United Nations COPUOS/T.631

Committee on the Peaceful Uses of Outer Space

Unedited transcript

Fifty-fourth session

631st Meeting
Thursday, 2 June 2011, 3 p.m.
Vienna

Chairman: Mr. Dumitru Dorin PRUNARIU *(Romania)*

The meeting was called to order at 3.04 p.m.

The CHAIRMAN Good afternoon distinguished delegates. I now declare open the 631st meeting of the Committee on the Peaceful Uses of Outer Space.

This afternoon we will continue our consideration of agenda item 4, general exchange of views. We will begin our consideration of agenda item 5, ways and means of maintaining outer space for peaceful purposes and agenda item 8, report of the Legal Subcommittee on its fiftieth session.

There will be three technical presentations this afternoon. The first one by a representative of Japan, entitled 'Effectiveness of satellite data for disasters - the Great East Japan Earthquake'. The second one by a representative of Chile, entitled 'Chilean Space Agency: Activities and International Cooperation 2010-2011' and the final one, by a representative of Mexico, entitled 'Satellite-based operational monitoring of the environment in Mexico government'.

General exchange of views (agenda item 4)

Distinguished delegates I would like now to continue our consideration of agenda item 4, general exchange of views.

The first speaker on my list is the distinguished representative of Pakistan.

Mr. A. BILAL (Pakistan) Mr. Chairman, distinguished delegates, ladies and gentlemen. I consider privileged to make a statement on behalf of the Pakistan delegation at the fifty-fourth session of UN COPUOS. Mr. Chairman, please first accept our appreciation on chairing this session of UN COPUOS, we are confident that under your guidance and that of the other members of the bureau, the Committee will successfully accomplish the task before it in further promotion of the peaceful uses of outer space and international cooperation. We are grateful and appreciative of the efforts of the management and the staff of the Office for Outer Space Affairs for organizing this session.

Mr. Chairman, my delegation is greatly appreciative of the efforts and contribution of COPUOS in ensuring that the benefits of space technology also reach developing countries. For mankind space is the final frontier, it is imperative that special efforts be made by UN COPUOS to ensure easier availability of knowledge in the field of space science, technology and their applications for the people of all nations. This involvement must encompass sharing of experiences, know-how, technology, as well as affordable and timely access of relevant data and information on a non-discriminatory basis. My delegation believes that there is a need to enhance international cooperation for realizing the shared goal of socio-economic development as well as prevention and mitigation of natural disasters.

UN COPUOS, through other UN components, can actually play a vital role in promoting education in the disciplines of space science, technology and their applications especially for enhancing this awareness right from the junior school level.

V.11-83700 (E)

Mr. Chairman, Pakistan has always been a strong advocate of peaceful uses of outer space for the greater benefit of mankind. SUPARCO, the National Space Agency of Pakistan, has established necessary infrastructure for space-based R&D activities to address various socio-economic issues of the country. The application of space science and technology in agriculture, water resource management, environmental and natural disaster monitoring, is being effectively pursued by a large number of organizations in Pakistan. Pakistan remains committed to the goals outlined in the Vienna Declaration on space and human development adopted in 1999 by the Third United Nations Conference on Exploration and Peaceful Uses of Outer Space, UNISPACE III.

The regional support office of the UN-SPIDER programme established in Pakistan is in line with the UNOOSA mission to ensure quick availability of information to all countries in case of disaster or natural calamities. In this context, a call of _____(?) disaster, on behalf of SUPARCO in Pakistan, was activated by UN-SPIDER in July 2010 providing medium and high resolution images to Pakistan for relief and early recovery operations during the devastating floods of 2010. In close cooperation and coordination with UNFAO, UN-SPIDER, World Bank and other concerned agencies, timely availability of satellite remote sensing data was of great help in monitoring the floods, damage assessment and rehabilitation. Pakistan in 2010 has suffered the worst and the most devastating natural disaster in its history. Some seven million people were affected, one million were rendered homeless, a large number of cattle perished and thousands of acres of standing crops were destroyed. The scale of devastation caused was greater than the combined effect of the Asian tsunami of 2006 and the Haiti earthquake of 2010.

