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Committee on the Peaceful Uses of Outer Space

Unedited transcript

599th Meeting
Thursday, 4 June 2009, 10 a.m.
Vienna

Chairman: Mr. Ciro Arévalo-Yepes (Colombia)

The meeting was called to order at 10.12 a.m.

The CHAIRMAN *(interpretation from Spanish)*: Good morning ladies and gentlemen, distinguished delegates, I now declare open the 599th meeting of the Committee on the Peaceful Uses of Outer Space.

This morning we will continue with our consideration of agenda item 4, General Exchange of Views, and we will also continue our consideration of agenda item 5, Ways and Means of Maintaining Outer Space for Peaceful Purposes, agenda item 6, Implementation of the Recommendations of UNISPACE III, and agenda item 7, Report of the Scientific and Technical Subcommittee at its Forty-Sixth Session.

Following the Plenary, we have a technical presentation by Mr. Jun Yanagi of Japan entitled "Japanese Space Policy: the Basic Plan for Space Policy".

Then Mr. Jiae Ajayi of Nigeria on the International Academy of Astronautics and the Third African Regional Conference that was held in Abuja of that entity.

As requested by the Committee, we would also have presentations by Mr. George Joseph of India on "The Status Report on the Operation of the Regional Centre for Space Science and Technology Education in the Asia and Pacific Region.

Then Mr. Abderrahman Touzani of Morocco who will give a presentation entitled "Status Report on the Operation of the African Regional Centre for Space Science and Technology" in the French language.

Are the interpreters being heard this morning?

I would kindly urge delegates who intend to make technical presentations to submit them to our Conference Officers at least one day in advance so that they can be tested and uploaded on to a computer.

I would also like to remind delegates that presentations should be strictly limited to 20 minutes.

I would also like to inform you that at 1.00 p.m. in this same room we will be signing Cooperation Agreements in the support of the UNSPIDER Programme for setting up Regional Support Offices. This will be between the Office for Outer Space Affairs and the Romanian Space Agency, Asia Disaster Reduction Centre in Kobe, and the National Research and Development Agency of Nigeria.

The Cooperation Agreement between the Office for Outer Space Affairs and the Romanian Space Agency will be signed today at 2.15 p.m. in Conference Room II. It is my pleasure to invite you all to participate in these ceremonies.

I would also like to invite all delegates to the video presentation by Japan on Japan's Lunar Probe Kaguya, or Sentinel-Asia, this afternoon at 2.00 p.m. in this room.

Let us now proceed with the general exchange of views, item 4, distinguished delegates.

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The first speaker on my list is the distinguished representative of France. The Ambassador, welcome, first of all, we are very pleased to have you with us which, I think, is your first conference in Vienna. Again, a pleasure and honour to have you here with us. We will be hearing from the Ambassador of France, Florence Mangin. You have the floor.

Ms. F. MANGIN (France) *(interpretation from French)*: Chairman, before I address the core of the subject, I would like to say that it was just yesterday that I assumed my post as the new representative of France in this Committee. This is my very first time I am participating in this forum and I would like to say that this is a very important occasion for me.

On behalf of my delegation, I would like to congratulate you for the way in which you intend to conduct the work of this Committee. Certainly, your great experience in the field of space activities will be ensuring that the activities of our Committee this year are going to be successful and your presence, indeed, is a sign of the particular interest that Colombia authorities have in the development of space activities and this we can only be very satisfied with indeed and our delegation will certainly be contributing to the work of this Committee constructively and on the basis of consensus.

We would also like to take this opportunity to thank the Chairmen of the Scientific and Technical Subcommittee, Mr. Aboubekr-Seddik Kedjar, and the Legal Subcommittee, Mr. Vladimir Kopal, for the way in which they have ensured the pursuit of our work over the past year.

As you know, France bases its space policy on three major principles. Firstly, the free access of all to space for peaceful purposes, secondly, maintaining the security of satellites in orbit, and thirdly, taking into account the legitimate interests in terms of defence on the part of States. It is these principles which guide France's action in respect of space activities. The peaceful use of outer space remains for France, just as it does for the EU as a whole, an essential challenge for international security. It is necessary, indeed, in order to ensure that outer space is peacefully used to ensure the security of outer space activities. It is necessary to enhance this. We have seen the proven risks of collision recently. I would refer you to the collision of the Iridium-33 on the part of the United States and the Russian Cosmos-2251 last 10 February. And this recalls to us, brings home to us the need to have stepped up international cooperation, to step us the security of space activities to ensure the free access to space for all for peaceful purposes and ensuring the security and integrity of space objects in orbit.

We take note of the following. The capability of States to make use of outer space in the long term is not guaranteed, particularly of two major factors. Firstly, the steep increase of the number of governmental operators and private operators and of orbiting satellites, and secondly, the continuing proliferation of space debris, especially in the most used orbits. So the interference risks and the risks entailed by overcrowding of orbits are real indeed.

On this basis, on this recognition of the facts of the situation, we would like to pose the following major goal, stepped-up sound management of frequency management and of orbit positions and space operations. This can be reflected in the adoption of guideline on the viability of outer space activities and this would collect the best practice acceptance by operators and by the States members.

In order to indeed achieve this goal, we need international cooperation within the Space Committee. With regard to space debris, our Committee has, on the basis of the Inter-Agency Space Debris Coordination Committee, developed guidelines relative to debris mitigation which have been approved of and adopted by the General Assembly of the United Nations in resolution 62/217 of 21 December 2007. This work is a fine example of the central role played by the Outer Space Committee and of the will of the international community to work to promote a viable regime of space operations.

Indeed, such an example should motivate us in establishing a formal Working Group dedicated to the long-term viability of outer space activities within the Scientific and Technical Subcommittee as from 2010. We believe that this Working Group could have the following work calendar and schedule.

In 2010, it could define the present challenges and future challenges for outer space operations and consider measures that could be useful to improve the long-term viability of such space operations. The Working Group could base itself on the results of informal consultations conducted since February 2008 in order to conduct its deliberations and subsequently to develop recommendations for the Subcommittee.

Then 2011, it could continue exchanges of views within the Working Group and consider the reports of member States and other entities as to the various measures that could be taken to enhance the

long-term viability of such activities, and the development of a document entitled "Best Practices for Long-Term Activity of Space Activities" could indeed be ensured.

And in 2012, we believe that this document, entitled "Best Practices for Long-Term Activity of Space Activities" could be finalized and subsequently presented to the Outer Space Committee.

As you note, we would start our approach on the basis of a stock-taking exercise covering the very issues affecting long-term viability of space activities, such as the proliferation of space debris and the security of space operations, the management of the spectrum of electro-magnetic frequencies, the natural causes of disturbance of space systems, in particular space meteorology, solar eruptions, flares and micro-meteorites, etc., in order to promote the best practices in order to ensure the enhanced security of space operations.

The approach of the Working Group is a technical and operational one. It is a matter of reaching consensus on the basis of consultation with technical experts on the diagnosis of issues which affect the long-term viability of space activities and, if possible, on the ways to remedy those problems. This technical approach is complementary to the political approaches on security of outer space activities. We, indeed, wish to see a transparent process emerge.

France is aware of the technical character of the contents of this initiative and would be available to all States interested in getting more information and explanation as to the objectives of this initiative and as to the contents of the reference document. We are, of course, open to any suggestion proffered by member States of the Committee concerning this initiative.

Our presentation document has been distributed by the Secretariat during this present session. It bears the reference number A/AC.105/L.274 and it is translated into the six United Nations official languages. My delegation, of course, is available to all delegations to field any complementary questions and to furnish information.

France would also give particular attention to having this initiative be complementary to other initiatives of the Committee, debris, meteorology, asteroids, etc., and that adopted by other international relevant fora, for example, ITU, WMO, the Disarmament Conference, etc., and there should also be complementarity with the draft Code of Conducts on Outer Space Activities. We consider that the organizations dealing with outer space activities should be called upon and invited to participate in this work to be undertaken on long-term viability of outer space activities for the aspects of particular concern to them.

France has organized, for the purpose of all of the member States of the Outer Space Committee, information meetings, particularly in Vienna, in order to give them as much information as possible as to the relevance and the contents of this initiative. We believe it is time to put this agenda item on our agenda because it is within our responsibility to work in order to ensure viable outer space operations the service of all States and their peoples.

Chairman, France is satisfied with the good results achieved during the forty-fifth Scientific and Technical Subcommittee and the forty-seventh Legal Subcommittee. We are going to be speaking more about the good results achieved when we speak subsequently especially under agenda items 7 and 8 when we get to the reports of these two Subcommittees.

In particular, the very last Scientific and Technical Subcommittee adopted the Safety Framework for the Applications of Nuclear Power Sources in Outer Space and approved the report of the Joint Group of Experts of the Scientific and Technical Subcommittee and that of the IAEA.

France is very active in this Working Group and it is most satisfied with the results achieved and the quality of the partnership under the Scientific and Technical Subcommittee and the Agency and hopes that this work will be pursued along the same lines and in the same spirit.

After the forty-eighth session of the Legal Subcommittee last April, we note with satisfaction the good work conducted on national space legislations with regard to the exploration and peaceful use of outer space and we indeed participated in presenting the new French law on outer space operations. We are indeed very attached to this Legal Subcommittee and we would like to work and think together on its future activities.

Chairman, I am not going to be dwelling on the very recent space achievements for the benefit of the international community. I will just highlight one. The Herschel European Mission, which was launched successfully last 14 May by Ariane-5, along with another observatory, the Planck Satellite, was intended to study the background noise in outer space. And this excellent mission indeed focuses on the exchange of

data for the benefit of the worldwide scientific community.

After a selection, which lasted practically a whole year, the ESA has announced the names of the six new astronauts it has just recruited and one of them is French, Mr. Thomas Pesquet. These are the new faces demonstrating the will of Europe to continue the human adventure which is that of our exploration of outer space. I would like to express the hope that the States represented here within the Committee on the Peaceful Uses of Outer Space will also, in turn, enable, thanks to their work and the decisions that they will be taking, the continuation of the space adventure in the most secure, sustainable and viable conditions possible for the benefit of the entire international community. Thank you very much Chairman.

The CHAIRMAN *(interpretation from Spanish)*: Thank you very much Madam for the very kind words that you have expressed and addressed of the Chairman. Let me thank you very much for that very didactical presentation of the French proposal which will be fully taken into account by this body and which you have described in detail. All our thanks for that contribution and for highlighting the latest developments of space in your own country. Thank you.

It is now my pleasure to give the floor to Petr Lála from the Czech Republic. You have the floor.

Mr. P. LÁLA (Czech Republic): Thank you Mr. Chairman. Mr. Chairman, this is a statement on behalf of the European Union.

As this Committee is already aware, the European Union has been preparing a draft text of a Code of Conduct for Outer Space Activities in the framework of the project that is aimed at increasing the security of outer space activities. On 8 December 2008, the Council of the European Union approved the draft text of the Code of Conduct. The draft text includes transparency and confidence-building measures. It is, however, not a legally binding document nor does it seek to replace the initiatives which works towards that aim. It recognizes that a comprehensive approach to safety and security in outer space should be guided by the following principles: freedom of access to space for all for peaceful uses; preservation of the security and integrity of space objects in orbit; and due consideration to the legislative defence interests of States. The draft text of the Code is available on the website of the Council of the European Union.

