

**Committee on the Peaceful
Uses of Outer Space***Unedited transcript*562nd Meeting

Thursday, 15 June 2006, 10 a.m.

Vienna

*Chairman: Mr. G. Brachet (France)**The meeting was called to order at 10.08 a.m.*

The CHAIRMAN (*interpretation from French*): Good morning distinguished delegates, I now declare the 562nd meeting of the Committee on the Peaceful Uses of Outer Space.

This morning we will continue our consideration of agenda item 8, Report of the Scientific and Technical Subcommittee on its Forty-Third Session.

We will also continue, and hopefully conclude, our consideration of agenda items 11, Space and Society, 12, Space and Water, 13, Recommendations of the World Summit on the Information Society, WSIS.

And finally, we will continue our consideration of agenda item 14, Other Matters.

At the end of this morning's meeting, there will be four technical presentations. The first will be that of Ms. Yolanda Berenguer of UNESCO, which, you will recall, we had postponed from yesterday to today, and it will be on the topic of recent information on UNESCO's Space Education Programme. This will be followed by a presentation by Mr. Tamotsu Igarashi of Japan, who will make a presentation on "The Japanese Programme on Space and Water Applications. Mr. K. Radhakrishnan of India, on "The Use of Space-Based Systems for Water Resources Management in India".

**Report of the Scientific and Technical
Subcommittee on its forty-third session (agenda
item 8)**

The CHAIRMAN (*interpretation from French*): Let us start this morning's meeting and continue our consideration of agenda item 8, Report of the Scientific and Technical Subcommittee on its Forty-Third Session.

And on this item, I think the best way forward would be to ask the Director of the Office for Outer Space Affairs to tell us exactly where he stands with the preparation of the recommendations of the Committee on the issue of DMISCO/SPIDER.

Mr. Camacho will share some information with you on this.

Mr. S. CAMACHO-LARA (Director, Office for Outer Space Affairs): Thank you very much Mr. Chairman. It will be brief comments addressing comments that were made after I had made a statement. There are still a few comments that were made so I will address those and, of course, be able to expand on any aspect as far as I can.

One of the issues that was brought up, it was not completely clear, was how would DMISCO be established if the Committee decides to make that recommendation. And it had to do with the process and this would address points that were raised by Greece and by the United States.

We checked them yesterday on how the Programme on Space Applications was established. You are aware that the Programme had its initiation with the first UNISPACE Conference. That was in 1968. As a result of the Conference, then the Scientific and Technical Subcommittee made a recommendation

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that there should be a person with expertise in scientific and technical aspects of space that could advise the Secretary-General on matters related to applications of space, in particular for developing countries.

The Subcommittee addressed that issue and made the recommendation that an expert should be hired for that purpose. The next step in that recommendation was that it should be assigned to the, at the time, Outer Space Affairs Division, that was the name of the Office when it was in New York. That recommendation of the Subcommittee is in its report, which is A/AC.105/55.

The Committee then, in its report to the General Assembly that same year, 1969, endorsed the recommendation of the Subcommittee and the General Assembly, in its resolution A/7621/Add.1, sorry, ignore that last part. That is part of the supplement, that is the reference of the Committee's report. The Committee's report is Supplement 21A (A/7621/Add.1). And then the General Assembly agreed with the recommendation of the Committee in its resolution 2601 (XXIV) and that is in Part A of the resolution, it has two parts, and that is in paragraph 8.

UNISPACE '82 then expanded the mandate of the Programme. In the report of the Scientific and Technical Subcommittee that I made reference to, the Expert, the current Expert now on Space Applications, was given only two mandates and one was to organize training courses and workshop, and the other one was to disseminate information. UNISPACE '82 then, in its resolution 3790, expanded the mandate of the Programme. Later, UNISPACE III further expanded the mandate of the Programme.

So as far as the mechanism to establish DMISCO, it would not require a dedicated resolution. It could be done within the omnibus resolution, which is the way the Programme was established originally. That would be a possibility. There would be other possibilities.

To establish a Programme under the Office, if that is the way it was to be, then it would not require to have a Special Conference, as was indicated by the representative of Greece.

Another one of the issues was, what would be the role of the Office for Outer Space Affairs and would that impact on the work of the Office, the current work of the Office? The way the recommendation has been presented is that it would be the additional staff that would be working within the

Office for Outer Space Affairs that would be providing the support for the work that had to be done with respect to DMISCO. So, in essence, it would not be the current staff. The reason I say in essence is because, for practical reason, it could be that some of the work would be more efficiently done by people that know how to do the administrative processing, that the gathering of the information of what needed to go into that part of the administrative process would be done by additional staff. So the work and the relationship that the Office has with the Committee and its Subcommittees and the Fourth Committee should continue the way it currently is.

I might add there that this was one of the considerations in the discussions that as the Office did participate in the work of the Ad Hoc Expert Group, that we brought to the Group continuously that the Office would not within its existing resources be able to provide much more support than what it actually provides right now for Action Teams. We do support Action Teams. So the Office would be able to provide some support but not in the volume and the amount that would be required by the being run of the parts of this _____(?) we are discussing right now.

Then there was a question regarding whether the Committee would be the Advisory Board. Now that, of course, would be up to the Committee to decide how to do it, that a possibility would be that the Committee identify, members of the Committee identify experts to function as members of that Advisory Board. That would be very similar to the way the Action Teams work. It would be under the supervision of governments, but those that would be sitting on the Advisory Board would have expertise either in the area of space or in the area of disaster management. My impression would be that it would be a more effective advice if those that were sitting as representatives were experts in one category or another.

And then I take what I would then have, the _____(?) of it was completely clear that what we have right now is the type of resources that we have and this is with respect to the possibility that the DMISCO, the SPIDER, function as one of the Regional Centres. What we have right now is we have confirmed offers of support by a number of countries and we have, when we look at the resources, practically what the Group of Experts identified. It might not be perfect, but what they identified as the requirements to carry out the functions. So it is practically there. We have seven experts that have been offered by Germany, by Austria, by China, additional support, these are strong offers of support.

However, if we review the letters of commitment, they are conditioned to DMISCO being established. So in a way we have a situation where we have resources but we do not really have resource(?) (*not clear*).

If it was to be then established as a Regional Centre, in following that model, then we could expect that some of these resources, or maybe all of them, if it gets established some place else, would not actually be, the complement is what is proposed by the experts to put the package together so that we would have enough resources for meeting those tasks that the Group of Experts indicated. These would be the functions of this entity.

And, I think, Mr. Chairman, I would stop there and, of course, if there are any further comments, I am at your disposal.

The CHAIRMAN (*interpretation from French*): I thank Mr. Camacho, Director of the Office for Outer Space Affairs, for this additional information which follows on to our debate held yesterday on the report of the Ad Hoc Group of Experts, as well as the proposals which it contains. It is my understanding that what is proposed will be included in the Committee's report and we will discuss it tomorrow morning within the framework, we will continue the discussion within the framework of the discussion or the consideration of the report of the Committee.

Mr. S. CAMACHO-LARA (Director, Office for Outer Space Affairs): Yes, Mr. Chairman, that would be a possibility. Another possibility would be that we could start that discussion this afternoon. If you wish, we would have some draft text, depending on additional input to be provided by delegations.

The CHAIRMAN (*interpretation from French*): Yes, thank you for this clarification. If we do have a draft on this part, and it is available this afternoon, this will enable us to continue consideration of this issue. If we have a text before us, a text which we intend to incorporate in the Committee's report. So I do thank you for this clarification.

I will now turn to the delegations and ask them whether they wish to take the floor for questions, comments. The Netherlands.

Mr. A. A. REIJNGOUD (The Netherlands): Thank you Mr. Chairman. The Netherlands delegation likes to thank the Ad Hoc Expert Group for its report on creating an international entity regarding disaster management, as in document CRP.13. The Netherlands is in favour of the idea to establish such an

entity as soon as possible and in a most appropriate way. The discussion yesterday shows that several delegations have concerns about the recommendation made by the Ad Hoc Group of Experts to implement the proposed entity as a Programme of the Office for Outer Space Affairs.

One of the main concerns is the financial aspect. Is budget availed within the United Nations for the establishment of the entity? The Secretariat replied that there will be an opportunity. The United Nations is in reform, priorities are changing and re-allocation of budget is a possibility.

Mr. Chairman, this sounds hopeful but what is the reality? In this light, I have two questions. First, what is the chance that budget will be available for the establishment of the entity? And do we accept the risk in the case that not enough budget can be found? Anyway, it means a delay in establishing the entity for at least four months.

The second question. In the case that the proposed proposal could implement the entity as a United Nations Programme will be rejected, what does this mean for COPUOS, our Committee, and what does this mean for the establishment of the entity?

Thank you.

The CHAIRMAN (*interpretation from French*): I thank the distinguished representative of The Netherlands for his statement and for the questions he has put to us. Let us try and gather all the questions.

I think Colombia had requested the floor and he will be followed by China.

Mr. C. ARÉVALO YEPES (Colombia) (*interpretation from Spanish*): Thank you Mr. Chairman. I would like to convey my gratitude to Dr. Camacho for his statement for following the questions we put yesterday. I have now fully understood what his concept of things was, as far as the Group of Experts is concerned, what the process of creation and operation of DMISCO/SPIDER will be. I am pleased that his answers have contributed to dissipating a number of doubts and have responded to our question as well as to those of other delegations.

I think we should underscore three elements.

Firstly, it is important to ensure that there is greater commitment from States which have already committed to providing resources. We should not place any conditions on DMISCO. What I mean is that

DMISCO has to be created to actually enjoy these commitments.

Concerning the change of priorities within the framework of the United Nations, I believe that in New York we should seek a way to promote this process, to prompt it, to raise awareness regarding this project, to ensure that we do not take any risk with it, risk that this change of priorities might undermine the availability of resources for our project.

And a third point which I consider a crucial one is the model of the Regional Centre. In our experience, there is no common denominator as far as the management of the Regional Centre is concerned. There are a number of variations. This is why we should undertake an effort to preclude a case where there would be insufficiently close links or relationships with these Centres that some States find themselves marginalized. We have to ensure regional representation within these Centre.

And finally, Sir, regarding the Advisory Group, the proposal which Dr. Camacho made is a sound one. The Action Groups have functioned well but, of course, this will lie at the level of the Committee. I believe this is an appropriate structure. We cannot offer expertise which we do not possess. And the final decision will, of course, be taken by the Committee.

Thank you.

The CHAIRMAN (*interpretation from French*): I thank the distinguished delegate of Colombia for his statement.

And I now give the floor to the distinguished delegate of China.

Mr. C. LI (China) (*interpretation from Chinese*): Mr. Chairman, in support of the recommendations of UJNISPACE III, China, as the member of the Bureau for Action Team 7, in coordination with Canada, France and the other countries like the United States and India, as well as other 40 members and Action Teams, have worked for almost four years and completed our task entrusted to us by the Committee and provide our final recommendation.

Afterwards, we, in coordination with the Ad Hoc Expert Group, after more than one year of work have finally put forward a basic workable working plan. We are very pleased with the results of our work. As it is known by all of us, during these five years,

there were a lot of disasters that happened. We are pleased that this work plan had provided good opportunities for us to translate this work plan into real action.

We are confident that with China, Germany and Austria's support and financial assistance, this work plan has already acquired all the necessary conditions for a start.

We also believe that with the support from other member States, this work plan will be implemented very well so that the space science and technology will be put into effective use for disaster reduction and management so that more and more people will not suffer from disasters.

So we hope that the report and the recommendations will be considered and understood by the Committee. And the urgency of implementing this work plan could also be understood. It is our hope that the report of the Ad Hoc Expert Group will be submitted by the Committee to the General Assembly for consideration so that our hard work and efforts from this work will not be wasted.

