mr. T. OUTTARA (Canada): Thank you Mr. Chairman. I think this morning we have spoken about another concern concerning Africa. (*Continued in French*) Maybe I could be a little more in general. I think the intent, the political intent, should be clear. This is much more political than technical. Talking about the Conference of the Americas, when I talk about Africa in general, this could sound too general. Maybe we should say here (*continued in English*) "... the sentence before". (*Continued in French*) The sentence before, if we could keep this as a framework and ask the Bureaux to highlight specific events or support specific activities or specific events, as appropriate, otherwise, every year each delegation would be putting this or that specific event in the report and there will be no end to that. We support the Conference of the Americas. However, we believe that here it is in our interest to be more general. We would like to avoid referring to specific cases.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Canada for that observation. Do you have a proposal for us?

Mr. T. OUTTARA (Canada): Yes, my proposal is to arise is this sentence, for me, which is complicated. It will be simple to say "the Office would promote cooperation with and support for the Centres among Member States at regional and international levels". That is all. Something like that. At technical level, you can see how to support, for example, space, _____(?), etc. This is what I would like to propose.

The CHAIRMAN: I ask the Committee to give me a few minutes.

I give the floor to the Ambassador of Colombia.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Mr. Chairman, I regret to have to make a series of observations that I had not wanted to have to make as we had said at the outset we felt that this paragraph reflected this morning's discussion quite well. But first, I would like to say to the distinguished delegate of Canada, that the Space Conference of the Americas is not just any event, Sir.

The Space Conference of the Americas is an organizational process which is institutionalized by way of a Pro Tempore Secretariat and it stems from a continual declaration called the Cartagena de Indias Declaration and it has a specific Plan of Action made up with more than 600 delegates from the continent of Latin America. This includes developed and developing nations, including your country, which you very well mentioned.

Secondly, the sentence reflects, and must reflect, because it is a record of what was requested on behalf of the Pro Tempore Secretariat, which is in my country, Sir. And, therefore, it has a responsibility and the country representing the Conference must comply with the mandate conferred upon it by a number of countries, including your own country, Sir, and that must happen.

Thirdly, and here I would like to refer to the two observations made by the delegations of Brazil and Mexico. I understand quite well and what they are trying to say, and I am very clear on that and I have no difficulty in seeing anything added to this, but I would just like to call their attention to the fact that this is a very simple action. It is proactive. It does not prejudge anything. It is not harmful in any way and in no way are we undermining or not placing appropriate worth on the work of the Centres. But the various Centres do have some problems, administrative and financial problems, and this was a benign action, a proactive and positive action that was requested, with the view to providing linkages, not with just any conference, but with a structure, an institutionalized structure, which is what a Pro Tempore Secretariat is. We have a responsibility. We had to respond to a call by the General Assembly, the resolution of last year, December of last year, requested that we present a report and the report is contained in CRP.7, if I am not mistaken. And in reading that resolution, one sees that, indeed, the activities range from cultural activities to very concrete endeavours such as remote education and remote medicine. So this phrase is not formulated in any way that is harmful. On the contrary, it is just trying to call attention to the importance of this link and the purpose here is to try and remind us all of the unity of thought, which is always characterized by(?) delegations from Latin America and we just want to continue along those lines and working in that way.

So, Mr. Chairman, I would just like to insist that this sentence does reflect what occurred. It reflects an action that was requested. This goes back some years now. And we would like to see it expressed in the manner as appropriate for the way procedures take place in Vienna and we would like to see it stay.

Thank you.

The CHAIRMAN: I thank the distinguished Ambassador of Colombia.

Before I call the next speaker, I want to appeal to the Committee to recognize one thing. Professor Kopal, before we went for lunch, alerted us with the fact that we are supposed to close this meeting tomorrow and we did not have any inkling as to the status of our report. At the beginning of this meeting, the Secretariat apprised us of the processes they are taking and the steps they have taken. If we are going to conclude our work and adopt our report, we need to be a little bit accommodating in our positions here and, therefore, I am making a recommendation to you all for your consideration before we continue.

As of this moment, I have four additional speakers that have asked for the floor to address this subject and these are the United States, Ecuador, Nigeria and Argentina. At the end of that, I want us to please not debate this issue further for to resolve, to take action on what we are going to do rather than continue because we need to arrive at a conclusion. So I hope we will close the debate after Argentina has spoken and we resolve the issue before us.

Please I beg you to give me that mandate.

It is so decided.

I give the floor to the distinguished representative of the United States.

Mr. K. HODGKINS (United States of America): Thank you Mr. Chairman. I want to turn to the last paragraph of the Conference Room Paper and make one suggestion. It reads “the Committee agree”, I think that should read “the Committee agreed”, add a “d”, “that the Regional Centres should be invited”.

And then I would like to go to the last paragraph on the first page of this CRP. I have to admit I am a bit confused as to what we are debating here and a bit confused as to the intent of the paragraph because it is rather tacit. I do not feel strong one way or another, but it seems to me that if the Office is to promote cooperation with and support for the Centres among Member States at the regional level, and these last three sentences, either remain passive, which would be “the view was expressed that” or “some delegations expressed the view that the Office should promote cooperation” or it should read “the Committee agreed that the Office would promote”. Because my

reading of this paragraph does not give the Committee any mandate to do this work. It only recalls that something was done, it notes that something was done and then it says in a very passive and conditional way “the Office would promote cooperation”. I do not believe that that is strong enough to give the Office the necessary mandate to undertake this work. And I am assuming that, in fact, we do want the Office to undertake the work. So I would suggest that in the last paragraph, with the sentence beginning “the Office would promote cooperation with”, we would make this a separate paragraph and begin it by saying “the Committee agreed that the Office would promote cooperation with and support for the Centres” and so on.

And then, the next sentence, in the case of the Centre for Latin America and the Caribbean, the Office will also encourage the Centre to coordinate activities.

And then the last sentence would remain as written.

I am not trying to complicate matters here, Mr. Chairman, but my understanding of the debate is that we want the Office to do these things and it is not written in report language. It does not give the Office that mandate. Now if others feel that we do not want to give the Office the mandate to do this, it is fine with me, either way. But in the case of the way it is drafted here, it is not clear what the Committee’s intent is, vis-à-vis, the Office.

Thank you Mr. Chairman.

The CHAIRMAN: Thank you very much Mr. Hodgkins. I think what you have said is exactly what the Office had in mind in drafting this proposal. That is my own interpretation. But that is what the Office intended.

Now what is actually I said is that within the intention of the Office, then you have this one in bold where you have contention(?) (consensus?) of more Member States.

The next speaker on my list is the distinguished representative of Ecuador.

Ms. R. VASQUES DE MESSMER
(Ecuador) (*interpretation from Spanish*): Thank you Mr. Chairman for the floor once again.

Truly my delegation has firm objection to the proposal by the distinguished delegate of Canada because it does not really help at all in solving the

current problem which is to strengthen activities for the Centres for Latin America and the Caribbean. And as the Ambassador of Colombia said very correctly, this is an institution, it is an institution which benefits the region which has problems right now and these problems need to be resolved or at least we need to work towards their resolution.

My delegation would be flexible with rewording the text if it is not clear but definitively, we would like to see something remain in the report about the need for the Centre for Latin America and the Caribbean to have cooperation with the Space Conference of the Americas strengthened.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Ecuador.

The distinguished representative of Nigeria, you have the floor Sir.

Mr. J. CHABO (Nigeria): Thank you Mr. Chairman for giving me the floor. I will be as brief as possible and I will not complicate matters.

I believe, Mr. Chairman, that this is a simple and straightforward matter. There is a more senior(?) consensus. Although I understand, the contribution of the distinguished delegate from Canada, the two issues have been lumped together here and that is to encourage the Centres to coordinate activities which the Pro Tempore Secretariat of the Conference of the Americas, as well as asking it to expand the membership of the Governing Board. Yes, it is, indeed, very confusing but there are times when, in the spirit of consensus and compromise, you could decide to have some constructive ambiguity. Along those lines, I think at the same time, we must take into consideration the concerns of everybody. The distinguished delegates from Brazil and Mexico and I believe what they are saying here is that some delegations want the Office to encourage, and I believe that those delegations are also in agreement with this. So we should reflect it that way but unfortunately it may not be so look clear in the way the distinguished delegate from the United States is suggesting if we are trying to give in mandates to the Office.