The European Union is currently consulting the text with other space-faring nations with the aim of reaching a consensus text that would be acceptable for as many States as possible. It is envisaged that at the end of the consultation process, an ad hoc conference would be organized in order for States to subscribe to the Code.

While it is not our intention to negotiate the Code in this forum, we will COPUOS and its Subcommittees informed on the progress of the work on the Code.

The European Union also supports the initiative with the item on long-term sustainability of space activities, the formal edit to the 2010 agenda of the COPUOS Scientific and Technical Subcommittee.

The continued involvement of numerous States, as well as commercial operators and relevant international organizations, reflects their interest and importance that they attach to the search for concrete measures to strengthen the security of outer space activities. This initiative is fully consistent with, and complementary to, the European Union Plan for a draft Code of Conduct for Outer Space Activities.

Mr. Chairman, a more detailed information note of the Code in written form is available at the back of this room. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from Spanish)*: Let me thank you for that statement on behalf of the European Union and which you mentioned the Code of Conduct. We are very pleased that you did that because we have this text and it is an important text. You also explained to us that the European Union fully supports the proposal on sustainability of space activities, long-term sustainability, which fully fits the Code of Conduct that you did mention and thank you Mr. Petr Lála, speaking on behalf of the European Union.

I now have Nigeria, Mr. Wahab Jimoh. Mr. Jimoh, you have the floor.

Mr. W. K. JIMOH (Nigeria): Mr. Chairman, the Nigerian delegation welcomes you all and all the members of the Bureau back to the fifty-second session of COPUOS.

It is our expectation that the Committee under your chairman will bind their collective effort to advance the peaceful exploration and use of outer space in its role in shaping the international standard for space activities for the benefit of all countries.

Similarly, we wish to commend the Director of the Office for Outer Space Affairs, Ms. Mazlan Othman, and the entire staff of the Office for their work. Our delegation looks forward to a new and innovative approach to the Office in carrying out its daunting task in the face of impending dwindling resources.

Nigeria wishes to congratulate the European Space Agency for the successful launch of its Far Infrared Space Telescope, Herschel, and the Cosmic Background Mapper, Planck, both of which will expand the frontier of knowledge in space science and technology and provide advance information about the Universe.

Similarly, my delegation congratulates the United States for the recent successful launching and landing of the Space Shuttle Atlantis and the repair work accomplished on the Hubble Telescope.

Similarly, we congratulate the People's Republic of China for its recent successful spacewalk.

Mr. Chairman, as we now live in an ever-interdependent world brought about by the rapid and more effective information and communication technology, we need more than ever before renewed international cooperation to ensure continued sustainable development of the Earth. This becomes more imperative as the United Nations General Assembly in its resolution 63/90 of 18 December 2008, emphasized the need to increase the benefits of space technology and its applications and to contribute to an orderly growth of space activities favourable to the socio-economic growth and development in all countries, including the mitigation of the consequences of disasters, particularly in the developing countries.

Space science and technology and their applications are proven that they could make important contributions to the socio-economic development of countries and contribute in the most effective manner to the achievements of the Millennium Development Goals.

Mr. Chairman, at the fifty-first session of this Committee in 2008, my delegation drew attention to the challenge of food security, exacerbated by the increase in food prices and the need for concerted efforts to deploy space-based information to address this challenge in consulting with other United Nations agencies such as the Commission for Sustainable Development. It is in this regard that Nigeria therefore notes with satisfaction that a Panel on Space Applications on Food Security, comprising of the Chairman of COPUOS and a representative of the United Nations Division for Sustainable Development, the International Institute for Applied Systems Analysis, and the FAO _____(?) 2008, to exchange ideas and best practices to improve the current situation.

We look forward to the translation of those ideas in the concrete Plan of Action that could address this challenge in a definitive manner.

This Committee owes it a duty as the United Nations body mandated to address all issues associated with the peaceful exploration and use of outer space to work with all concerned parties especially space-faring nations to bring the benefit of space technology within the reach of all, and in particular developing countries, in order to address the socio-economic challenges.

Beyond the commitment to do so, there is need for financial resources to enable the Office for Outer Space Affairs to implement its Programme on Space Applications and other recommendations of UNISPACE III.

Nigeria notes with regret that the Office for Outer Space Affairs, along with other United Nations bodies and entities, would have but yet a reduction beginning from next year and those will be constrained in the allocation of its priority projects

In order to bridge this funding gap and maintain the Office for Outer Space Affairs tempo of activities, Nigeria is urging member States to its capacities to contribute to the Trust Fund for the United Nations Programme on Space Applications so that the Office for Outer Space Affairs will be able to continue to provide in particular technical services and initiate pilot projects in accordance with the Plan of Action of the Committee.

Mr. Chairman, as we celebrate the tenth anniversary of UNISPACE III, it is important to do a stocktaking of how far we have implemented the recommendations of that Conference. We, therefore, commend the work of the Scientific and Technical Subcommittee Working Group of the Whole concerning the implementation of the UNISPACE III. I recommend that it should continue its work until the Committee concludes that concrete result have been achieved.

There is need to re-visit the report of the various Action Teams started by the Committee and which _____(?) to our standing

programmes for implementation. As we all know, the UNSPIDER Programme is one of the _____(?) of the UNISPACE III.

In order to ensure its worldwide coverage and accession, Nigeria has offered, and it has been designated, a Regional Support Office in line with General Assembly resolution 61/110. The resolution requires the United Nations Office for Outer Space Affairs to work closely with the Regional and National Centres of expertise in the use of space technology in disaster management and thus form a network of Regional Support Offices for implementing the activities of the Programme in their respective regions in a coordinate manner, to take advantage of the important experience and capabilities being offered and to be offered by member States, particularly the developing countries.

The Agreement establishing the Regional Support Office for the West African Sub-Region and Nigeria will be signed during this session between Nigeria and the Office for Outer Space Affairs.

Mr. Chairman, at the national level, the National Space Research and Development Agency has taken strides in deploying space technologies to address the socio-economic needs of the Nigerian people. In recognition of our efforts, in using space technology for healthcare delivery in the rural areas, the United Nations Economic Commission for Africa is here, again the National Space Research and Development Agency, the technology and the government in Africa want for the use of ICT to enhance health services delivery. Through this award, the ECA recognizes the way to use a mobile clinic with motorized VSAT(?) for recent(?) online diagnosis, health education and tele-consulting between the rural communities, especially health institutions.

By these health programmes, the Nigerian Space Agency(?) has demonstrated that capacity-building in space application techniques can go a long way to improve the socio-economic lives of millions of people living in the rural areas. Such application techniques include tele-health, tele-education, as well as space-based information for the cultural development, physical planning and monitoring of the environment.

Nigeria also wishes to report that a new Agreement has been signed with China to replace the dysfunctional communication satellite that went out of service on 10 November 2008. The replacement is due for re-launch by the fourth quarter of 2011 and will put Nigeria back on track to provide all its services either to provide by the dysfunctional satellite, NIGCOMSAT-1.

Similarly, the launching of NIGERIASAT-2 which has been built to replace the country's first part of the regional satellite is due for re-launch later by the first quarter of 2010 with a capacity for better continuity, better resolution and wide application.

Within the context of international cooperation for capacity-building we wish to inform the Committee that Nigeria is preparing to co-host the Third IAA African Regional Conference in Abuja, Nigeria, from 24 to 26 November 2009. The theme of the Conference is "Space for Africa: Joint Participation, Knowledge Development and Sharing". Our delegation will make a short presentation about the Conference shortly.

Nigeria considers cooperation with member States and relevant space agencies strategically to assess the implementation of its space policy and programmes and we will continue to reach out for meaningful collaboration for the development and use of space technology to address the critical needs of our country. I thank you.

The CHAIRMAN *(interpretation from Spanish)*: Thank you very much to the distinguished representative of Nigeria. The theme of food security and public health are very important for this Committee, especially in the light of the panel which will be in parallel with the presentation of the resolutions of this session to the General Assembly. We are indeed thinking about questions of space technology and health, public health, which is, as you said, is a priority for your country, your region and your continent. So I think we are working along the same lines that we agree on the priorities that have been established.

Also very pleased with the support that the Office for Outer Space Affairs is getting from the Support Office under SPIDER and once again we are talking about the importance of cooperation amongst States. I think of this with your Agreement with China for the replacement of the satellite.

It also seems to me that the Conference you are organizing is going along the lines that we are trying to encourage that your work with the Federation (International Academy of Astronautics?) is something that also works along these lines. They are going to be holding a Conference in 2012. We are working on the preparatory works for that at this time. Thank you for your presentation.

It is now my pleasure to give the floor to Mr. Elöd Both from Hungary. Mr. Both, you have the floor.

Mr. E. BOTH (Hungary): Thank you. Mr. Chairman, my delegation is pleased to see you again chairing this Committee and expresses its full support during the work of the Committee. Your long-term association with the United Nations and able leadership qualities will lead to substantial progress in this Committee. We are convinced that under your leadership, this session will achieve progress under the important issues on our agenda.

Mr. Chairman, distinguished delegates, my delegation takes note with great satisfaction the substantial progress reached in the past year concerning the use of nuclear power sources in outer space. The Joint Expert Group of the Scientific and Technical Subcommittee and the International Atomic Energy Agency developed an international technically-based framework of goals and recommendation for the safety of planned and currently foreseeable nuclear power source applications in outer space. The work resulted in a new updated text of the Safety Framework. The Scientific and Technical Subcommittee at its forty-sixth session adopted the Safety Framework on Nuclear Power Source Application in Outer Space which is a substantial step forward.

My delegation would like to highlight the role that COPUOS has played as a catalyst for initiatives in the field of international cooperation in that promoting protection of the space environment and for the rational and sustainable use of its applications in the economic, social and cultural fields. We are convinced that space technology and its applications is an essential tool for the development of peoples.

In accordance with the Multi-Year Work Plan, the Committee this year evaluates the activities that are directly related to the use of space-derived geo-spatial information for sustainable development. My delegation will inform the Committee on the relevant activities in Hungary in a separate statement.

We also welcome and emphasize the importance of the activities of the International Year of Astronomy. We express our appreciation, acknowledge and sends to all contributors of IYA our intent to inform the Committee on some related Hungarian activities in a separate statement under the agenda item Space and Society.

My delegation takes the opportunity and congratulates to all partner States and organizations participating in the International Space Station Programme. Very recently, the ISS reached its full working capacity and an international crew of six astronauts is working on board. This increase of the crew provides an excellent opportunity for scientific research in outer space. We are pleased that as a result of the SURE Programme, Hungarian Scientists will also have opportunities in the near future to carry out three experiments. The SURE Initiative is a common project between the ESA and the European Commission funded via the Sixth Research and Development Framework Programme of the EU. The SURE Programme focuses on giving small and medium enterprises and scientists of the new EU member States to chance to perform research and development on the International Space Station. The ESA SURE Project is not only a model (motor?) for innovation and business excellence, but also a unique opportunity to kick-start high-profile local business segments.