Let us join hands to promote this work continuously.

Thank you Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you to the distinguished representative of China for that statement.

And I now give the floor to the representative of India, Dr. Suresh.

Mr. B. N. SURESH (India): Thank you Mr. Chairman. A number of questions on the report of the Ad Hoc Expert Group have been raised by several member States yesterday and all such questions certainly need their _____(?) and need such resolutions.

The Director of the Office for Outer Space Affairs has provided the answers to many of these questions and we appreciate his efforts.

There is further need to fine tune the solutions. While appreciating the need to find the right solutions to these questions, we also appreciate that the more important need is to find quick solution to the vital issue of disaster management. We are all agreed that the natural disasters of one kind or another strikes very often at one part or the other all over the globe

causing serious loss of life and property. Therefore, this Committee has rightly given the highest priority to this topic and, in the last four years, the Ad Hoc Expert Group, constituted by this Committee, has received a lot of inputs and an enormous amount of efforts. There has come out a well-structured implementation framework for creating this international entity.

We appreciate that the issues raised on funding and the solutions needed are very important but it should not be forgotten that the funding needed to overcome any single disaster is several orders higher than the funds needed to ensure to run this proposed entity. Therefore, the Indian delegation strongly believes that the need of the _____(?) is to initiate action to establish this entity without losing any further time.

We are in full agreement with the statement made by the distinguished representative of Colombia yesterday that the natural disasters, as and when it happens, does not differentiate the geographical borders.

The Indian delegation is aware that the programme proposed is an open network. It envisages flexibility and has provision to utilize the expertise of existing as well as new players in this field of disaster management. All regional laws(?) certainly play a very vital role in the proposed network.

The Indian delegation is also happy to note that _____(?) of resources and support from member States, there is a very good response from third(?) countries and we believe that with this support, there is a needed critical mass to ensure this entity.

So with the clear-cut recommendation and the well-structured proposed entity and also the support that has been promised, it is possible to ensure the proposed entity.

So we strongly feel that it will be a major step forward in addressing this important agenda of disaster management and considering all these factors, we strongly feel that the Committee has to find a way to take this proposal forward. It is worth considering that this Committee reports to the General Assembly in the next meeting on this particular agenda item and try to obtain in principle _____(?) by the General Assembly at the earliest.

We strongly believe that progressive fine tuning is certainly needed to make any system very stable and effective and this proposed programme on disaster management is no different. Therefore, our

efforts should be to launch the entity at the earliest possible time to meet the needs of all countries who are in this room.

Thank you Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you Dr. Suresh for that statement on behalf of the Indian delegation.

We now have a request for the floor from the United States. Mr. Hodgkins, you have the floor.

Mr. K. HODGKINS (United States of America): Thank you Mr. Chairman. I would like to express my appreciation to the Director of the Office for Outer Space Affairs for his clarifications concerning the establishment of the Space Applications Programme. I just wanted to make a couple of comments regarding that and then move on to a few other points.

Certainly the process that was used for establishing the position for an Expert on Space Applications and expanding the mandate of that Expert's work was taken care of through the Committee and then through General Assembly resolution. But I think we have to be quite honest with ourselves the magnitude, or the order of magnitude of that versus what we are asking for here was much less. That is, we recommended there should be an Expert. We found the necessary resources to create a position in the Office to deal with space applications. And through UNISPACE '82, we did ask for the Expert to provide training and workshops. I think, if I am not mistaken, that much of the resources for that activity would have come from voluntary contributions or matching funds from member States that might host those workshops and training activities. So we were not creating a sort of operational role for the Expert as opposed to what we might be looking at here for DMISCO.

I share the points that The Netherlands and our distinguished colleague from Colombia have raised concerning the chances in getting the money, what happens if we do not receive the funding for this. And how do we increase awareness in New York concerning this proposal?

We are in a rather curious situation, that is the Committee and the Office for Outer Space Affairs, because this is not a specialized agency like the WMO or UNEP or UNESCO. That is, we do not control our budget. That budget for the Office for Outer Space Affairs and for the activities of COPUOS is controlled

in New York by a separate process and we cannot make those decisions on our own concerning funding. So we might think that our ideas deserve support and have a great deal of merit but when it comes to funding those, it is a completely different process. So we have to be realistic. We do not control the budget for what we do.

And one of the questions that was raised yesterday was the sustainability of funding for this programme and it is not clear to me how this would be sustained through the regular United Nations budget process. That is, would we get money for just one year or are we asking the General Assembly and the Fifth Committee and the Committee on Programme Coordination to make a 10-year commitment to this. I do not know. That is another question that we will have to look at.

So it would seem to me that we should be looking for a way forward. And when I say looking for a way forward, I mean what can we as a Committee decided and can control in order to move this idea to the next level? One proposal to create a new programme in the Office would necessary mean that other people will be making the decisions for us, and I am saying specifically the people controlling the budget in New York. And there is the risk that they will not support this and then the question is, what do we do next?

The other option is, are there steps that we can take today and tomorrow that move this forward that allow the countries that have made commitments or have put on the table the possibility of commitments? Are there decisions we can make that will allow them to do that? And are there decisions that we can make that would allow the Office for Outer Space Affairs to play a role in the establishment of this activity that would not open us up to the possibility that other committees in New York would be making the decisions for us and that a negative decision will not allow us to move forward on this. So I think this is the challenge. What can we decide, on our own, within our own competencies, that can push this concept to the next level? And then we can continue to look at what more can be done. I think deciding to place the future of this idea in the hands of committees outside of this Committee runs a tremendous risk that we would fail or not get the resources that we might ultimately need.

Thank you Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Hodgkins for that statement on behalf of the United States.

I will take another couple of statements and then I will ask the Director of the Office for Outer Space Affairs to answer some of the questions then we will stop discussion on this issue since we will be resuming discussion on the same issue this afternoon, based on a draft text proposal, which, of course, will as much as possible take into account this morning's statements.

I now give the floor to the distinguished delegate of Canada.

Mr. T. OUATTARA (Canada): Thank you Mr. Chairman. Yesterday, the Canadian delegation expressed our position and point of view on DMISCO. This position is very clear. Much work has been done during the last four years. The important questions raised by some colleagues are really more related to technical procedures of the United Nations system. This could be addressed by the Office for Outer Space Affairs with the help of the Committee.

As our colleague, Dr. Suresh, the delegate from India, stated, the Canadian delegation is supporting the idea to move ahead as soon as possible because the disasters are not waiting for us. Please, people are suffering.

Again, this has to be done, taking into account the questions expressed by delegations. This is clear for us.

(*Continued in French*) Mr. Chairman, once again, this is real. Luck is real and it is beautiful. It is an opportunity to offer mankind a practical and concrete contribution on something which is important and useful for the community of the United Nations for the peaceful uses of outer space.

Thank you Sir.

The CHAIRMAN (*interpretation from French*): Thank you to the distinguished representative of Canada.

Are there any other requests for the floor. Yes, the delegation of Nigeria has the floor.

Mr. J. O.AKINYEDE (Nigeria): Thank you Mr. Chairman. Once again, my delegation wishes to back up what India and Canada have said. Much as we consider the issues raised by the United States and The

Netherlands, my delegation feels that we should not pre-empt what the General Assembly will come up with in terms of the other negative aspects whether funding will be coming or not. I think we should look at the positive aspects, what has been cleared before the Committee, in terms of financial assistance from the various member States and move ahead. A framework has been provided. What the Office for Outer Space Affairs needs to do is to work out the details for this programme to start.

I want to assure that my delegation wish to assure this Committee that the General Assembly, as well as the international community as a whole, is very much concerned about disaster. If another disaster should strike, of the magnitude as we witnessed in South-East Asia, I am sure the General Assembly will ask us why have we been waiting.

Thank you very much.

The CHAIRMAN (*interpretation from French*): Thank you to the distinguished delegate of Nigeria.

I now give the floor to the delegate of Austria.

Ms. U. BUTSCHEK (Austria): Thank you Mr. Chairman. I certainly do not want to expand the debate and keep you from taking up other issues. I just wanted to relay to my previous speakers that I have heard a lot of support on a political level for the need to have improvements in the organization of disaster management done as soon as possible. So I think that the political will and that seems to across very strongly. The people in New York dealing with the budget do not have the right to question these political priorities again, they just deal with the technical process, so to say. And it is the same governments that are sitting here that are dealing with the budget process. So I think we also have to do our homework from the inter-governmental side and make sure that we express in terms of political will here does find support undertaking aside. And if I listen to previous speakers, I think we should just be able to ensure that we are not speaking with two voices and then there is a good chance for the budgetary process to be along the lines that we seek here.

Thank you very much.

The CHAIRMAN (*interpretation from French*): Thank you to the distinguished representative of Austria.

For the time being, we have no other request for the floor so I would propose the following.

The Director of the Office for Outer Space Affairs has taken note of the various comments and questions and he will take the floor at this time for a few moments to address those remarks and then we will resume with this discussion this afternoon, based on a written text geared to being included in the Committee report. I think that is the best way to make some headway here.

Mr. Camacho, you have the floor Sir.

Mr. S. CAMACHO-LARA (Director, Office for Outer Space Affairs): Thank you Mr. Chairman. Very briefly also. I just want to make a few comments on the statements that were made.

There is a question asked by The Netherlands, the United States and other delegations of what of the chance that the budget would be available. And, as I mentioned before, from the donors, that part is confirmed. That is a firm budget. So we are actually talking of the United Nations regular budget. And that, as the distinguished representative of the United States indicated, that is a separate process. And he asks what happens if we do not raise the money and the funding is not controlled by the Committee, what is it that is controlled by the Committee. He is absolutely correct in that. The Committee makes programme-type recommendations, which is also what the distinguished representative of Austria indicated. So it is what the Committee believes should be policy. That is the role of the Committee. The Committee should not address budgetary matters.

And the other questions then so remain and whether it is going to be successful or not, it would be as was indicated by the distinguished Ambassador from Colombia. For example, it was there that if the decision was to move forward, with whichever cautions would be put into the language. There would need to be strong support from the same member States that are supporting here now in New York and that is something that really should start well in advanced, not only when the Fourth Committee is meeting, because by that time, the documents have already been distributed and there is very little time for capitals than to documents, meaning the draft resolution when the meeting is going on. The draft resolution is put forward, there is very little time to get support from capitals.

I _____ (?) Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Camacho for that reaction and for that more detailed information. I think you are right, consistency of States positions between what they say here in the Office for Outer Space Affairs and this Committee and the Fourth Committee is key to the whole process in order to make some progress here.

So I will close this item for this moment and then, based on the statements made and the proposals from the Group of Experts, the Secretariat prepared some written elements which are planned to be included in the Committee's report and we will have a first version available this afternoon to possibly come back to this issue.

I would propose then that we continue.

We will now continue consideration of agenda item 11, Space and Society.

I have no requests for the floor on this item. I should say this is an issue that we have looked at quite a lot in the last few days. Although I should also say that there are some technical presentations on this subject that we will be hearing at the end of the morning and so, no doubt, will be going even more in-depth into it later in the morning.

Since there are no requests for the floor on that item, we will move on to item 12, which I will remind you at this time is Space and Water.

And on this item of the agenda, we have a request for the floor from the distinguished colleague of Canada, who has stepped out for a moment. So while waiting for Mr. Ouattara to come back to the room, I will give the floor to the distinguished colleague from Nigeria, Mr. Joseph Akinyede. You have the floor Sir.

Mr. J. O. AKINYEDE (Nigeria): Thank you Mr. Chairman. Mr. Chairman, as part of the larger Nigerian delegation to the forty-eighth session of COPUOS in June 2005, the Ministerial Team on Water Resources Management in Nigeria addressed its activities generally and specifically presented a project proposal on the restoration and the integrated management of the water resources of the distressed Lake Chad Basin.