Mr. Chairman. In Pakistan, we have made steady progress towards promoting and encouraging the use of space technology and its peaceful applications in various fields. SUPARCO, the Space Agency of Pakistan, has established infrastructure and facilities for developing space technology applications to address the country's socio-economic issues, ranging from space education and awareness to agricultural productivity, monitoring of crops, natural and water resource management, snow cover estimation, environmental _____(?), search and rescue, natural disaster management, etc. We are now forecasting crop estimation and issuing monthly satellite-based crop monitoring bulletins which are available on the Web.

Under the natural water course improvement programme, mapping of _____(?) 86,000 of the 140,000 water courses in the country have been completed. The awareness in the public and private sectors of the users of space technology applications for socio-economic uplift is gradually increasing.

Mr. Chairman. PakSat-1, a leased communication satellite, continues to operate at 38°. Its remaining service will expire in the third quarter of 2011. Its service and capacity are being marketed by a private PakSat International Ltd. The satellite carries a total of 34 C and Ku-band transponders, providing services to most of Pakistan's TV and video channels as well as a host of other satellite services. PakSat-1R is a replacement of PakSat-1 planned to be launched in the third quarter of this year. It will carry a total 26 transponders in Ku and C band. The satellite will support telecommunication, e-commerce, e-learning, tele-education, e-health, tele-medicine services within the footprint, beside hosting many TV channels.

Realizing the importance of remote sensing and geographical information system technologies and various applications for national development, Pakistan is proactively engaged in training future manpower at the National Centre for Remote Sensing and Geo-informatics. In the last year, many courses on various themes related to space and ground-based environmental monitoring, water resource applications, space _____(?) research and image processing have been organized.

Mr. Chairman in pursuance of the decision of the General Assembly resolution 54/68 of 1999 to celebrate the World Space Week, Pakistan celebrates this week every year with a view to creating awareness about the scope and benefits of space science and space technology and its application for human benefit. Various week-long activities _____(?) around the _____(?) including panel discussions, space awareness raising, sky _____(?) shows, various competitions like poster and painting and model making, water rocket demonstration and a space fair for students and the general public. This year the World Space Week, this is the 11th Space Week, is being celebrated along with the fiftieth anniversary of SUPARCO itself and also the fiftieth anniversary of the first man in space for which a large number of activities have been planned.

Lastly, Mr. Chairman, I am sure that with the combined efforts of a forum like UNCOPUOS, knowledge of space science, technology and their application would continue to be available to all nations of the world in their effort to help socio-

economic uplift of the people especially in developing countries. Thank you.

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

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

Mr. M. PISO (Romania) Thank you Mr. Chairman. Cosmonaut Prunariu let me express our satisfaction at seeing you again in the main Chair of the Committee and allow me to extend the congratulations with the other members of the bureau. I would also express the appreciation for Dr. Mazlan Othman, Director of the Office, and to the staff of the Secretariat and I will also take this opportunity to express warm congratulations to all who contributed to the success of the Committee's commemorative segment of 1 June.

Mr. Chairman, the space era started as a consequence of the structural change of humankind. After half a century, space became a driver for the global development of humanity providing a vector in the evolution of our civilization. Space activities are generating knowledge and beneficial technology and applications but they are also providing defence against _____(?) cosmic threats with a capability to destroy all components of our civilization.

Mr. Chairman and distinguished delegates. In our view, any country might practically contribute to the space endeavour. Both the global character and the wide multidisciplinary aspect of space activities clearly provide the possibility for most States and industry to become space actors. At the same time, the globalization of the industrial market but also the possible global effects of natural threats put States in the position of users and beneficiaries of results. Continuing with this view, this _____(?) provides the basis for both wider international and industrial cooperation and also support for a longer term sustainability of space activities. Romania is continuing to support the space development at the national level and together with the international space community.

I am happier to report today that, last January, Romania acceded to the European Space Agency Convention opening the procedure for becoming the nineteenth ESA member State. I would like to mention that the cooperation of Romania with ESA as long-standing. In 1992, Romania was one of the first eastern European countries to sign a cooperation agreement in the field of the peaceful uses of outer space with ESA paving the way for Romanian participation in several research projects with other European countries. The cooperation between ESA and Romania was strengthened and, in 2006, Romanian signed the European Cooperating State agreement. Romania has participated in several ESA missions such as Cluster, Herschel, Planck, SOHO and Gaia, and in Earth observation activities, micro-gravity and exploration and technology.