So I believe what we can do is perhaps leave it is and thus say “in the case of Centres for Latin America, “some delegations wanted the Office to ...” and something and I believe that it is the suggestion by the distinguished delegate from Brazil, which has not been opposed to by the distinguished Ambassador of

Colombia and the distinguished delegate from Ecuador. So rather than prolonging the matter, some delegations want this done. Let us just insert that and move on.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Nigeria.

I now invite the last speaker on this issue this afternoon, the distinguished representative of Argentina.

Mr. S. SAYUS (Argentina) (*interpretation from Spanish*): Thank you Mr. Chairman. Briefly, what I would like to comment on is the two multi-national institutions in the region for space is the Quetal(?) Regional Centre and the Space Conference of the Americas. All we want in this document is the that the two coordinate their activities, the Centre and the Conference.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Argentina for that contribution.

Now, distinguished delegates, after listening to everybody, including the Secretariat, there are three proposals before us. The first proposal is what you have in the text and with the later amendment from the United States, making it clearer that we giving a mandate to the Committee. So that is in the text. But it is apparent that we are disagreeing with that. So the next one is what has been proposed by Colombia and Ecuador and other speakers saying that they want that there and is opposed(?) by Brazil and Mexico, which means we are going to include the second to the last sentence in paragraph 6. It will have to be reflected separately as "some delegations".

The third alternative is the one proposed by Canada which says this is a good document. Do not let us put "some delegations" there, let us all agree. But in agreeing, let us look at the international framework for this paragraph rather than a specific identification of a particular sentence. Ask the Office to work with all the Regional Centres so that all the Governing Boards, the same text here but without the specific reference to any geographical region. This is my understanding of the proposal from Canada. And if you do that, he is saying that the Committee should be able to accept that, which I doubt very much, I wish I believe would be acceptable hopefully to Mexico and Brazil and to Ecuador and Colombia. So what I want is not a debate

but just tell me which proposal you want. Either you want us to now have this paragraph beginning with the bold as a new paragraph which will now just say "some delegations", or leave it as it is, modify it with the view from Canada and then it becomes "the Committee agreed". That is all, I think.

Please, I will invite probably two or three interventions and then the case is closed.

Colombia.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Thank you Mr. Chairman. We would like to hear the opinion of the Director of the Office for Outer Space Affairs on this matter. After all, we are vesting this responsibility with him. We need his opinion. These various suggestions that have just been made are of different scale or significance. The Canadian suggestion is not viable, either for Mexico or Brazil or Ecuador or Colombia or for the Pro Tempore Secretariat.

Mr. Chairman, once again we would like to hear the opinion of the Director.

The CHAIRMAN: I give the floor to the Director. And I hope that after he has spoken we can close the case. Thank you.

Mr. S. CAMACHO-LARA (Director, Office for Outer Space Affairs): Thank you Mr. Chairman. My recommendation would be that as it is necessary to reflect the view of some delegations, which in this case are from Latin America and have direct interest in the outcome of the report and what implications that might have to promote the coordination that was said by Argentina of the two regional institutions. Then perhaps what might be done is to take that sentence, put it out as a new paragraph, do it with the traditional way that the Committee works, with "some delegations" We will, from the Office point of view be able to take then, even if it says "some delegations" We can take action on that communication to the Centre, say and specific in a letter, we could say "some countries from the region", without identifying the countries, indicated that they would wish ..." A and B.

Would that be something acceptable?

The CHAIRMAN: Colombia, you have the floor. Thank you very much Mr. Camacho.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Yes, Mr. Chairman, for us, for Colombia, it is acceptable. But you should feel

free to mention Colombia specifically in any such letter. Thank you

The CHAIRMAN: I give the floor to the distinguished representative of Brazil.

Mr. C. E. DA CUNHA OLIVEIRA (Brazil) (*interpretation from Spanish*): Thank you Mr. Chairman. Mr. Chairman, it seems to my delegation that the solution proposed by the Director of the Office does reflect the contents of the discussion that has taken place on the issue. It is a solution but impartially takes into account the opinions expressed in the course of the discussion.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Brazil.

I now invite Mr. Hodgkins of the United States.

Mr. K. HODGKINS (United States of America): Thank you. Mr. Chairman, I do not want to stand in the way of a potential agreement but I am a little concerned about this formulation and typically in the Committee, if there is consensus on something to be done, it is the Committee agrees. But if it is some delegations request the Office to send a letter, there is no consensus there. So I am a bit confused as to on what basis the Office would be taking an action if it is only reflected in the report that some delegations wanted this. I do not want to be overly legalistic and I have no objection to the Office sending a letter, but what I do not want is to set up a situation where we are using language that does not denote or connote consensus as the basis on which the Office will act because then the Office could act on a whole number of things in our report on the basis of just the fact that some delegations had asked for something to be done. Again, I have no objection to a letter or anything in this paragraph but I think it has to be very clear as to whether or not the Committee is asking the Office to do something very specific.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of the United States.

And with your understanding, can we please agree that Canada will be the last speaker, then the Director and then we conclude?

That being the case, I give the floor to Canada.

Mr. T. OUATTARA (Canada) (*interpretation from French*): Thank you Mr. Chairman. Once again, Canada would like to clarify its thought. The Conference of the Americas is one of the priorities for Canada as regards space and I am in a position to say that because I am responsible for these issues. So it is not a matter of under-rating the importance of this Conference. Once again, as the United States delegate has pointed out, we need to be clear in what it is we are asking of the Bureaux, what we are asking the Bureaux to do. The latest wording proposed by the Director of the Office is fine for us. But I want to be very clear in my statement. I wanted to give the organizers of the Space Conference of the Americas support. When we support an action, we support an action, there is no ambiguity about that. And for Canada it is clear that this should be supported but we should also be very practical in giving the Office a mandate. It is the practical aspect that was important for me and that I was trying to highlight in my statement, not the political aspect.

Canada is willing to go back on its first proposal and we want to be very clear with our friends from Latin America. This is not a matter of denigrating or underestimating the importance of these activities. On the other hand, we believe that these activities are extremely important and need to be supported.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Canada for his contribution.

I now invite the Director of the Office for Outer Space Affairs.

Mr. S. CAMACHO-LARA (Director, Office for Outer Space Affairs): Thank you Mr. Chairman. I will try to maybe present it a little bit differently for the distinguished representative of the United States. The way I see is there would be a paragraph that says "the Committee ..." and "the Committee said this ..." or "agreed" or "recommended" and so. This is a separate paragraph that only refers to some delegations and whatever else. It is not setting it here a precedent that the Office reacts to some delegations with a view, because throughout all the reports, sometimes we take it the view of some delegation was thought(?) for implementing the programme whether it was with full consensus or not. If there is something that, in my view, or in the view of the Expert, or whoever is

implementing one part, there is something that serves to promote the objectives, then we do not come to the Committee to ask would you agree if we send a letter on issue A or B or if we take this action, because otherwise, we would work in increments(?) like this.

The way I was trying to characterize it is as a unilateral action, not reacting in one way to an action or not to the Committee. It is just part of the implementation process of trying to support the Centres. Nobody asked us either to launch a support campaign for the Centres. We think that this is something we should do and we put it down if somebody objects, then, of course, we do not do it. If somebody tells us do not do this, then we do not do it. Or if somebody says do this, then we do this. But I would like for that flexibility that we can take action on what we think is promoting the Centres, well, of course, any activities.

Thank you Mr. Chairman.

Mr. CHAIRMAN: I thank the distinguished Director.

Can we close the shutter on this issue?

Distinguished delegates, can we close the shutter on this. Brazil wants to say something? OK. Brazil, you have the floor.