Our delegation is pleased to inform this Committee that some progress has been made which include stakeholders meeting to articulate the implementation strategy. In particular, some scientists and technical staff of the Federal Ministry of Water

Resources, the Nigerian Space Agency and the Lake Chad Basin Commission have been meeting to discuss the strategies for the feasibility study and the integration of relevant data, including the use of space-based data, to provide for the basis and justification for inter-Basin water transfer to the Chad Basin. The pilot study team intends to examine the relationship between the surface hydrology and the sub-surface water movement, as well as integrating the results of a space-based study funded by the UNEP. While we are in the process of realizing this objective, we look forward to the Chad Basin member States to resolve other political issues to enhance the project implementation. Other limiting factors according to the Coordinating Agency, the Lake Chad Basin Commission, include lack of financial resources.

Similarly, Nigeria, through the Ministry of Water Resources, participated in a Workshop organized by the EU/ESA on Space Technologies for Water Resources Management, TIGER Workshop 2005, at ESRIN, in Frascati, Italy, in October 2005. The Workshop aimed at exposing the participants to the latest innovations in space technology to water resources management worldwide, thus providing a forum for interactions among experts from all over the world. The effect of this Workshop is being brought to bear in the activities of the Ministry of Water Resources in Nigeria.

As part of the follow-up activities of the Ministry, ground-truthing campaigns of a trans-boundary aquifer project in the Iullemeden Basin is being carried out with the participation of experts from Europe, for example, the support of ESA, in the Nigerian segment of the Basin. This is geared towards the development and demonstration of Earth observation-based products and services for supporting national authorities and international institutions in trans-boundary aquifer management.

My delegation wishes to reiterate Nigeria's commitment to the restoration of the water resources of the Lake Chad Basin. We want to assure this Committee of Nigeria's commitment in this regard and plead with the international community, especially the donor agencies, to please fulfil their obligations made at the Donors Meeting organized in Abuja in January 2006, in respect of this project.

Thank you Mr. Chairman.

The CHAIRMAN (*interpretation from French*): I thank Dr. Akinyede for the information he has provided us on activities on water resources and their management in and around the Lake Chad Basin.

I will now give the floor to the distinguished delegate of Japan.

Mr. S. NOTO (Japan): Mr. Chairman, distinguished delegates, on behalf of the delegation of Japan, I have the honour to present Japan's experiences with and future plans for space-based water cycle observations and their applications.

Within the last year, we have witnessed the damaging effects caused by major water disasters across the world. Just last month, in Thailand, 77 deaths and the loss of thousands of homes were caused by flooding. This year, in February, the island of Lathe in the Philippines, suffered from mudslides precipitated by heavy rainfall, burying an entire town and claiming more than 3,000 lives. I would like to extend my deepest sympathy to the affected nations, their people and the families of all victims.

In each of the afore-mentioned cases, the Japan Aerospace Exploration Agency, JAXA, made rapid response observations using the Advanced Land Observing Satellite, DAICHI, which was launched last January with the cartography and environmental and disaster monitoring missions. DAICHI carries optical sensors that provide stereo-viewing ground surface images with a 2.5 metre spatial resolution, as well as the Synthetic Aperture Radar, SAR, which can conduct observations regardless of the time of the day or weather. The combination of these sensors provided observation images useful for gaining a synoptic picture of the disasters, investigating their causes and planning disaster relief responses.

Today, Japan supports projects such as the Sentinel-Asia which was developed to disseminate and share disaster information of this kind in the Asian region. Sentinel-Asia is expected to provide a disaster information platform based on an Internet and Geographical Information System. We look forward to the second Joint Project meeting which will be held later this month in Bangkok with the participation of more than 12 countries and four international organizations.

Mr. Chairman, plans are underway to complete the Global Precipitation Measurement, GPM, project in order to establish the monitoring of international water cycles, a Japan-United States initiative based upon the technological experiences we have gained. GPM seeks to forecast weather and monitor water cycle variation and natural disasters, including torrential rains, typhoons, floods and droughts. The GPM system accurately observes

rainfall every three hours, using a main satellite, which carries the Dual-frequency Precipitation radar, DPR, and a microwave radiometer like Tropical Rainfall Measuring Mission, TRMM. In addition to small satellites that carry microwave radiometers in polar orbit, DPR is the key to ensuring accurate rainfall intensity data acquired by the GPM project and will contribute to improving the accuracy of weather forecasts.

Mr. Chairman, demand for space-based observation and the prediction of global scale water cycle and water resources continues due to an increase in water disaster trends and other socially significant water-related issues in many countries. Therefore, it is necessary to promote the development and the utilization of space-based observations as an effective tool to respond to the associated demands for information. Water cycle changes and the variability of water resources cause a big impact on societies around the world, such as water-related disasters, the availability of fresh water, the consequences on agriculture and commercial activities and so on.

Mr. Chairman, it is fair to say that we have come to a point where we must target the operations of global water cycle observations and the use of these data in daily weather forecasts, river management and food production systems. We believe space-based Earth observation will be able to play a major role in these areas. Integrating the outcome of space-based and *in situ* observations, achieving high accuracy and frequency global water cycle observation, using forecast and hazard information for disaster management and hazard information for disaster management and agricultural production planning will bring numerous benefits to all humankind. Japan, in full cooperation with other countries, will make every effort to achieve these targets.

Thank you for your attention.

The CHAIRMAN (*interpretation from French*): I thank the distinguished delegate of Japan for your statement on the activities of JAXA in the field of the water cycle, focusing on rainfall. I know that the mission is one which makes a significant contribution to our understanding of the water cycle and we await with a great deal of interest the launch of the next GPM mission, which will be an improvement, a significant improvement, compared to the current mission. So thank you for this information.

And I now give the floor to the distinguished delegate of Canada.

Mr. D. ALDWORTH (Canada): Mr. Chairman, this year again, the Canadian delegation is pleased to note that space and water is on the agenda.

During the Canadian delegation's statement last year, we spoke of the Canadian Earth Observation Satellite, RADARSAT-1, and of its usefulness for managing and monitoring water issues. This year, we will highlight some new achievements concerning space and water activities undertaken by the Canadian space community. Specifically, we will share with the Committee some new activities related to the TIGER initiative, the Canadian Observing Initiatives Affecting the Great Lakes, and the Water Quality service project on Lake Winnipeg.

Mr. Chairman, under the ESA TIGER initiative, the CSA is now funding two other new projects. The World Conservation Union project is related to the remote sensing and geographic information system application in integrated river basin management vulnerability assessment and formulation of adaptation strategies in the Zambezi Delta and Medium Limpopo Basin. Environmental stresses in Southern Africa induced by human activity, such as dams and land-use change, and by natural forces such as erosion and cyclones, are intensified by climatic factors. Certain areas may be vulnerable to the impact of climate change, sometimes with irreversible damage. Using RADARSAT imagery, the vulnerability assessment and the development of adaptation strategies for the Zambezi Delta and Medium Limpopo Basin will test and demonstrate how well remote sensing and geographic information system applications work for integrated river basin management. The vulnerability of the area to flood and drought from climatic extremes and the mitigation measures are a special focus. This initiative will take place within the context of the Zambezi Basin Programme, Phase II, led by and funded by the Canadian International Development Agency.

The second new project is the development of an integrated decision aid system for water resource management in the Sous-Massa Basin in Morocco. The project will develop a Decision Aid System for water resource management based on a geographic information system, satellite data and other data such as geology, land use, land cover and topography. Since 1975, the area has seen extraordinary economic growth. Agriculture, tourism and population expansion contribute to increased demand for water and over-exploitation of ground water resources. Updating information on the water system will help with sustainable management of these resources. The project will also integrate an approach that uses

satellite images and traditional information as an analysis tool for better management of the water resources and mapping of the ground water potential and evolution.

In addition, the CSA is involved in seven projects in six African countries: Burkina Faso, Ghana, Kenya, Mozambique, Morocco and Egypt.

Mr. Chairman, last year, we spoke about the Nile River Awareness Kit produced by a Canadian company. The Nile RAK Project was developed at the specific request of the end-user partners, the Nile Trans-boundary Environmental Action Project within the Nile Basin Initiative. The Nile RAK project is an interactive CD-ROM that explores four thematic topics: River Science, People and the River, Governance and Environmental Management. The Nile RAK was officially launched in Cairo in the presence of the Egyptian Ministers of Environment and of Water and Irrigation. This reflects the importance of the CD-ROM as a communication and awareness tool to disseminate information to national and local-level stakeholders. More importantly, it will strengthen management capacity and awareness regarding the environment and resources of the Nile Basin. The CD-ROM demonstrates the practical use of satellite imagery and applications by providing a regional perspective to environmental and water management and monitoring.

Mr. Chairman, the Canadian Department of Fisheries and Oceans is currently developing and demonstrating a water quality service project at the Lake Winnipeg test site. Based on AVHRR data, maps of total suspended solids bloom detection product are generated. A severe algae bloom can reduce oxygen to critically low levels and could have a major impact on the environment, for example, insects that prefer low-oxygen environments are becoming more abundant than they were 30 years ago in this area. Images are processed on a weekly basis and a data access delivery service was designed. During the open water season, images and maps are downloadable to every organization interested in this information. The TSS and bloom algorithms have been successfully implemented and are well received by the user community. The Water Quality Service had more than 100 users in the summer of 2005. The users represent provincial and federal water quality agencies, both in the Canadian province of Manitoba and the United States' State of North Dakota, university, media outlets, both TV and newspaper, commercial fisheries and community organizations.

Mr. Chairman, the Great Lakes and St. Lawrence River eco-system has always been recognized by the Canadian public and by Canadian policy makers as a sensitive and strategic area with specific economic, social, political and environmental dimensions. This has become increasingly true with the observed pressure on the environment related to economic development, urban growth and the impact of climate change. The unique perspective and information provided by space-based Earth observing systems has never been more important.

Over the past decade, the Canadian Space Agency has been involved in the support of scientific initiatives, demonstration projects and operational activities related to the monitoring and study of the Great Lakes and St. Lawrence area. The Canadian Space Agency understands the tremendous role and value that space-based Earth observation systems and information have with regard to the important environmental and socio-economic issues facing this region. Through the Government-related Initiatives Programme and the Earth Observation Application Development Programme, the CSA and its public and private sector partners have fostered the development of Earth observation applications for the Great Lakes. Furthermore, the requirements and designs of past, current and future Canadian Earth observation satellites have always taken into consideration the information needs from the scientific and operational communities of this large eco-system.

Mr. Chairman, let me conclude by stating that Canada will continue to strongly support the use of Earth observation for water issues. We believe that water is one of the essential pillars for human survival. If it is true that life comes from water, that life depends on water and that life is in water, we can confirm without any doubt that space science and technology applied to water issues is a tremendous contribution to the well-being of humanity.

Thank you Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you distinguished representative of Canada for your presentation on the very varied activities undertaken by the Government of Canada and the Canadian Space Agency, both in the African region as well as in your own country in the Great Lakes region.

I believe that with this presentation, we conclude consideration of agenda item 12, Space and Water. And I think that the conclusions voiced by our distinguished colleague from Canada certainly very

aptly summarize the use and application of space technology to the issue of water and it would perhaps be the ideal moment to suspend consideration of this agenda item.

Recommendations of the World Summit on the Information Society (agenda item 13)

We will now move on, dear colleagues, to consideration of item 13, Recommendations of WSIS.

I do not believe we have a list of speakers for this. You will recall that when we addressed this issue yesterday, we had referred to the absence of any representatives or representation from the ITU, representatives who could have shared with us information on the activities of this specialized agency of the United Nations system following WSIS. It was suggested at that time that this agenda item be included on the agenda of the annual Inter-Agency Meeting, at which point the ITU, which is always represented there, will be able to comment.