A new science experiment involves recording brain electrical activity of the subject astronauts during performance in a visual spatial cognitive task. The same experiment will be completed on the ground on larger groups of subjects in hypoxia(?) held by build, sleep loss and fatigue conditions in order to separate the effects of destressors(?).

The first experiment in orbit takes place in these days and the end of the series of five experiments is expected to conclude by the summer of 2011.

The focus experiment to be carried out also in the framework of the SURE Programme next October studies the behaviour of forms in the micro-gravity environment.

Even in the low-Earth orbit of the International Space Station where the astronauts are protected to some extent by the Earth's geo-magnetic field, cosmic radiation poses probably the most long-term risk and overall flight time limitation to the crew. In order to minimize the radiation dose of astronauts performing the wide-range of dosimatic measurements is necessary. The dose rates measured on board the ISS are about two orders of magnitude higher than those on the Earth's surface. For this purpose, the Hungarian engineers are developing in the framework of the SURE Programme a three-dimensional silicone detector telescope. The development phase of this telescope SURE will finish this year. The targeted flight of the instrument is April 2010. The operation

inside the Columbus module of the Space Station will last for six months.

Finally, let me briefly inform the Committee on some further features of exploration in the peaceful uses of outer space in Hungary.

Our country's space activities are being coordinated by the Hungarian Space Office. Recently the space activity became the task of the National Office for Research and Technology and now the Hungarian Space Office is functioning as its Unit so space became an integral part of the overall research and development activity. The whole field is supervised by the Minister of National Development and Economy.

Our highest priority partner in international cooperation is the European Space Agency. Hungary is a European Cooperating State of the Agency. The implementation of the PECS Agreement goes mostly. There are more than 30 ongoing projects yielding several successes in different fields of space activity. Since our participation in the PECS Programme proved to be so successful, at the end of last year we extended the PECS Agreement for another five years. Nonetheless, our goal is to be a full member State of ESA as soon as all possibilities allow it.

Hungarian university students, many of the Technical University of Budapest, are participating in the ESA European Student Earth Observer Satellite Project. They are partners in preparing two scientific experiments as well as the power supply sub-system of the satellite. Thank you for your attention. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from Spanish)*: I would like to express my thanks to the distinguished delegate from Hungary, Mr. Both. He mentioned progress achieved, in particular under the SURE Programme, which is a good name for a programme for one that deals with security, medical and scientific in nature and cooperation with the ESA. Thank you for that statement.

I now give the floor to Van Tan Thai from Viet Name. You have the floor Sir.

Mr. T. VAN TAN (Viet Nam): Thank you Mr. Chairman. The Vietnamese delegation would like to extend warm congratulations to you, Mr. Chairman. We are fully convinced that with your excellent leadership and experience, you will conduct the fifty-second session of our Committee to a success.

We also congratulate the whole staff of the Office for Outer Space Affairs for their excellent preparation for this meeting.

Mr. Chairman, distinguished delegates, ladies and gentlemen, let me start by highlighting the latest developments in space technology in our country.

I am happy to inform that the first Vietnamese communication satellite, VINASAT-1, was successfully launched in 2008, has significantly enhanced the capacity and safety of the national telecom network and ensured the provision of Internet services to all corners of our country. All these services are now being exploited by the Vietnamese Post and Telecommunication Group, VNPT. The Vietnamese ground receiving station which had been put into operation two years back, now regularly provides satellite images from a support satellite as an environmental satellite for natural resource and environment management.

Besides many other activities related to forming a legal(?) frame for space technology research and applications within the national space technology infrastructure, promoting the research on space science and technology and promoting the space technology applications are also being conducted in our country in which space technology applications in the field of post and telecom, hydrometeorology, resource and environment, including evaluation of the impact of global climate change in Viet Nam. Agriculture, transportation, national defence and security will be enhanced taking advantage of the VINASAT-1 satellite capacity.

The National Programme for Space Technology Research and Applications for the period 2008-2012 is now underway and a new body, the Vietnamese Commission for Space Research and Application will soon be established to manage and supervise the National Programme as well as international cooperation on space technology development and applications.

Mr. Chairman, on this occasion, Viet Nam is pleased to inform that with the close cooperation and support from Japan and other countries, the Fifteenth Asia and Pacific Regional Space Agency Forum, APRSAF-15, was successful held in December last year in Hanoi and Ha Long Bay in Viet Nam. The Forum becomes an important event because it creates greater opportunities for scientists and decision-makers to learn from and exchange experiences with international colleagues in the area of space technology.

During the Forum, international and Vietnamese experts in space technology share experiences and issues in four working groups, Earth Observation, Space Environment Utilization, Communication Satellite Applications, and Space Education and Awareness.

We sincerely thank Japan and we wish the upcoming APRSAF-16 to be held in the beautiful country of Thailand with all success.

Viet Nam is now also preparing the Hoa Lac Space Centre Project in collaboration with Japan. The main project objectives are space science and technology research, space technology applications, research on high-technology applications, and Space Technology Transfer Centre for social and economic development.

Recently, Viet Nam also signed a project with one centre which belonged to the French Space Agency and the French Research Institute for Ocean Exploitation to monitor the ocean and water resources of Viet Nam. With the support from France, Viet Nam will soon start another project called VNREDSAT-1, it means a small satellite for monitoring natural resources, the environment and calamities. It will be the second satellite of Viet Nam in outer space.

Mr. Chairman, also space technology is just only beginning in Viet Nam. However, with the support of the Government and through internship with international cooperation, Viet Nam is _____(?) to build a solid foundation for its development. We will increase professional training, encouraging young people to study space science and technology, actively studying the international treaties and conventions on the peaceful use of outer space and within its national legal infrastructure for space activities, the conformity with the international treaties and conventions that Viet Nam has committed.

We highly appreciate the fruitful cooperation on space technology with COPUS so far and we hope to promote further ongoing programmes with Viet Nam and COPUOS and its member States.

In conclusion, Mr. Chairman, the Vietnamese delegation would like to express its wishes to expand and strengthen the cooperation with all countries and international organizations in the research, development and utilization of space technology for peaceful purposes for social(?) development and for the common prosperity. I thank you for your attention Mr. Chairman and ladies and gentlemen.

The CHAIRMAN *(interpretation from Spanish)*: Thank you very much to the distinguished delegate from Viet Nam. I participated in the Conference that you mentioned, the APRSAF(?) Conference in your country and I was very impressed by the vitality and the hospitality of its people and I would say that you are off to a good start. I saw a lot of enthusiasm for space affairs there and I am sure that with the help of the appropriate international organizations, you will be able to put together a very robust space programme and beginning with the adhesion to the treaties. That is very important, of course, that is the foundation that this has to be built upon. Thank you very much for your words.

The next speaker on my list is Imran Iqbal from Pakistan. You have the floor Sir.

Mr. I. IQBAL (Pakistan): Thank you Mr. Chairman. Mr. Chairman and distinguished delegates, please allow me on behalf of the Pakistan delegation to congratulate you on presiding the affairs of the Committee as its current Chairman. With rapid developments in the field of space technology, the work of our Committee has become more sensitive and complex. I believe that the Committee has acquitted itself well in the past in facing quite serious challenges as well as resolving the various problems and issues related to space science, space technology and their applications. I am confident that under your competent stewardship, and other members of the Bureau, the Committee will successfully achieve its objectives in further promotion of the peaceful uses of outer space and international cooperation.

I also express my appreciation to the Secretariat under the leadership of Dr. Mazlan Othman for their hard work and excellent arrangements for this meeting.

Mr. Chairman, over the past several years, the people and the Government of Pakistan have been adversely affected by the war on terror. About 2.5 million people have recently been displaced and became homeless.

Mr. Chairman, space science and technology have a great role to play due to their expanded applications in the areas of remote sensing, geo-informatics, environmental monitoring, disaster management, etc. Pakistan, like other developing countries of the region, faces problems such as haphazard organization, deforestation and environmental deterioration.

SUPARCO, the National Space Agency of Pakistan, renders assistance to the users of these technologies. SUPARCO's capabilities and services in the realm of satellite applications include research and development in remote sensing applications, user-tailored applications, customized solutions and GIS, vehicle tracking, consultancy, GIS database development and GPS service.

SUPARCO is making consistent efforts to create our awareness among the potential users of these technologies to promote the uses in new avenues of applications.

In the last one year, considerable progress has been made in the field of agriculture, forestry, land use, irrigation, open planning, water resource management, soil survey, agriculture, coastal ecosystems, monitoring natural hazards and environment monitoring, civil engineering, and geological mapping. Some of the projects carried out were the National Programme for Improvement of Water Courses, Land Use Mapping of Azad, Jamo(?) and Kashmir, flood inundation mapping, crop monitoring through satellite technology, baseline and air quality study, disaster preparedness and mitigation, climate change studies, also a data archival and retrieval system.

Mr. Chairman, Pakistan has always accorded priority to explore possibilities of regional and international cooperation in outer space for undertaking space science and technology projects. Some of the regional and international cooperative projects are: Glacial and Snowmelt run-off(?) projects with the Institute of Tibetan Plateau Research, China; Regional Atmospheric(?) *(not clear)* Studies with the International Centre for Integrated Mountain Development, Nepal, capacity-building for crop monitoring with ASEAN, crop monitoring through satellite technology with the Food and Agriculture Organization United Nations.

Mr. Chairman, Pakistan has leased a communication satellite named PAKSAT-1 at the orbital slot of 38 degrees East, which we are planning to replace by 2011. A Commission Contract has been signed with the China Great Wall Industry Corporation for the design, manufacturing and launching of a 30-transponder communication satellite, PAKSAT-1R to meet our national requirements.

The satellite is planned to be launched on 14 April 2011. The implementation of this project will not only augment the existing telecommunication infrastructure of the country but would also help greatly in promoting the use of satellite communication in the country, particularly for socio-economic development.

Mr. Chairman, in support to the mandate of the UNSPIDER Programme, Pakistan has requested the United Nations Office for Outer Space Affairs to establish a satellite-based United Nations-affiliated Disaster Management Regional Support Centre in the country and has offered office space, facilities and an official to act as a Coordinator for the Regional Office. Discussions on cooperative arrangements and plan of work are in progress.

To enhance the capacity-building in natural disasters and risk management and mitigation, Pakistan participated in the Second UNSPIDER Workshop and Expert Meeting in February and October 2008.

Commitments have been made for participation in an eight-week mid-term training course in Indonesia on Geo-Informatics for Natural Hazard Management and Disaster Risk Reduction.

Our Atmospheric Data Receiving and Processing Centre has recently been established at Karachi, Pakistan, that will help preparing composite risk assessment maps of all hazards for areas in the country. It would further support SPIDER core activities such as access to information, knowledge management and capacity-building.

A new COSPAS-SARSAT Local User Terminal is being established, again at Karachi, to provide timely alert and location data to the search and rescue agencies.

Mr. Chairman, in pursuance of the decision of the General Assembly resolution 54/68 of 1999 to celebrate the World Space Week, Pakistan celebrated the week this year with a view to creating awareness of the people in general and the younger generation in particular about the scope and benefits of space science and space technology. The theme for 2008 was "Exploring the Universe". Various week-long activities and events during the World Space Week '08 around the theme included seminars, workshops, symposia and lectures on space awareness, sky simulation shows, Sun observation, etc. A number of competitions like poster painting, aero-modelling and water rockets were also arranged.