Mr. C. E. DA CUNHA OLIVEIRA (Brazil): I was wondering, Mr. Chairman, if the concern that was expressed by the distinguished delegate of the United States in the sense that some countries would not be entitled to confer a mandate to the Secretariat to take a second course of action would be accommodated. Simply by changing the word "would", the Office would encourage for some other formulation in which we made it clear that this was a recommendation on the part of some member countries for the Office to do something that, to my understanding would be under the normal mandate of the Office. That is my previous, some delegations were of the view that in the case of the Centre for Latin America and the Caribbean, the Office should encourage the Centre to coordinate activities or it would be advisable that the Centre coordinate activities or something according to these lines.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Brazil.

Professor Kopal?

Mr. V. KOPAL (Czech Republic): I have a modest suggestion. We could replace the word "would" by "could".

The CHAIRMAN: Is this acceptable to Nigeria?

Mr. J. CHABO (Nigeria): Mr. Chairman, I ... (*no microphone*) ... reference to the suggestions. I just do not want us to further complicate matters. Already the language here is formulated in a non-mandatory manner. It should encourage, I believe that is one of the weak formulations one can have and what we have just sort of had is that "some delegation" will want the Office to encourage. We should not (delete? believe?). It is not going to put any strong action on, the Secretariat, the Office for Outer Space Affairs is not going to ask the Regional Centre to do this. It will only encourage the Centre to do. I believe that this formulation is already mild enough and we should not further dilute or complicate it.

Thank you Sir.

The CHAIRMAN: The Ambassador of Colombia, you said you wanted to speak but please hold on a second for me.

Distinguished delegates, I am really being pressed by time and the task before us. I have a suggestion for you to accept. Let us accept this proposal from the Office and take out this sentence. And all interested delegations can work with the Secretariat to come up with an acceptable paragraph for that one tomorrow morning for adoption so that we do not go on discussing this non-stop. Because I do not want to continue debating. We have been debating this now for one and a half hours.

The Ambassador Colombia.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Mr. Chairman, indeed, to prevent further prolongation of our discussion, I think we are clearly close to a consensus on this. And I fully agree with what the representative of Nigeria said in that, indeed, the "would" does not do any harm here. I am just wondering if we said "some delegations", then could we also formulate, have an option to formulate things as they were expressed. Now Brazil does not want to part of this but I believe that we should have the freedom to express what we are saying. So I would endorse the text as is and I think, Mr. Chairman, we are very close and I think one last effort on your part might achieve an agreement.

Thank you Sir.

The CHAIRMAN: OK, I thank you very much Ambassador of Colombia.

Distinguished delegates, in the document before us, paragraph 6, we take into consideration the proposal from the United States which will read, I am looking at the seventh line from the bottom, starting with the word “the”. Instead of “the Office”, it should say “the Committee agreed that the Office would promote cooperation with and support for the Centres and Member States at the regional and international levels.”

Then we would have a new paragraph which will begin with “some delegations expressed the view”, the Secretariat knows the language and they will put in “some delegations”. Before that, the last sentence that talks about relevant companies should go above the one in bold to join the other one before. So it is only the one in bold that stands out as a separate sentence.

Are you following me, Ambassador of Colombia?

OK, the last sentence as it is now. The only sentence that is becoming a new paragraph is the sentence in bold, that is all, and that is the one we are going to have _____ (?) “some delegations have the view”. That particular one in bold would be a new paragraph by itself and the Secretariat knows the language to put there. And that it is.

And then the last sentence in the document itself has been modified to read “the Committee agreed”.

Is this OK? Can we accept the document as it is?

Colombia is asking for the floor.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Yes, I would like to accept it in principle but I would ask for the convening of the Latin American Group, the GRULAC, this afternoon after 6.00 p.m. to discuss this issue more specifically.

Thank you.

The CHAIRMAN: With that, can we adopt the paper?

The United States.

Mr. K. HODGKINS (United States of America): Thank you Mr. Chairman. I apologize for taking the floor. I just want one clarification, which is this. And I am not asking other delegations to intervene but just for a clarification from you, Mr. Chairman, or the Secretariat.

Am I to conclude that the sentence, in the case of the Centre for Latin America and the Caribbean, that sentence in bold, reflects the views of only some delegations and then, in fact, there are some other delegations, based on the debate, that object to that. Because if there is no objection to that sentence, then why can we not say “the Committee agreed”. That was my only proposal because if I just go back to the legal point I am making which is that if it said “some delegations”, then it means that there is an opposite view some place out there and I do not want a paragraph that says “some delegations” and then the Secretariat goes off and does something based on that because it opens the door to all sorts of things. So I would ask, when the GRULAC meets, is there any reason why that sentence cannot be reflected as consensus language. Because if there is a reason why it cannot be reflected as consensus language, then, in my view, the Secretariat should take no action in regard to that one sentence.

Thank you.

The CHAIRMAN: Thank you very much Mr. Hodgkins. What you are saying then is that if we express the view that says “some delegations”, then the Committee has no passive mandate for the Office to act? That is what you are saying? OK.

But let us not start the process where you are just asking for clarification and understanding. In the interim period, for the benefit of our work, let us proceed by taking that sentence in bold, making it a new paragraph, 6 bis, it says “some delegations” and then the GRULAC people are going to come up with a position tomorrow. And the delegations that object to this, if they want to come up with their own statements to complement this, this would be also welcome.

So with that stated, we accept this document, accept that sentence in bold. Is this done?

It is so decided.

I do not want to hold the meeting longer but I want you to agree on something before I make my own comment. And my comment is on the last sentence. I

was very surprised to hear some host countries this morning say that there is no legal obligation for the Centres to report. This may not be in writing but these Centres were established under the auspices of the United Nations. They are "affiliated to the United Nations" and, therefore, we have some, I will call it, mutual understanding with the United Nations, that they would let the United Nations know what is going on, even if there is nothing in writing. I am not opening a debate, I am just making a comment. Please, do not let us go into a debate, this is a comment. It is an advice. I am not raising an issue. But if these Centres are supposed to be affiliated to the United Nations, they were established under the auspices of the United Nations, it is just normal that the United Nations will expect that these Centre will come back from time to time and say this is what we are doing. And what the United States has put forward, which we have approved, is that let us make this annual event. And that is all.

And that is all I want to say. I do not want to open a debate here, if you do not mind. Please, I beg you. OK. Thank you very much.

We have hereby adopted that modified CRP with the paragraph to be finalized tomorrow.

And finally, I would like to address a matter relating to the work of the Ad Hoc Expert Group on Disaster Management. As you will recall, the Committee requested the Secretariat to prepare a Conference Room Paper on the recommendations of the Committee to the Ad Hoc Expert Group concerning the process for finalizing the study on the possibility of creating a disaster management international space coordination entity. I understand that the Secretariat has distributed CRP.20 on this matter and all of you hopefully have that CRP.

Can I take it that the Committee agrees to the recommendations contained in that CRP?

Greece has the floor.

Mr. V. CASSAPOGLOU (Greece): Thank you Mr. Chairman. I am afraid that this text does not reflect exactly what we have discussed during the previous meetings and does not reflect the proposal made by my delegation concerning the institutional aspect of this organization. And I have showed to repeat and please to be retain *in extensor(?)* in the summary records of this session. In fact, the Greek proposal concerning the use of already existing United Nations organization infrastructure and facilities in order to promote this very important activity. And I

have to make a reference to UNOSAT of the UNITAR initiative which is based, as you know, in Geneva, using the electronic, the informatic facilities of CERNE(?) which really works in an exemplary way. And as I understood, it is provided for an amount of about 1.5 or 1.9 million dollars or something for the establishment of this new entity. In my view, it should be catastrophic because this amount of money, if it is possible to acquire from the United Nations budget, it is better to be directed to the already existing organization within the United Nations.

I reserved my right to come back next February or even the Fourth Main Committee in September/October in New York to present this Greek proposal *in extensor(?)* in details.

That is what I would like to be present in the report of our Committee. I think it is very, very important and so is very urgent to proceed as soon as possible, not to establish a new entity or other organization on that. It should be very costly and also seeing at the effectiveness of this organization, we need more time. All countries suffered from natural, as well as alphraprogenic(?) catastrophes, should be used these facilities, if I can say so, of the existing facilities of the United Nations in order to cover their needs.

Thank you Mr. Chairman.

