

Committee on the Peaceful Uses of Outer Space

Unedited transcript

571st Meeting

Friday, 8 June 2007, 3 p.m.

Vienna

Chairman: Mr. G. Brachet (France)

The meeting was called to order at 3.13 p.m.

The CHAIRMAN (*interpretation from French*): Ladies and gentlemen, representatives, please take your seats. I now declare open the 571st meeting of the Committee on the Peaceful Uses of Outer Space. I hope you were able to follow the two interesting documentaries that were screened during the lunch break and, on Monday, we will have a chance to see another two documentaries, this time provided by the United States.

Distinguished delegates, this afternoon we will continue and hopefully conclude our consideration of agenda item 5, ways and means of maintaining outer space for peaceful purposes. We will also continue our consideration of agenda item 6, implementation of the recommendations of UNISPACE III and 7, report of the Scientific and Technical Subcommittee on its forty-fourth session.

If time is available, we will begin our consideration of agenda item 8, the report of the Legal Subcommittee on its forty-sixth session.

At the end of today's afternoon meeting, there will be a technical presentation made by Mr. Sergiy Gushev of the Ukraine, the title is, Use of SKAKO (Automated System of Control and Analysis of Outer Space) for Observation of Space Debris.

May I also tell you that the Secretariat, this afternoon, has distributed a provisional list of participants, it is session paper 2. Delegations are invited to be so good as to check the names of representatives and to inform the Secretariat of any changes they need to make by Tuesday at the latest.

May we now go on and I hope we will finish item 5, namely, the ways and means of maintaining outer space for peaceful purposes.

On this item, I do not have any speakers but do any delegations wish to speak on agenda item 5?

If no one wishes to speak we can consider that we have concluded examination of that agenda item and we will move on to agenda item 6, that is, the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space, namely, UNISPACE III.

Distinguished delegates, I would like to continue with the exchange of general comments on the revised draft text for the Committee's contribution to the work of the Commission on Sustainable Development for the thematic cluster 2008-2009. You have received this as Conference Room Paper 4. It is also my intention to review this document, paragraph by paragraph, with a view to finalizing the Committee's contribution to the work of the Commission on Sustainable Development for the thematic cluster 2008-2009, hopefully by this afternoon.

My first speaker on this agenda item is the delegation of Canada, so I will call on Madam Anne-Marie Lan Phan.

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

Corrections should be submitted to original speeches only. They should be incorporated in a copy of the record and be sent under the signature of a member of the delegation concerned, within one week of the date of publication, to the Chief, Conference Management Service, Room D0771, United Nations Office at Vienna, P.O. Box 500, A-1400, Vienna, Austria. Corrections will be issued in a consolidated corrigendum.



Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) (agenda item 6)

Ms. A-M. PHAN (Canada) (*interpretation from French*): Mr. Chairman, this intervention is to inform you about the activities of Canada under our commitment to progress, the recommendations of UNISPACE III, more specifically, the work done under the working group 6 on improving public health services.

As you know, in public health there is a legitimate need for space services for remote medicine. Spatial techniques could improve public health by basing surveillance activities and the appearance of certain types of maladies, of sicknesses and, propagation of these sicknesses, of an infectious nature, as well as the continuous training of health experts. In Action Team 6 where Canada was co-president with the World Health Organization, the members then agreed that the team should concentrate on studying rapid alert mechanisms for infectious illnesses using space technologies. They recognized the importance of using tele-epidemiological practices to show the value that would be added in future work.

Other examples were given by the members and a basic model was proposed by the Expert in Space Applications, Madam Alice Lee, from OOSA, so that this could be used for the discussions in this Action Team. The members agreed to progress this work by setting up a list of tasks which would be assigned according to the areas of interest.

Mr. Chairman, following a consultation with certain Canadian ministers, the Canadian delegation would like to say it would wish to increase its support to the Action Teams and, in accordance with our other commitment, we will make available to the Action Team members an Internet portal which will be where information can be exchanged or discussed and then, the Public Health Agency of Canada (ASPC) has accepted joining up with the Research Centre on Communications in Canada and the Canadian Space Agency to offer its expertise in rapid alert in the case of infectious illnesses using geospatial data.

Let me now mention a few initiatives that might be of interest to the Committee. The ASPC has set up two successive versions of the Internet system for rapid alerts, it is called the RMISP, Global Intelligence Public Health Network. This is a unique system, it accepts in real time any kind of reports, 24 hours a day, 7 days a week, in seven languages, the

information is then filtered to see whether it is pertinent, then it is automated and so is very readily accessible to users of the RMISP, particularly the World Health and then NGOs and government services responsible for public health throughout the world.

To combat the West Nile virus and to protect Canadians the ASPC has developed a web cartography system which means you can better analyse where dead birds, infected by the West Nile virus, might have been infected. This is called HealthNet and this web application uses the Canadian Infrastructure for Geospatial Data (ICDG) and its common standards in terms of data and services.

Then there is a cooperative project between the ASPC, the National Resources Canada and the University of Guelph, has led to interesting results related to using satellite imagery for the vegetation cover in order to identify any kind of danger spots for this West Nile virus. Under the auspice of Epidemio, which is a programme, supported by ESA, a Canadian body called C-COR has been a partner in this programme and has supplied some maps of the capital of Angola, which has generated images from the satellite of very high resolution. The point here is that personnel at WHO can make efforts to survey this whole question of the Marburg virus and the contact with WHO has been maintained between C-COR and the World Health Organization, so there is support for these activities.

Under the initiative called TIGER of ESA, a project has made it possible to develop and demonstrate the usefulness of observation technology of the Earth to pick out natural habitats of mosquitoes and to, in some way, forecast malaria risks in Africa. Two Canadian bodies, C-COR and _____ (*inaudible*) Research, have been the leaders of this project, under a national project for dealing with malaria in Kenya. There is an interdisciplinary team here made of ecological experts, human health experts and tropical medicine experts as well as in the area of the ecology.

Mr. Chairman, under international cooperation, I would like to underline that the International Development Agency of Canada signed, this year, a four-year agreement with the Pan-American Organization for Health, which is called PAHO to support work in health within the Americas. PAHO is a regional centre of WHO. One of the programmes which it backs is preparing for pandemics of influenza, a very large Canadian delegation took part in this workshop, Canada/PAHO/Veterinary Health.

In the programme of the United Nations for the application of space technologies, under that framework, the CRC, that is the Canadian Research Centre, accepted that it participate in training pan-American groups on satellite technology for tele-health. This is something which will be held between the United Nations/Mexico and the organization on 25-29 June in Mexico and Canada will have a lecturer there.

Under the same programme, the Space Affairs Bureau has organized with UNESCAP, a regional expert meeting on surveillance and rapid alert systems for infectious illnesses, including bird flu, and we have been doing this using spatial techniques. The meeting will be held from 1-3 August, next, in the United Nations headquarters in Bangkok. Canada will take an active part in that meeting as co-Chairman of the Action Team and it will contribute, through its knowledge and its expertise, in this area. The point being to develop a regional network for surveillance and for establishing rapid alert systems for infectious illnesses in Asia.

I hope, Mr. Chairman, this has made it possible for you to get some idea of the very wide-ranging work and efforts that have been made by Canada in this area. Thank you very much.

The CHAIRMAN (*interpretation from French*): I thank Madam Lan Phan for that statement, giving us a picture of some very important activities done by Canada, together with Action Team 6, which was set up as a result of UNISPACE III. I am very happy to note that a training course has been organized in Mexico, this June, on the application of space technologies in respect of the use of satellites in the whole field of remote health surveillance. This will certainly help that Action Team's work to make progress so thank you very much for your contribution.

Now, and we are still on agenda item 6, I will now call on the representative of India, Mr. Radhakrishnan.

Mr. K. RADHAKRISHNAN (India): Thank you, Mr. Chairman. The Indian delegation places its appreciation for the excellent _____ (*inaudible*) made towards establishment of the United Nations Platform for Space-based Information for Disaster Management and Emergency Response (SPIDER). We are happy that it is functioning as a programme of the Office of Outer Space Affairs, here in Vienna, as an open network and activities are being planned and carried out in a coordinated manner through the consolidation of a network of regional support offices.