So if you agree with this conclusion, we could suggest to the Office for Outer Space Affairs that this agenda item be addressed during the course of the next Inter-Agency Meeting and we would thus have a report when we, in fact, see the report on the conduct of the Inter-Agency Meeting.

If no one objects, we will conclude consideration of this item in this way. This seems to me to be more constructive than to emit the hope that at the next meeting we would get some answer.

Very well, with your agreement, we shall conclude consideration of agenda item 13.

Other matters (agenda item 14)

And we move on to agenda item 14, Other Matters.

We have a number of issues to consider here. Let us first turn to the issue of the request for observer status by the Centre for Human Rights and Peace Advocacy. And on this item, I would like to draw your attention to Conference Room Paper 14, which was distributed by the Secretariat and which contains application documents which was received from the Centre.

I hope you have had the time to peruse this document which provides us with additional information on this Centre, what the Centre is exactly.

And I will, therefore, now ask any delegations wishing to take the floor to do so regarding the request for observer status for the Centre for Human Rights and Peace Advocacy, which is an NGO based in Cameroon.

I will give you a few minutes to familiarize yourself with CRP.14.

I believe that you have had time to familiarize yourselves with CRP.14. I will draw your attention to the cover page of this document which is the note by the Secretariat which reminds you of the procedure which is followed when an organization requests status of observer.

On an item such as this, it is incumbent upon us to reach a decision, a decision which will be included in the report which will be considered tomorrow.

Any delegations wishing to take the floor on this request should do so.

The Islamic Republic of Iran.

Mr. M. ASL (Islamic Republic of Iran): Good morning, thank you very much Mr. Chairman. Mr. Chairman, since we have received recently, we need time to reflect on that.

Actually another point which is also a matter of principle. We considered the status of any observers in principle and _____(?) relevance to the work of the COPUOS so it is a matter of principle without having such kind of a clear picture how this NGO would contribute to the work of the COPUOS. It is strange, for at least for our delegation, to see that maybe we invite an observer which might not have right the relevance to the work of the COPUOS. So that is the problem that we have. However, we have always promoted the participation of NGOs when it has direct relevance to the work of the COPUOS. So for the time being, I am afraid that I will not be in a position, at least until tomorrow, because I am sure that we in the weekend in the capital and in that issue we are not in a position to get at this stage because at the late hour we have been informed at this _____(?) time to reflect on that.

Thank you very much and thank you for that NGO as well. I mean, giving its own readiness to participate in the work of the COPUOS but we should consider it.

Thank you.

The CHAIRMAN (*interpretation from French*): Thank you Iran. Indeed, the question before us, what is the involvement of this organization in space matters? I must admit that this answer is not immediately evident from reading these documents. So our friend, the distinguished delegate of the Republic of Iran has asked for some extra time to consider this request for observer status. As information was provided to us at a rather late stage, I think it was as late as yesterday afternoon, we could perhaps postpone a decision until tomorrow morning unless you wish to take a decision now. I do not think it will take much time.

Iran?

Mr. M. ASL (Islamic Republic of Iran): Mr. Chairman. I should be clear on that. I am not sure that I would be in a position until tomorrow because now we are on the weekend in capital and not in a position to say something, but I will do my best. But for the sake of consistency, if you come tomorrow and ask me about this already to accept these observers, I am sure that if I am not in a position, I will have the same answer that I provide to you.

Thank you.

The CHAIRMAN (*interpretation from French*): Thank you.

And I give the floor to Nigeria.

Mr. A. A. ABIODUN (Nigeria): Thank you very much Mr. Chairman. Now, as delegates will recollect, in the first two years, myself and many others in this room have strongly advocated the need for active participation of members in the activities of the Committee. But I do not believe that if we are going to make a sort of progress in that direction, it is through the submission, as we have before us, from the Centre of Human Rights and Peace Advocacy. Most institutions that have applied to this Committee for observer status have done so on their own merit, not by coming before us to _____ (*not clear*) on non-_____ (?) member States. The question is, what is the status of this particular NGO within the international community to assign to itself the right to represent the interest of the people of the Cameroons? My delegation takes a strong exception to this submission and we would not support it.

Thank you.

The CHAIRMAN (*interpretation from French*): Thank you for that statement on behalf of the Nigerian delegation.

Are there any other requests for the floor?

I see none.

I think that the statement that I have just heard from our distinguished colleague from Nigeria would indicate that the request for accession is not accepted. We are working on the basis of consensus in this Committee and so under those circumstances, I do not think it would be very useful to come back to this question tomorrow morning unless there are any objections to this conclusion.

I see no objections.

So we will ask the Secretariat and the Office for Outer Space Affairs to answer the organization and indicate that the Committee did not wish to follow-up on the request to be granted status as observer.

Another request for the floor from the distinguished delegate of the Islamic Republic of Iran.

Mr. M. ASL (Islamic Republic of Iran): Mr. Chairman, this is just another clarification. It is not _____(?) objection but a matter, you just put on record, we do not raise any objection, just that we ask for some time to be given to us. It is a matter of principle. And the procedure, _____(?) decision that there should be give the necessary time to delegations to consider any proposal, any kind of request for the observer status.

Thank you very much.

The CHAIRMAN (*interpretation from French*): Thank you to the distinguished delegate of the Islamic Republic of Iran. It is clear that out of these circumstances, we need time to look at the application and we did not have a significant amount of time available to us to do that. But that, in any case, does not change the conclusion. Once there is an objection by any delegation, I think that indicates that the request for status of observer is not granted and we would just ask that, we could recommend rather, that in future that requests for the status of observer be sent in a timely manner with enough time ahead of time so that delegations have time to examine the application. And we can further indicate that this is even more important when it is an organization that is not well-known in the area of space activities.

So we will conclude this item of the agenda.

Distinguished representatives, we will now move on to the next item of the agenda, still under item 14, Other Matters, and this is the role and future activities of the Committee. This is an important issue. We started talking about it yesterday.

Before giving the floor to delegations, I would just like to point out to members of the Committee that the document for session number 16 was distributed this morning. It is in the room. And it called "The Use of Space Technology in the Report Submitted by the Secretary-General to Major United Nations Conferences and Summits for Economic, Social and Cultural Development" and its inclusion in the outcomes and commitment of those Conferences and Summits.

This is a document which responds to the request of several delegations and in particular our distinguished colleague representing Chile. So it is a response which looks at how we might find a way for the application of space technologies to be taken into account and reports submitted by the Secretary-General. So this is for your information.

I come now back to the issue of future activities of the Committee on this item of the agenda.

We have a request for the floor from the delegation of Canada. You have the floor Sir.

Mr. J. BARRETT (Canada): Thank you Mr. Chairman. This agenda item holds particular significance for Canada. The discussion was initiated in this Plenary last year after Dr. Karl Doetsch was asked by Dr. Ade Abiodun, the former COPUOS Chair, to prepare a paper on the future role and activities of the Committee on the Peaceful Uses of Outer Space.

Dr. Doetsch's paper was prepared and delivered in his personal capacity and nevertheless, he consulted widely beforehand and worked hard to ensure that his recommendations reflected the views of a range of our colleagues.

In general, we found Dr. Doetsch's paper to be a worthy basis to begin discussion on this important agenda item, particularly when read in combination with Dr. Abiodun's subsequent paper from the Chair and the very useful working paper prepared by the Office for Outer Space Affairs Secretariat, A/AC.105/L.265.

Mr. Chairman, the strong rise in the number of commercial and private entities operating in space, as well as the development of entire new industries involved in space activities, suggests that thought be given to ensuring that outer space remains accessible to all countries for peaceful purposes.

The increased use of space and the arrival of new actors involved in space, of which a growing number represent private commercial interests, has the potential to generate greater demand for orbital slots and competition. And with that comes the potential for friction between competing space actors.

It would be prudent, therefore, to identify and anticipate where activities might benefit from additional guidelines to ensure safety and common understandings about how space is used for peaceful purposes. And such work would aim to keep the space environment safe and sustainable for civil space assets, especially in an era of expanded satellite traffic.

Mr. Chairman, the way in which we give thought to future needs, in the light of increased civil space activities, could be pursued in various ways.

For example, consideration could be given to the recommendation of Dr. Doetsch for the creation of a long-range strategic planning group, which could be invited to reflect on these matters.

Alternatively, consideration could be given to an open-ended ad hoc or voluntary informal group to undertake such reflections. This would not be a subcommittee but rather more like a group of friends of the Chair, open to all COPUOS members who so wish.

And more importantly, in either of these cases, the mandate of COPUOS would not be under review. Rather, the existing mandate would be the basis upon which reflection could proceed. And let me reiterate, lest there be any misunderstanding about what we are saying, we are not talking about revising or reviewing or calling into question in any way the existing COPUOS mandate.

Mr. Chairman, the example of the Scientific and Technical Subcommittee Debris Mitigation Working Group could usefully be examined as a possible model for undertaking reflections on needs related to the continuing orderly peaceful use of outer space and the safety of States' civil space assets.

What might some of these needs relate to? Without at all pre-judging the work of any group, whose work programme or parameters might need to

be developed or subject to agreement, we could mention several for illustrative purposes only.

In giving thought to making civil space use more predictable and manageable, a group may wish to examine ideas concerning right-of-way or traffic separation and so forth or how to ensure appropriate ways of advising when orbits of other operations are being passed. Such ideas could be considered from the perspective of possible voluntary guidelines that could be implemented through national means.

The presentation to the Committee by the representative of the International Association of Astronautics of the IAA's report on space traffic management already touched on ideas in this regard. But it need not, and it should not, feel restricted to any one set of issues relating to civil space activities.

Mr. Chairman, with these thoughts, we would like to turn now to the Office for Outer Space Affairs very commendable working paper on "Future Role and Activities of the Committee on the Peaceful Uses of Outer Space" and offer a very preliminary reaction.

First, we would like to stress that Canada is very supportive of the work that has been conducted by the Committee in implementing the recommendations of UNISPACE III and the Vienna Declaration on Space and Human Development, as noted in Section 3 of the Working Paper.

Canada is also supportive of the statement in paragraphs 28 and 29 that Committee Report A/59/174 constitutes a road map for the further development of space capabilities to advance human development and "a long-term strategy for enhancing", I believe I have a mistake in my text here, "mechanisms at the national, regional and global levels in developing and strengthening the use of space science and technology and their applications to support overarching global agenda for sustainable development; developing coordinated, global space capabilities; supporting specific agendas to meet human development needs at the global level; and supporting overarching capacity development."

That being said, Canada note that Committee Report A/59/174 focuses on activities on Earth using outer space, rather than on activities in outer space.

We would like, therefore, to raise an additional area that we consider should also be looked at over the longer term. This is the sustainable use of space and the continued access to space for all nations

for peaceful purposes. In other words, activities that pertain to civil space operations.

An ad hoc, informal and open-ended "Friends of the Chair" could be an appropriate means by which to focus our "looking ahead" or our long-range thinking, however we wish to call it. It would act as an input, an input only, to help the Committee plan and guide its activities, which only the Committee can decide.

A "Friends of the Chair" approach would not, as some might claim, constitute another layer of bureaucracy, because it would not be a formal committee *per se*, nor would be it so institutionalized as to constitute part of the bureaucracy. Rather, the friends, could be a generator of ideas in an area where there is, at present, no means of focused thinking over the mid- to longer-term of the challenges we might face in civil space operations in future, especially in the light of growing civil, commercial and government space activities.

As an informal gathering, there would be no attempt to pre-judge who would participate on behalf of a member State. We could envisage experts from space agencies there, if States so wished. In fact, this gathering could become a useful venue for space agencies and operators to give their views and forecasts of future needs, in order to pursue their programmes with minimum risk of harm or dispute with other States and operators.