The CHAIRMAN: I thank you Professor Cassapoglou. I think, procedurally, that is something that should have been done first and that is to ask the author of this CRP to speak first and that was not done. So I invite the Director of the Office to please introduce the paper formally.

Mr. S. CAMACHO-LARA (Director, Office for Outer Space Affairs): Thank you Mr. Chairman. This text in front of you refers only to the agreement part. The report of the Committee will have the elements of the discussion. We will not be able to do a verbatim, of course, but we will be reporting on the discussions that were held.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished Director.

Professor Cassapoglou, does this address your concern? OK. Thank you very much.

Are there any other concerns on this CRP.20, as the proposed text to be included in the draft report?

Bulgaria has the floor. You are agreeing, I hope.

Mr. A. PEYCHEV (Bulgaria): Thank you Mr. Chairman. I understood that the honourable delegate of Greece has something in view saying that this body should be addressed to another United Nations(?) body. Maybe he has in mind such a body and if that is so, I will be happy if he would name it in his proposal.

Thank you.

The CHAIRMAN: No, he is already satisfied with what the Director said so it is not creating any new body. I am speaking for him now. Are you creating a new body or is there a body in the house that you are referring to because I sort of felt what the Director said was satisfactory to you and we can move on with the proposal in front of us.

Yes, you have the floor.

Mr. V. CASSAPOGLOU (Greece): Thank you. I have to repeat what I said. My intervention is related to the Greek proposal made three days, four days ago, concerning the use of existing United Nations infrastructure and organization for the disaster management which is the UNOSAT of UNITAR at Geneva which is using the infrastructure of CERNE(?) which is the most advanced computer base in Europe, and I think all over the world. And also they have already, I can read it to you "a UNITAR initiative aiming to expand direct access to satellite imagery through the Internet and other multimedia tools. It seeks to facilitate physical planning and programme implementation by local authorities, project managers and field personnel working in emergency response, disaster management, risk prevention, peacekeeping, environmental, rehabilitation, post-_____ (?) reconstruction and social and economic development."

We have already the infrastructure to go ahead with this specific matter.

Thank you very much.

The CHAIRMAN: OK. Thank you very much Professor Cassapoglou. I believe a number of delegations have said the same thing and I have just spoken with the Director of the Office. I want Greece to hear me. Professor Cassapoglou, I am responding to your question. The issue you raised, the Director of the Office is aware of it and other delegations have raised the same issue and according to him this will be

reflected in the report we are going to be reviewing tomorrow. And that is what he said before.

Can we, therefore, adopt the report before us, as modified CRP.20?

It is so decided.

Distinguished delegates, except for the new paragraph on the Conference of the Americas we are waiting for, that concludes our consideration of agenda item 6. We are suspending it for final adoption only for that little sentence and that will be tomorrow. OK? So everything of our agenda item 6 is over, except for that particular sentence.

Agreed.

Other matters (agenda item 13)

Now distinguished delegates, I would now like to begin our consideration of agenda item 13, Other Matters.

In this connection, I would like to remind delegates that in resolution 59/116, the General Assembly requested the Committee to consider ways to improve participation in its work by Member States and entities with observer status, with a view to agreeing at the current session on specific recommendations in that regard.

I now invite delegations to make proposals on ways to improve participation by Member States and entities with permanent observer status in the work of the Committee.

And the first speaker on my list is the distinguished representative of Canada, Mr. Aldworth. You have the floor Sir.

Mr. D. ALDWORTH (Canada): Thank you Mr. Chairman. The Committee on the Peaceful Uses of Outer Space has a long and successful record of advancing the global community's interests in terms of benefits from the peaceful uses of outer space.

The increase in living standards and quality of life that can be traced back to developments in space is substantial. With these increased uses has come an expanding variety of space activity which, in many cases, is being considered, influenced, regulated, negotiated and controlled by United Nations organizations, nations and non-governmental organizations without reference to each other.

The concern, of course, is that these activities are not always being undertaken in coordination with each other. As a result, it is not always clear where one organization's mandate stops and another starts.

We believe that it is time for the United Nations to undertake an examination of the many bodies involved in influencing space behaviour, with a view to ensuring that information on policy and activities in areas of common interest is shared and discussed between these bodies and that their respective responsibilities are adequately delineated. This will help them to work together on space activities for the common good.

Canada believes, for example, that the First Committee and the Fourth Committee should have formal mechanisms to share and cooperate in their space-related mandates. We believe that the Conference on Disarmament, the International Telecommunication Union and the Committee on the Peaceful Uses of Outer Space should develop a consultative mechanism, in particular in the area of dual use space assets, to ensure that their policies, regulations and decisions reinforce each other, that there exist no major policy lacunae where no forum has the responsibility to address a pressing issue, and that no opportunities are missed to facilitate access by all to the benefits that peaceful use of space provides. One suggestion has been to expand the membership of the Inter-Agency Meeting on Outer Space Activities, but there are many possible options.

Mr. Chairman, Canada fully supports the inclusion of the subject of "New Areas and Mechanisms of International Cooperation in the Peaceful Uses of Outer Space" in the agenda and encourages COPUOS to make detailed suggestions to realize such new forms of cooperation.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Canada on this subject.

Are there any other delegations wishing to address this topic now?

I see none.

Let me just make one brief comment. As you are aware, the Office in convening the annual Inter-Agency Meeting on Outer Space. First of all, let me thank you very much for this to begin with. The Office has now taken the initiative to _____(?) propose that the membership could be extended to even go

beyond the Inter-Agency Group themselves and they have invited Member States who are interested to participate in their meetings. As I really believe that the position that Canada has expressed through this presentation of yours is a presentation that could easily be articulated once more at that particular meeting and appropriate decisions taken at that meeting to transmit what Canada is reflecting here to all concerned. And I am sure the Office can equally reflect this, it is going to be reflected, of course, in the report of the Committee, but if there is any comment from the floor, this is welcome.

On the other hand, if delegates want to also leave this open for brief comments tomorrow morning, if we have time, and I am not sure we will, but Greece, you have the floor.

Mr. V. CASSAPOGLOU (Greece) (*interpretation from French*): Thank you Mr. Chairman. Perhaps I misunderstood. I would like a clarification from our colleague from Canada, if I may. It is a proposal with regard to the introduction of new items on the agenda for the next session of the plenary or is the proposal for action? And we would have to delegate that effort, either to the Head of the Office or to the Secretariat to proceed then with it because the Inter-Agency Meetings take place before the General Assembly sessions. So that was the question.

Thank you.

The CHAIRMAN: I thank Professor Cassapoglou.

And I invite the Director for his own intervention on this subject.

Mr. S. CAMACHO-LARA (Director, Office for Outer Space Affairs): Thank you Mr. Chairman. Maybe some clarification. The Inter-Agency Meeting does not invite Member States to participate in its meeting, you are correct. But what it is doing is it holds at the end of its meeting, a half-day open forum and this is for the interaction between delegates and agencies, representatives of both because it is open. You are totally correct.

Thank you Mr. Chairman.

The CHAIRMAN: OK. Is this agreed? And can we move on? If there is any more contribution on this subject, we are here tomorrow morning. If not, we will close first thing tomorrow morning.

OK, before we move on, distinguished delegates, as you are aware, the European Space Policy Institute has applied for permanent observer status with the Committee. As I mentioned last week, the information relating to the application is contained in CRP.6. This has been circulated during the forty-second session of the Scientific and Technical Subcommittee as well as the Legal Subcommittee at its forty-fourth session. And I would like to believe that all of you have read this CRP.

That being the case, does any delegation wish to speak on this matter?

Greece, you have the floor. Briefly Sir.

Mr. V. CASSAPOGLOU (Greece) (*interpretation from French*): Thank you Mr. Chairman. We have to accept and welcome this application by the European Space Policy Institute and grant it the permanent observer status.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Greece.

I now invite the distinguished representative of France.

Mr. C. LECLERC (France) (*interpretation from French*): Thank you Mr. Chairman. Very briefly. I would like to second the statement made by the distinguished delegate of Greece. We approve and support the application of ESPI for permanent observer status with this Committee.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of France for his contribution.

Distinguished delegates, can I take it that we now agree that the European Space Policy Institute be granted a permanent observer status in our Committee?

Any objection?