The Indian delegation specifically noted that the United Nations General Assembly resolution mandated our Committee to review the implementation of UNISPACE III recommendations until the Committee considers concrete results are achieved.

The establishment of SPIDER is one of the very classical examples of successful implementation of the UNISPACE III recommendations. We fully support the recommendations of the Working Group of the Whole of the Scientific and Technical Subcommittee to focus its discussion on the implementation of three actions called for in the plan of action identified in our report to the United Nations General Assembly, that is, maximizing the benefits of existing space capabilities for disaster management, maximizing the benefits of the application of global navigation satellite systems and enhancing capacity building in space-related activities.

Mr. Chairman, the Indian delegation is satisfied with the detailed work carried out by the Ad Hoc expert group in recommending the establishment of an open network for disaster management under the United Nations umbrella. The study carried out by the group _____ (*inaudible*) of disaster, like the pre-disaster preparedness with databases on countries and regions which face recurrently some natural disasters like floods, forest fires, earthquakes, etc.

We also note that the special approach of the Ad Hoc expert group to address on how to maximize the _____ (*inaudible*) of the existing mechanisms. The financial human resources and infrastructure support commitments made by member States during the last session of COPUOS and the Scientific and Technical Subcommittee were quite appreciated.

The Indian delegation would like to report to this Committee that, with the strong space application programme that exists in India, we would like to extend full support to the SPIDER network by way of creating a regional _____ (*inaudible*) in India and provide the necessary disaster manning services for the Asian region.

Mr. Chairman, we are happy to note that the General Assembly has agreed for reconvening of the meeting of the Working Group of the Whole to consider implementation of recommendations of UNISPACE III. The Indian delegation is prepared to participate and contribute actively to the discussions and activities under the agenda of implementation of UNISPACE III recommendations with the aim of progressing towards achieving concrete results in this area. Thank you, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you, Mr. Radhakrishnan for your statement which reflects your country's active support of the activities within the SPIDER platform.

I am looking to see if any other delegations would like to speak under agenda item 6. I see none.

We will then move on to the paragraph by paragraph consideration of Conference Room Paper 4, which is a draft revised text on the Committee's contribution to the work of the Commission on Sustainable Development for 2008-2009 and hopefully we will finalize this contribution by the end of this afternoon.

First of all I would like to recognize Mr. Hedman who is going to introduce this document.

Mr. R. GONZÁLEZ-ANINAT (Chile) (*interpretation from Spanish*): I would like to say something on a point of order. I am not receiving interpretation very well for technical reasons, I think. The interpreters in the Spanish booth are outstanding, it is a purely technical problem, the interpretation is not reaching me well through this earpiece. I thought we were examining a document we have here stated on the provisional programme but we are still on item 6. Item 7 is a report of a Subcommittee, personally I have a difficulty and I would like to ask the Committee, through you, could we have a brief as possible introduction of the Legal Subcommittee's report. If that cannot be done then I would submit to the general wish but here in the provisional programme it states that, there is no document here but perhaps there is a confusion due to the fact that there was a technical problem in this little earpiece that I am holding.

The CHAIRMAN (*interpretation from French*): Thank you, Ambassador of Chile. So that there is no doubt, I would like to recall that we are under agenda item 6, that is to say, consideration of the implementation of the recommendations of UNISPACE III and the document that we are going to take up now is Conference Room Paper 4. This is the document that we need to approve and that is about the Committee's contribution to the work of the Commission on Sustainable Development for the thematic cluster 2008-2009. Once again I am passing the floor to the Secretariat for an introduction of this document.

Mr. N. HEDMAN (Secretariat, OOSA): Thank you very much, Mr. Chairman. Delegations should have before them the document CRP.4 titled, Revised draft text for the Committee's contribution to

the work of the Commission on Sustainable Development for the thematic cluster 2008-2009.

The draft text contained in the annex to this document is a revised version of the draft document that was presented to the forty-fourth session of the Scientific and Technical Subcommittee and the document presented to the Scientific and Technical Subcommittee was contained in CRP.6 at that time.

The revised document also takes into account comments received during that session of the Subcommittee and the Secretariat would now be happy to guide you through the document and indicate the modifications and updates to the document.

On page 3, section 2, space contributions to thematic cluster 2008-2009, paragraph 6, the first paragraph on page 3, the last sentence has been added and it reads "regional and interregional cooperation and coordination often provides essential mechanisms for advancing such international efforts".

The next change refers to page 4, the first paragraph on page 4, which is a continuation of paragraph 12 and there has been inserted the locations of the regional centres and I will read that part that is new, on the third line "which are located in Brazil and Mexico for Latin America and the Caribbean, in India for Asia and the Pacific, in Morocco for French-speaking Africa and in Nigeria for English-speaking Africa", that is the new element.

The next paragraph, paragraph 13, is entirely new to this document and it has been inserted accordingly. The entire paragraph 13, on page 4.

The last change to this document refers to paragraph 14 on the same page, page 4, under subsection (a) the role of space in agriculture and it is the last sentence of paragraph 14, "the global land cover network jointly initiated" so forth.

Mr. Chairman, these are the changes made to this document that was before the Scientific and Technical Subcommittee. The changes, as delegations will see, refer to regional, interregional cooperation, since there was a request from several member States to have more focus on regional cooperation in sustainable development introduced into the overall document.

When this document is reviewed and finalized by the Committee it will be processed accordingly, it will become a general document of the General Assembly, which means that it will be edited and

translated into all United Nations languages and submitted to the Commission on Sustainable Development.

The Commission on Sustainable Development will start considering the thematic cluster 2008-2009 next year but the deadline is later this year so we are in time to submit the contribution by the Committee before the CSD. Thank you, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Hedman for introducing the document and for making clear to us the existence of a new paragraph or rather a new sentence which was introduced after our discussion at the Scientific and Technical Subcommittee's session.

Distinguished delegates we now need to approve this document. I suggest approving it paragraph by paragraph. I will start with page 2, the document itself starts from page 2.

Chapter 1, Introduction. First paragraph. It is simply a recollection of the origins of the request to the Committee to provide this document.

Approved.

Paragraph 2. I think it poses no problems either.

Paragraph 2 is approved.

Paragraph 3. I see no questions or comments.

Approved.

Paragraph 4.

Approved.

Paragraph 5. Also corresponds to the wishes of this Committee.

Approved.

Paragraph 6. With the additional sentence, highlighted by the Secretariat.

Mr. González, representative of Chile.

Mr. GONZÁLEZ-ANINAT (Chile) (*interpretation from Spanish*): Thank you. I do not think I am very happy with this Secretariat amendment. I repeat myself, I am not particularly happy with the

Secretariat amendment, I have a text in English where the words "often provide" come up. I think "often" takes away strength from the General Assembly resolution which says that the report of COPUOS is one thing and then there is another thing in the UNISPACE report. We think the topic of regional cooperation is a fundamental point here, so this "often" which in Spanish would be "¿?" I think we should in fact delete that word "often", "¿?" in Spanish.

The CHAIRMAN (*interpretation from French*): I thank the distinguished representative of Chile for his suggestion that we remove the word "often" from this paragraph.

I see no objections, thus we approve this paragraph with the word "often" deleted in the last line.

Moving on to paragraph 7. I do not think there are any problems here.

Approved.

Paragraph 8. This harks back to the resolution of the General Assembly.

Paragraph 8 is approved.

Paragraph 9. This is quite consistent with the wishes of this Committee.

Approved.

Paragraph 10. I think we should all welcome the setting up of ICG which is outlined in paragraph 10.

Paragraph 10 is approved.

Paragraph 11. No comments.

Approved.

Paragraph 12. In paragraph 12, in its second part, the geographical situation of the regional centres has been added. I see no objections.

Approved.

Paragraph 13 is new.

South Africa has asked for the floor and Chile has asked for the floor. South Africa you have the floor.

Mr. P. MARTINEZ (South Africa): I apologize for bringing us back to paragraph 11 but something that just caught my eye and it may be my mistake or it may be a typographical error in the document. If one looks at the URL that is given at the end of that paragraph, it says www.uncosa, should that not be unoosa? and that occurs in two places on that URL.

The CHAIRMAN (*interpretation from French*): I think it is uncosa. It is not a typo.

There is a request from Nigeria for the floor.