As becoming an ESA member State and a European Union member State, Romania participated to the European space research and development activities but was also keeping and developing its own national space programme. The Romanian space programme is further developing under the authority of the Romanian Space Agency and presently involving more than 100 organizations with research, academic and industrial profiles.

Mr. Chairman. I can assure you that Romania will continue to develop constantly its own space programme, first by keeping in harmony the participation to European and international space missions and projects, second by further developing its national space infrastructure and capability and, third, by investing in some specific areas of science and space technology core competencies.

One of the main components of the national space policy is defined by further investment in the training of younger professionals. I would like to mention that a first promotion of a master course in space technology graduated during last week in Bucharest in the frame of the faculty of Earth space engineering under the aegis of the Romanian Space Agency. The two-year multidisciplinary courses are converging to specializations for onboard systems, micro-satellites and space data processing, in particular radar technology.

I would like also to remind you that Romanian students have several years background in developing nano-satellites and new student teams are also participating in the ESA European Student Earth Orbiter and European Student Moon Orbiter. I would also like to recall that a Romanian team, supported by the Romanian Space Agency, operated the Mars desert research station in Utah, USA, this January, and the Mars crew 99 mission purposes, included biology, geology, bio-security, astronomy, astro-navigation training and telescope servicing, environmental management study and outreach.

Another feature that we would like report is that the UN-SPIDER regional support office in Romania, hosted by the Romanian Space Agency,

continued to develop specific activities during the last year. The office coordinated a national group of experts and facilities and joined several organizations and specific SPIDER issues were included as applications and examples in the ESA Earth Observation Programme and the European Union GMES projects.

I would also like to remind you that, during the floods that took place in Romania after the last session of the Committee, the office utilized the GMES SAFER methodology of rapid mapping to monitor the affected areas and provided reliable support to local authorities. I would also like to mention the support given by Romania to the Republic of Moldova regarding the floods in November 2010 through the regional SPIDER office. I would also like to mention that Romania is participating actively to global issues as defined through its partners and by international organizations as COPUOS, GEO, _____(?), IAF, International Academy of Astronautics.

During May 2011, Romania co-organized the International Academy of Astronautics Planetary Defense Conference: From Threat to Action, in Bucharest. The high standard scientific quality programme was extended over four days and a workshop regarding asteroid missions was organized on the fifth day. More than 160 professionals from all major space agencies and organizations attended the event. The conference included most of the major issues in asteroid protection and planetary defence. The Committee will be provided by the Academy with a more detailed report of the conference.

I would also like to recall to note that Romania provided the chairmanship and hosted, during last October, the XIIth Plenary of the European Interparliamentary Space Conference with the _____(?) supported by the European Space Policy Institute in Vienna.

Mr. Chairman, we would like also to recall that COPUOS proved to be a unique global forum recognized by most governments and organizations as for scientific, technical and legal issues. COPUOS at its beginning was needed for balance between the two military blocks. Then COPUOS devoted mainly to promote space applications to developing countries and to promote cooperation and applications for the benefit of their citizens. During the last decade, the role of COPUOS began to move again to global security but not to horizontal equilibrium. Space systems proved to be essential for planetary defence either for disaster management or space security or to protect the Earth from cosmic threats.

Mr. Chairman I would also like to report that Romania celebrated not only 50 years of the first human space flight but also 30 years of the first flight of a Romanian cosmonaut. Dumitru Dorin Prunariu spent one week on Salyut-6 space station and he was the 103rd in the world, man in space.

Mr. Chairman my delegation will ask to take the floor during the specific items of the agenda and thank you Mr. Chairman and distinguished delegates for your attention.

The CHAIRMAN Thank you very much distinguished representative of Romania for your considerations and statement.

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

Mr. V. CASSAPOGLOU (Greece) Thank you very much Mr. Chairman and dearest friend. First of all, I am very happy in seeing you again chairing, last year I was not able to come here for the reasons everybody knew. I have first of all to because our colleague of Romania reminded me that there are already 10 years we celebrate in the academy Bucharest the twentieth anniversary of your fabulous space flight. I am happy because I wish to celebrate the 100th anniversary of your space flight.