Mr. Chairman, pursuant to paragraph 51 of General Assembly resolution 62/217 of 22 December 2007, the Committee at its current session will continue to focus discussions on space education under the agenda item Space and Society for enhancing

education in space and expanding space tools for education and ensuring that the space-based services contribute to the achievement of the Millennium Development Goals on access to education.

Pakistan has plans to launch the Space Education and Awareness Programme, SEAP, to create awareness and to promote the use of space technology and its applications towards building a prosperous society. The proposed Space Education and Awareness Programme would include visits of scientists and experts from SUPARCO to far-flung areas to give multi-media presentations and show space videos and movies. Also included are seminars, summer camps, competitions and visits of the students to foreign countries for participation in various space-related activities. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from Spanish)*: Let me thank the distinguished representative of Pakistan. The programmes under SUPARCO, your Agency, are very interesting, especially in the field of education. This is also one of the priority concerns that we have in the Committee in terms of installed capacity or to be installed. Thank you very much and thank you for the support of SPIDER.

My next speaker is the representative of the United States, Mr. Kenneth Hodgkins. You have the floor Mr. Hodgkins.

Mr. K. HODGKINS (United States of America): Thank you Mr. Chairman. On behalf of the United States delegation, I would like to start by expressing satisfaction at seeing you and the other members of the Bureau once again leading our deliberations. We look forward to working with you to ensure a successful outcome to this session.

I would also like to express our deep appreciation to the staff of the Office for Outer Space Affairs for their superb work over the past year and for their diligent efforts to prepare for our meetings over the coming days.

Since last year's session, the Committee and its Subcommittees have recorded a number of significant achievements in promoting international space cooperation and I will address those under the appropriate agenda items.

Mr. Chairman, this session of COPUOS has convened on the fortieth anniversary of perhaps the most significant technological achievement of our time. The 20th July will mark the fortieth anniversary of the Lunar Landing of Apollo 11. On that date in 1969, astronaut Neil Armstrong stepped on the lunar surface telling millions who saw and heard him on Earth that it was one small step for a man, one giant leap for mankind.

The first clear pictures of the Earth taken in preparation for this mission caused the people of the world to view Earth in a different way, that is, an incredible beautiful sphere hanging in the blackness of space.

Much of our attention today is focused on the application of space techniques to the understanding and solution of terrestrial problems and this is entirely proper. But exploration remains an enticing goal and an important objective as we seek answers to fundamental questions about the origins of the Universe and life itself.

Project De Paolo(?) *(not clear)* was a very important early step in that ongoing process of seeking new knowledge and we and our partners in the International Space Station Programme and now the Global Exploration Strategy have built upon this legacy.

On 7 May of this year, the President directed an independent review of NASA's human space flight activities. The goal was to provide options that would ensure the nation's human space flight programmes remain safe, innovative and affordable in the years following the Space Shuttle's retirement. The review will evaluate options for extending the Space Station operations beyond 2016. The review will also examine the appropriate amount of research and development and robotic activities needed to make human space flight activities most productive and affordable over the long term as well as appropriate opportunities for international collaboration. The results of this review will be available in August of this year in order to support a decision on how to proceed shortly thereafter.

Mr. Chairman, since our last session, there have been three Space Shuttle missions to the Space Station to continue Station assembly and support and one mission to carry out the final servicing of the Hubble Space Telescope. There will be four more Shuttle missions to the ISS in 2009 including one which is scheduled to launch next week.

NASA's Constellation Transportation System, which is being developed to return humans to the lunar surface by 2020, continues to make progress. NASA

has successfully completed the preliminary design review for the new ARIES-1 rocket in 2008.

While the Space Exploration Review of NASA's plans for ARIES takes place, NASA will continue to coordinate its exploration plans with other space agencies through the Global Exploration Strategy International Space Exploration Coordination Group, including leading initial discussions focused on potential lunar exploration architecture scenarios and the important interfaces that would facilitate cooperation on the Moon.

I would also like to highlight a number of ongoing robotic science and exploration missions. The Phoenix Mars Lander reached a soft landing on Mars on 25 May 2008 at a site further north than where any previous spacecraft had landed. The mission successfully returned unprecedented science data to Earth advancing the goal of documenting the history of water on Mars.

In 2008, the Hubble Space Telescope continued to make unprecedented observations.

The Spitzer Space Telescope continued its search for planets outside of our solar system and the Fermi Gamma Ray Telescope was launched in June 2008 to explore the most extreme environments in the Universe, searching for signs of new laws of physics and investigating dark matter. Fermi is a collaboration between NASA, the United States Department of Energy, and academic institutions and partners in France, Germany, Italy and Sweden.

NASA's Mars Exploration Rovers, Spirit and Opportunity, have passed their fifth anniversary on Mars and continue their remarkable journeys.

The New Horizons mission to Pluto, which passed by Jupiter last year, is currently in an inter-planetary cruise phase and is due to arrive at Pluto in 2015.

As we look to the future of operational environmental satellites, the United States continues to prepare for its next generation of geostationary and polar orbiting environmental satellites. The National Polar Orbiting Operational Environmental Satellite System known as NPOESS, is a coordinated effort of the United States National Oceanic and Atmospheric Administration, the United States Department of Defense, and NASA. The launch of the first NPOESS platform is expected in 2014 and will be preceded by the NASA launch of the NPOESS Preparatory Programme scheduled for 2010. The NPP will minimize a data gap between the EOS Programme and NPOESS and provide a valuable baseline for the operation of the sensors coming on NPOESS.

In addition, NOAA plans to launch its Next Generation Geostationary Programme, GOES-R, in 2015. The NPOESS and GOES-R systems will provide huge amounts of weather with relevant data to the environmental and research communities worldwide.

A new lower polar orbiting satellite, NOAA-NPINE(?), was launched on 6 February 2009. After reaching orbit, the satellite was designated NOAA-19. It is the latest in a series of NOAA polar orbiting environment satellites and supports NOAA's weather and ocean forecasts as well as the United States search and rescue operations.

Additionally, NOAA-19 is part of the international search and rescue satellite-sided tracking system, known as COSPAS-SARSAT, that detects distress alerts from emergency beacons and supports rescue operations.

In the fall of 2008, NOAA assumed operational management of the JASON-2 satellite. JASON-2, launched on 20 June 2008, is a joint effort between NOAA, NASA, France's Space Agency and EUMETSAT.

The United States Geological Survey is responsible for the operation of the LANDSAT-5 and the LANDSAT-7 land imaging satellites. LANDSAT provides essential information for land surface monitoring, ecosystems management, disaster mitigation and climate change research.

Earlier this year, LANDSAT-5 marked the twenty-fifth year of successful operations. The satellite, which was launched on 1 March 1984, has completed more than 130,000 orbits of the Earth and has provided more than 700,000. Under the previous United States pricing policy, with the users paying for the cost of reproduction and transmission, the greatest number of LANDSAT scenes sold by the USGS in one year was approximately 19,000. Under this new policy, the USGS expects to deliver more than one million LANDSAT scenes to users in the coming year.

The LANDSAT Data Continuity Mission, or LANDSAT-8, is under development, with a launch scheduled for late 2012.

LANDSAT-8 will be delivered and launched by NASA and the spacecraft and associated ground

segment would be operated by the USGS. USGS will work with existing and new foreign ground station partners to facilitate direct reception of regional LANDSAT data for local users.

Beyond LANDSAT-8, the President's fiscal year 2009 budget has included a funding request for the United States National Land Imaging Programme which will address United States Federal State and local requirements for access to and long-term continuity of land imagery and international cooperation would be an important aspect of this programme.

Mr. Chairman, as many of you are aware, on 10 February, a collision occurred involving an active United States commercial satellite, Iridium-33, and an inactive Russian satellite, Cosmos-251, in lower Earth Orbit. As we reported to the Scientific and Technical Subcommittee and the Legal Subcommittee, we have been in communication with the Russian Federation regarding the collision. The Department of Defense conducted an internal review of the processes and procedures currently employed for monitoring space objects, performing orbital conjunction analyses and reporting pertinent findings to concerned parties. Next week we will provide special presentations on the collision as well as update on the resulting space debris.

The United States Air Force's Space Surveillance Network is continuing to track the debris from the two satellites in two separate debris clouds. As we said previously, there is little risk to the International Space Station due to orbiting debris from the collision but the Department of Defense and NASA are conducting further studies on the potential risks due to the two debris fields.

The collision underscores the increasing risk of congestion in the space environment and emphasizes the vital importance of heightened space situation awareness, as well as international cooperation between governments and industry which is critical in the future to improve space safety.

As with all objects large enough to be tracked, new pieces of debris resulting from the collision will be posted on the public website, www.space-track.org, so that all nations and companies with assets in space can have access to this information.

Finally, Mr. Chairman, I would like to note that none of the space debris created from the February 2008 engagement of USA-193, which eliminated the potential risk to human life from the remaining highly toxic hydrazine, remains in orbit today. Most debris entered the Earth's atmosphere within a few weeks of the engagement and well within the Debris Mitigation Guidelines that the United Nations COPUOS endorsed in 2007. To our knowledge, none of the debris survived re-entry. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from Spanish)*: Let me express my thanks to the very complete presentation made by the United States representative who has informed us on the latest developments in space exploration in the context of his country's programmes, in particular on a topic which has been very important for us here and for developing countries essentially, satellite imaging. We are very pleased to hear about the LANDSAT Programme's intention to put its archives free of charge at the disposal of all. We are very appreciative of that.

We are also pleased to see the updating of data on collisions and impacts which, as you said, is part of the risk side of this question involving international alert warning and cooperation, a critical issue for the future and space activities.

Thank you very much for that statement which was not the last. I have one request from Ambassador Raimundo González who wants to comment on some of the statements made this morning. You have the floor Sir.

Mr. R. GONZÁLEZ ANINAT (Chile) *(interpretation from Spanish)*: Thank you very much Chair. Yes, on your list that was the last one but to be coherent and consistent, you have stimulated us to have an exchange of opinion and debate and discussion here so I take the floor and I will be very disciplined in my responses to the topics raised here.

Just two remarks concerning some of the statements made today and yesterday. First of all, the distinguished representative of France on sustainability in outer space. I think this is good contribution and we had learned about this informally but we are still awaiting for more detail as to know whether the fundamental principles that have to do with sustainability. Inter-generational equity and things like this are also included in that proposal. So this has to be refined a little bit this proposal so that countries, especially those in Latin America who have worked very closely with France at the Space Conference of the Americas, can learn a little more detail on this proposal.

Now Nigeria. We totally agree with the fact that food security is a crucial topic. We said this in our

first intervention here this year in the General Assembly. The follow-up to the Panel that there was a discussion in the Fourth Committee on food security and this is going to be continued, let us say, under this over-arching theme and we were actually talking more about public health and this interaction here a very important bit of interaction between the two.

There is also climate change, something that, of course, affects us all and is linked to these others. We have had to confront 36 different new pathologies in the past year so there are serious problems here as well.