Mr. J. AKINYEDE (Nigeria): Thank you Mr. Chairman. Looking at paragraph 13, I think there is an omission somewhere on the sixth and seventh line, the biannual African Leadership Conference on Space Science and Technology for Sustainable Development first hosted by Nigeria in 2005, then to be hosted by the Government of South Africa, the rest I think should be OK.

The CHAIRMAN (*interpretation from French*): So we are going to add, “first hosted by the Government of Nigeria in 2005”.

Mr. J. AKINYEDE (Nigeria): _____ (*inaudible*) by the Government of South Africa in 2007.

The CHAIRMAN (*interpretation from French*): I do not think there will be any objection to this, the recollection that the first meeting took place in Nigeria 2005.

Thus, paragraph 13 is approved with these amendments.

The distinguished delegate of Thailand has asked for the floor.

Mr. S. VIBULSRESTH (Thailand): Thank you, Mr. Chairman. I think there is one missing in paragraph 13, the fifth line, the word “Space” was missing, “the Convention on the submission of the Asia-Pacific Space Corporation Organization (APSCO)”, “Space” was missing.

The CHAIRMAN (*interpretation from French*): I thank our distinguished colleague from Thailand for his capacities for detection. Great detective work for having spotted this, thank you.

We are going to introduce this correction, of course.

Paragraph 13 is thus approved with the two corrections that have been duly noted.

Moving on to paragraph 14. In paragraph 14, the second sentence is new. Any comments on paragraph 14? I see none.

Paragraph 14 is approved.

Paragraph 15. It has not been modified. I see no comments.

Paragraph 15 is thus approved.

Paragraph 16. Any comments on 16? I see none.

Paragraph 16 is approved.

Paragraph 17 causes no problems.

Approved.

Paragraph 18. No comments?

Approved.

Paragraph 19. I see no comments, observations.

Approved.

Paragraph 20. No comments on 20?

Approved.

Paragraph 21. I see no requests for the floor.

Approved.

Paragraph 22. No comments on 22?

Approved.

Paragraph 23 is called for by the new sentence at the end of paragraph 14. I see no comments on paragraph 23.

Approved.

Paragraph 24. No comments?

Approved.

Paragraph 25. Again, I see no requests for the floor on 25.

Approved.

Paragraph 26. No comments?

Approved.

Paragraph 27. I see no comments on 27.

Approved.

Paragraph 28. I see no comments.

Approved.

Paragraph 29. No comments?

Approved.

Paragraph 30. No comments?

Approved.

Paragraph 31. No comments?

Approved.

Paragraph 32. No comments on 32?

Approved.

Paragraph 33, there is a small correction to be made here, in the second line, in brackets, it should say "see paragraph 23 above". Any further comments on 33? I see none.

33 is approved.

Paragraph 34. I have a personal comment to make here. We are a little overwhelmed by the number of acronyms that appear in the text, in some cases it might be useful to decipher those acronyms. I rely on the Secretariat for doing that and making sure that the reading is made easier for those readers who are not familiar with all of these numerous acronyms.

On 34 with this comment?

South Africa has asked for the floor.

Mr. P. MARTINEZ (South Africa): Thank you, Mr. Chairman. I do not wish to make a comment on paragraph 34 so I do not know if it is appropriate for me to take the floor at this time but rather regarding paragraph 27. I am sorry to bring us back to that, there is something that just caught my eye which I do not understand. In paragraph 27, the fourth line, the sentence reads "with regard to desertification SAR has the potential in the monitoring and mapping of water resources and is a primary instrument for sustainable water management and a weapon for desert fight," I do not think that is what was intended, so perhaps the Secretariat can assist us with a more appropriate wording there. I am sorry to bring us back to this paragraph, it is just something that caught my eye after we had moved on.

The CHAIRMAN (*interpretation from French*): I thank the distinguished representative of South Africa for the necessary qualification of Synthetic Aperture Radars. Maybe we could find a less problematic wording, less combative wording, more appropriate of course.

We take note, the language will be improved.

Getting back to paragraph 34, we were in the process of approving that in spite of the proliferation of acronyms.

No comments on 34?

Approved.

Paragraph 35 is actually a description of what is being done, in actual fact, I see no comments.

Approved.

Paragraph 36. No comments.

Approved.

I have to say that in paragraph 36 the acronyms are explained, so the overwhelming effect is not there, whereas in 34 I definitely felt this overwhelming effect of acronyms.

Paragraph 37. No comments?

Approved.

Paragraph 38. No comments on 38?

Approved.

Paragraph 39.

Approved.

Paragraph 40. No comments?

Approved.

Paragraph 41, this is a list of activities carried out within the framework of space application programmes. No comments on 41?

Approved.

Paragraph 42. No comments on 42?

Approved.

Paragraph 43. No comments on 43?

Approved.

Paragraph 44. It fully corresponds to the wishes of this Committee, in my opinion, so I think we can approve 44.

Approved.

Paragraph 45. No comments on 45?

Approved.

Paragraph 46. In paragraph 46, the exact dates from 6 June to 15 June 2008 will be added instead of the dots in brackets. No comments on paragraph 46?

Approved.

Thus we have approved this draft document which will now, once the corrections are introduced, become a document for the General Assembly to be translated into all the official languages of the United Nations.

I think we have thus concluded our consideration of agenda item 6, that is to say, implementation of the recommendations of UNISPACE III. To be quite clear, we do not intend to re-open this agenda item during this session. Now, we are going to take a small step back to items 4 and 5, following the requests for the floor that we received from Ecuador and from Greece.

I am going to start by giving the floor to our distinguished colleague, the Ambassador of Ecuador, who is going to make a statement under agenda item 5.

Ways and means of maintaining outer space for peaceful purposes (agenda item 5)

Mr. B. MOREJÓN-ALMEIDA (Ecuador) (*interpretation from Spanish*): Thank you, Mr. Chairman. Thank you for being kind enough to come back to item 5 which we have already gone beyond but I thank you Mr. Chairman for that.

In the intervention made on behalf of Ecuador on the first day of this meeting of COPUOS we very amply pointed out how the temporary secretariat of the Conference of the Americas had submitted its decision and commitment to fulfil the mandate established by the Declaration made at San Francisco de Quito and had started its task of following up and implementing the plan of action adopted. Consequently, I will not refer to those aspects now.

In my intervention I associated myself with those who referred frequently to the need to link globalization and solidarity to give form and content to effective international cooperation so that space technologies for peaceful purposes should be accessible to the whole of humanity and in particular to the developing countries. For that reason, when dealing with this agenda item 5 on the agenda I must underline, when talk comes up about cooperation, the invaluable, generous help which my country has received from the United Nations Office for Outer Space Affairs and particularly from Dr. Sergio Camacho for his excellent, personal contribution which has made it possible to achieve a very effective organization of the Fifth CEA and also to help the work of the temporary secretariat.

As was stated at the meeting of the Scientific and Technical Subcommittee, I would like to repeat our particular thanks to the Government of Chile for organizing the pre-conference of the Space Conference of the Americas which was held in March 2006 in Santiago, the purpose of which was to develop and analyse the topics that would be looked at Quito. We expressed our gratitude also to Ambassador Raimundo González for his enthusiastic and intelligent contribution as Chairman of the International Committee of Experts who were the organizers of the Santiago conference.

I would like also to repeat again the great thanks of my country for the very generous contribution from the authorities of Colombia who brilliantly organized the fourth CEA and I think a

special mention should be made of the very high level professionalism and work of Ambassador Arévalo. All this meant that we had very effective cooperation which meant that, all those whom I have mentioned were historic participants in this whole area of achieving peaceful uses of space for the benefit, in this specific case, of the region of Latin America and the Caribbean. We would urge them to continue to offer their valuable help in the future to the temporary secretariat in order to push forward all these goals which have been laid down in accordance with the firm proposals put forward. Thank you very much, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): I would like to thank the Ambassador of Ecuador for his statement. This mentioned the very important role played by OOSA in helping in the organization of the fifth Space Conference of the Americas. I personally was able to note the considerable commitment by Sergio Camacho in that particular instance.

Thank you very much for your statement and I will now close again agenda item 5 but I will then re-open agenda item 4 so that we can listen to a statement to be made by our distinguished colleague, the delegate of Greece.