My friends and colleagues, I have prepared something to read but I have changed my mind for two reasons. First of all, just at the end of the reception of Japan and visiting the small exhibition about the successful, unique human adventure in extraterrestrial fields of our beautiful cosmos, I saw the, if I can say the slogan in the NASA stand, 50 years of peaceful exploration and I am asking why not to add, 50 years of peaceful uses and I am saying that the wish of all humanity is to continue to use space for only peaceful purposes. I have to quote what the most resolute pacifist of the twentieth century, the late US President Eisenhower who said addressing his counterpart the then Prime Minister Bulgarin, the time to stop is now and he spoke this famous general of the victory of allied forces against the Nazis. He spoke about the exclusively peaceful use of outer space and he spoke also about the avoidance of an arms race in outer space.

The second is also very moving. When I saw on the left and the right of Gagarin's _____(?), our very dear colleague astronauts from Kazakhstan and the United States shaking the hands and making this gesture we have in aviation - OK So I am saying, Vasili it is not the time to make a declaration and

statement of routine but say towards we have all of us, all conscientious citizens of the world and exercise towards our government our influence to understand the governments that space is only to help the humanity needs. You, dear astronauts, you have .. and I remember .. and allow me dear colleagues this personal reference.

When we met for the first time with the astronaut Dorin Prunariu in Athens, my wife asked him 'Dorin, what is your feeling when you are flying' and he answered 'Maria, I understood from up there how minimal in size we are as humans but also as an Earth vis-à-vis this great unboundless cosmos'. Thanks to you, we realized what the human dimensions vis-à-vis this divine cosmos we are. So, how we have the obligation and the duty to conserve the integrity and this unique harmony of the cosmic ecosystem because we are part of this ecosystem. I spoke years ago about the ecological approach to the space problems and we have to cooperate, space faring nations and non-space faring nations but also the space users nations because fortunately, 192 nations almost all of them are space technology applications users and we have to conserve outer space and conduct space activities towards the conservation of this huge but unique desirous treasure that we have. That is the reason why I changed my paper, I think this is an opportunity to remind you that it is exactly the thirtieth year that Greece participated in this august Committee and I am very happy. Unfortunately my two other colleagues are now not alive but nevertheless we still be present and for this opportunity I would like please, to the colleagues from the Secretariat, to project .. the only thing we have to do is, as I told in the morning unfortunately it is not enough visible but I put these names 'ad memoriam _____(?) - I translate it into English to understand it 'in eternal memory of the humanity and voice lost in space expeditions'. At the time when astronaut Leonov knew about the motor accident of Yuri Gagarin he said 'the eagles have to fly' _____(?) Thank you very much for your kind attention and your friendship.

The CHAIRMAN Thank you very much distinguished representative of Greece, Mr. Vasili Cassapoglou for your considerations on behalf of your country with regard to our activity.

The next speaker on my list is the distinguished Ambassador Kirui of Kenya.

Ms. N. KIRUI (Kenya) Mr. Chairman. Kenya is very pleased and privileged indeed to join other delegations in the celebrations as COPUOS commemorates its fiftieth anniversary of the first session of COPUOS and the fiftieth anniversary of human space flight activities. Kenya would also like to express her appreciation for the work that COPUOS and its two subcommittees have carried out in promoting international cooperation on the peaceful uses of outer space through the principles and treaties governing outer space activities. My delegation assures you personally, Mr. Chairman, and members of your bureau of our support in this session. We would also like to express our gratitude to the Director of the Office for Outer Space Affairs, Dr. Othman, and her dedicated staff for the documentation and planning required for convening this meeting.

My delegation associates itself with the statement made by the permanent representative of the Islamic Republic of Iran, Ambassador Ali Soltanieh, on behalf of the Group of 77 and China.

Mr. Chairman, space science applications continue to benefit mankind in various ways. Kenya in particular utilizes the technology in areas such as climate change monitoring, communications and environmental management. Kenya wishes to recognize and appreciate the very important role played by the Office for Outer Space Affairs in enabling States to work together in availing the benefits and contributions of space applications to the whole world. I would also like to reiterate the fact that international cooperation is critical to ensure that space science and technology serve all countries, particularly developing countries.