I again toss out the idea not for discussion at this time because I know that you have got a very strict timetable to follow which we agreed but we have talked a lot about cooperation. Ever since we started the _____ *(not clear)*, everyone has talked about cooperation and I who have spent some time in the United Nations have never been able to understand what we actually mean by international cooperation in terms of the possibilities of cooperation. If we looked at year to year and see that, for example, the Office for Outer Space Affairs budget has been reduced year after year, or as Sergio Camacho said yesterday, that they had to reduce 20 to 30 per cent when they were trying to budget for UNISPACE III and had to do all kinds of juggling to have a world conference to launch international cooperation. All of this shows that this is a very pertinent topic. We have made important efforts because we have to, in our countries because we have some legal instruments that bind us to international cooperation, resolution 2526, for example, and talks about the duty to cooperate. Thank you very much Chairman. I hope that, as Chairman, as my friend, I have respected my wish that I stick to my two minute limit or one minute 50 perhaps even. Thank you.

The CHAIRMAN *(interpretation from Spanish)*: I will not make any remarks on what you said concerning your concerns that you have voiced here which we, of course, share.

I give the floor to Colombia at this time.

Mr. J. H. OJEDA BUENO (Colombia) *(interpretation from Spanish)*: Good morning Chairman. My thanks to you and thanks to all of the delegates who have given their countries statements. We have seen that there are increasing possibilities and developments here in the field of space. Of course, for Colombia it is important to take into account the point of view of developing countries and one of the concerns that we have, for example, Nigeria and Viet Nam, Pakistan, and other distinguished delegates have mentioned this. Let me go over this adding environment, public health, resource mapping, food security, all of this done on a sustainable basis. These are the priority areas for Colombia.

Normally when we talk about sustainability, we are reminded of what Ambassador Raimundo González already said about certain concepts which are anchored to mankind's knowledge. I am thinking back of Agenda 21 in Rio de Janeiro in 1991. Only 10 years following that we came up with the principles, which the Ambassador has already mentioned, precautionary principle, planning for future generations and so on, all of these other pillars, the pillars of current thinking as a part of what is not just called environmental diplomacy now but which we really find to be values and which can also be a part of what we could call space diplomacy. We have to work on these ourselves and cannot just limit ourselves to the technological or technical sides. If we look at these individually as they have been enumerated here, and these are a part of the important environmental agreements, we see that there is a technological side, an economic side and these are the ones that obviously have influence when it comes to taking decisions by governments.

This is why the French proposal is, I think, very much worthy of interest. I do not know whether we should talk about sustainability now or if we should continue to do more thinking about sustainability if we need to have a much broader scoped policy for the United Nations here, taking this out of the hands of just groups of experts.

Let me express my thanks again to the Chair and to the Ambassador of Chile for starting the ball rolling on this debate and discussion which is of such great interest to us.

The CHAIRMAN *(interpretation from Spanish)*: Let me thank Colombia for those pertinent remarks.

Does any other delegation wish to take the floor at this time?

Someone in the back whom I cannot see. I believe it is Syria. You have the floor Syria. Do you want to make a presentation or is this a remark to be made? If you have a presentation, we need to programme that later because we have come to the point of technical presentations. If it is just remarks on the discussion, please make them now.

Mr. O. AMMAR (Syrian Arab Republic) *(interpretation from Arabic)*: Chairman, I could defer

my statement until later if this agrees with you. However, I would like to respond to the discussion that is ongoing right if I could be given that opportunity.

The CHAIRMAN *(interpretation from Spanish)*: Yes, absolutely if it has to do with the debate and discussion here, you can do that now. If it is to make a country presentation we will do that later.

Mr. O. AMMAR (Syrian Arab Republic) *(interpretation from Arabic)*: Chairman, ladies and gentlemen, I have the honour of addressing you during this COPUOS session.

To start off, I would like on behalf of my delegation as well as personally, I would like to greet you, Chairman, as well as your two Vice-Chairmen as well as Mrs. Mazlan Othman and all her colleagues. Through you, I would also like to greet all of the Heads and members of delegations present.

Chairman, we certainly appreciate all of the experiences acquired by member States in the field of space technologies and we would like to express our admiration at the successes achieved by certain States. Yesterday we were reprised of the accomplishments of China in the field of space technologies as well as the achievements of other countries as well. All of these activities will certainly have very positive benefits for all mankind.

Chairman, we are fully aware of the fact that there is a divergency of levels of technology between various States in the world and I do believe that we should seek to put all of these space technologies available, make these technologies available for the development of our peoples and to make this also available regionally. And our efforts coincide with some of the items of the agenda, in particular, as concerns society, water resources, climate change, as well as international cooperation for the use of geographical data. We can also refer to some activities that we have conducted under these agenda items.

Furthermore, we appreciate all of the initiatives made to ensure the sustainability, long-term sustainability and viability for outer space activities conducted for peaceful purposes and we certainly would like to join those who expressed their concern as to the over-crowding and over-use of orbits. Orbits are resources that should be shared fairly and equally by all States. If there are some States which make use of the orbit which is common heritage, if there are States which make use of this orbit in an exaggerated fashion, then there are other States which find it difficult to find their place in the Sun, as it were, in this orbit, to gain access to it. And when the distinguished delegate of Chile spoke about the need to define concepts as concerns exploitation, I believe this is a very fair point. Indeed, the fact that many States are cooperating is something which is to the advantage of the development of outer space activities but we have to be careful as to the way in which we are making use of this common heritage. And, indeed, for example, the problem of greenhouse gases could be possibly be addressed in this fashion. But there are ever so many international issues that could usefully be addressed so that the developing countries would not be overly taxed in this regard so that they should not have to contribute in an exaggerated fashion.

So I believe that the use made of the orbit and of the over-use made thereof are indeed very legitimate issues. I believe that we must be very prudent, however. We have to see what our requirements are, how they can be met and not more. It would be very useful indeed to develop a mechanism of complementarity and of assistance so as to activate this mechanism of cooperation and in order to register positive gains for all States in resolving problems that they must cope with and this in order to properly preserve outer space and orbits for the future.

We have a major challenge before us and, for this reason, we must establish a mechanism that can be made to serve development programmes so that technologies can be indeed exploited to this end alone. This would allow us indeed to address the problems of certain States that do not have access to these technologies. Thank you.

The CHAIRMAN *(interpretation from Spanish)*: Let me thank the distinguished representative of Syria. It is now time for us to turn to the technical presentations.

The first person on my list is, and please excuse me in advance if I am not pronouncing the name correctly, Ms. Aneska(?) Lukaszczyk from the Space Generation Advisory Council. You have the floor.

Ms. A. LUKASZCZYK (Space Generation Advisory Council): Thank you Mr. Chairman. I would like to declare that I will be making a statement and not a technical presentation. Is that still OK? Is that an appropriate time?

The CHAIRMAN *(interpretation from Spanish)*: That is what we intended yes.

The delegate of Greece has the floor.

Mr. V. CASSAPOGLOU (Greece) *(interpretation from French)*: Thank you very much Chairman for giving me the floor.

I would like to make a point of order.

During this last meeting, in other words during the session of the Scientific and Technical Subcommittee, as well as during the Legal Subcommittee, I asked that before it be accepted that there be a presentation of all of the legal elements underpinning its legal and economic existence so that we would be able indeed to find out where the financing comes from enabling this activity. Because, as I have already said before, I see that in 2007 there was a deficit, there was a budget of roughly 6,000 Euros and a deficit of 1,500 Euros. And in spite of all of this, they are appearing and saying that they are a sponsor of a major congress, a major meeting that is going to be taking place in Grenada.

Now, Chairman, if we do not get all of these elements of information provided to us, I cannot accept and go along with this Organization being present here. They do not have an address. They do not have a local organization. This is an Austrian civil law-based organization but it does not have a headquarters, a real headquarters. They do not have a business address. And I believe that this is quite a challenge for us to actually accept such entities which have very grandiose appellations indeed. For us, it is not acceptable to adopt this approach if this Organization is unable to provide the information and documents that we requested six months ago already. Thank you.

In all of the major meetings of intergovernmental organizations, we have what is termed the Credentials Committee and I believe that for all of the States represented here should be afforded the possibility of enjoying and controlling their full powers and credentials.

The CHAIRMAN *(interpretation from Spanish)*: First of all, I want to hear from the Secretariat. The distinguished delegate from Greece has questioned the nature and validity of an organization. And, among other things, one year ago, we had a debate here and the result of that discussion was that the Secretariat would study during the year to follow the format that would govern the acceptability of these organizations which are, in my opinion, most have made very important contributions but let me turn to the Secretariat and give the floor to Niklas on this point.

Mr. N. HEDMAN (Deputy Secretary, Office for Outer Space Affairs): Thank you Mr. Chairman. Yes, indeed, just to inform delegations that under our agenda item, Other Matters, item 15, there will be a discussion on the status of the permanent observers which are non-governmental organizations, the status, vis-à-vis, ECOSOC. And this discussion will be taken up next week under that item and I refer you to the provisional agenda for this meeting.

The Secretariat has prepared a table listing the non-governmental organizations and their respective status with the ECOSOC because that is what the Committee has requested from us to study the status of ECOSOC, the consultative status of ECOSOC with regard to these respective non-governmental organizations.

In the case of this particular Organization, the Space Generation Advisory Council, I can inform the Committee that that Organization has permanent observer status with the Committee and it has consultative status with the ECOSOC. But, Mr. Chairman, this discussion will be taken up next week and the Secretariat will prepare that table and with additional information for the consideration of the Committee. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from Spanish)*: Let me thank the Secretariat. Indeed, this is a concern but we have clarification. The Space Generation Advisory Council has met the requirements in the past so I would ask the Greek delegate that we discuss this when the documents are presented to the Secretariat, which, when will that be? More or less when would that be? Next week? OK more or less Monday. Monday we will have the debate and discussion on this but I give the floor back to Greece.

Mr. V. CASSAPOGLOU (Greece) *(interpretation from French)*: Thank you very much for the elements of information that you have presented. However, I really still would ask, even if ECOSCO had granted the status to this Association, on the basis of what elements was it granting the status? What were the documents presented to justify this application? I believe that it is necessary to establish this so that the matter could be resolved. If we decide that it is not completely clear this situation as it relates to the actual legal existence of this situation, then we must review the situation. I do not know exactly what period of time would be referred to for the period presented for ECOSCO for its consideration but I really would question its international representativity because otherwise any association from anywhere in Paris could just surface all of a sudden and claim

observer status. So I would really reserve my right to revert to this topic once we have had further and more clear explanations.

The CHAIRMAN *(interpretation from Spanish)*: Let me thank the representative of Greece. And I can tell you that on the part of the Chair, we would not let any association that did not meet the requirements legally to attend the meeting attend the meeting. That point at least is clear. So I give the floor to the representative of the Space Generation Advisory Council.

Ms. A. LUKASZCZYK (Space Generation Advisory Council): Thank you Mr. Chairman. Perhaps my statement will clear some things up. As you and the distinguished delegates may know, this year is very special for us as we are celebrating our 10-year anniversary.