General exchange of views (agenda item 4)

Mr. V. CASSAPOGLOU (Greece) (*interpretation from French*): Thank you very much, Mr. Chairman. First of all, I would like to express my joy at seeing you again at the helm of this august assembly and I would also like to thank colleagues of the Office for Outer Space Affairs for their contribution through the organization of this session.

Mr. Chairman, anniversaries play a very important part in the life, not only of individuals but of their societies because they offer a double occasion to commemorate an event, be it the birth, the passage or, for that matter, the end, in the existence of a being, of a group of beings but, at the same time, to evaluate the activities over this perpetual trajectory. Hence the reason for and the need to celebrate anniversaries.

Consequently, commemorating does not mean forgetting or relegating to history it means drawing lessons as well, for we remember the Roman axiom, *Historia magistra vitae*, history is the teacher of life. On the other hand, to evaluate is to draw up the inventory and the upshot of activities, evaluate their positive or negative results and be more aware and that

is wiser, in terms of planning all future activity, while avoiding the mistakes of the past.

Thus, the fiftieth anniversary of COPUOS, to use the French acronym CUPEEA, which is the same as COPUOS, this anniversary coincides with the golden jubilee of the heroic entry of man into space and the fortieth anniversary of the conclusion of the Magna Carta Spaciales, which we have a chance to celebrate jointly this year. All of this gives us an opportunity for retrospection and also future projection.

Starting with the living history of COPUOS. First of all, we need to pay tribute, the appropriate and due tribute, to those personalities that were in charge of the work of this Committee who have made an enormous contribution toward its success. That is its former Presidents, Mr. Jankowitsch, Honnenfeld, _____ (*inaudible*) Gonzalez and, the former Directors and experts of the Office for Outer Space Affairs, _____ (*inaudible*), Kopal, Jasentuliyana, _____ (*inaudible*), _____ (*inaudible*).

Furthermore, we need to mention the senior members of this organization, Kolosov, Kopal, _____ (*inaudible*), Hodgkins and Gonzalez, with whom we have worked for over 25 years within the traditional framework of high level meetings of this unique international organization.

Obviously, Mr. Chairman, there are other colleagues and friends, those living and those who have departed, that I should be citing by name and referring to their contribution but I would need a lot of time for that and time is one thing I do not have. I was really moved to see yesterday the photographs exhibited in the corridor of the seventh floor of this building, tracing the long history of this Committee and it seemed to me appropriate and just to ask that we might publish, if not a commemorative album at least a complete list of the former presidents, vice-presidents and rapporteurs of this Committee and its two Subcommittees and their working groups as well as the names of directors and experts of the Office for Outer Space Affairs. I am convinced, dear colleagues, that this suggestion will be favourably received by all delegations present here.

Mr. Chairman, you yourself as well as the colleagues who spoke before me have already spoken at length of the fruitful deliberations of this Committee. I am going to confine myself to just a few comments regarding, on the one hand, the Committee's monumental contribution to constructing the foundations of an international legal space regime and,

on the other hand, its mission and role played throughout the twenty-first century.

The founder of international law, Francisco de Vitoria, Primarius Professor of Sacre Téologica in Salamanca Academia, in his former work, *De Indis recenter inventis relectio prior*, published after his death in 1546, maintained the following, [*spoken in Latin*] in other words, friendship among men is a natural order of things. I am not sure that participants in the meeting on 14 November 1957 of the twelfth session of the United Nations General Assembly were all aware of this excellent _____ (*inaudible*) but 40 years after the launch of the first Sputnik, they did adopt, unanimously, the grand legal principle according to which States must make sure that launching objects into outer space be done only for peaceful purposes.

I am not sure either that the former President of the United States, the victorious general who defeated fascism and Nazism, Dwight Eisenhower, was familiar with this principle when, in his letter of 12 January 1958 addressed to the Soviet prime minister of the time, Nikolay Aleksandrovich Bulganin, proposed that the two countries agree that outer space be used only for peaceful purposes. Still, it was absolutely clear, and this is an undoubtable fact, that since the onset of the space era, instinctively and instantly, the main and fundamental principles of *juris gentium spatiales* were established, that is, the need to use space for peaceful purposes based on international cooperation.

Furthermore, this conduct of the international community was not really surprising because it was in conformity with the famous _____ (*inaudible*) contained in Instituciones de Justinian which was paraphrased by de Vitoria to say, [*spoken in Latin*]. For that reason the international community, consciously or unconsciously it does not matter, applied these principles following the general rules in place underlining international law. That is why a decade sufficed for formulating the rules for positive space law. A difficult enterprise but also a very fruitful effort of the Legal Subcommittee. Of course, it is true that the current space law provisions, like all human endeavour, are not complete especially as concerns the prohibition and exclusion, pure and simple, of all abusive utilization of outer space, such as, militarization, arsenalization and alteration of the space environment through debris of all kinds including nuclear waste.

The very recent incidents of deliberate destruction and voluntary blinding of national and

foreign satellites that were in the way, as it were, opens the door to activities that risk becoming catastrophic for life on our planet itself. Thus, there is an urgent need to reconsider and revise, in the immediate future, the methods, the ways and means whereby space activities are pursued given the great changes that have occurred on the planetary level since 1967.

It is encouraging to know that the institutions charged with technological and aerospace affairs within two regional organizations such as the Interparliamentary Assemblies of NATO and of the west European Union, respectively, met first in Majorca, 15 days ago and the second in Paris only two days ago, to discuss the existing institutional and regulatory lacunae in space law and to examine critically important proposals with regard to concluding a treaty codifying the rules of outer space law and the other to found an international intergovernmental organization for outer space. These ideas were originally presented here, at least 10 years ago, by the Russian Federation and France respectively and they were warmly supported since the very beginning by Greece.

As to the results of the work of these two meetings that were highly democratic and representative as well as parliamentary for all countries in our continent, we will come back to those results as soon as we receive their final reports.

It follows from this, Mr. Chairman, that our Committee and its two Subcommittees and their working groups have before them a new and noble mission to bridge the gaps, fill in the lacunae, update international outer space law provisions. This important mission is very delicate as well because, as the great humanist Richard Butler former Secretary-General of the International Telecommunication Union said, it is not possible to make bad regulations unless one is also concerned with principles. Thus, this update to the provisions of international space law should be based on principles guaranteeing the respect for the shared interests and benefits of all of humanity.

Mr. Chairman, this Committee, throughout its history to date, has gone through two major phases in its evolution. First, from the beginning to 1989, the ascendant phase, I daresay, glorious phase, during which in spite of the very tense geopolitical climate, it was able to create the foundations of an international legal regime for outer space activities. The second phase from 1990 to date, a phase that has evolved in a fundamentally changed geopolitical framework, however, it is unfortunately characterized if not by a downward slope at least by a lack of major progress.

We are tempted to revitalize the role of the Committee but we decided 98 to change the principles for its function we were unable to go further than that and overcome the institutional paralysis of the 1960s. Furthermore, this Committee, which one sometimes thinks is navigating without a compass, without itinerary, almost at random, by chance, after the end of the Cold War and the monopolization of power by a political military establishment. Questions are asked as to reason for existence of this Committee, therefore it is even more important and appropriate that your report, Mr. Chairman, on the future activities of COPUOS, has finally reached us, we are very glad to see it and we will talk about it at length and in depth during the discussion next week. Until then, let me cite very briefly a few ideas that might be useful for this future debate.

Even though the Committee is open to third parties it needs to retain its intergovernmental character and serve as a place for understanding and mutual cooperation among States, under the aegis and responsibility of States. Introducing methods of work that are more efficient, more effective and more economical is essential. We need to adopt programmes that are realistic, innovative and creative. Finally, we need to strengthen the Committee's links of cooperation with other international institutions and agencies that deal with outer space, such as ITU, _____ (*inaudible*), IMO, WMO, WLO, UNESCO. Anyway, Mr. Chairman, the Committee needs a new vision and a new guidance instrument, that is a strategic plan, that will give us a chance to organize ourselves systematically in our future activities. Thank you very much for your kind attention.

The CHAIRMAN (*interpretation from French*): I thank Mr. Cassapoglou for his statement on behalf of Greece. I have to say I am always impressed by the erudition of our dear colleague from Greece who recalls the historical context, not only of this Committee and its work but also on the historical context of law as such. Within that context, of course, all our activities need to be inscribed. Thank you for your contribution and thank you also for the encouragement you have given us with regard to the proposed discussion on future activities of this Committee.