Mr. Chairman. My delegation wishes to inform the Committee that preparations for the Fourth African Leadership Conference on Space Science and Technology for Sustainable Development in Africa which is scheduled for 26-28 September 2011 in Mombasa, Kenya, under the theme 'Building a shared vision of space in Africa' are at an advanced stage. While appreciating the Office for Outer Space Affairs for the continued support in the preparation of the conference, Kenya takes this opportunity to invite member States to participate in this conference which is expected to bring together decision-makers, chief executives of space agencies, diplomats and scientists. The members may wish to note that details of the conference are posted at the following websites:

www.africanleadership2011.com
www.ncst.go.ke

I thank you very much Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Kenya for her statement.

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

Mr. J. MONTSERRAT FILHO (Brazil) (*interpretation from Spanish*) Thank you very much Mr. Chairman. Mr. Chairman, on behalf of the delegation of Brazil it is my honour and pleasure to greet you in the Chair at this fifty-fourth session of COPUOS, I am sure that under your able leadership, Sir, our deliberations shall be very successful. Our thanks also go out to members of the bureau who are also doing a fine job at this session. The delegation of Brazil would also like to express its gratitude to the Director of the Office for Outer Space Affairs, Dr. Mazlan Othman, as well as her very qualified staff for providing the documents for this session as well as making all of the other arrangements for such a special event, the fiftieth anniversary of the first sitting of COPUOS as well as the fiftieth anniversary of the first human space flight. I would also like to take this opportunity to reach out to all of those people who have been actively involved in the major adventure of space exploration over the last 50 years.

Brazil joined this adventure under very special circumstances. The last days of July 1961 and the first days of August of that same year we saw and we welcomed to Brazil the first astronaut, Yuri Alexeyevich Gagarin. This event was a huge event in Brazil, he visited three cities Brasilia, the brand new capital, São Paulo and Rio de Janeiro. In São Paulo he was welcomed by the President of the Republic and he was hailed as a universal hero given the highest honour, the decoration of the Order of the Southern Cross. Gagarin was met by countless thousands of people in Rio and in São Paulo, students, workers, trade union members, scientists, it was like a huge event, something that had never been seen in Brazil, he really was received and welcomed as a national hero, a universal hero of course. One of the most important things that I remember from this event was that, as soon as he left the President at the time, Jânio Quadros signed the first law in Brazil that established the first Brazilian office in charge of space affairs. It was almost as a way of paying tribute to Gagarin's visit. If I recall correctly, Gagarin left Brazil on 3 August and on 5 August the President signed off on that law which established the first office in Brazil in charge of space affairs which gave rise to the creation of our National Institute of Space Research, INPE, which you are all familiar with, and of course it was an offshoot - 15 to 20 years later the Brazilian Space Agency, AEB.

Brazil has been part of COPUOS from the very outset when COPUOS did not even have the name it has got today. Back in those days, there is just one thing I would like to underscore because it is important for us and that was, at the time the person representing Brazil was a diplomat whose name was Siesta Carvalho? and he was a rapporteur in the initial sittings of COPUOS and what this meant in practical terms was that he acted as the second vice-chair. He spent some 20 years working in COPUOS, all the way up to end of the 1970s and the early 1980s. We would like to take this opportunity to pay tribute to this gentleman Siesta Carvalho?, he worked for such a long time to make the work of COPUOS bear fruit as it was taking its first steps, fighting its first battles.

My delegation would also like to recall that we were very active in the drafting of the Space Treaty. Article I of the Space Treaty, the very first part, the first paragraph, it says that exploration and use of outer space, including the Moon and other celestial bodies, shall be conducted for the benefit of all countries regardless of their degree of economic, scientific development, this belongs to all humankind. This part of the treaty was included in the preamble but Brazil suggested that it be included here in article I. Brazil, in fact, worked with other delegations in making this specific reference in this article. So we are well positioned to be very pleased with the fiftieth anniversary commemorations that we have been celebrating because Gagarin really spurred us to establish our own national space capability and COPUOS gave us an opportunity to get down to the nitty gritty with all kinds of details.