Mr. Chairman, the benefits of space are many. Both developed and developing countries continue to augment their uses of space on a continuing basis and we are all the better for it. Civil space assets must continue to be free from interference and must operate in a stable environment to deliver these many benefits to us all.

This Committee clearly has an important role to play in this regard, a role that will be enhanced not only by tackling the immediate problems of today but also by keeping a watchful eye on what needs to be tackled next, in order to forestall difficulties which may be gathering on the horizon and to work together to find solutions before such difficulties arrive.

That is the logic, the reasoning, behind the "Friends of the Chair" concept that we are proposing. We see it in the context of aiding and supporting the Committee and its mandate.

Thank you Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Barrett, representative of Canada for that statement. A very interesting statement, particularly because it proposes a rather pragmatic approach to an issue that we had begun to address during the Committee meeting a year ago.

So on that proposal, I would like to hear reactions from delegations if they wish to take the floor.

The distinguished representative of the Czech Republic. Mr. Kopal, you have the floor Sir.

Mr. V. KOPAL (Czech Republic): Thank you very much Mr. Chairman. Mr. Chairman, my delegation listened with great attention to the statement, to a _____(?) statement of the distinguished representative of Canada. I believe that he explained in greater detail the origin of the role initiative that has led up to now to the consideration of the future role and activities of the COPUOS. And I would like to recall that it was just our delegation which suggested to ask the former Chairman of the Scientific and Technical Subcommittee, Dr. Karl Doetsch, to make such a presentation which was very, in my opinion, not only very interesting but also very useful. And the main idea that he suggested, and that is well reflected in document 265, and namely that the idea concerning the establishment of a long-term planning group to consider the mandate and goals of the Committee is indeed alive and should be further discussed and further developed. It would be in harmony with the present general strength to reform the United Nations. So we could in the specific field of our Committee also consider the possibility, if not of a great reform but at least of improvement of the up-to-date activities of the Committee of the up-to-date methods applied in the work of the Committee, both Subcommittees and the Working Groups.

Therefore, I would like to kindly request that this paper remain on the agenda of the Committee, that this discussion should be further developed at the next session of the Committee and perhaps also during the considerations of both Subcommittees. And then we could proceed with some more specific suggestions.

The idea of establishing a group of friends of the Chairman is, in my opinion, quite interesting and should be also further pondered. Of course, we have also a so-called Group of 15 which prepares the sessions of the Committee and both Subcommittees and also prepares some longer-term plans a little bit and, therefore, it might be a certain harmony between the work of the G15 and of a newly established Group

of Friends of the Chairman or perhaps it might be, these two ideas might be somehow brought to the common denominator and by improving and reforming the work of the Group of 15.

Thank you very much Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Kopal for that statement from the Czech Republic.

Are there any other requests for the floor on this item.

I see none. Oh, yes, Nigeria would like the floor. You have the floor Sir.

Mr. A. A. ABIODUN (Nigeria): Thank you Mr. Chairman for giving us the floor to make a few comments on this particular agenda item. And at the outset, I would like to join Professor Kopal in thanking the distinguished representative of Canada for the statement on a major issue that we started last year.

Now, I think, as he rightly stated, the Secretariat has taken the case to us through this very good paper, A/AC.105/L.265, and Canada has referred to it in elaborate detail. We associate ourselves with all the things that Canada has proposed and we really believe that a mechanism should be found by this Committee to move the idea as posed last year forward.

Probably Professor Kopal will forgive me if I say we should probably move faster by, Mr. Chairman, looking at the possibility of giving us the delegates the opportunity to study this paper and probably come back in the afternoon and take some steps forward in terms of what we do, taking into consideration, of course, the comments already made by Professor Kopal of the Czech Republic.

Thank you very much.

The CHAIRMAN (*interpretation from French*): Thank you for that statement on behalf of Nigeria, Mr. Abiodun. For my part, I would not mind making a little comment here on the proposal we heard from Canada. My comments would be as follows.

I think that indeed this Committee needs to have some light shed on what the new challenges are in the area of space, challenges due to the considerable increase of activities in the private sector, and that was indicated by him and it was very much underscored in the presentation we heard by Dr. Doetsch last year.

Moreover, there is another dimension that we should take into account when looking at this issue and that of space exploration and it is true for this Committee is the issue of international cooperation in space activities.

And under this item, I will say this by way of information, under this item I would envision requesting a panel of experts to come and give us some presentations on space exploration next year. It is something that I have been thinking about.

And then, of course, there are some other sources of concern. These have been very much addressed by this Committee and the Scientific and Technical Subcommittee, and I am thinking most particularly of space debris. If we look at the discussion on space debris, we will see that in the long run, we have a fairly serious problem before us and it raises the issue of the very safety of peaceful space activity in orbit around the Earth, just due to the mere fact of proliferation of debris that we have witnessed. And some of our colleagues, and we also heard this in the presentation of the International Astronautical Federation, a number of international experts have been thinking about this for the long run and thinking about a possible regulation of space debris or more particularly of traffic in space in order to resolve the space debris issue. So this is something we saw in the presentation of the IAF.

So these are a group of subjects which, of course, is not an exhaustive list but it is our group of subjects which indicates that the Committee does need, has the duty to look at these issues, the implications of these new challenges, not only in terms of international cooperation, which would include not just member States of the United Nations, but also the best way of protecting the resource which is space for the purposes of space applications.

Personally, I would say I am very interested by the suggestion put forth by the delegation of Canada that we might want to reflect on this, produce something that would be brought to the attention of the Committee and which would then translate into launching some new activities, new items on the agenda on the Scientific and Technical Subcommittee's agenda and on the Legal Subcommittee's agenda and, of course, in the full Committee.

So generally speaking, in principle, I would say that our friends from Canada are right to call our attention to the need to generate reflection on this and I would like to thank them for their very positive input, as expressed by the distinguished colleague of the

Czech Republic and, of course, by my predecessor, the distinguished representative of Nigeria, both who had very good contributions to make to what Canada said.

The colleague from Nigeria suggested we come back to this this afternoon. I think that would be entirely possible so what I would propose is as follows. We could come back to this this afternoon as an item of the agenda and this morning we might want to continue with our agenda so that we do not, once again, find ourselves overwhelmed by the number of presentations that are scheduled.

So if everyone agrees, I would like to give the delegation of Brazil who, under a different item of the agenda, under Other Matters, will be presenting CRP.15.

Mr. C. E. DA CUNHA OLIVEIRA (Brazil): Thank you Chairman. At the end of the last session of the Legal Subcommittee, my delegation took the floor in order to anticipate some elements of what would be a proposal for the inclusion of a new agenda item on the agenda of COPUOS, on the agenda of this Committee. My delegation explained back then that that proposal would be further elaborated and that informal consultations would continue to be held with a view to its possible presentation during the current session of the Committee. Indeed, Chairman, my delegation has continued to undertake such consultations. The proposal has received comments has raised questions, has elicited suggestions which have improved its quality and clarified its scope.

I wish to convey my acknowledgement and my gratitude to all delegations which have contributed to this process.

On a personal note, Chairman, the open and constructive spirit displayed by these delegations are, to me, a clear demonstration of the value of this Committee, as a global forum for discussing and exchanging ideas which are of vital importance to all our countries.

I also personally believe that these goals, in line with predicament, that you and that some other delegations which took the floor some moments ago, did as regards the future activities of this Committee.

Chairman, my delegation has already reiterated _____(?) informal consultations the main elements and rationale development(?) of the Brazilian proposal. This proposal, as you have pointed out, was circulated through the Conference Room Paper Number 15. This notwithstanding, and since this

is the first time that the proposal is formally submitted, I would kindly ask for your indulgence to go again through its main elements. And I wish to begin by its rationale.

The first point I would like to call to the attention of this Committee is the following.

Capacity to use geo-spatial information is critical to a range of activities having a direct impact on sustainable development. I think I do not need to elaborate on this topic. Doing that would be to preach to the already converted. But that does not mean that there would be no more room for another convergence, if you allow me to continue on the same note. Many delegations had emphasized in the course of this session the need to further strengthen the links existing between the activities of COPUOS and those of the Commission on Sustainable Development. The distinguished Chilean Ambassador, and it is a pity that he could not be here at the moment, rightly pointed out the existence of clear references in the Human Development Reports to the role played by space-based technologies in the achievement of higher and sustainable levels of development. Agenda item 13 also draws our attention to the recommendations of the World Summit on the Information Society.

What lies behind these interventions is rather a request, a call for more international recognition and I would stress this part, international recognition to the links between the use of space-based technologies, and I would highlight in this particular, the use of geo-spatial data and the achievement of sustainable development.

By bringing this issue to the consideration of the Committee, my delegation also wishes to give it more international recognition. In Brazil, in my country, there is a saying that goes as "one who is seen, is recalled". That this issue can be more widely seen and consistently recalled at this global forum is an important part of the rationale that Brazil attaches to this proposal.

Part Number Two. The experience of countries which have emerged in the last two decades as effective users of geo-spatial data makes a compelling case for expanding international cooperation in this field. It is never too much to recall that Brazil provides a good example in that regard. Brazil was the second country in the world to have built a LandSat Ground Receiving Station. The establishment of Ground Receiving Station and the cooperation provided to Brazil to that effect

represented _____ (*not clear*) of the capacity that Brazil has achieved in this field.

Together with the technical infrastructure came(?) (CANE?), in our case, and this ethic to create and capacitate human resources. Brazil realized in subsequent years that a combination of technical infrastructure and appropriate human resource would also require improvements in our own institutional framework regarding the formulation and implementation of activities in this field.

The reference "The Brazilian Experience" is important to illustrate that international cooperation to promote capacity use of geo-spatial data is not something new. I will highlight this point as well. In the Brazilian case, it dates back to the early 1970s. International cooperation has been promoted by many governments on a bilateral level. I could refer in the case of the Americas to Canada which actively promotes initiatives in this field, to the United States which actively promotes initiatives in this field. It has been part of initiatives on the regional and international level as well. Some of them within the system of the United Nations.

Some of these experiences might have proved to be successful ones. They could provide a set of examples of practices, of good practices, which could be further disseminated and replicated. Sharing information about these practices might contribute as well to a better coordination of efforts amongst key stakeholders, building up synergies and improving the efficiencies of these initiatives of cooperation.

Third point. This notwithstanding a large part of the globe still lacks the human, the technological and the institutional capacity to benefit from the use of geo-spatial data.

This is not new to use. Despite the role played by the capacity use of geo-spatial data as a means to promote sustainable development, despite the compelling examples, the successful examples of international cooperation exist in this field, despite recommendations emanating from conferences such as UNISPACE and the World Summit on Sustainable Development and their respective follow-ups, a significant number of countries still lack the human, technological and institutional capacity benefits from the use of geo-spatial data.

Now comes the proposal. The title of the proposal, as other delegations have already had a chance to see, is "International Cooperation in

Promoting the Use of Geo-Spatial Data for Sustainable Development".

I would like to draw the attention of all delegations to a particular point in this title and this is the use of the expression "Geo-Spatial Data". Some delegations expressed concern about the use of such an expression. Those delegates who attended the last session of the Legal Subcommittee might remember that the same question was addressed to my delegation on that occasion. And we conveyed our view that geo-spatial data, at least this was our understanding, is data about the Earth provided by space-based options.

Other delegations pointed out that this concept might be more encompassing and that it would be necessary to clarify what kind of data we are talking about. My delegation has absolutely no problems to clearly spell out what we mean by geo-spatial data in order to clarify this point and we would gladly accept any suggestion that other delegations might have in that particular regard.