Allow me to give a bit of a historical overview on SGAC. In December 1997, the United Nations Office for Outer Space Affairs Secretary invited keen young space enthusiasts to organize a youth forum as part of the United Nations Committee on the Peaceful Uses of Outer Space. Those young people then solicited alumni volunteers to plan, organize and conduct the Space Generation Forum in parallel with the UNISPACE III Conference activities.

Thus, the Space Generation Forum was planned, organized and conducted by young space professionals. The 160 participants, the original Space Generation members, were from 60 nations. Their expertise covered all fields of space including science technology, law, ethics, art, literature, anthropology and architecture, and many other fields relevant to space.

On 23 July, the participants had before them a document containing 49 recommendations. The participants were asked by the Committee to choose the 10 best recommendations which are contained in the document entitled "Space Generation Forum: Visions and Perspectives of Youth".

As part of UNISPACE III, alumni of the International Space University organized and convened the Space Generation Forum. The aim of the Forum was to express the visions and perspectives of youth with regard to the future of space activities. This evolved to include a youth input into deliberations of the United Nations at UNISPACE and was charged to make recommendations to the Committee on the Peaceful Uses of Outer Space. Over 160 young people from 60 countries attended the Forum which ran parallel.

Of the 10 recommendations from the Space Generation Forum Technical Report that were accepted by the United Nations, five were integrated into the Vienna Declaration. One of the recommendations of the Committee was to create a Council to support the United Nations Committee on the Peaceful Uses of Outer Space to raising awareness and exchange of fresh ideas by youth. The vision is to employ the creativity and vigour of youth in advance the humanity to the peaceful uses of space.

Ten years has passed and we have grown from strength to strength having over 4,000 members in about 90 countries conducting projects in advance across the globe and offering opportunities to young people to engage in space activities, regardless of where they are coming from.

This weekend we will hold a 10-Year Anniversary Conference entitled "UNISPACE III: How Far Have We Come?" which will take place at the European Space Policy Institute where we are based. Young people from all over the world are coming back to Vienna to analyze the past and learn from it and plan for the future. We will have working groups which will produce an output which we will share with this Committee next week so you can immediate results of our work. We want to demonstrate to the international community that young people are concerned with the space policy issues and want to contribute to the debate on space.

Just like 10 years ago, we will offer a platform for young people to exchange ideas and bring some together with experts and member State representatives to facilitate not only international cooperation but also cooperation between generations.

In addition, we are organizing a 10-Year Anniversary Reception this Friday at 7.30 p.m. at the Bösendorfer Piano Factory in the Fourth District of Vienna. We would be honoured if the distinguished delegates of this Committee would join us in this very important celebration for us. We will distribute invitations this week and we are looking forward to welcoming everyone at the Bösendorfer so you can meet our members.

There are many people who have contributed to the success of the Space Generation and it is simply impossible to mention them all. They might not be mentioned in this statement but they are certainly not forgotten.

Young people today are in need of role models and we thank all those who support our activities and take their time to mentor us. We certainly appreciate the constant support of the United Nations Office for Outer Space Affairs. Dr. Mazlan Othman has been very open to our ideas and has offered a helping hand on many occasions which is more than we could have asked for.

I would also like to take this opportunity to thank the current Chair of COPUOS for his tremendous support for our work. Ambassador Arévalo has been supporting youth space activities beyond our expectations. He has become an inspiration and true model to many of our members and we very much appreciate it. Young people around the world need guidance, motivation and attention. Having someone like the Chair of COPUOS taking time in his very busy schedule to speak with them, offer advice and engage in projects, makes a world of difference and this is why we would like to thank you for taking an interest in the work, plans and dreams of those young space enthusiasts.

I would like to end with once again cordially inviting everyone to our Reception on Friday. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from Spanish)*: Thank you very much for that statement and I would ask that you include an invitation to the distinguished representative of Greece for the Symposium.

Now we are going to go into the technical presentations. I would like to invite Jun Yanagi from Japan to present "Japanese Space Policy: The Basic Plan for Space Policy". You have the floor Sir.

Mr. J. YANAGI (Japan): Thank you Mr. Chairperson. My name is Jun Yanagi, Director in charge of Space Affairs of the Foreign Ministry of Japan but also I belong to the Strategic Headquarters for Space Policy which was established last summer.

Today I want to make a presentation of the Japanese basic space law and Basic Space Plan.

In Japan, basic space law was enacted in August last year. This law was initiated but not by the bureaucrats but by the politicians unanimous support among leading(?) party and opposition party. Then the Strategic Headquarters was created with the Prime Minister as the Head and the Chief Under(?)-Secretary and the Minister in charge of Space Affairs as his two deputies. And about 20 people have been assembled to set up a Secretariat from various ministries and agencies like the Ministry of Industry, the Ministry of Science and Technology, the Foreign Ministry, the Defence Ministry and the Ministry of Telecommunication, JAXA. So these people have been now working in the Secretariat for the Strategic Headquarters.

What are they doing? There are three things which they are doing whilst reformulating the Basic Space Plan for Space Policy but that was adopted the day before yesterday marking a turning point in the history of Japanese space activities. But also they are looking at the domestic legislation on space activities but also they are dealing a hard constellation on restructuring of space-related organizations including governmental agencies but also the position of JAXA within the Japanese Government.

Today I want to explain the status of this Basic Plan for Space Policy. This includes six pillars, six basic pillars, and also some majors that the Government should take comprehensively and systematically.

Now the status or the Basic Plan or background. Why Japan has been coming up with basic law or a Basic Plan. We had a sense programme, that the three programmes was a lack of comprehensive strategy and shortage of experience and lack of competitiveness of industries.

So based upon this kind of perception, a weakness of Japanese space policy's space activities or space industries, we had adopted basic space law and Basic Space Plan. This five-year Plan posing the next 10 years, aims to shift the policy priority from a research-oriented to utilization-oriented. This Plan also aims to realize the rich, secure and safe life of our people and to contribute to the international community and the Government should take comprehensively and systematically with regard to utilization of space.

So this is what I have already said. The basic philosophy of the Basic Space Plan of Japan.

And now let me move on to each of the six basic pillars.

First, for a rich, secure and safe life. For certainly our Plan is designed to ensure this kind of life to the Japanese people, public safety, preservation and care of the territorial land, supply of food, natural

resource and energy, and better quality of life and such and such.

And second is security through the utilization of space. As you may know, Japan had imposed a sort of self-restriction on the use of outer space for our security or defence purposes but his basic space law has opened the Japanese Government to use space for security purposes but I want to stress this is certainly in line with the Pacific(?) Constitution and also exclusively for Japan's oriented purpose.

Third is the sort of space diplomacy. I think there are two dimensions. One is diplomacy for space and another is space for diplomacy. What I mean by space for diplomacy is the using some space science or space technologies of Japan for some diplomatic purpose or for international cooperation, like the GEO or as I said yesterday, by using our satellite DAICHI and contribute to UNESCO monitoring the World Heritage situation and such and such.

And diplomacy for science, for space, we would accelerate our diplomatic efforts to promote our space industries but also to bring up or educate our people so that they could make a leading role in space-related international fora including COPUOS.

Fourth is the research and development, the promotion leading actually research and development. We would contribute to resolving the global environment and energy programmes through leading-edge research and development and promote space science and manned space activities.

The fifth pillar is we place our space-related industry as a strategic industry for the next century and we would like to promote our own space industries.

And six, and the last pillar is the environment. Certainly in promoting our space activities and industries, we give due consideration to protecting the environment, not only on the Earth but also in space.

So according to these six pillars, we will ascend all space-related activities and programmes what we call five systems and four programmes. Then we will illustrate what we are going to do for the next five years.

First, the five systems: (a) Land and Ocean Observing Satellite system; (b) Global Environmental Change and Climate Observing Satellite System; (c) Advanced Telecommunication Satellite System; (d) Positioning Satellite System; and (e) Satellite System for National Security.

And four programmes: Space Science Programme: Manned Space Activities; R&D of Space Photovoltaic Programme; and Small-Size Certification Satellite Programmes.

So we sorted that all activities and programmes into nine programmes and systems so that we illustrate how many what kind of activities we are going to do, how many satellites we will need. Then it will give us a sort of an idea to our space industries how many satellites our Government will need so that they could have a sort of a predictability of the demand in the future.

Now I want to move on to some concrete measures but actually this is a repetition of the part I described as the six pillars because these concrete measures are stipulated in accordance with the above-mentioned six pillars. But I just want to pick up a couple of examples under each pillar.

First, a rich, secure and safe life. There is nothing to be mentioned specially here the first and second pillar.

On the third pillar, space diplomacy, we would emphasize on the regional aspect, APRSAF.

And the next, under the pillar of the research and development, here you might notice the basic plan stipulates what we are going to do with regard to the Space Station and also decide whether to prolong the operation of the ISS after 2016. And also we are considering about the probe of the Moon within a year, aiming to probe the Moon by a two-legged robot by around 2020, something like that was included in this Plan.

And then some concrete measures with regard to space industries and the environmental safeguards.

But also in addition to the six pillars, this Basic Plan stipulates a sort of an educational process or bring up young people in the field of space activities. We need support by the _____(?) people to promote the space activities or to get enough budget for the space activities. So some elements are clearly stipulated to educate our people, especially young people.

And this is the last part of my presentation. But actually this five-year Plan does not exclusively stipulate how much budget we can get from our Ministry of Finance but certainly thanks to this kind of exercise and the structure in governance and minister

structures, we could foresee much an increase in the budget, vis-à-vis, space-related activities.

And having all said that, I have been involved in this process for more than one year and we have established three eminent persons groups. One is for a Basic Plan and another is for the structure in the governmental agencies and third is for domestic legislation. But I am surprised to find how much enthusiasm they have especially, vis-à-vis, manned space activities. Perhaps we are impressed by the Chinese successful space activities or manned space activities, but perhaps these people, our people, would like to not do that the possibility of that kind of activities in order to a sort of a goal at which we are moving for.

And another element which is a sort of a heated debate is how to place JAXA within Japanese governmental agencies. Certainly there is a consensus to strengthen JAXA but from a research-oriented one to a more legislative(?) entity(?) but also to the more not only for the Ministry of Science and Technology but for all the Government and all industries. So JAXA will be certainly strengthened in the near future.

And also I want to stress that this exercise on basic space law and Basic Space Plan has been drawing an unanimous support by not only the leading party but the major opposition parties so there will not be any change of our basic stance posture, vis-à-vis, space activities. Thank you for your cooperation and thank you for your attention.

The CHAIRMAN *(interpretation from Spanish)*: Thank you very much to the distinguished delegate of Japan, Mr. Yanagi, for that very interesting presentation covering the development of a space policy for Japan and its basic principles, how to promote the role already being played by JAXA in that overall policy.

Let me now give the floor to Mr. Jiae Ajayi from Nigeria who is going to speak about the Third IAA Regional Conference in Abuja. You have the floor.

Mr. J. AJAYI (Nigeria): Thank you Mr. Chairman. I am going to give a brief presentation on the Third African General Conference coming up in Abuja in November 2009.

About the content of the presentation I am going to make this morning, went through the outline out to the work and message(?).