The Declaration that we were so enthusiastic to approve yesterday, the Declaration of the fiftieth anniversary of the first human space flight and the fiftieth anniversary of COPUOS, we discussed two things. Let me refer to 10 where it says, reassert the importance of cooperation for the development of the rule of law. Brazil is a country with a long and deep legal tradition, we are legalists. We have had some problems in the past but we have recovered our democracy and the rule of law through many tough battles. Now we look at Brazil and see it as a great democracy and this is why we feel very confident and morally encouraged to say that the progressive and gradual development of the rule of law is something that is of paramount importance for whatever space activities are undertaken afterwards as part of our conquest of space. So, the rule of law is fundamental, any initiative that is taken that might undermine that principle is something that cannot be good for us. If we look forward to the next 50 years of space conquest we will see that this must move forward within a clearly established rule of law otherwise we will be seeing utter confusion. This is why we are doubly proud, we are proud to be working for the development of

international space law so that there is a firm, robust, coherent, foreseeable, reliable, legal framework. These are critical issues for the establishment of an atmosphere of transparency and clarity and fairness when it comes to space affairs. On more than one occasion we have heard voices say that together we stand stronger and there is no doubt of that, together we stand stronger, we are better and the more we are the further we can go in the conquest of space and that is the big challenge that lies ahead in this twenty-first century. More peaceful work, more constructive work, that is what we have in our hands. Thank you very much and I certainly hope that the next 50 years will be even better than the 50 years that we were just commemorating yesterday. Thank you.

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

Now we have some statements on behalf of the observers.

The first speaker on my list is the distinguished representative of Ghana.

Ms. M. AHIADEKA (Ghana) Thank you Mr. Chairman. Mr. Chairman, distinguished members of the Committee on the Peaceful Uses of Outer Space, ladies and gentlemen. The Ghana Space Science and Technology Centre (GSSTC) was established on 1 January 2011 through the collaboration between the Ghana Atomic Energy Commission and the Ministry of Environment, Science and Technology. Prior to the establishment of the Centre, an interim committee was set up under the chairmanship of Professor E.H.K. Akaho, the Director-General of the Ghana Atomic Energy Commission and Professor F.K. Allotey, the Director of Africa Physics Society and the Ghana Academy of Arts and Sciences. This Committee has played a pivotal role in the establishment and running of the Centre.

Vision. The central vision of the Centre is to uncover and exploit the capabilities of space science and technology for the benefit of humanity. For national, social, technological advancement and development through education, cutting edge research and training.

Objectives and activities. The Centre has a series of projects and activities earmarked in its official working document. Ranging from short through medium to long-term, where the most immediate and current ones are operating hosting space astronomical observatory, that is Ghana Astronomical Project. Building a mega planetarium and space science and technology museum. Running post-graduate study programmes on space science and technology.

The Ghana Astronomical project. Ghana is among the eight nations on the African continent who are supporting South Africa on her bid to hosting the twenty-first century radio astronomical projects, the Square Kilometre Array (SKA). As a partner country it stands a chance of benefiting from the project by hosting a 30-dish antenna array in the Karoo range area of the country. Beside the prospects of SKA, Ghana's location 5° North of the equator is paramount and very strategic for observing the entire Milky Way even with a single dish antenna. More of the sky can be observed than any existing single astronomical telescope. In addition, a VLB _____(?) linking EVN _____(?) in South Africa and a dish in Ghana would be a valuable asset to the global astronomy. In practice, the Ghana Space Science and Technology Centre is adding Ghana's name to the long list of countries converting _____(?) satellite communication Earth _____(?) into radio astronomical facilities.

In this direction, Mr. Chairman, and upon request, a team of experts that is radio astronomers and engineers from the United Kingdom, Oxford University and the Goonhilly Satellite Earth Station and the South African Hartebeesthoek Radio Astronomy Observatory, _____(?) Ghana Vodaphone Satellite Earth telescope at Kuntunse near Accra. The team assess the viability of the facility for radio astronomical use in March 2011. According to their reports, of the three telescopes at the station the 32-meter telescope is mostly _____(?) for radio astronomical use. A technical team comprising of Ghana Atomic Energy Commission, Vodaphone Ghana, and two experts from South Africa, followed up to reassess the 32-meter telescope.