Unanimous.

Agreed.

Now, distinguished delegates, I have requested that a non-paper, OM/Np/1, be circulated. The title of that paper is "Planning for Future Roles and Activities of the Committee". Last week,

Thursday, we all listened to Dr. Karl Doetsch, upon our own invitation, to address us on what we are doing and what will be our future role, given the ongoing progress and advances in the area of space. After he finished, we raised questions, we discussed last week, Thursday, Friday, what he had presented to us. And then, after instead of asking myself some questions, as your Chairman, we invited this man to come and do this job. He has done an excellent job. All of you said that. I do not know how many times you clapped for him, but you did, many times. And then I said, so, what follows? Is it just going to be hot air? No action? I do not believe you want that. I think the man has given us challenges to think for the future, not for our own generation but for the future of our great, great grandchildren.

So as a result of which all of us felt(?) (*not clear*), something should be done and that this Committee should take some action. Accordingly, I put some heads together to assist me in drafting what you have before you as a non-paper and I also consulted with members of the G15 in putting this together, as well as some of you.

But before going further, I would like to invite Dr. Karl Doetsch himself to assist me in introducing this paper to you.

Dr. Karl Doetsch, you have the floor.

Mr. K. DOETSCH (Canada): Mr. Chairman, I am honoured that some of the ideas of my talk of last week should now form part of the Committee's deliberations, through its consideration of this Chairman's non-paper and that you have asked me to introduce your paper to establish a long-term planning working group within the Committee.

I shall not introduce the details of the proposal but talk more of the need for it.

The proposal aims to find an efficient mechanism to address a central problem, namely space activity is not yet recognized to be part of the toolset available to political leaders to help solve global issues in the civil domain. We had a clear example of this earlier today in our need to seek to insert references to space activity in the United Nations outcome document of the President of the General Assembly.

COPUOS is an established Committee that could be more instrumental in changing this perception and also to being an ever more effective catalyst for the broader application of space activity. But to do this will require that COPUOS take a step back from its

daily activity and reflect deeply on the external situation existing both on the global stage and in emerging space activities that are now ongoing and planned in the civil and commercial sectors.

Without such reflection, it will not be possible to quickly develop an influential coherent approach. The tool often used to do this is a planning process with the aim to develop a clear and persuasive vision with a corresponding actionable plan. That is the purpose of the proposed long-term planning working group.

I am convinced that if the members of COPUOS and all of its stakeholders are properly involved in developing such a vision and plan, it will move from being the working group's proposal for a vision and plan to being the COPUOS plan and then to being an integral part of the plans of our current and potential stakeholders to meet global needs.

Mr. Chairman, I hope the time when, as a result of the work of the proposed working group, outside just to the space community will seek out the COPUOS website to clearly see how the world's space activities are being geared to solving the world's problems of today and tomorrow. And furthermore, that they are so inspiring to the leaders of tomorrow that they consider space activity as being central to their world.

The time for this proposed activity is ripe and I do hope that delegates see fit to giving due consideration to your proposal.

Thank you Mr. Chairman.

The CHAIRMAN: I thank you very much Dr. Karl Doetsch for that introductory remark.

Distinguished delegates, the proposal is before you. It was given to you earlier today. I will now invite comments on it.

I give the floor to Poland.

Mr. P. WOLANSKI (Poland): Mr. Chairman. I have not been last week on the presentation of Mr. Doetsch but I hear very positive opinion and I also read it and I also listened carefully to this presentation. And the Polish delegation totally supports the idea of having the vision of the long-term commitment for space and policy. So we totally support the idea of establishing the long-term planning working group of COPUOS.

Thank you very much.

The CHAIRMAN: I thank the distinguished representative of Poland for his statement.

Any other comments on this proposal?

Japan has the floor.

Mr. M. MIYAKE (Japan): Thank you Mr. Chairman. Japan supports this proposal and I think the most important thing on this COPUOS is how important the Action Plan of UNISPACE III will be appropriately the follow-up(?) and accomplish and must prioritize the action as soon as possible. I think proposal will help us to consider help prioritize the Action Plan to be accomplished with some good expertise created(?) here for _____(?) on the Member States. So I think the working action team should be involved in this working group as much as possible. So Japan has the chair of Action Team 17 and Japan is willing to support this proposal.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Japan for his comments on the Chairman's proposal.

I now invite the distinguished representative of Nigeria.

Mr. J. CHABO (Nigeria): Thank you Mr. Chairman. Let me, through you, thank the distinguished Dr. Karl Doetsch for his presentation and also Mr. Chairman for putting those thoughts in a non-paper. Our delegation would _____(?) prefer that this should have come not as a non-paper, but as a proposal from the Chair. It would have carried better weight. But I will say that we will be making some specific comments on this proposal as time goes on and we just want to express our full support for this proposal and for the long-term vision for COPUOS. And more importantly, at this stage, we would have loved to see that the proposed working group have a clear Terms of Reference, which is missing in this paper that is before us. And so when we have a clear reference that _____ (*not clear*) but could have, and has been a debate(?) at this point in time. Perhaps later we will be making specific recommendations as to what we think should be a Terms of Reference. At this stage, we would like to give the floor to others for their comments.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished representative of Nigeria. But quickly let me add that if you look at page 2, and there are four white bullets on top of page 2, those are the suggested Terms of Reference with the working group itself and look at and elaborate upon as time progresses. So we have something there to start with but we do not want to begin as a know-all and start doing everything because this is just the idea of a few with the Chairman. The Committee itself, I expect it to be a Committee that is seriously knowledgeable and can do a better job than even the Chairman has put here. So I thank you Nigeria for your support.

I give the floor to the distinguished representative of South Africa.

Ms. L. GREYLING (South Africa): Thank you Chair. I would like to give the support of the South African delegation to this initiative. If COPUOS is to remain relevant in the twenty-first century, it must take account of the rapid pace of change in the space arena. It is in the case of space that technical developments often outpace legislative and policy evolution. But to have any effect, this discussion of this evolution needs to take place in a forum such as COPUOS.

Thank you Chair.

The CHAIRMAN: I thank the distinguished representative of South Africa.

I now invite the distinguished Ambassador of Thailand.

Mr. S. ARIYAPRUCHYA (Thailand): Mr. Chairman, I thank you for coming up with this Chairman's paper which should be a follow-up to a very good talk by Dr. Karl Doetsch. My comment is that this is vital in order to bring COPUOS to the forefront in terms of policy-making. And, as Dr. Karl Doetsch said, COPUOS or space matter should be more visible in the term(?) of solving world problems. So we are in agreement that there should be a working group. But what I would like to do is how can we involve people like Dr. Karl Doetsch or eminent people, eminent people who are not really representative of government but they are eminent people and they can give advice also to this working group. Can we also create a kind of advisory group that can help the working group, come up with good ideas, that incorporate the ideas from the _____(?), from non-governmental agencies, so we have more ideas coming up for consideration for the working group.

Thank you.

The CHAIRMAN: I thank the distinguished Ambassador of Thailand. And I would like to believe, in my thinking, in coming up with this action, with this paper, that the working group itself will not arrogate to itself to the entire knowledge of looking at the future. But, as you rightly suggested, we seek opinion from other sources, particularly space organizations and space agencies, especially institutions like COSPAR, like IAF and things like that. If we do that. And space agencies like NASA, like the Space Agency Rocher(?), JAXA and ESA and so on and so forth. So it is not going to limit itself to just its own members but it will look for whatever. We are dealing with issues that concern the world and, therefore, the world must be made to make contribution to our work. So thank you very much for your contribution.

Yes Sir. There are two speakers before you but you will get the floor Sir. You want to just reflect on what I am saying?

I invite the distinguished representative of Cuba. Please, you have the floor Cuba.

Ms. L. PALACIOS (Cuba) (*interpretation from Spanish*): Thank you Mr. Chairman. I did have the opportunity to hear Mr. Doetsch's presentation and I commend him for the very high quality and perceptiveness of his presentation. Having said that, I still have to admit that I do not see the *raison d'être* for the reasons for setting up such a working group. It is suggested that regional groups should propose members to the working group but we already have the subcommittees, Legal and Scientific and Technical, where we also talk about the future and think, reflect about the future. Even today, proposals have been made of a forward-looking nature, talking about the future of our work. I am under the impression that this long-term planning working group, while perhaps justified in another type of organization or another set of circumstances, I do not see the reason for it here in COPUOS.