We are now suspending our consideration of agenda item 4 and returning to agenda item 7, which is the report of the Scientific and Technical Subcommittee on its forty-fourth session which we started considering this morning.

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

Under agenda item 7 we have a number of speakers on the list. There is a request from the United States. You have the floor.

Mr. J. HIGGINS (United States of America): Thank you, Mr. Chairman. On behalf of my delegation I would like to express our appreciation for the excellent work of Dr. Mazlan Othman of Malaysia as Chair of the Scientific and Technical Subcommittee this year. Under her able guidance the forty-fourth session of the Subcommittee made significant progress and addressed a wide variety of topics. In addition, the United States delegation, once again, commends the extensive work of the Office of Outer Space Affairs in supporting the Subcommittee meeting and its several working groups.

Mr. Chairman, my delegation has noted the positive developments in the Scientific and Technical Subcommittee in addressing how we will proceed in addressing the UNISPACE III recommendations. We believe the flexible approach that uses multi-year workplans, action teams where appropriate and reports by other groups on their activities, is proving to be an effective means of implementing UNISPACE III recommendations and permitting us to address a wide range of relevant issues.

We fully endorse the report of the 2007 Scientific and Technical Subcommittee. We would particularly like to note the Subcommittee's success in reaching consensus on a set of space debris mitigation guidelines that are based on the Interagency Space Debris Coordination Committee or IADC Space Debris Mitigation Guidelines.

This achievement was very timely in light of the January 2007 anti-satellite test by China that produced thousands of pieces of long-lived space debris. The avoidance of intentional creation of long-lived space debris is addressed by one of the Scientific and Technical Subcommittee's debris mitigation guidelines. The creation of thousands of pieces of debris, through an act that could have been avoided, underscores the importance of moving forward at this session to endorse the Scientific and Technical Subcommittee's space debris mitigation guidelines. The United States views these guidelines as solid, technically based measures that should be adopted by all space-faring nations and implemented through appropriate national mechanisms. The US Government had previously endorsed the IADC orbital debris

mitigation guidelines and our domestic agencies are well along in implementing debris mitigation practices that are consistent with the IADC guidelines and the guidelines endorsed by the Scientific and Technical Subcommittee this year. We look forward to the endorsement of the Scientific and Technical Subcommittee space debris mitigation guidelines by the full Committee at this session.

We would also like to note the progress made at the Scientific and Technical Subcommittee by the Working Group on Nuclear Power Sources in Outer Space under the direction of its chairman, Mr. Sam Harbison, of the United Kingdom. The Working Group, following the multi-year workplan approved by this Committee in 2003 and as amended in 2005, completed its work to examine options for the development of an international, technically-based framework of goals and recommendations with the safety of planned and currently foreseeable space nuclear power source applications. We are pleased to note the Subcommittee accepted the recommendation of the NPS working group to proceed with a new multi-year workplan to develop the safety framework in collaboration with IAEA. Our experts will participate in the joint Scientific and Technical Subcommittee/IAEA experts meeting that will take place here in Vienna immediately following this Committee's session.

Mr. Chairman, I would also mention that the United States is pleased to continue to support the multi-year workplan on the International Heliophysical Year, IHY 2007. The IHY campaign was officially opened here in Vienna in February in conjunction with the Scientific and Technical Subcommittee session. It is a truly international endeavour with countries from every region of the world hosting instrument arrays, providing scientific investigators for offering support in space missions. The IHY is focusing worldwide attention on the importance of international cooperation in research activities in the field of solar terrestrial physics. The effects of solar activities and space weather phenomena on our daily lives, our environment and our space systems are becoming more apparent and we need to collaborate to reach a greater understanding of these consequences.

As General Assembly resolution 58/89 has provided reports on activities of the international satellite system for search and rescue are to be considered under agenda item 7. Accordingly I would like to briefly address US participation in the international COSPAR-SARSAT satellite search and rescue programme.

The total number of member nations in COSPAR SARSAT now stands at 38. The United States continues to provide instruments in both its geostationary and polar orbiting operational environmental satellite programmes and together with our international partners, the COSPAR-SARSAT programme has seven polar orbiting and five geostationary satellites that provide worldwide coverage with search and rescue beacons. In 2005, COSPAR-SARSAT helped save 1,666 lives in 435 different events. Since COSPAR-SARSAT became operational in 1982, the system has helped save more than 20,500 lives.

We would like to continue to remind member States that of the two main types of beacons in the COSPAR-SARSAT programme, a 406 megahertz and a 121.5 megahertz. The 121.5 megahertz beacon is being phased out and will not be usable as of 1 February 2009. Given the large number of these beacons still in service, outreach efforts are currently underway to provide information on this programme change.

The United States also assisted in an effort to build an international beacon registration database for COSPAR-SARSAT. This capability enables beacon owners who live in countries that do not register beacons to have a place to do so. It also enables nations who maintain a beacon registration service but who do not have it available online, to record their beacons within the international database. This database became operational on 16 January 2005. Accurate and timely beacon registration is vital to the success of a SAR response to beacon activation as it gives SAR forces appropriate information about the beacon owner.

Additionally the United States and its partners are exploring the use of satellites in mid-Earth orbit to improve international satellite search and rescue operations. The United States is currently conducting proof of concept testing using its Global Positioning System satellites. It envisions that this new mid-Earth orbit system will improve location accuracy while reducing the inherent delay associated with satellites in low-Earth orbit. For additional information on COSPAR-SARSAT please refer to the website www.cosparsarsat.org or www.sarsat.noaa.gov.

Finally, Mr. Chairman, I would like to reiterate, my delegation welcomes the special presentations made before the Scientific and Technical Subcommittee on a wide variety of topics. We continue to believe that these presentations serve to provide complementary technical content for our deliberations and provide timely information that is useful in

keeping delegations informed about new programmes and developments in the space community as well as illustrative examples of the applications of space technology. Thank you, Mr. Chairman.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Higgins for your statement. I would like to thank you in particular for the very up-to-date information that you provided on the COSPAR-SARSAT system, which is not as well known as it should be, since it has been known to save lives on an international scale.

I have no further delegations on my list for this agenda item, I am now going to give the floor to Madam Alice Lee, Expert on Space Applications. She is going to report on the United Nations Programme on Space Applications.

Ms. A. LEE (Expert on Space Applications, OOSA): Mr. Chairman, thank you very much for this opportunity to address distinguished delegates of the Committee on the activities of the United Nations Programme on Space Applications. Congratulations on your successful leadership of the Committee.

Together with my colleague in the Space Applications Section, we continue assisting you in implementing the activities regarding implementation of the recommendations of UNISPACE III particularly in the areas that are proposed in chapter VI of the plan of action in COPUOS report to the General Assembly.

I would like to congratulate you also on the promising start of the SPIDER programme and the successful work of the International Committee on Global Navigation Satellite Systems (ICG). The Space Applications Section provided substantial technical support to both activities in promoting the applications of space technologies.

I would also like to thank the Action Teams that are continuing their efforts in defining concrete steps and the plans for implementing the UNISPACE III recommendations.

Mr. Chairman and distinguished delegates, the Space Applications Section is successfully conducting the diverse range of activities set forth in the United Nations Programme on Space Applications in 2007 and is laying the foundations for activities planned for 2008.

The Section has also been supporting the implementation of the agreements reached at the forty-fourth session of the Scientific and Technical

Subcommittee. Our efforts focus on the priority thematic area with specific topics addressed in sustainable development for developing countries. Our objectives are achieved through activities that produce tangible results in developing countries.

The priority themes of the Programme on Space Applications are the use of space technology for disaster management, for tele-health and tele-education, monitoring and protecting of the environment and the natural resources management as well as basic space science education and capacity building. The space technologies currently employed within these themes are, global navigation satellite systems, satellite communications, remote sensing applications and Earth observation and the meteorological satellites. The programme is open to investigating new applications and the use of new space technologies such as micro and nanotechnologies, to support the priority thematic areas whenever possible. Within the priority themes we introduce space technologies to educators and decision-makers, stimulate discussions to identify regional needs and explore the possibilities for creating solutions using space technologies and assist regions in launching pilot projects that utilize space technology applications and meet the original needs identified.