I would invite delegates to look at the draft working plan. But before that, I would like to convey some words on the meaning of this non-paper of this now Conference Room Paper.

In the first part of that document, there is a sort of justification for inclusion of this new agenda item on the agenda of the Committee. The only purpose for the submission of such a paper is to provide inputs for the discussion of this issue during the current session of the Committee. What is crucial in this document is its title and its working plan. I believe that this is what would be _____(?), this is what would be contained in the report prepared at the end of this session.

And why I make this explanation. This justification is not complete. It might contain, I would daresay, some inconsistencies from a technical standpoint. The only reason for presenting this paper is to shed light on this issue, to explain to delegates in as many ways as possible as to why it would be important to bring this discussion to the attention of the Commission.

Looking at the draft working plan now, what we envisage, in 2007 is to help presentations by member States, observers and informal groups, the respective activities related to geo-spatial information for sustainable development. Here we see the use of the words "geo-spatial information" again. I have the impression from some of the informal consultations

that were taken by my delegation that this might deserve some sort of clarification.

In 2008, once we have gone through the link between the use of geo-spatial data information and sustainable development, we might focus on the other part of this situation(?), which is what kind of experiences or successful experiences can be utilized as inputs for the discussion on ways to foster international cooperation in this field. That is why we say here that we would convene presentations on experiences in establishment appropriate, infrastructure for collection for the processing application, of remote sensing data about the Earth provided by space-based objects.

In 2008, this is the second point, we would also have presentations on national capacity-building activities and their impact on the international market for Earth observation sensors and applications. And this is a fairly important point that my delegation also wishes to highlight.

What the Brazilian experience has demonstrated is that developing countries might will(?) a large market for remote sensing data for remote sensing application, a market that is not appropriately tapped because lack of capacity. So by creating capacity in this field, we might be nurturing a market for data. We might be nurturing a market for space-based applications. And this is an outcome(?) that might have possible implications as well to space-faring nations.

What I would expect to do in that regard is just to shed a different light on this question of international cooperation. This clearly seems to be a situation in which both sides would have a lot of terrain(?).

And the last part of this draft working plan, in 2009, we wish to bring to the attention of the Commission, the evaluation of activities related to, within the United Nations system, related to the use of geo-spatial information for sustainable development and to consider ways to highlight the links existing amongst those activities and the means to give them stronger international recognition.

We believe that this goes truly in line with many of the interventions that were made in the course of the current session of the Committee. It goes in line with the talks that are being currently undertaken as regards the very reform process of the United Nations and we think it might be important to bring the attention of the Committee to this issue.

And the very lasting part, we might consider the possibility to draft recommendations on this particular issue that is contained in the proposal.

Chairman, I am sorry for having taken a long time to make this presentation. My delegation is ready to receive any inputs that other delegations might have in that regard. And with your(?) permission, if you think it might be necessary to convene on the margins of this session in order to come up with a final text for this draft working plan, my delegation would also be willing to engage in such a discussion.

Thank you.

The CHAIRMAN (*interpretation from French*): I thank our colleague, the delegate of Brazil, for having presented this proposal, a new item on our agenda, but one comment which is important.

The word “geo-spatial” in French, at the very least, does not mean data which comes from space but data on space. So the translation into French would be “geographical information of space origin” because the word “geo-spatial” is used by colleagues who deal with the geographical field as meaning information on geographical space. It has nothing to do with outer space. So there is a sort of disconnect between these two. Of course, I am not competent to say that this exists in Spanish or in English or so forth, but in French at the very least. And Dr. Camacho, who is always quick off the mark is pointing out that even in English there is some ambiguity and we would avoid it if we said “the use of space-derived geo-spatial data”. And in that case, it would be absolutely clear that it is geographical data which is derived from space. And nobody(?) had an opportunity to discuss this with our friend from Brazil in the past.

I would have a second comment which, craving your indulgence, will take the form of a question. I know that the Chairman does not usually put questions to the delegations but it is too late to teach him new tricks. The reference in your document to Earth observation and remote sensing is present but when we refer to geographical data or information, we also use space-based positioning techniques. And I think that if we were to retain this proposal, it would perhaps be useful to ensure that it is quite clear that it is all the space systems which can contribute to the generation and the updating of geographical information, which must be taken into account, so not only Earth observation systems but also positioning, navigation systems. And I see, to my great pleasure, that a number of our colleagues seem to be in agreement with this.

This was just to clarify matters but, of course, this is no comment on the substance of the matter.

Would any other delegations like to take the floor regarding the Brazilian proposal?

Canada perhaps?

Mr. J. BARRETT (Canada): Thank you Mr. Chairman. I will be using geo-spatial in the sense of space-derived data. Thank you for that clarification. So whenever I say geo-spatial, everyone will do the flip(?) and the translation.

Mr. Chairman, the proposal by the distinguished delegate of Brazil is interesting and I thank him very much for the extremely clear and careful presentation and explanation of the proposal.

We appreciated also the care and effort taken by the Brazilian delegation to bring this proposal forward for the consideration of the Committee. And we have reflected very carefully and consulted carefully on it.

We agreed with the basic premise that there is a need for geo-spatial infrastructures in countries and that it is necessary to effectively collect and share geo-spatial information.

We also agree that capacity-building is essential. Canada is presently active in the area of capacity-building by sharing its experiences with a number of countries, such as Thailand, India, Tunisia and Senegal. We have also had discussions with other countries that do similar capacity-building such as Chile and Brazil.

Mr. Chairman, let me explain our approach to this proposed agenda item. Geo-spatial data is more than space-based data. It includes, for example, the field data, traditional maps, other vector and raster data different from images.

National Geo-Spatial or Spatial Data Infrastructure, well known under the name SDI, covers many areas like mapping, web-mapping, GIS, database, data-sharing, data standards and policy. Space-based matters under SDI represent no more than 10 per cent of its activities.

So we, therefore, conclude that, as proposed in the paper under consideration, the international cooperation in promoting the use of geo-spatial data for

sustainable development, that this, with respect, does not fall under the COPUOS mandate.

If the idea behind this proposal is to share space-based data for sustainable development, this could be done using the United Nations Space Applications Programme and/or the implementation of UNISPACE III.

There are a number of existing information fora where countries undertake discussions regarding the implementation of geo-spatial data infrastructures. And the creation of another multi-lateral forum could lead to significant overlap and possible duplication.

One of the more prominent of these existing fora is the Global Spatial Data Infrastructure Association which I will refer to GSDI. The mission of the GSDI is to: one, serve as a point of contact and effective voice for those in the global community involved in developing, implementing and advancing spatial data infrastructure concepts; two, to foster spatial data infrastructures that support sustainable, social, economic and environmental systems integrated from local to global scale; and three, to promote the informed and responsible use of geographic information and spatial technologies for the benefit of society.

The GSDI also has a number of working groups that look at specific issues and we note that Brazil's National Institute of Space Research is a member of the GSDI.

And there is also a Permanent Committee of Spatial Data Infrastructure for the Americas which also has a similar mission but whose membership is limited to North and South American countries. And the Institute of Geography and Statistics of Brazil is a member of this organization.

In Africa, the United Nations Economic Commission for Africa, through its Development Information Service Division, is helping to develop the National Space Infrastructure in African countries. And, every two years, this Division organizes the Committee on Development Information Conference, where SDI is the principle focus.

The Committee on Development Information is one of the seven subsidiary bodies of the United Nations Economic Commission for Africa, established in 1997 by the twenty-third meeting of the Conference of African Ministers responsible for Economic and Social Development and Planning. As a subsidiary body of the Commission, the Committee on

Development Information provides policy and technical guidelines for the sub-programme(?) entitled "Harnessing Information for Development".

Mr. Chairman, this proposed agenda item could, therefore, in our view, duplicate or possibly dilute tasks done by international and regional institutions as well as tasks carried out under existing multi-lateral collaboration agreements between countries and institutions. For example, Natural Resources Canada has been in discussion with Brazil to share experiences on geo-spatial data infrastructure. This collaboration, which has resulted in the signing of an MoU just last week between the Institute of Geography and Statistics of Brazil and Natural Resources Canada, will have as a first activity the sharing of information regarding the governance model that Canada has used in setting up our spatial data infrastructure and in developing our Geo-Connections Programme.

So with that, Mr. Chairman, those are some comments that the Canadian delegation would like to bring to the attention of the Committee on this proposal.

The CHAIRMAN (*interpretation from French*): I thank the distinguished delegate of Canada, Mr. Barrett, for his statement and his comments on the Brazilian proposal. The delegation of Brazil would perhaps like to respond or share its comments?

Mr. C. E. DA CUNHA OLIVEIRA (Brazil): Thank you Chairman. I will try to be brief so as to give to all the delegations the possibility to also take the floor under this agenda item.

The Canadian delegate made some important remarks and I would like to make reference to them.

He correctly pointed out that Brazil is engaged in a series of initiatives of cooperation in order to improve its capacity in the utilization of space-derived, but not only, also other sources of geo-spatial data, as a means to promote its sustainable development.

He also pointed out the important dialogue that exists between Brazil and Canada in this particular field and this is something that is welcome and appreciated by my government.

As regards the possibility that issue might fall outside of the competence of this Committee, I would like to call the attention of the Committee to what issue we are really discussing at the current point.

It is true that initiatives in this field, the field of capacity-building, the use of geo-spatial data as a means to promote sustainable development, are being undertaken by different countries, by different mechanisms, either on the regional or the international level. Some of these initiatives are also undertaken within the framework of the United Nations.

But my point here is the following. In spite of these initiatives, are we being able to provide the necessary international recognition to this point?

Second, some of these initiatives might be important and successful and meaningful but COPUOS is a global forum. Should we take advantage of this fact in order to receive information about these initiatives in order to have a better grasp of their implications in order to better learn from their successes so as to further promote international cooperation in this field? This is the question that my delegation thinks could be addressed by the Committee once it accepts inclusion of this new agenda item.

Another point that was raised by the Canadian delegation is that bringing this expression to the Committee might represent and might create an overlapping with other initiatives undertaken on the international level. Chairman, here we are not talking about any concrete initiatives in this field. What we would expect to promote is a debate on this issue so as to keep more political momentum so as to achieve a high international recognition and hopefully so as to draft a set of recommendations on how we could better promote international cooperation with a view to building up national infrastructure to use geo-spatial data.

I would conclude for the moment. It seems to my delegation that this is an issue that could well deserve the attention of the Committee. The main aspect and the main component of the mandate of the Committee is the promotion of the peaceful uses of outer space. The Canadian delegate during his past intervention on the future role of the Committee made a quite interesting remark about a difference that would exist between applications in outer space, the issue(?) applications in outer space, and I am sorry, I am quoting the Canadian delegate, but actually I was unable to do that appropriate. But this is a clear example of an activity which would strongly benefit from capacities existing in the use of space-derived data and, therefore, my delegation believes that this is an issue that could well elicit the support and the consideration of the Committee.

Thank you.

The CHAIRMAN (*interpretation from French*): Thank you to the distinguished delegate of Brazil for those comments in response to the Canadian proposal.

We are running short of time. It is 12.35 p.m. so it is going to be hard to meet our schedule but I will still give the floor to the delegation of Venezuela but I will stop the discussion after Venezuela's statement so that we have time for the other two technical presentations that are scheduled for this morning.

You have the floor Madam.

Ms. N. ORIHUELA (Venezuela) (*interpretation from Spanish*): Thank you very much Mr. Chairman. I will try to be brief.

First and foremost, I would like to thank the delegation of Brazil for their initiative with regard to a new item on the agenda. This delegation believes that the proposal put forth by the sister Republic of Brazil is a very interesting proposal. It is relevant. And we think it is very much in line with paragraph 32 of the Secretariat's proposal and paragraph 3 on Future Activities of the Committee, Proposals for Work.