Thank you.

The CHAIRMAN: I thank the distinguished representative of Cuba.

I give the floor to the distinguished Ambassador of Colombia.

Mr. C. AREVALO (Colombia) (*interpretation from Spanish*): Thank you Mr.

Chairman. We have already had an opportunity to express our view on the matter. I am not going to repeat myself and state things that I stated previously. We do believe that Mr. Karl Doetsch's introduction has been entirely timely and appropriate. Obviously, we have no objection to thinking about the long-term vision of the work of the Committee. Having said that, however, as was stated previously, the situation needs to be studied in-depth, particularly the practical ways of proceeding. The Ambassador of Chile has already stated his delegation's objection to this specific proposal and we have asked for a more profound and detailed discussion of the matter. In our opinion, it is important to retain and preserve national sovereignty in any vision of the future. Space activities involve many actors on the international stage. However, it is the national States that have to be the principle decision-making. It is the States that should absorb and act on the opinions expressed by other actors.

You are aware of my view and Dr. Doetsch is aware of the views of my delegation. Very briefly, we think it is premature to talk about setting up such a group. There are other entities, other tools, other ways of shaping that long-term vision. There are other possible alternatives which will and could envisage as ways of providing a necessary impetus to this work, highly important and necessary work planning the long-term activities of the Committee.

Thank you.

The CHAIRMAN: I thank the Ambassador of Colombia.

Distinguished delegates, let us listen to Professor Kopal as the last intervention on this subject today. If there are further comments, we can bring that up tomorrow morning.

Professor Kopal, you have the floor.

Mr. V. KOPAL (Czech Republic): Thank you Mr. Chairman. Mr. Chairman, my delegation has already had the opportunity to express its attitude to this initiative and I think it was positive. It means we agreed with an idea of having a kind of long-term planning because it is important for the work, not only of this Committee as such, but also for both Subcommittees. So far, the work of the Subcommittees proceeded quite independently, separately and it is necessary to note where, for example, the Committee and the Scientific and Technical Subcommittee go in the field of science and technology and where the Legal Subcommittee should go, how it should react to the development of science

and technology. And, therefore, the work of such a special ad hoc working group might be really useful.

I have nothing to say more about this text because this text has been reviewed a little bit on the basis of the preliminary discussion within the Group of G15 but I would only suggest two very minor points. On page 2, in the last but one sentence, "comments intersessional planning activity subject to the ratification". I would replace the term "ratification" by "approval" because it is less solemn and the term "ratification" is connected to treaty-making and this will be not a treaty.

And second, I have a question concerning the last sentence on page 2, "continue informal consultations", yes, it is correct, and I say it will be important to continue such consultations. And the "review preliminary activities undertaken". I do not know exactly what the preliminary activities are mentioned here, if it should be the activities that are enumerated on page 1 and on page 2 or some other activities, so this again might be made more precise.

Thank you very much Mr. Chairman.

The CHAIRMAN: I thank you Professor Kopal.

And we have agreed that that would be the last delegate intervention on this subject. We have two presentations waiting for this afternoon. We have only about 35 minutes left. I just want to take one minute to react because this is my own paper as your Chairman. And on the basis of your reaction, I need to react. And my reaction is as follows.

I am very happy to hear all of you speak on this paper. I am very grateful for the support you have given for the paper. I am more than grateful to Dr. Karl Doetsch for the initiative that led to the paper.

Having said that, I need to correct certain impressions.

Number one. The working group is not making decisions. The working group we are proposing is not a decision-making body. Professor Kopal just brought attention to page 2 where we said "commence intersessional planning activity subject to the approval of the above at the Committee meeting". That means that the working group has a boss and the boss is this Committee. That is number one.

Number two. Is the working group necessary? My humble opinion, in my heart of hearts,

absolutely yes. Statements have been made that what has been proposed can be addressed by this Committee itself as a body or can be addressed by the Legal Subcommittee or can be addressed by the Scientific and Technical Subcommittee, my response is, I want us to look at how well used the Legal Subcommittee or the Scientific and Technical Subcommittee. Let me reflect back on this Committee when it was established in 1959. They were meeting but they soon found out a year or two later that they could not work unless they had scientific experts and legal experts. That led to the creation, not in 1959, but later, of the Scientific and Technical Subcommittee and of the Legal Subcommittee.

Since last week, what have I been doing here? I have been giving the floor to the Chairman of the Working Group on Space Debris. I have been given the floor to the Chairman of the Working Group on Nuclear Power Sources. If the Committee could resolve one of those issues within the time allotted to it, why did you create these working groups? Similarly, in the Scientific and Technical Subcommittee, you created the Working Group of the Whole to help you look at the Space Applications Programme and UNISPACE '83. If you could look at that within the time allotted to you, why did you create that Working Group? This is a special issue. I am not politicizing it. If you want to politicize it, that is your business. But the truth of the matter is, if some people did not dream, there would be no Committee on Outer Space today. And if you fail to dream, this Committee will just not be recognized in the world anymore. You want to be relevant, then dream but your dream must be realistic, must be practical, must be achievable and must be timely.

I can now wait until tomorrow to bring this paper before you because you are the only ones in this room that listened to Karl Doetsch. Who is going to come to the Scientific and Technical Subcommittee? I do not know. It may be some of you but it will not be all of you. I know that. Similarly, not all of you are going to be at the Legal Subcommittee. You are the ones that listened to those profound ideas and, therefore, it is only appropriate for me, as a responsible Chairman, to ask you to act on those profound ideas and the best way I feel I can do it is through this action paper. I have put it before you and I hope you will address it tomorrow when you come.

With that, I will adjourn this meeting. I will suspend this meeting to allow the presentations to take place. Thank you very much.

Technical presentations

Distinguished delegates, I now invite Mr. Toshihiro Ogawa of Japan to make his presentation on "Japan's Activities Related to Space and Water". Mr. Ogawa, you have the floor.

Mr. T. OGAWA (Japan): Thank you Mr. Chairman for providing me with the opportunity to introduce our experience and expertise concerning about the observation of water from space.

Let me start my talk with this here showing the concept of the global water cycle. There are the reservoirs like oceans and lakes, rivers, snow, glaciers on them and also in the atmospheres. And also we have a transporter among these, like evaporation, precipitation and the reservoir(?) and also transport of water within the atmosphere.

I would like to remind you that to understand and describe the amount of water in the water and the amount of the transport of the water is not an easy task to us because the amount of the water, the amount of the transport of water is highly variable in time and space.

Even the ocean is rather a stable reservoir but even the lake is variable. This is the change of the amount of sea, amount of water of _____ sea from 1996 to 2003. You can see that the area of the water changed largely in these seven years. Again this picture shows the amount of water is very variable, variably distributed all over the world. The yellow colour shows the heavy varying areas and the dark blue colour shows cloud and the amount of water.

In particular, rainfall is very closely related to our life like food production and flood and drought and rainfall is key parameters in the weather forecast monitoring and also climate monitoring and again the rain is one of the hardest meteorological parameters to measure because its temporal and spatial variability is very large.

So that the observation from space could make some contributions to understand the global distribution of the water amount of precipitations.

We put the precipitation radar on the TRMM satellite. This is a Japan-United States joint mission. And combining the precipitation data with a microwave radiometer, radar is also using the microwave techniques, we can describe the distribution, a very precise structure of the rainfall, particularly in this three-dimensional structure.

I would like to show some three-dimensional, change of three-dimensional.

So this satellite can describe the three-dimensional structure within the _____ cyclones.

Another example is that microwave radiometers onboard the NASA's EOS Aqua satellite, we call this AMSR-E. The microwave radiometer can observe the atmosphere water vapours and also sea surface temperature and the sea surface wind. This is an example for the distribution of sea surface temperature over the Pacific. You can see the higher temperature in the tropical region and in the lower picture shows that the Sun(?) time variation. These are the temperature in the equatorial Pacific and this amount shows the so-called indication of the El Niño event. You can see that the sea surface temperature, it is slightly higher in this year and in particular 2003, you can see the higher temperature. So this is the El Niño years.