This is achieved by conducting workshops, seminars, symposia, training courses and expert consultations. Passed efforts of the Programme have focused on building capacity in developing countries. We are continuously searching for effective and innovative ways to fulfil our goals. Our primary interest is in executing practical projects that effectively utilize space technologies to meet critical needs in developing countries.

The status of the year 2006 activities under the Programme on Space Applications and those planned for 2007 can be found in my report to the forty-fourth session of the Scientific and Technical Subcommittee, A/AC.105/874. That report was supplemented by the proposals contained in my statement to the Subcommittee which are reflected in its report, A/AC.105/890.

My statement today deals with the most recent work of the Programme on Space Applications and makes proposals for 2008.

In 2007, the Programme has successfully completed the United Nations/Morocco/European Space Agency International Workshop on the Use of Space Technology for Sustainable Development, it was held in Rabat, Morocco in April. This workshop was

designed with the view of supporting the implementation of the United Nations Commission on Sustainable Development (CSD), cluster 14, for Africa. Participants of the workshop initiated three projects:

- Approach to establish national data sharing policy;
- Mapping, analysis, data accessing and data sharing;
- Capacity building, training and education.

Participants also identified leaders for each project and agreed on the formation of national teams, products and the schedule.

On the activities in the rest of 2007, there are nine other workshops, symposia and training courses to be held during the remainder of 2007. They are

- UN/ESA/NASA workshop on basic space science and International Heliophysical Year 2007 will be held between 18-22 June 2007, in Tokyo, Japan;
- UN/Mexico training course on satellite technology for tele-health. This is the follow-up to the Argentina 2005 tele-health workshop for Latin America and the Caribbean region, it will be held between 25-29 June in Mexico City;
- UN/Russia/ESA workshop on the use of micro-satellite technologies for monitoring the environment and its impact on human health, will be held between 3-7 September in Tarusa, Russia;
- UN/Austria/ESA symposium on space tools for monitoring air pollution and managing energy resources, to be held between 11-14 September in Graz, Austria;
- UN/IAF workshop on the use of space technology for sustainable development toward food security, will be held between 21-23 September in Hyderabad, India;
- The first United Nations regional SPIDER workshop will be held 29 September - 4 October 2007, in Khartoum, Sudan;
- UN/Viet Nam/ESA workshop on forest management and the environmental protection

will be held between 5-9 November in Hanoi, Viet Nam;

- UN/Argentina/ESA workshop on sustainable development in mountain areas of Andean countries, to be held between 26-30 November in Mendoza, Argentina.

For the objectives and more details on the afore-mentioned activities I would refer the distinguished representatives to paragraph 41 of the report of the forty-fourth session of the Scientific and Technical Subcommittee A/AC.105/890 and annex II of the report of the Expert on Space Applications A/AC.105/874. Paragraphs 44-54 of the Scientific and Technical Subcommittee report and annex III of the Expert report reflect the activities of the regional centres for space technologies and education and the technology education affiliated to the United Nations and supported by the Programme in 2007 and 2008.

All regional centres continue to offer post-graduate courses in space science and technology. We think our fellowship programme, the Programme on Space Applications continues its cooperation with the Institute of Superiore Mario Boella and Politecnico di Torino of Italy providing scientists and specialists from developing countries with long-term fellowship opportunities in GNSS and the related applications. Five participants joined the third class of this programme in October 2006 and five participants will be selected to join the fourth class that will commence in October 2007.

I have the pleasure to announce a new fellowship programme that was launched recently. The Argentina Space Agency (CONAE) provides a fellowship at the advanced school for training in landscape epidemiology at the Institute for Advanced Space Studies Mario Gulich in Córdoba, Argentina. It is the follow-up to the United Nations/Argentina workshop on the use of space technologies for human health held in 2005.

The fellowship annually provides a six-week training course to 20 representatives from the Latin America and the Caribbean region. The first class commenced on 14 May this year and it will be concluded on 22 June. The six-week programme will include theory and the practice in the use of satellite imageries, geographical information system and the statistical techniques most commonly used in landscape epidemiology. Teams of the participants will also work on developing projects that are relevant to their countries. The fellowship also aims to support the

training aspects of the goals of Action Team 6 on tele-health.

Activities planned for 2008. Mr. Chairman and distinguished delegates, in 2008, the programme plans to conduct the following ten activities:

- Three workshops on the integrated applications of space technologies for disaster mitigation, environmental monitoring and the natural resources management-related issues and to address various issues related to the United Nations global agendas for development;
- Two workshops on the use of GNSS for integrated applications;
- One training course on the satellite-aided search and rescue system;
- One UN/IAF workshop;
- One workshop on space law;
- One workshop on basic space science;
- Two workshops on tele-health.

The programme's achievements this year, so far. Mr. Chairman and distinguished delegates, the Programme continues to support regional centres for space science and technology education affiliated to the United Nations with its nine-point interactive coordination procedure with the regional centres. The Programme assists the regional centres in strengthening their governing boards with the aim of increasing financial and technical support to the centres from the regions.

In February 2007, Action Team 6 on tele-medicine has been revived successfully and made significant progress under the leadership of Canada and WHO, with technical input provided by China and technical assistance by the United Nations Programme on Space Applications. Action Team 6 has defined its goal and formulated its task list to facilitate coordination of the establishment of an early-warning database, modelling analysis and a coordination mechanism for water-borne and vector-borne infectious diseases that include bird flu.

In August 2007, the Programme will co-organize with ESCAP an expert meeting for Action

Team 6 to initiate the technical cooperation in the Asia Pacific region.

In order to avoid duplication of efforts between the activities of SPIDER and the activities in the thematic area of disaster management of the United Nations Programme on Space Applications, the Programme takes the approach of integrated space technology applications in which the Programme integrates disaster management with other thematic areas such as, natural resource management and environmental monitoring, tele-education and tele-medicine and basic space science. This approach is reflected in the report of the Scientific and Technical Subcommittee A/AC.105/890.

Since the session of COPUOS last year the Programme has continued to monitor the progress of several pilot projects that support the sustainable development in developing countries. In May 2007, the Centre for Remote Imaging, Sensing and Processing of Singapore successfully completed the project entitled, mapping tsunami-affected coastal aquaculture areas in northern Sumatra using high resolution satellite imagery. This project was financially supported by funds donated by the Korea Aerospace Research Institute.

Our data sharing project entitled, distribution and the use of available global Landsat datasets for sustainable development in Africa, continues to contribute to the global Landsat datasets to African institutes building upon the work being carried out by UNEP. Up to now this project has provided Landsat imagery to 14 institutions for education, training and project development. These institutions are spread throughout the Africa region. This project is financially supported by the United States of America.

With its very limited budget, the Programme implements pilot projects with volunteer efforts from each participating institute in various topics, such as, developing early-warning strategy for disaster management using space technologies, establishing base map for specific types of natural disasters, establishing national data sharing policy, providing capacity building, training and education, developing methodology for predicting and mitigating infectious diseases, assessing the communication system network configurations, needs assessment for implementing national space application programmes and developing a geo-occupancy analyser tool.

In the area of basic space science, supporting the celebration of IHY 2007, the Programme has implemented elements of the three-year workplan of

the Scientific and Technical Subcommittee, particularly taking into account how IHY 2007 might benefit developing countries. The Programme initiated the IHY 2007 series of instrument array projects. A major thrust of IHY 2007 is to deploy arrays of small, inexpensive instruments such as, magnetometers, radio antennae, GPS receivers and all-sky cameras around the world to provide global measurements that have practical importance to global phenomena on planet Earth. The series of projects is implemented by collaboration between the Office and the IHY 2007 secretariat that is led by NASA. For detailed information on this project, I refer the distinguished delegates to the report of the Expert on Space Applications, paragraphs 44-54.

The Programme continues to support the efforts of the Office to carry out the responsibilities of being the cooperating body of the Charter on behalf on the United Nations system. The United Nations is the single biggest user of the Charter having activated a total of 37 times, including 11 times in 2006 and 4 times so far in 2007.

On educational outreach to youth. The Programme continues to support activities of the World Space Week, we are also working with the Space Generation Advisory Council in defining the activities that involve young professionals and students in space technology applications.