It is very important that in this Committee we have options for programmes such as that being presented at this time by Brazil. Not only does it renew and bring new blood into our activities but it also brings us in line and harmony with the world activities, it updates us. Increasingly, we see the interdisciplinary nature of the tasks before us, those of us who live on planet Earth. It is increasingly difficult to establish areas where skills and competencies are exclusive to one or another working group. Increasingly, we have common ground and overlapping areas of interest. Often we have initiatives that involve other actors. And yet I think I have to repeat what I argued yesterday and that is that I am convinced that we have substantive contributions to make and, of course, we have not the in-depth review yet of the proposal. No doubt, it will need to be refined and I fully agree with what the Chairman said in that regard in terms of terminology and other refinements and the need for broadening it so that it can include other elements that might be excluded from the current text of the proposal.

But, having said that, I do not see that that is in contradiction to initiatives from other institutions or parts of our institution. And indeed, I believe that it is a very worthwhile contribution and it is an excellent opportunity in this Committee to open up new avenues

to work and cooperation that are directly linked to increasing the quality of life of the inhabitants of Earth in a truly sustainable manner.

Thank you.

The CHAIRMAN (*interpretation from French*): I thank the delegation of Venezuela for that statement. As I said earlier, we will stop the discussion on this item at this time but we will resume it this afternoon so we will have time to discuss item 14 and the various sub-items later this afternoon again.

Technical presentations

I would now like to move on to the technical presentations.

I will now give the floor to Madam Yolanda Berenguer from UNESCO who will be speaking about the "Update on the Space Education Programme of UNESCO".

You have the floor Madam.

Ms. Y. BERENGUER (United Nations Educational, Scientific and Cultural Organization) (*interpretation from French*): Thank you Mr. Chairman. First, I would like to congratulate you. It is better to congratulate you late than never. On behalf of UNESCO, we would like to extend our congratulations on your election to chair the Committee.

Secondly, UNESCO wishes to express its condolences to the Indonesian Government due to the natural disaster which took place at the end of May and which led to thousands of dead. And we would hope that stability will be returned as quickly as possible.

(*Continued in English*) I have the pleasure to update the members of COPUOS on the activities of the Space Education Programme. Last year, I gave a presentation on the Programme but first I would like to just remind the members of what the Programme is all about.

It was launched in 2002 based on the recommendations of two World Conferences, the World Conference on Science and the UNISPACE III. And these are the objectives of the Programme: to promote the enhancement of space-related subjects and disciplines in schools and universities; assist teachers and educators, provide them opportunities to improve their knowledge and develop their skills in space-related areas and this means providing them access to pedagogical materials, appropriate to their needs;

lastly, UNESCO promotes raising public awareness of the important contribution of space-based system to the development of society.

The overall objective of the Programme is to contribute to the preparation of the next generation of space workforce. UNESCO has 119(?) member States and it is a tall order to carry out this and we do our very best in cooperation with space agencies, space-related institutions, NGOs and associations.

These are the three focuses of the Programme: space science, space and aeronautic engineering and space technology applications.

What is our *modus operandi*? We organize space education workshops, at the moment targeting students and teachers at secondary level and what we do is we organize it in several cities in one country to reach the most number of students and teachers. And we bring a team of space experts and these are experts from space agencies and from space-related institutions. We also donate portable telescopes in cooperation with Meade Instruments Co. and the National Space Society "Permission to Dream" Initiative.

And at the end of our workshops, we sit down with the local authorities and draft pilot national space education programmes. The objective of this activity is there would be sustainability of our workshops. And so far, we have been very successful in this. You will see below the list of countries where we had undertaken the workshops, in the Philippines in October 2004, Nigeria in May 2005, Colombia in October 2005 and most recently in Viet Nam. You would also notice that this is done by geographical distribution. We try to organize the workshops at least twice a year, depending on the demand of the member States and also within our financial budget.

Let me just point out that concerning the team of space experts, you can see that there is, we had cooperation with the French Space Agency, with JAXA and this is also in cooperation with the Japan Space Education Centre, as you heard already yesterday from Ms. Chiku.

What we do actually is we bring the experts there. Depending on their expertise, we come up with a list of space topics that they would talk about. Of course, this is a raising awareness type of activity so they can talk about Moon exploration, human exploration, Mars exploration, astronomy, remote sensing for primary and secondary students and the

topics would depend on the experts that participate in our workshops.

The telescopes, normally bring about six portable telescopes, with the idea of encouraging the recipients to carry out roving courses, that is to organize studies in nights(?) in remote areas. Instead of leaving the telescopes in one area, it would be better to carry it around to be able to reach out to as many students as possible.

And then, as I said, for the National Space Education Programme, the idea is to make this as a blueprint of space activities in the country. At the moment, of course, space activities are carried out in an informal way but the overall objective is to have this integrated, to have space-related subjects and disciplines integrated in the curricula on a longer term.

Now concerning our workshops, we will be holding in September in Tanzania and the Government of Tanzania has just signed a Memorandum of Understanding with UNESCO on the reinforcement of its educational institutions, in particular the University of Zanzibar. So we invite the participating organizations, as well as space agencies who would like to attend and join us in this workshop. We could look into coming up with an agenda on this.

In 2007, we are looking into organizing workshops in Ecuador, in Syria and in a Pacific island, most probably in Fiji and we have not considered yet our workshop in 2008.

The comparative advantage of UNESCO's workshops is that we are involved with the National Commission of UNESCO which is made up of the representatives of the Ministry of Education, Science and Technology, the Ministry of Foreign Affairs, the Ministry of Culture and Communication.

We also, in view of our network of science institutions, we get in touch with the local national planetaria, observatories, science centres, museums and space-related NGOs.

On the primary level, we carry out awareness-raising activities, such as contests, and at tertiary and post-graduate level. And for professionals from young and mid-career professionals, we try to cooperate with the universities and training centres that organize post-graduate courses so that these students from developing countries could be provided opportunities to enrol or participate in these training courses and workshops. And some of these in centres are ITC, the International Space University, the UAM, this is the

Universidad Auto_____ (?) de Madrid, and GFZ of Germany.

With regard to the United Nations-affiliated Regional Centre, CRECTEALC in Brazil-Campus, most recently we discussed the possibility of using the Centre as a teacher-training centre. We are focusing at the moment the possibility of training teachers because we believe that teachers are the main drivers of all this and they should be trained appropriately.

Now here are some pictures that took place during our workshops. This is in the Philippines. These are the telescopes. You can see here they are small ones, really easy to carry around and they were received officially by the Director of the Science Education Institute and the gentlemen on the left is the President of the National Space Society. These are just students lining up for the telescope, having a look at the telescope in broad daylight, the experts brought the sun filter just to give a demonstration of how the telescope should function and how they could take advantage of it.

In Nigeria, we have a representative of Ahmag(?) Planetarium demonstrating hands-on activities, making use of a simple device to demonstrate rocket launching.

We have actually the university Professors who are quite interested as well so they came and attended the workshop.

This is in Brazil. The Minister of Education of Brazil received the telescopes herself. She considered it a very opportune occasion to thank UNESCO for this and she, herself, came to receive the six telescopes that we donated to the Colombian Government.

This is our latest workshop. This was held in Viet Nam.

So other international mechanisms through which UNESCO works through to be able to promote space education is through the CEOS Working Group on Education and Training. UNESCO chairs this Group at the moment until next year and these are our activities. We would like to reinforce the Education Portal where there is a lot of educational resources, space-based resources at the Portal.

We are also looking at organizing an educational activity in November 2006 in time for the CEOS Plenary which will take place in Argentina.

UNESCO is a member of the IAF Space and Education Outreach Committee and in Valencia, where the International Astronautical Congress will take place, there will be a Workshop on Space Exploration Education and we will be discussing how to get educational materials available for everybody and representatives of the countries where the workshops took place will be invited to attend this Workshop as well, including some countries in developing countries. Of course, space agencies, such as NASA, ESA and JAXA whom we presume have a lot of educational materials, will be presenting their materials during this occasion.

The United Nations Office for Outer Space Affairs will be sponsoring the participation of some of those who will attend both the United Nations-IAF Workshop and this Workshop.

The Asia-Pacific Regional Space Agency Forum will hold an event in Jakarta in November 2006 and UNESCO and JAXA and the Space Education Centre are looking into organizing a similar Space Education Workshop. This will be in cooperation with LAPAN(?), which is the space agency of Jakarta.

UNESCO is also a member of the GEO Capacity-Building Committee and there was a workshop in Brazil at the end of May and we looked into these two special tasks of the work plan of GEO. Number one is to identify existing and planned capacity-building activities and gaps. And secondly, to promote the use of best practices in cooperation with specialized agencies.

We actually are at this very first stage of identifying the best practices and eventually the role of this Committee is to replicate this and to implement it in developing countries. And the most important role of this Committee is to identify gaps and fill in the gaps so that there would be an integrated global observation capacity-building way of implementation.

I would just like to remind the members of COPUOS that the United Nations Decade on Education for Sustainable Development started in 2005 and will go on until 2014. And the three pillars of sustainable development, as we all know is economy, society and environment. Now the United Nations Decade on Education emphasizes on quality education. It is what is quality education, that is, the critical thinking process, the problem-solving skills and the participatory decision-making skills are well developed among the youth. And we believe that space studies does indeed qualify these type of skills and process.

Lastly, UNESCO is, as I said last year, promoting the International Year of Astronomy in 2009 and a proposal has been submitted to the United Nations General Assembly. This will be discussed this year at the United Nations General Assembly for it to be declared as the United Nations-declared International Year of Astronomy.

To end my presentation,, Mr. Chairman, I would just like to refer to agenda item 11 on Space and Society. The last paragraph says “the Committee, the forty-ninth session, should prepare a brief document on the role of space and education, as well as the link between space and education for transmission to the General Conference of UNESCO”. Next year is the General Conference of UNESCO, October 2007. So maybe this, now is the time to come up with this brief document and we would like to invite the Chairman or his representative to present this document during the General Conference of UNESCO.

Thank you for your attention.

The CHAIRMAN (*interpretation from French*): Thank you Ms. Berenguer for that very complete presentation on UNESCO’s Space Education Programme and also for recalling to us that the Committee needs to present a document at the UNESCO General Conference next year on the subject of education in the context of a larger item, Space and Society.

We have a request for the floor from Ecuador, I believe.

Ms. R. VÁSQUEZ DE MESSMER (Ecuador) (*interpretation from Spanish*): Thank you Mr. Chairman. I will be very brief in view of the time. And I am speaking here for Colombia and on behalf of Ecuador, of course. Just to thank Madam Berenguer for her excellent presentation. Indeed, UNESCO is becoming one of the main players in the area of space education. And, on behalf of Ecuador, I would like to extend already our gratitude for the cooperation that they have provided us and the holding of seminars that we will be having next year. They have helped us already a great deal in working towards that.

UNESCO has helped us achieve the dreams of our young people in Ecuador who look to space.

Thank you.

The CHAIRMAN (*interpretation from French*): Thank you to the distinguished representative of Ecuador, also speaking for Colombia.

And I believe that we can now move on to the last presentation, Mr. Suresh, on the “Effective Utilization of EDUSAT for Education in India”.

Mr. B. N. SURESH (India): Thank you Mr. Chairman. I am indeed honoured to present on the effective utilization of EDUSAT for Education in India to this forty-ninth United Nations COPUOS.

As you are all aware, EDUSAT is India’s first exclusive educational satellite. In fact, we made a detailed presentation to the Scientific and Technical Subcommittee last year about the EDUCAT, its features.

Just to recapitulate. We launched this EDUSAT on 21 September 2004 and this is essentially built to support and enhance the educational efforts in India. And also we have configured exclusively to meet the educational needs of India.