The Conference is going to be held between 24 and 26 November 2009 at the Sheraton Hotel and Towers, Abuja, Nigeria. And the theme of the Conference is "Joint Participation, Knowledge Development and Sharing", which will be hosted by the National Space Research and Development Agency, NASRDA, in conjunction with the International Academy of Astronautics, IAA.

The contents of the Conference will include exhibition, social programme and the presentation of papers.

And this is just a bit about NASRDA. The pictures are showing the NASRDA Campus, the Space Applications Building, the Administrative Block of NASRDA and the Network Operating Centre of the Nigerian Communication Satellites.

This is the composition of the International Programme Committee made up of the Conference Co-Chair, the Co-Vice-Chair, the General Secretary and the International Programme Committee members.

We have got in a chance of support from some other organizations which are shown above. The National Space Research and Development Agency will be hosting the Conference in connection with the IAA, the United Nations Office for Outer Space Affairs will be giving us financial assistance, together with the European Space Agency and the EADS Astrium.

These are the areas of interest for the Conference which covers integrate Earth observation system for development, space communications and navigation systems, space transportation and propulsion systems, space debris and near-Earth objects, all through to the seventh which is capacity-building and the space enterprise.

This is the Conference venue and the picture on the left is showing the Conference Hall and the one view of the Conference venue for the _____(?) Sheraton Hotel and Towers, Abuja, Nigeria.

In addition to the presentation of papers, the social programme, there will also be an exhibition at the Conference and we have different categories of the exhibition which are shown above and the following information on the exhibition can be gotten from the IAA website and the NASRDA website which I will be showing to you later on on one of the slides.

With regards to transportation to the Conference, all major airlines fly both to the cities of

Abuja and Lagos, but we are imploring all the delegations to try as soon as possible to book their flights directly to Abuja or Lagos but if _____(?) to do that any of the delegates have to fly out to Lagos, we have already made arrangements to meet all delegates at both the Lagos and Abuja airports and transportation arrangements have already been made from each hotel to the Conference venue.

With regards to obtaining visas to come to Nigeria for the Conference, we have informed all Nigerian embassies abroad with regards to the Conference in order to prevent delay in processing visas. And with respect to delegates that do not have Nigerian embassies in their home countries, they should also notify the Secretariat in time so that letters can be issued to them through obtaining visas at the point of entry.

With regards to welfare and security, we have made adequate welfare and security arrangements at the airports, the Conference venue and all hotels.

Hotel rates have actually been arranged with different hotels in Abuja and have different types and class of _____(?), five star down to two star hotels and we have actually negotiated rates with them which will be made available on the websites of the IAA and the NASRDA website by 30 June 2009.

In addition to the technical aspects of the Conference, we are also going to have social programmes. We will take you around to see what the Nigerian culture is really about and we have actually selected some specific places where people can visit and have a piece of the culture of Nigeria. So the first one is showing the Arugungu Festival which takes place in the Kebbi State. We have the Yankari Game Reserve there. We have the Aso Rock and the Zuma Rock.

In addition to this, delegates will have an opportunity to see the Masquerades in Nigeria. The one on the left is the Eyo Masquerade and the picture on the right shows the Egungun Masquerade.

The following information with regards to the Conference, you can actually visit the IAA website and the NASRDA website. The addresses are shown on the screen.

So I would just like to take this opportunity to welcome all the delegates attending this meeting to the Abuja Conference which will be held between 24 and 26 November 2009. Thank you very much.

The CHAIRMAN *(interpretation from Spanish)*: Let me thank you on behalf of the Committee for that very complete presentation.

Now I think we have a few moments remaining and let me give the floor to any delegation which might wish to make an observation. Chile.

Mr. R. GONZÁLEZ ANINAT (Chile) *(interpretation from Spanish)*: Thank you Chair. First of all, with respect to the presentations I think they were really excellent. Let me congratulate and commend all of them. They have made a real contribution.

But if you would allow me, let me make a specific request to you and to the Bureau, specifically referring to the very broad-minded and democratic spirit that has presided over the preparation and running of this session, allowing for the participation of all observers who have made excellent contributions during this session. We have been witnessing today of a very unfortunate statement that has put into question the Space Generation Forum which is going to do a presentation this year, Saturday and Sunday. I am not sure whether the representative is here with us at this very time. They are the ones who would usually, you have to make this kind of, we find it very regrettable to deprive young people who are our future of the possibility of providing them a space for communication. Again, as I said, it is a part of the spirit of democracy which presides over our work.

And secondly, Chair, I think that it is extremely important we continue to be open to all who are members, observers, who come with the best intentions to make a contribution and that we set aside our prejudices, our ideologies, our suspicion, which do not match the reality of the contemporary world. Since we need international cooperation to advance, I think this would be shooting ourselves in the foot, so to speak, that we would not listen to those who might indicate avenues of future development for us in the international sphere to provide them with participation in this forum. We would not want to be a party to this kind of situation so we reiterate our support to continue the policy as we have had it.

The CHAIRMAN *(interpretation from Spanish)*: Thank you Chile. On behalf of the Bureau and the Chair, we would like to thank you for your words of support which, of course, match our thinking in this matter.

Let us continue Mr. George Joseph who will be speaking to us on the Status Report on the Operation

of the Regional Centre of Space Science and Technology Education in the Asia and Pacific Region and progress achieved by that Centre in its work. You have the floor Sir.

Mr. G. JOSEPH (India): Thank you Mr. Chairman for giving me the honour of presenting the activities of the Centre for Space Science and Technology Education in the Asia and the Pacific.

The Centre was established in 1995 and 10 countries came together and made an agreement to establish an educational centre with India as the host country. Later in 1996, the DPR Korea and Malaysia joined, in 1998 the Philippines joined, Myanmar in 1999, and Thailand in 2005. Currently we have 15 members with part of the policy-making body.

Now the Centre is supposed to work using the facilities and the expertise of the host country's institution, namely the Indian Space Research Organization. The Headquarters of the Centre is at Dehradun. It is on the campus of the Indian Institute of Remote Sensing, one of the primary(?) institutions in India for inviting(?) training in the field of remote sensing and GIS. It also conducts the remote sensing and GIS course.

The other campus involves the Space Applications Centre in Ahmedabad for satellite meteorology and satellite communication and physical satellite laboratory in Ahmedabad for space sciences.

Basically, the organization of the CSSTEAP, which is the short form for the Centre, a coining for the Centre, is there is a Governing Board with a policy-making body and the Governing Board meets every year except in 1998 and, as you can see, there is a good participation of the presence of the Governing Board members, at least 75 per cent and above when there is a meeting.

Now, in addition to this, we have here an Advisory Committee which gives the technical advice about the curricula and the courses to be conducted and similar things. And this is chaired by the United Nations Office for Outer Space and the tenth meeting has been held in the last year at Ahmedabad.

In addition, since there is a host country to have all the correct facilities for the Centre, there is a Coordination Committee set up by the host country to iron out any problems or any support which is incurred by CSSTEAP.

Now each course is managed and run by the Course Director under the overall supervision of the Centre Directors. After each course, we have a Board of Studies which gives input, based on the input from the School and Centre Faculty, fine-tunes the curricula.

Now the basic linkage of the institution is with the DOS/ISRO, the first institution, which I already mentioned. In addition, we have linkages with the various academic institutions and Andhra University which is one of the oldest universities in India, has recognized the PG Diploma curricula which we brought to the students to make the coursework requirement for the M.Tech.

In the international arena, we have, of course, the United Nations agencies and we are very happy to share with you in this last year, ITC, one of the primary institutions in _____(?) *(not clear)* of The Netherlands has recognized the Remote Sensing and GIS PG Diploma course what we are offering for partial credit of the M.Tech Programme. That means the students who undertake our PG Diploma course need not take few credits for getting the M.Tech awarded by the ITC.

Now as far as the educational programme is concerned, each of the PG course is a nine-month course in four disciplines, in remote sensing and GIS satellite communication, satellite meteorology and space science. At the end of the nine months they are awarded a PG Diploma course. If they continue to do one year of a set project based on their dissertation, they are awarded an M.Tech Degree by Andhra University. And this one-year course is normally in the home country of the students. In the 2004 onwards, we have been giving Fellowships for the students to continue their M.Tech Programme in India because many of the students find they do not have adequate facilities on this for this to continue the M.Tech Programme.

Because curricula is based on, the bare backbone is the one which is decided by, compiled by the United Nations Office for Outer Space Affairs on the Frascatti Meeting in 2001. However, these are fine-tuned based on the inputs we received from the Board of Studies.

Now this year onwards, last year onwards, we have introduced what is called a Common Module. The idea is any student passing in one discipline should have a reasonable understanding of the potential of the other disciplines to the social benefit of their country. So we have before three basic technical courses as well

as a space law taught to all the students that cut(?) off the _____(?).

Until now we have conducted PG courses, 12 in remote sensing and GIS, six in satellite communications, satellite meteorology and space science. And in addition to this, we have conducted 21 short courses on which I will give you some details a little later.

This has benefited around 862 participants from 47 countries, 522 from PG courses and 342 from short courses.

Now this gives you a fair overall idea of the number of students in each course. What is given in the brackets is the number of countries benefited from that and as you can see, we have the maximum demand for remote sensing and GIS and the minimum for the space sciences.

As I mentioned earlier, those who complete one year research work can get an M.Tech awarded. Ninety-four students have been now M.Tech awarded which covers in various courses and the countries are put in there. And we have also about 58 people already registered to complete the M.Tech Programme.

Now in addition to the nine-month course, we also conduct a short course. The idea of having the short course is to have a middle level person who has been working on an activity, you give him on-the-job training. So here the stress is to make him an expert on a specialist job so that he can go back to the home country and do that. And in remote sensing, the idea is here we have been doing for natural resource and environmental management, disaster management. We have done two courses on disaster management, one on the flood and the other on the drought, and the third on geological disasters is being planned for next year. SATCOM, we talk about the digital signal processing and mainly applications of SATCOM for societal development.

Now this gives you an idea of the outreach. Whatever you see on the blue, whatever you see are the countries who were benefited because of the Programme. What is underlined and the capital are the member countries. You can as well see in the Asia-Pacific region, _____(?) 15 countries have members. Most of the Asian, more than 95 per cent of the countries have been benefited because of this Programme.

Activities for 2009, the sixth PG course for satellite meteorology and satellite science have been completed. The thirteenth PG course on remote sensing and GIS will be completed at the end of this month and 14 post-graduate courses on remote sensing and GIS is starting on 1 July and we have already selected 21 students from 13 countries and similarly satellite communication will be starting on 1 August. We have already selected 15 students from nine countries.

We have a number of publications. A newsletter is one of our major carriers of information. It is published every six months. It has a lead article from an eminent person in the field and also news from the member countries. We have already interesting in all languages “Alumni Speaks”. Right now they give us their feedback on how with knowledge acquired by them has been used for the benefit of the national development. Also we include forthcoming symposia and workshops so that this Newsletter is useful for there are other publications like the lecture materials, etc.

Alumni we consider our extended family. We _____(?) want the people who take the _____(?) from our Centre, go back and who have now the facility to upgrade themselves. So they have, every alumni is registered as an alumni who also gets certain privileges, like we partially support for attending an international conference, provided the papers we find is good. And some of the remote sensing and GIS students, if they are alumni, wants the data, we subsidize and try to get that data. The idea we have started is a discussion forum that the students who go back and have some doubts, etc., like they can put it in the discussion forum and some faculty, expert faculty, will be answering that.