We constructed web pages for showing the archive of our data taken from the TRMM and AMSR-E and AMSR.

And there is special emphasis on the tropical typhoon that you can see the distribution of the water vapour to the rainfall within the typhoon.

And also you can see that the three-dimensional structure, the rainfall within the typhoon and please visit our website.

And this shows our future plan called Global Precipitation Measurement. This project consists of the one core satellite and constellation of the eight satellites and on the core satellite we have one precipitation radar and a microwave radiometer to measure the amount of water vapour. And on the other satellite, we have a microwave radiometer which can also make measurement of the water vapour.

And this project is a joint venture, so many organizations have participated. And with this observation system, we can get global mapping of the water every three hours.

This shows some scientific and social significance of the GPM. For we can take a global rain map every three hours. This can make us a climate change assessment by monitoring the variation of rainfall and to improve the weather forecast and makes us to predict flood and use for water resource management and others.

We are concerning the systems using the satellite data. This is called a Global Flood Alert System, GFA, and our satellite data come to the groundstation. IFNET are our partners who are dealing with the satellite data and radar analysis and IFNET will distribute the data through the Internet.

This is an example for this IFNET system for the areas of the Ganges-Brahmaputra-Meghna River Basin. This shows the distribution of the rainfall and, as compared to the long-time average, we can get some exceeding areas of the rainfall. So this sort of information is very useful for the water management or how to _____(?) the timing of the flood.

And our partner completed the development of pilot version of this system.

This is another project of ours. We will soon be round to the Advanced Land Observing Satellite, namely ALOS, in coming September hopefully. This satellite carried the sensitive apparatus and the tool optical images. The main objective of this satellite is land observation. However, this data is also useful for water management, for watching disaster while making the hazard map.

So in concluding, I have demonstrated that satellite observation is very effective to obtain information of water mass. And the advancement of satellite observation technology is very remarkable in recent years. And I hope that satellite data use for flood or water resource management and actual policy-making is becoming real.

Thank you very much for your attention.

The CHAIRMAN: I thank you Mr. Ogawa for your contribution to our agenda item, Space and Water.

Do I have any questions or comments for Mr. Ogawa?

If not, thank you very much.

I now invite Mr. Neumann to make his presentation on "Looking From Space on Oceans and Inland Waters". Mr. Neumann.

Mr. A. NEUMANN (Germany): Thank you Mr. Chairman, distinguished delegates. Thank you for the opportunity to give you some insights on activities going on in Germany with respect to looking from

satellites down to water resources in the marine or inland waters.

I would like to start with this kind of nice animation because I think, like most of us, if we are looking on the Earth, we are seeing the continents, the land masses of the continents, but usually we do not see the oceans. But what this animation shows, based on a map of biological activities that the oceans, as well as other waters, are not simply blue or black, they are biologically active, they are physically active. The colour coding here shows the biological activity so what we might want to reach in the end is the comprehensive view on the Earth and the Earth's ecosystems on different scales which I am going to show you a few examples during this talk.

The same as if we are looking at the physics of the ocean. This shows, based on a simulation of EROS-2(?) _____(?) data, the distribution of wave height in the Atlantic and we see that it is a very dynamic and a very rapidly changing system which influences any kind of human activity. So we might want to understand what is happening and to see how it influences human activity as well as how we are impacting the system of the Earth.

So the one message I will try to answer while we look at oceans, marines and coastal zones and inland waters is that the oceans are the biggest ecosystems with a crucial role for the entire climate. The second, I will not go through all these topics because I think you heard and read much of them several times already but the main message is that coastal zones is the crucial eco-system of the Earth because the majority of activities of mankind take place there. The impact of mankind on nature is taking place in majority in that area and it is of crucial importance for a lot of different activities, starting from fishery and ending up with recreation.

And going even down in scale, onto the local scale, looking at inland waters, this is not only a sensitive indicator on what we are doing to nature but is also a critical resource with respect to freshwater supply with respect to recreation and human activity in the inland areas.

So what I would like to do is to give you a few hints on what we can do and try to understand what is happening in these eco-systems with respect to biological, ecological questions with respect to physical processes. I listed here a few of the main subjects, starting from understanding the system, going to trying to understand vulnerability, which, of course, is becoming more and more of importance for our

dealing in society and in policy and trying, of course, then to derive measures for management of human activity as well as of nature.

So briefly, I will not go into detail through all these parameters, but I think it is worth to try to list up what we can see if we look from space because we cannot see everything. Basically we see several physical values, parameters and process such as temperature, wind and waves which are driving forces for the physical but also biological processes. They are threats, if we are looking at waves and winds, to human activity to coastal buildings or, in the sense of erosion too, eco-systems along the coast. Coastal morphology is another key word under this.

And here we have a little bit more regarding the water quality part of the whole question, that is that we want to look at phytoplankton distribution, concentrations growth or decay of algae blooms, etc., because that is something which is giving us a clue on the ecological state of our waters, but also on the other hand, may cause danger to man or to economic activities.

Suspended matter and dissolved substances, another group of parameters that we may assess by remote sensing which also gives us an idea on the ecological state or on measures that we should take to protect coastal zones and inland reservoirs, etc.

I will not say anything about ice cover and aerosols, but they are parameters which are also something we might want to look at.

So how can we do this? Basically, talking about water quality, what we are doing is looking at the colour of the water. The colour of the water carries information of what is except pure water in the water. So what we are able to do, having corresponding measurements, is to derive or to quantify the substances in the water, basically three main groups, chlorophyll, which is the biological active part, it starts on the food chain, etc., but also quality measure, suspended inorganics or dissolved organic matter. Finally, we want to know this and we want to quantify this to assess water quality, bio-productivity and also the contributions of carbon cycle of oceans, coastal waters and inland waters.

This is just an image to show that water is not only blue. If you are looking from space, that is the Black Sea, it is not even black, but in different shades of blue. This is the Yellow River Mouth in China, also showing a lot of colours. And this is basically what we can use to quantify the state of the eco-system.

So this is an example for one part.

Going now to the physical part. There we do not use optical imagery but we are using radar imagery, that means microwave active instruments. This is an image taken of the island of Tenerife by ERS, which shows us the different shades of grey that we see here, show us different roughness or status of the surface because the radar is not penetrating the water, it is just being reflected at the surface. And the strength of the signal gives us a clue about wind speed, wind direction, waves, wave direction, wave height. So to illustrate a little bit more, if we take an enlargement here of the northern part of the island, we see these ripples and these structures there in the water part which is basically what we can use to get a clue about physical processes at the surface of the ocean.

The same here is an example, an image of Hurricane Floyd. The structures we see at the water surface and we can use this to investigate the hurricane itself.

So examples, Pathfinder, which DLR is deeply involved for the biological or ecological remote sensing, together with the colleagues from the Indian Space Research Organization, launched in 1996, was that IRS-P3 satellite carrying the first imaging spectrometer which was ever in space. From that we went to ENVISAT, which is more or less the key satellite at this time for DLR, I think, for the entire Europe. I have no chance to explain here all the details of this huge mass of instruments which are on their but they allow us in a synergistic(?) view to use all the different technologies available for remote sensing to assess, besides other things, also the marine and water resources.

This is an artist's view, of course, because you cannot take pictures up there, how ENVISAT is flying around the Earth.

So coming to a few examples. This again, similar to the animation which I had at the beginning shows the distribution of biological activities in the global ocean, that is on the global scale. Why do we want to do that? Why do we want to know that? Basically, it is for three issues. The one is, for instance, fisheries, the second is understanding climate and the role of the ocean in the climate and the third one is carbon cycle, because phytoplankton is living by photosynthesis. And if we know the amount of photosynthesis, which means consuming CO₂, we can estimate and quantify the role of the ocean in the global carbon cycle. For the global ocean, it is more or less

understood but we(?) had a lot of trouble understanding and quantifying the role of the coastal eco-systems and inland eco-systems.