On future development of the Programme, we are fully aware of the world trend of needs that can be met by the application of space technologies. At the workshop held in Morocco this April, we initiated a session on using space technology to predict climate change and global warming that could impact land use such as agriculture and afforestation and can support combating natural disasters such as drought and desertification. We will examine this issue of climate change in the upcoming workshop on forest management and the environmental protection, to be held in Viet Nam in November 2007.

We also plan to address the use of space technology in combating and predicting the potential impact caused by global warming in several of our activities in 2008, such as, the workshop proposed by the governments of Colombia, Indonesia and Kenya.

In the area of new technologies, we are fully aware of the increasing use of micro and nanotechnologies in the space industry. The micro and nanotechnologies have the benefit of increased reliability, reduced power consumption, reduced

volume requirements, therefore, they have the benefits of reducing maintenance efforts and lowering cost.

In our forthcoming workshop in September on the use of micro-satellite technologies for monitoring the environment and its impact on human health, co-organized with the Russian Academy of Sciences, there will be a session to discuss the application of micro and nanotechnologies.

Beginning two years ago, the Programme has expanded its effort in providing greater support for pilot projects of national or regional significance in developing countries. The Programme will continue its efforts with the approach of utilizing low or zero cost voluntary efforts from each participating institute and the no-transfer of funds among any parties involved in the project. The Programme has demonstrated some initial success using this approach. In the future the Programme will continue to place emphasis on the follow-up activities for sustainable development after giving capacity building activities such as a workshop or symposium. The ultimate goal is to apply space technologies to contribute to the economic growth and the social betterment of humans.

Mr. Chairman, distinguished delegates. I have presented to you a brief review of the major activities carried out under the Programme on Space Applications. We have achieved significant success but many challenges remain. International cooperation in mastering the human resources technical capacity and the financial resources is essential. Our success in overcoming these challenges depends upon support from multiple partners. We rely on the financial and the technical resources contributed by many member States in developing programmes and activities that encourage local support for the sustainable operational use of space technologies. I thank the member States for your contributions of labour, financial and technical resources and appeal once again to member States and the relevant organizations to contribute generously to the voluntary trust fund of the Programme on Space Applications.

In conclusion, the Programme on Space Applications seeks to continue to identify ways to use space science and the technologies to build capacity in developing countries for promoting their sustainable development. We will continue to focus on activities that prevent or reduce the loss of human lives and property and on activities that improve economical and social conditions. Within the constraints of the limited financial and human resources available, the Programme seeks to establish near and intermediate term activities and projects that yield tangible results

and that will help to propagate sustainable economical and cultural development. In this endeavour we look forward to fruitful cooperation with all member States and their institutions. Thank you very much for your attention.

The CHAIRMAN (*interpretation from French*): I would like to thank Ms. Lee, Expert on Space Applications. She has covered a very impressive number of activities, workshops which have taken place all over the world and all of which are aimed at having better development of space applications particularly in the service of the developing world.

Are there any questions anyone would like to put on her report?

There seem to be no questions from delegates. That is a very good sign it means that delegations are very satisfied with the good implementation of the Programme of Space Applications. Of course, there will be an even more detailed presentation of this Programme at the Scientific and Technical Subcommittee meetings but what we have heard means we can already be up to date on what has been happening since the last meeting of the Scientific and Technical Subcommittee.

If I do not hear any questions on this item, let us continue with our item 7 on Monday. Let us now move on to item 8, which is the report of the Legal Subcommittee on its forty-sixth session and I am going to call on the Chairman of that Legal Subcommittee who will talk to us about the results of the forty-sixth session of the Legal Subcommittee. Mr. González you have the floor.

Report of the Legal Subcommittee on its forty-sixth session (agenda item 8)

Mr. R. GONZÁLEZ-ANINAT (Chile) (*interpretation from Spanish*): Thank you very much, Mr. Chairman. In respect of the last meeting of the Legal Subcommittee I do not want to go into all the items because most of the delegates who are here, or their delegations, have had a good opportunity to discuss those topics so I do not think we should go into a detailed examination of each. Essentially to say it was a very, very successful period in many sectors, in the agreement on the convention on registers of space objects, which is going to lead to a separate resolution and, the examine of other agenda items linked up to the five space treaties and then the working group which went into that in depth.

I would also like to refer to the question of the definition and delimitation of outer space. This is an aspect which will come up in the next years, which reveals the great interest there is in the legislative development that it should go alongside in a symmetrical and accordingly with technological developments, which is not happening now.

There is a basic concept that comes up in the discussions which we had this year and that is, that clearly, what there must be are new efforts to adapt standards to the new international scenario which is now filled up with new actors and new topics. Therefore, there is a horizontal and a vertical direction, which of course has an effect on the whole situation and we do not want to repeat that, we want to change that so we must look at training. We must train the new actors in the light of the new topics and, in fact, an initiative has been made by Chile as a topic for a symposium next year on the legal implications of space related to the local climate and therefore it is, in fact, facing one of the principal threats that we face, the whole question of climate.

As I said at the beginning, I would only be speaking very briefly, I think that the meeting that we had in March of this year of the Legal Subcommittee was really and truly very useful on a series of components for the future development of space law as is stated in the preambular part of the General Assembly resolution which comes up in many of the relevant documents of the United Nations. So I do not think I should go on into the aspects which have been very much presented and discussed in detail during the Legal Subcommittee's meeting. Simply I would hope that next year we will continue to move forward in making progress.

Outside this topic, I would like to just say something and I would like to say thank you for the very fine statement by the delegate of Greece, somebody who has played a vital role in the work of this Committee and he also referred, in a very special way, to my father, so I would like to thank him for that very specially.

The CHAIRMAN (*interpretation from French*): I would like to thank the distinguished delegate of Chile, the Chairman of the Legal Subcommittee. He mentioned the main items which emerged from the meeting of the forty-sixth session of the Legal Subcommittee which was held in March and April of this year.

One delegation has asked to speak on this agenda item 8, that is the delegate of Germany. You have the floor.

Ms. K. SCHICK (Germany): Thank you, Mr. Chairman. This year's session of the Legal Subcommittee has brought exceptional progress in many ways. At the outset, my delegation would like to congratulate wholeheartedly the Chairman of the Legal Subcommittee, Ambassador Raimundo González from Chile, for achieving these outstanding results. The Legal Subcommittee was conducted in a way that substantive debate was fruitful and in addition to that new perspectives could be opened for the work of the Subcommittee.

Mr. Chairman, the first issue I would like to mention is the Working Group on Registration Practice. My delegation is very pleased about the progress made and the results achieved by this Working Group. The deliberations have been extremely fruitful during the past three years and the conclusions of the Working Group are very much appreciated by my delegation. These conclusions contain numerous substantive and important recommendations with regard to improving the registration practice by States as well as by international organizations.

My delegation strongly supports the procedures agreed upon at the Legal Subcommittee to prepare, in this Committee, a resolution to be adopted by the General Assembly. The Legal Subcommittee has already negotiated such a draft for a General Assembly resolution and my delegation would welcome the adoption of this text, as contained in United Nations document A/AC.105/2007/CRP.5 of 5 June 2007, at our present meeting. With the adoption of such a General Assembly resolution the work of the Legal Subcommittee would produce another positive and relevant output in line with the results stemming from the Working Group on the legal concept of the launching State. Thereby the Legal Subcommittee demonstrates its relevant function for shaping the regulatory practice of today's space activities. My delegation therefore again stresses its support for presenting this draft resolution to the General Assembly for adoption at its next session.

The Chairman of the Working Group, Professor Kai-Uwe Schrogl who is a member of the German delegation is present at this meeting and will assist in this process.

Mr. Chairman, the Subcommittee also made important progress in the Working Group on the Status

and Application of the five United Nations Treaties on Outer Space, chaired by Professor Vassilios Cassapoglou. In this context, the agreement to address issues related to the Moon Treaty of 1979 has to be mentioned. In this regard, my delegation assures its active participation in the debate.