We also have started investing _____(?) allowing the alumni to publish their scientific papers before they are published in a regular journal. The idea is that the alumni get a feedback on their work and based on which they can improve their work. And also there is an opportunity for all their peers to find out how their scientific work is being evaluated.

The facilities are provided both for academic and personal comfort.

There is a dedication Earth Station for satellite communication students. For during the nine-months period, the host country has established this or that during the nine-months period the antenna and the facilities is entirely under the control of the Course Director and this is also available for the students.

Similarly, for the satellite meteorology students, they have access to online the satellite data which is collected from the geosynchronous satellite in _____(?) and _____(?) *(not clear)*.

Also each student, pertaining what is more important is when as soon as they join, they are given a computer for their use with all the modern software what they require, with their name put on that so that they can use during the daytime up to 12.00 at night.

We have a well-equipped library with all the books and e-journals.

We also have a state-of-the-art laboratory and field instruments especially for the remote sensing and GIS course participants.

We have indoor and outdoor games so to keep busy during their leisure time. Those who are interested in improving their health in addition to their education, we have a full-fledged gym. Of course, they have to eat well if they have to study. Each hostel has got a modern kitchenette facility with all the modern equipment required.

They also have the opportunity to visit different institutions in India concerned with space technology. Of course, from time to time they also have cultural programmes and visits, you can see the icon of India, the Taj Mahal behind the back of the students while they were visiting there.

As a concluding remark, Mr. Chairman, I would like to say that for the past 13 years, CSSTEAP has 66 scholars per year, 80 per cent of them are from outside India. So that is one remark And since all the courses have not for the exact duration, I would say that we have embarked(?) 440 mine(?) years of training and feel that CSSTEAP as a Centre of Excellence in _____(?) a _____(?) training in the areas of space application.

Through this august body, I invite all the members in the Asia-Pacific region to maximum use these facilities available. And before concluding, Mr. Chairman, let me also thank you and the Office for Outer Space Affairs for the support and on behalf of the Centre, the host country which wholeheartedly supports and gives all the facilities, both technical as well as the other requirements. Thank you Mr. Chairman.

The CHAIRMAN *(interpretation from Spanish)*: Thank you very much Mr. George Joseph for that very interesting presentation on the Centre for Space Science and Technology Education for Asia and the Pacific, located in India.

Now we will take five minutes at the end for questions.

So let us continue with the next presentation which is going to be done by Mr. Abderrahman Touzani who is Director of the African Regional Centre for Space Science and Technology, a French-speaking institution, and he will be speaking on the Status Report on the operation of that Centre. You have the floor Mr. Touzani.

Mr. A. TOUZANI (Morocco) *(interpretation from French)*: Thank you very much Chairman. Thank you for having allowed me this time to present to you the activities of the African Regional Centre of Space Science and Technology Education in French. I am going to be speaking about the activities of this Moroccan Centre ever since its initial establishment.

The Centre was set up in 1998 upon the initiative of the Office for Outer Space Affairs Programme, 11 countries participated in the establishment of this Centre, Senegal and Côte d'Ivoire joined subsequently in 2000.

Here you have a picture of the Centre itself. It is in the School of Engineers of the University. The way in which this Centre is organized is presented here. There is a Governing Board and Scientific Advisory Institutions. There is supported from member States from the international community. This is where the financial resources come from and Moroccan institutes and entities support this Centre which dispenses basic training at post-graduate level in outer space technologies, organizes short-term training courses and workshops as well.

The objectives of the Centre's work is to increase knowledge in the space sciences and technologies by improving the technical competence of the experts, teachers, decision-makers to enhance regional capacities and to promote cooperation between the developed countries and States members as well as among the above States.

Now, the main programmes in our courses are remote sensing and geographic information systems, satellite communications, satellite meteorology and global climate and space and atmospheric sciences. Our target public is academics, researchers or engineers from universities or research entities or from private institutions. The educational curriculum is based on the publications of the United Nations Office

for Outer Space Affairs which was developed in Frascatti in 2001.

The training course comprise six training courses in remote sensing and GIS, two training courses in satellite meteorology and global climate and three training courses in satellite communications.

Here I am presenting information on the post-graduate courses in remote sensing and GIS. You see that there are 113 trainees from 18 different countries who are involved in participating and this from 24 different institutes. The countries having sent trainees are presented on your lower left. On your right, you have the trainee profile which is indicated and described.

Here this is a picture of one class of graduates. We have also an indication of the number of course hours, the number of lectures and practical training sessions for each course.

This is a slide on research projects and the preparation of the publications of the Masters in Space Technologies and here I am also indicating the various topics which are focused on in the research conducted. This ranges from cartography to population migration.

In parallel two of this work, we also organized a certain number of workshops and conferences. I will just be referring to two major ones. The first has to do with Space Information and Sustainable Development. This was organized jointly with ESA, CNES, the French Government, as well as Moroccan institutes, 150 participants participated drawn from over 30 countries and they spoke about space information and how that could be put to use in supporting sustainable development.

The second example of the work I have referred to is in the context of the UNSPIDER Programme on Disaster Management and Emergencies in Africa. This was a Conference which had to do with the technical and organizational aspects and legal aspects as well that are involved. There were more than 100 participants with 42 statements from 22 countries in Europe, the Middle East and Africa.

Here we have one example of the courses on satellite communications. Thirty-seven trainees for the time being have been trained from nine countries and from 14 different institutes. On your lower left you have the countries of origin, on your right you have the trainee profiles, engineer and communications also doctorate, physics doctoral researchers.

This gives you an idea of the breakdown of courses, lectures and practical exercises conducted. Conferences have also been organized in parallel to the training effort and that Conference was on Space Technologies and Tele-Medicine. This was set up in the Faculty of Medicine and Pharmacy where there was a properly equipped set of facilities equipped with remote conferencing centres which allowed us to liaise with the centres in Italy and Canada which cooperated in organizing this Workshop with the Canadian Space Agency and the ESA.

Now another example on post-graduate courses on satellite meteorology. Eighteen trainees involved, eight member countries of origin, 10 different institutes. On your left the countries involved, on the right trainee profiles.

Here a breakdown of the courses and workload and here you have other events that were organized in parallel to the training that was a workshop organized with the support of NOAA from the United States of America and this was a workshop which was also supported by the National Meteorology Centre of Morocco. Sixty participants worked together from 15 countries. This work focused on the use made of the Internet in land-based centres.

Here you have an example of another workshop organized with the Centre with the support of the Algiers-based Algerian Space Centre. It was in the Centre's facilities that the work was taking place. Some 20 countries of origin were involved and they focused on climate change and adaptation in Africa and the role of space technologies in support of climate change and this in the light of the impact on local populations. This is a snapshot of the Conference event I have just referred to.

Certain additional courses were introduced. We have included one module on space law initiation with courses covering remote sensing and GIS, satellite communications, satellite meteorology and global climate, and was helping us to develop the curricula on space law.

Within the context of UNSPIDER work, there was also training and development of the courses in disaster management. This became the subject of a workshop organized by the UNSPIDER team in parallel with the fifty-second meeting of COPUOS.

Among the innovative approaches in training and space techniques, we indeed will be organizing GNSS courses supported by the United Nations Office for Outer Space Affairs, ICG and other national and

international institutions. This course will be on satellite navigation and location-based services. The duration will be four weeks and it is going to be conducted by the CRASTE objective to building capacity for African participants in GNSS applications. The target public should be French-speaking and coming from all the African countries, even outside of the immediate membership of the Centre. This would allow any persons adequately highly-educated anywhere from Africa to be able to enrol. There are two modules in this Programme on satellite navigation and location-based services.

To sum up, to date, up to 158 trainees and all have followed the post-graduate courses in space technologies, nine-months training is entitled and only 42 Master Diplomas have been delivered by the Centre in space sciences and technologies in the various fields of applications of space sciences and technologies.

Now given the various events and activities organized, to date there have been up to 850 experts attending from Africa, Europe, the Middle East and North America, 48 countries of origin participating all in all.

The Centre has just recently in 2008 celebrated its tenth anniversary and we would like to note that it has contributed to capacity-building by training in space sciences and technologies. It has constituted a database of regional expertise in this field, enabling the inclusion of all the participants in events and conferences organized by the Centre.

The Centre also contributed to the awareness enhancement of the usefulness of space techniques for development.

In spite of the successes registered, there are some difficulties encountered by the Centre in conducting its work. Some of these problems are financial in nature. Sometimes it is difficult to wrap up research projects and sometimes even if the first phase of a project has been concluded because of the lack of financing, it is difficult for the researchers involved to conclude their work completely.

If you wish more information please I would refer you to this site.

The CHAIRMAN *(interpretation from Spanish)*: Thank you very much Mr. Touzani for that presentation, a gentlemen that I have known, like many others, for some time now. I do not believe we will have time for questions and answers at this time. I am quite sure that all of us who have followed these presentations will be able to consult the presenters. Later if we have time for a dialogue with them, we shall do so.

For the time being, let me invite all delegates to the presentation of a video presented by Japan on Sentinel-Asia to be projected in Conference Room III between 2.30 p.m. and 3.00 p.m. “Contributing to Disaster Management in the Asia-Pacific Region: Sentinel-Asia”.

Before I close this morning’s session, let me remind delegates of our work for this afternoon.

We will meet at 3.00 p.m. to deal with item 4, General Exchange of Views. I will not be here at the outset. I apologize in advance. I have a couple of meetings that may run over so I will ask the First Vice-Chairman, Mr. Dr. Suvit Vibulsresth(?), to kindly replace me at the beginning of this afternoon’s session.

We will also continue with item 5, Ways and Means of Maintaining Outer Space for Peaceful Purposes, Item 6, Implementation of the Recommendations of UNISPACE III, and Item 7, Report of the Scientific and Technical Subcommittee on its Forty-Sixth Session.

Once we conclude the Plenary, we will have four technical reports. One from Mr. Naoki Yamaguchi from Japan, Disaster Manager(?), regarding activities of the ADRC. Another from Rusty Schweickart from the Association of Space Explorers on “Asteroid Threats: A Call for Global Response”. And another one from India called “Chandrayaan-1: Mission and Scientific Achievements”. As well as another one from the Local Organizing Committee of the IAC 2009 from Korea entitled “IAC 2009”.

Distinguished delegates, lastly, before we suspend our work, let me say that today at the end of the afternoon’s session, the International Astronautical Federation and the Organizing Committee for the 2009 IAC will be hosting a Reception at 6.00 p.m. in the Mozart Room of the VIC Restaurant. You are all cordially invited.

Are there any remarks regarding the practical announcements and the agenda?

I see none.

Let me now turn to the Office for Outer Space Affairs for the ceremony of the signing of the Agreements. So please remain here. They are going to be signing Cooperation Agreements for the

establishment of Regional Support Offices of UNSPIDER. So I give the floor to Dr. Mazlan Othman, Director of the Office.

It would seem that we can suspend the session. So I suspend the session.

The meeting was adjourned at 1.02 p.m.