So we are going down in scale to the regional size now. It is a map of chlorophyll, a monthly medium(?) in that case direct from those from the Baltic Sea. This is used basically for two purposes. The one is for science for the subjects I was just mentioning. The second is this is generated on a daily basis, weekly, monthly basis, to support governmental and State agencies dealing with environmental monitoring and they have the obligation to get the EU and regulations and directive into operation and they need this kind of regular information, just like a weather forecast to be able to make the assessment.

This is a little bit confusing but that is how an algae bloom looks like, which especially in Europe in some seas became very important and critical in the last years. So this another image in the Baltic Sea blue algae, which are toxic algaes so there is a threat to fish, threatening to upper(?) farming but also if it comes to coasts, which happens sometimes, it is a threat or at least a danger for tourists. So we might want to understand why they appear, how they grow and how they decay.

Now going even smaller in scale into the inland waters, freshwater reservoirs. The instruments have been developing to a point in the last six, seven years, that we are able by the geometric resolution that they are providing also to assess the water constituents and the water quality in inland waters. In this case here it is still with the IRS-P3 satellite. A time series of the suspended matter concentration in Lake Constance, not very far from here, a little bit north. And if we are going to even more modern sophisticated instruments or satellites, like in this case here, CHRIS/PROBA, we can even go down to a local scale, here the per pixel resolution is 20 metres that we are able to assess real local status of water reservoirs and giving data in the hands of managers for the local assessment of water quality but also for the water resources management.

Going back again to the physical side because that is of big importance too. I have shown this image already so basically if we have these images, we are able to derive the wind fields on a global scale but also on a smaller scale like here in the case of this hurricane. If we are going to the coast, this is a snapshot of the German Deniche(?) along the North Sea. We are able to derive local wind fields here. The resolution of a few hundred meters. And this is from _____(?) several things and one is to assess the vulnerability along the coast, to give support to coastal

management, coastal construction support, to estimate erosion processes but also to support energy industry in optimizing, for instance, off-shore wind farms. So there are a whole bunch of questions that we are able to support. We are not able to answer all the questions but we are able to deliver support.

Another thing is transport and they are fascinating at least for us, the issue was that there is a lot being told about monster or freak waves. We have conducted with other partners together an investigation using radar data and trying to figure out whether they really exist because no one was believing in it. And if we look at the scale which is going beyond 20 metres and you see here we have these red dots, so that means we really could find similar occasions of these so-called freak waves. And this is of big importance for the ship-building industry, for the insurance, etc., because now they have started to believe that they really exist and we hope that we can continue this work again to understand and to map vulnerability in coastal zones or to typical transport waves in the oceans.

Another part which is of great importance, of course, is pollution. In this case, it was the big accident of the tanker Prestige off the Galician Coast and what you see here this dark trace is basically the trajectory of the tanker during the 10 days that it was not possible to get him in a port anywhere or to rescue and take the oil out. So we want to know how this oil spread into the ocean. We want to know where are the endangered zones along the coast, again because that is a serious threat to fishery, etc, and we want to know or support measures which could be undertaken to support us.

Going into the inlands, another part is, and you might have heard about that at the beginning of the week in another talk about the satellite-based Crisis Intervention Centre which is now established at DLR. This is, besides others, also looking at floods and here we have an example of the huge flood of the Elba River in the year 2000. On the left hand, you see the normal status, so to speak, of the river, with the city of Tandaminda(?) in the middle and all this blue here, it is the same scale, it is the same place, during the flood, so you see basically the whole city was flooded. This is, of course, something that we provide on one hand to the rescue teams. We provide that to the local authorities for the time of rebuilding, etc., but also for insurance companies, for instance.

This is another example, the same flood but more down the river and again you see here that more or less the entire city is flooded. So this is the kind of information, taking these kind of data and then

supplying that to local authorities, in identifying dangers, pollutions, threats to freshwater reservoirs which might arise from that, etc.

And I will end up with this very tragic case that we had at the end of last year around the Indian Ocean. This is an image or two images of the Banda Aceh Region, the left, the normal status before the tsunami, the right one is showing the damage that the tsunami made to the local coast. All the structures, as you can see, are destroyed. So this kind of data were supplied as fast as possible because you do not always have a satellite over the place where you want it, but anyway this was supplied to the local rescue teams to the humanitarian organizations, ,etc., directly in Banda Aceh within less than a day.

This is a second example also, an image of the Banda Aceh Region where it is identified where is the area of heavy damage and this was also used to find the ways through all this destruction in these areas.

So this is basically a very quick run through activities that we are doing currently at DLR, together with other partners in Germany, but also, of course, in Europe. And I would like to finish with three, so to speak, views into the future. How we bring this real to an operational use, not only as somewhere in a research institution but really in the society. I think all of you might have heard about the GMES, Global Monitoring for Environment and Security, initiative or programme of ESA and the European Union, so there is one so-called GMES service, elemental at just delivering this kind of information to European but also customers outside of Europe for the marine and coastal environment.

There is, as I have mentioned, and you might have heard about in earlier talks, the Centre for Satellite-Based Crisis Information, which is providing specifically for hazards and any kind of humanitarian crisis for information on a regular very fast basis.

And currently looking more into the freshwater reservoirs on the inland lakes there in preparation and it will be submitted just in three weeks from now to the European Commission the so-called Integrated Project in Water Resources which shall integrate the assessment of catchment areas plus water quality, plus drainage, done in different parts of the world, using pilot sites in Europe, in Africa, in Asia, to develop something like an operational service and assessment which, as we hope, if we do a good job, then might become something like an operational service for water management.

So this is, I think, everything I wanted to show you. Thank you for your attention and if you have questions or want to contact me, please do so.

Thank you.

The CHAIRMAN: Mr. Neumann, you actually brought to sharper focus the expression "space and water" through your presentation. And without making a mush of your presentation, just let me say, do you have any comments from the floor?

None. Yes, briefly, because we are running out of time.

Mr. A. PEYCHEV (Bulgaria): These changes in colours, if you take them back, did you try to use these changing colours, tracing them back, in order to predict or for the purposes of early warning in cases of volcanic eruptions and earthquakes?

Mr. A. NEUMANN (Germany): No, we did not.

The CHAIRMAN: OK, because of the shortage of time, I will advise that if any other delegation has any question for Mr. Neumann, they can please approach him directly. So help me thank Mr. Neumann for his presentation.

Distinguished delegations, I will now adjourn our meeting until tomorrow. But before doing so, let me state as follows. We will resume our consideration of agenda item 6, Implementation of the Recommendations of UNISPACE III, and the only item left under that agenda item is that sentence on the Strategy Work of the Office. And my hope is that the concerned delegations will agree on it and we can adopt this first thing tomorrow morning.

Thereafter, we will begin and conclude our consideration of agenda item 12, which we were supposed to take this afternoon but we could not, that is the Composition of the Bureaux of the Committee and its Subsidiary Bodies for the Period 2006-2007. And I hope with that we have a statement from the Chair of the Asia Group at that time because I understand a delegation, Pakistan, that is ____(?) Asia Group. So I hope we hear something from Pakistan tomorrow on this particular subject on that issue.

We will also continue and conclude agenda item 13, Other Matters, and when we are talking about other matters, one of the other matters we are going to consider tomorrow is my paper, which you kindly reflected upon this afternoon and yet again I want to

thank you. The text of the paper is amenable, it is a flexible theme. It is not that it is take it or leave, no. But it is subject to modifications, as appropriate, so that we can carry out the goal that is initiated in the paper. So if you have brilliant ideas on how to improve the text you have before you, so we will be happy to listen to that. There are some suggestions that have been made. Professor Kopal made some suggestions and I have told him that this will be reflected in modifying the paper as appropriate. So the same goes for all other delegations that may want to interject or introduce some modifications to the text we already proposed in order to make the working group we are proposing to make it function better.

Having said that, when we finish agenda item 13 tomorrow, we will then begin the adoption of our report. My hope is that we can start that adoption of our report, beginning in the morning and then finish it as early as possible in the afternoon tomorrow.

Are there any questions on this schedule of work for tomorrow?

If not, distinguished delegates and representatives, this meeting is adjourned until 10.00 a.m. tomorrow morning. Thank you.

The meeting closed at 6.10 p.m.