As you can see in this Figure, it has five Spot Beams. You can see that green on the top and upper region, light blue on the left western region and dark blue right at the bottom, the southern region and light violet in the eastern and the north-eastern region is shown in the slightly brownish colour.

We also have one National Beam in Ku-Band, two channels, one National Beam in Extended C-Band, six channels.

What are the objectives with which we started? In fact, about providing the effective training for the teachers. We envisaged the curriculum-based teaching in several regional languages because we have a multiplicity of languages in India. And because of the outreach to the rural areas, we wanted to have a greater participation as well as monitoring.

When it comes to the higher and professional education, we need to have the quality resource persons and we need to provide access. And because the distance education efforts on the _____(?) of there in the country but then we wanted to strengthen through this tele-education. And as you are aware, we have the north-eastern region, the islands, like that you have every nook and corner, we should be able to reach through education. And, of course, the new technology of video and audio connections will enable, will enthuse the students to really look at education in a proper way.

Now let us just take a look at the education scenario in India. We have given a major thrust for the

education in the last few years from not only the national government but also the governments of the different States. It has set up enrolled(?) a lot of interest in all rural areas so that has brought a substantial increase in the educational institutions as well as the students enrolment, particularly at primary and secondary levels.

In fact, the next two bullets will give you these statistics. In fact, there are more than 6,40,400 schools, 210,000 upper primary schools and, of course, the numbers are varying in terms of secondary and higher secondary, colleges and universities.

And as you can see, the number of students enrolled in primary, upper primary, secondary and higher secondary schools. The numbers are indeed quite large.

And also as I told, since there is a thrust to the whole activity, particularly in the rural areas, there is a continuing trend to help the enhanced primary and secondary education and also that requires additional new teachers and new school units.

And another important thing is industrialization has brought changed in our outlook, the way in which we help to held this syllabus, particularly in the higher and professional courses that has to be properly looked into. And with all this, you can see that when things get _____(?), it is very difficult to get the equal number of qualified teachers to meet the demands that are put.

These just outline how the network connectivity has been made. In fact, you can see right on the top the education concept is quite clear to all of you. You have a teaching gang, you have a classroom, a number of classrooms, of course, connected both by video and audio. We have a hub situated in the State capitals of each of the States and, of course, all necessary associated technologies are available.

Then you have the satellite, in fact, what is mentioned at the SIT(?) in the middle what you see which covers the higher secondary and university. You can have it interactive, both ways dialoguing. The one on the right is the receive-only terminal which has just one way communication. This is essentially mindful(?) various schools so that the cost of the whole implementation is brought down.

Who are the user agencies? As you are aware, in India there is a federal structure with about 28 States and about 10 union territories and a number of islands, about two to three islands, so the education is a State

subject. So obviously, at State level you have the universities, the higher secondary schools, State Education Department, Open Universities, vocational institutions.

So also at the national level, you can see that the national level autonomous institutions, Open Universities, and as well as the continuing education in government and private sectors and, of course, the professional institutes. These are the _____(?) agencies.

Now let us look at how it has been implemented. One is that we need to have a proper coordination set-up. What we have done is we have set up a kind of network with joint efforts by the Indian Space Research Organization. Of course, the Ministry of Human Resource Development were responsible for education. They are part of that. We have involved the technical universities and departments and, of course, all concerned State Governments, they are part of that.

We have created an Internal Project Team who really execute the task and carry out whatever is required. There is a Project Management Board who will oversee the activities, provide the necessary guidelines, both technical as well as resources. Then you have the Project Management Council which sort of decides on the policy guidelines on both technical as well as the resources required to implement it appropriately.

Or in the above, we have an Apex Body which is the Inter-Departmental Project Review Board. This again involved ISRO, the government agencies, educational agencies so that the interface(?) with various agencies are properly harmonized and we are able to carry out the task as planned.

This is just to show that the five regional terminals to cater to the regional needs because languages are different. You can see the North, the West, South, East and the North-East. Already all of these are all operational. Whatever is shown, there are the number of uplinks and the number of terminals and you can see that more than 52 uplinks are available and more than 4,074 terminals are available.

These are the national terminals. You will see that the broader light green is the one which encompasses the whole country. So this national link, this can give in any one particular language all through the country. It does about nine uplinks and more than 1,452 terminals and all of them are operational today.

Now let us look at the current utilization scenario, how it has been utilized. More than 21 different networks have been made operational today and we can say that for the most part of the country we have connectivity and we have given special focus, particularly in accessible areas like Jammu and Kashmir as well as the North-Eastern regions. There are seven States geographically particularly difficult to go there. And also among the _____(?) and _____(?) islands which are far apart from the mainland.

You can see that today we have more than 4,500 virtual classrooms and around 3,500 are receive-only terminals is benefiting now more than 200,000 students. In fact, what you see in the picture is just one of the rural areas where the students are attending this virtual classroom.

Now, we can see that what are the real multiple uses it has been put. _____ (*not clear*) primary education becomes important. Today we have more than 12,500 terminals linking to different rural schools at different States, including the islands, and they have more than 3,400 terminals for the secondary and higher education. This also covers almost all regions and remote areas.

Science and technology education has got the needed importance and have introduced more than 5,000 pilot terminals. This almost links with many of the prominent institutions of higher learning, technical and open universities and up in that area there that the Indian Institute of Technologies are the jewels in the technology education. They are all linked using these particular satellites.

Let us come to the medical education. This is another important area. Today, we have more than 800 nodes. It connects prominent medical colleges as well as experts from super speciality hospitals so that it is possible to get the advantage of their knowledge imported to students, particularly in the super speciality areas.

Training of teachers. This is another important area particularly for primary and secondary education. This has been fully established and linked in with the remote areas.

Another area we have _____(?) is nurses training. More than 15,000 nurses in the State, particularly in Kerala in the Southern region. It has been fully established because after they are trained, they, in fact, look for going out alone, not only in the

country but even outside the country or looking for various support.

Another very interesting thing is the Gujarat in the Eastern region. Blind Schools have been connected and it has become very effective to impart education for all levels(?).

Another important initiative that we have done is, we have established an Indo-US network and there is a hub in Coimbatore. It is done by _____ (*not clear*) for higher technical education. Today, in fact, it is very effective.

Now let us look at what are the key factors for effective utilization. One important thing is that we have identified first who are the major players. As I told earlier, State Governments, educational institutions and, of course, all concerned agencies who have identified them. Then you have the consultations with all of them to arrive to generate a mutually agreeable road map that exists with us today. This again important factor is the configuration. In _____(?) one, the one given below, for example, defines what is the configuration and _____(?). So what is involved in that? This you need to define appropriately. You have to set up the ground segments and the key factor is to bring it as a cost-effective, otherwise it is not going to work. We have done that in the country and also it should be commissioned timely, that is important.

The next topic that we are concentrated is that the concept. We have to familiarize with respect to users, they are the ones that are going to use it on a long-term basis. They have to understand at least the needed technology to run it and how to implement it, the process of implementation has been properly given.

Continuing with the key factors, network management, its operations then how to really maintain it trouble-free and also human resource training. We have really concentrated on this particularly area which has helped us a great deal.

The very important factor in all education is the content generation. Any information or any subject you teach, it depends on how well the content is generated and it is communicated. It is important to make it very informative and interesting to the audiences. We have sought the help of specialists to generate the content in each of the subjects and well prepared packages are available, they are utilized.

Of course, last but not least, is the monitor, how well this system is utilize, what is the attendance,

what are the performances that is being done and how to carry out the improvements. This is the one, because they have just introduced the one of them, I showed you earlier is the teacher training(?), these are the remote classrooms. What is the configuration? Basically, this is to see that how well the network is managed.

Of course, what is the future expansion plan? I think India being the _____(?) country, we are sort of looking very seriously to expand it to cover the entire country in a matter of maybe one to one and a half years. And also our aim is to class 500,00 students and out of which 300,000 will be in primary school. Of course, the funding we have a total mechanism that users will bring it(?) to set up the networks as well as ISRO content(?), we provide the technical support by providing the needed bandwidth.

Of course, we are also seeking the help of the Ministry of Human Resource Development, or the key agency for education in India, to come up with centrally-sponsored scheme so that this can be expanded to different States. Of course, we will make an attempt to enhance the future bandwidth for the space segment from our side.

I think this is important. Plato said somewhere in 427-347 B.C., I will just read it "Someday, in the distant future, our grandchildren's grandchildren will develop a new equivalent of our classrooms. They will spend many hours in front of boxes with fires glowing within. May they have the wisdom to know the difference between light and knowledge."

And I have just one small video which runs for about 90 seconds, just to give an idea how it will look like.

This is just to show you the various band coverage, regional, the National Beam, how it is covered and, of course, the Extended C-Band, what is the coverage of that and, of course, the hub that _____(?), the satellite interactive terminal, C-1 terminal and how really it affects you covering the various _____ (*not clear*) activities because this shows some of the areas where it is been taught, in fact, it is one of the classrooms. You can see that. Of course, this _____(?) just community development towards that, how it is really contributed.

Here, it just shows one classroom which is somewhere in the State of Maysore(?), just a view, I think the teacher is sort of taking care. What is interesting is that, coming through the video and audio

has made it very attractive for all the primary school students, in fact, attendance has increased there, considerably because of our efforts and we hope that has really helped in enhancing the education, particularly in the rural areas. You can see the enthusiasm with which, in fact, they are trying to attend this.

So, I think with this we come to the end. Here, this is what you call a virtual classroom technology in EDUSAT for rural school. The acronym VICTERS is the one which was inaugurated by our President of India, His Excellency you can see there and it was done in the State of Kerala.

Chairman, before I conclude because we are discussion on the education, I will just take about a minute more. This is just to give the information to this Committee that, while my colleague presented yesterday on the United Nations Centre for Space Science and Technology, we were asked to give our budget details. I just want to give you information as to the facilities and infrastructure for this United Nations is concerned in terms of laboratories, hostels and other support buildings. So far, we have spent about US\$8 million. Of course, our annual operational grant for courses, students and other headquarters functions is about US\$6.1 million. Of course, experts, faculty, manpower deployed in this Centre by various host institutions, it comes roughly about US\$1.9 million. So far in the last 10 years, we have spent about US\$16 million. Also I would like to add before I conclude, per annum we spend about US\$1.8(?) million from the host country.

Thank you very much. Thank you for your kind attention.

The CHAIRMAN (*interpretation from French*): Thank you Dr. Suresh for that excellent presentation. It shows both the ambition of your satellite education, distance education programme in India and you gave us some interesting information about the magnitude of the problem since you have one hundred million students in your primary schools. The figures are absolutely extraordinary and I assume that they are growing. In any case, congratulations on the implementation of this very ambitious programme and for the information provided in terms of statistics and figures for the regional budgets and for the Regional Centre. And thank you for reminding us through Plato's quote that wisdom is not necessarily in proportion to the amount of light that comes out of the box.

Now, distinguished delegates, I would like to adjourn this meeting soon. I would like to remind you that we will meet again at 3.00 p.m. this afternoon. We will continue with item 8 of the agenda, Report of the Scientific and Technical Subcommittee, and we will continue with item 14, Other Matters.

At the end of this afternoon's session, there will be two technical presentations. The first by Mr. Igarashi of Japan on "The Japanese Programme on Space and Water Applications". And the second from Mr. Radhakrishnan of India on "The Use of Space-Based Systems for Water Resources Management in India".

And I would like to thank the interpreters for being willing to extend our session by 20 minutes this morning so that we could finish our programme of work. Thank you. I thank you most warmly.

Thank you Sir (*says the English booth on behalf of the interpreters*).

The session is adjourned.

The meeting adjourned at 1.20 p.m.