Mr. Chairman, it is with particular appreciation that my delegation welcomes the agreement to start the debate on a new agenda item next year. The issue, general exchange of information on national legislation relevant to the peaceful exploration and use of outer space, is of great relevance for today's space activities. It is also perfectly in line with the work and the results achieved in the Working Group on the legal concept of the launching State and on the registration practice. The constant theme on this topic is an important set of questions arising from the growing participation of space activities. This working group will provide an opportunity in finding ways of how to cope with these questions. Germany can, in particular with academic work in this field which has been conducted by the University of Cologne and together with the German Aerospace Centre (DLR), provide a strong and substantive input. We will therefore be pleased to play an active role in this context as well.

Finally, I would like to state our satisfaction with the establishment of the new single issue, capacity building in space law, and the theme for the IISL/ECSL symposium, legal implications of space applications for global climate change. It is _____ (*inaudible*) that these issues are of great relevance and, in the case of climate change, relate to one of the most important topics of today.

Mr. Chairman, in summary, my delegation would like to stress again the excellent results of this year's session of the Legal Subcommittee, congratulate the Chairman and express our confidence to the Subcommittee's relevance for the future. Thank you.

The CHAIRMAN (*interpretation from French*): Thank you for that statement and for the very positive appreciation you expressed for the work of this Legal Subcommittee and in particular as regards the conclusion of the Working Group on Registration under the very fine leadership of Dr. Kai-Uwe Schrogl.

I do not have any other speakers asking for the floor today on this report from the Legal Subcommittee. Before we adjourn on this agenda item 8, I would like to draw your attention to the document CRP.5. This is the draft resolution which has been prepared during the work of the Working Group

of the Legal Subcommittee. This is a document that is called Practice of States and International Organizations in Registering Space Objects. This is a CRP paper we will go through it paragraph by paragraph but we will do that at the beginning of next week. At this stage would you please be so kind as take the time to look at it so that we can discuss it properly next week.

I am going to move on now to a technical statement which we had planned to have at the end of the afternoon. We now have a technical statement by Mr. Gusyev, representative of the Ukraine, he is going to talk about the space control and analysis system application for debris observation. Mr. Gusyev you have the floor.

Mr. S. GUSYEV (Ukraine) (*interpretation from Russian*): Thank you, Mr. Chairman. Once again I am going to speak about the use of the SKAKO system for studying space debris. The existence of a large number of objects that are described as space debris in near Earth orbits leads us to talk of the practical, not just theoretical but practical, importance of studying the matter of man-made space debris in near Earth space. There are a number of factors that contribute to the urgency of the matter, they are listed on this slide.

The problem is particularly acute for the geostationary orbit which is a unique natural resource. A search for space debris organized by European States has proved the existence of small-sized objects in geostationary orbit and high elliptic orbits and this is of great danger to spacecraft and space missions. The study of the problem of space debris is important in scientific and political terms. As a result of these studies, we can build a model of the distribution of space debris populations, understand the reasons for explosions of spacecraft and stages of spacecraft and pinpoint the culprits.

In Ukraine, space debris mitigation is an issue that is within the purview of the System of Control and Analysis of Outer Space, SKAKO. This is a fairly recently created structure, it is just beginning to develop, the technical capabilities of the system have to do with the existence of radio technical systems located in Sevastopol and Mukachevo, optical installations in Evpatoria and Dunaevtsy and information, collection and processing centre in Evpatoria and a number of observatories that we use in different places as part of the SKAKO programme.

We should specifically note the fact that Ukraine has a unique radio telescope, RT-70, which I described in my presentation this morning. State of the

art technological tools for monitoring space can be classified as optical, laser and sonar. The bulk of measurements of low-orbit objects as carried out by radio technical systems that work in the millimetre to meter range. This is a continuous monitoring system which makes it possible to obtain operational information on the concentration and distribution of particles with sizes exceeding 10 centimetres in the near Earth space.

VLBI experiments provide precise data as to the orbit, size, orientation parameters, revolution periods and physical and chemical properties of space objects including small objects with diameters counting in centimetres. The use, by the National Centre of Ukraine, of a quantum optical system designed for measuring the distance to space objects equipped with angular reflectors made it possible for us to obtain highly accurate data. The system can work on the basis of orbital parameters known beforehand or in real time.

The optical tools included AMT-28 telescope, this is the main source of information within this system. Based on AMT-28 measurements, SKAKO system obtains precise parameters of orbits. In the course of a year we carry out about 1,000 studies of individual space objects. Apart from observing existing and operational spacecraft, we observe space debris generated as a result of the launches carried out by Ukrainian launch vehicles, their payloads which turn into space debris and various national spacecraft that have stopped functioning, have reached the end of their active lifetime. We also use the AMT-28 optical telescope, which I described in detail in my first presentation. This is a tool for observing the geostationary and high elliptic orbits and, in response to the question put by our Chairman, I would like to reaffirm that we use a powerful CCD camera, 1000 x 1000 24-micron element.

Since 26 June of last year to September of 2006, in cooperation with the Russian Research Institute as part of the international Interferometer experiment, the AMT-8 telescope was equipped with a new camera with a penetrating capability of 20½ units. The field of vision of the system was 30 minutes.

The next slide shows the results of the observation of near Earth space objects as part of the Interferometer experiment conducted last summer. All in all this experiment, using the AMT-8 optical telescope, obtained 4,000 measurements for three fragments earlier discovered by the Crimea Observatory and the Mayak Observatory and also, very importantly, for the first time we discovered a formerly unknown fragment in the geostationary orbit. The

accuracy of measurements for the geostationary fragments in 2 to 3 angular seconds, which is acceptable in observing objects below 1/16th of stellar magnitude. Next year we plan to equip this telescope with an even more state of the art matrix.

In conclusion, I would like to say the study of small fragment populations is one of the most technically challenging but also high priority tasks for countries involved in space exploration particularly that deal with the issue of space debris. The technical facilities of the Space Control and Analysis System of Ukraine can track orbits and debris formed as a result of payload delivery into orbit by Ukrainian launch vehicles as well as through the cessation of the active lifetime of national spacecraft.

Radio stations located in Ukraine, including the AMT-8 telescope, led to unique results specifically with regard to objects in high altitude orbits with a large area to mass ratio. From 28 July to 5 August of this year, we plan to continue work as part of the VLBI detection of geostationary objects including objects that are targeted by the International VLBI campaign and the IADC programme.

Finally I would like to draw the attention of distinguished colleagues to the fact that Ukraine is going to hold two very interesting conferences this year, one of them in the last week of June, that is a conference on university-owned micro-satellites and in the first week of September, the seventh International Conference on Space Research. Both conferences will be held in the town of Evpatoria and I invite you to attend both. Thank you very much.

The CHAIRMAN (*interpretation from French*): Thank you Mr. Gusyev for your presentation of very impressive, very interesting results. We understand that this system was only recently set up and I suppose you will report these results at the next IADC meeting, which will be held in Toulouse in July.

Do delegations have questions on this technical presentation?

What we have seen and heard confirms the importance of systems that make it possible to identify, observe and monitor the orbits of debris that can interfere with space activities either in high orbits or geostationary orbit.

I see no questions in the room. Once again I thank the distinguished delegate of Ukraine for his technical presentation.

This brings us to the end of this afternoon meeting. Ladies and gentlemen, distinguished delegates I will shortly adjourn this meeting, before doing so I would like to inform delegates of our schedule of work for Monday morning.

We will reconvene promptly at 10 a.m., at that time we will resume our consideration of item 7, report of the Scientific and Technical Subcommittee on its forty-fourth session. We will continue our consideration of agenda item 8, report of the Legal Subcommittee on its forty-sixth session and, time permitting, we will begin consideration of agenda item 9, spin-off benefits of space technology: review of current status.

At the end of Monday morning's meeting there will be three technical presentations, two of them to be made by representatives of Ukraine and the third by a representative of Intersputnik.

I would also like to inform you that a meeting of participants in the SPIDER programme, that is countries that have contributed towards SPIDER, will be pushed back to 2 p.m. on Monday, the same room where it was originally planned. That is the SPIDER contributors meeting, the meeting of representatives of countries that have supported the SPIDER programme will be held at 2 p.m. in C0713 on Monday.

Any comments, questions, with regard to this schedule of work for Monday morning?

I see none, I will then adjourn this afternoon's meeting, I wish you all a nice weekend and see you again Monday at 10. Thank you.

The meeting closed at 5.30 p.m.