Planetarium and space science and technology museum. Space science and related technologies are not very familiar to the average Ghanaian. The Centre on its mandate would therefore embark on a nationwide outreach programme to educate the populace on the prospects in the field. Its applications and the benefits the development of individuals and the nation at large. A major planetarium and science and technology museum, in our view, would be a good platform to _____(?) the general populace as the facilities were completed, will be open to people of all walks of life. It is expected that this will boost interest of both the young and the old in the technology. The planetarium, together with the deep space astronomical observatory facility, will benefit education and schools training and research and development and provide incomparable hands-on training and research

opportunities for students from the primary through to the highest level of education. The Centre has been in talks with the other key players like South African Astronomical Observatory, National Research Foundation, Hartebeesthoek Radio Astronomy Observatory, and the American Museum of Natural History, for collaboration and assistance. We have received much encouragement from them but nothing binding has yet been reached.

Mr. Chairman, another important project of the Ghana Space Science and Technology Centre is to run a two-year four semester graduate programme in space science and technology. The host of the Centre, Ghana Atomic Energy Commission, is already running an international graduate programme at its post-graduate School of Nuclear and Allied Sciences. So the immediate arrangement is to start this post-graduate space science and technology programme as a department in the school. The Centre, in conjunction with the School of Nuclear and Allied Sciences, is in the process of preparing the curriculum for the programme. It is expected that the timeline of starting the graduate programme in space science and technology of between 2012 and 2014 will be met.

The five main thematic areas that are going to be captured by our post-graduate programme are: remote sensing and geographical information system; satellite communication; satellite meteorology and global climate; space and atmospheric sciences including astronomy and astrophysics and; astro biology. In the preparation for the take off of the programmes, courses in the above programme areas have been introduced at the under-graduate levels at the major universities in the country. Lectures for the respective courses have been identified and have been drawn from the major universities and research institutions nationwide. Our major drive is to have our post-graduate programme in space science and technology be adopted as a regional centre under the UN Outer Space Agency. _____(?) for space science and technology education for developing countries.

Expected challenges. The major challenges now are: to have collaborators and partners in these three major projects or programme areas of the Centre; to develop human resource capacity for the projects outlined above; to secure funding for the telescope convention projects; to get the graduate programme in space science and technology enacted into the UN Office Space Agency _____(?) for space science technology education stream and; Ghana has not ratified any of the major UN conventions and treaties on the peaceful uses of outer space and will commence the procedures towards their ratification in the shortest possible time.

In conclusion Mr. Chairman, the Ghana delegation thank you for the opportunity to attend this very important session as observers. We shall take the necessary measures to become full members of the Committee on the Peaceful Uses of Outer Space. Thank you very much.

The CHAIRMAN I thank the distinguished representative of Ghana for her statement.

Now I would like to give the floor to the distinguished representative of Azerbaijan.

Mr. A. HAJIZADA (Azerbaijan) Thank you Mr. Chairman. Mr. Chairman, distinguished delegates. The Azerbaijan delegation would like to express its gratitude to you and COPUOS member States for the opportunity to participate at the fifty-fourth session of COPUOS and wishes the Committee successful deliberations.

On behalf of my country we highly appreciate the continued efforts to support the peaceful uses of outer space by the United Nations Office for Outer Space Affairs under the direction of Dr. Mazlan Othman. We would like to congratulate Dr. Dumitru Dorin Prunariu of Romania on his distinguished chairmanship of this Committee. We would like also to express our appreciation to Mr. Ulrich Huth of Germany and to Mr. Ahmad Talebzadeh of the Islamic Republic of Iran as chairs of the committees on their skilful guidance of the work of these bodies. In addition, we want to recognize the staff and leadership of the Office for Outer Space Affairs for all their hard work in assisting with the planning and organization of this meeting and for their continued support.

Mr. Chairman. This session is very special which coincides with the fiftieth anniversary of the first human space flight as well as the fiftieth anniversary of the first session of COPUOS. Since its establishment the Committee has actively promoted efforts in furthering space exploration and bringing the benefits of space technology to Earth in order to ensure sustainable development of all countries. International legal instruments governing space related activities laid the foundation for the peaceful exploration and use of outer space, provided the legal framework for space activities, established the basic principles which countries might abide by when conducting space activities and particularly the peaceful uses of outer space principle, the principle of free exploration and utilization of outer space on an equitable and non-

discriminatory basis as well as international cooperation principle.

The Azerbaijan delegation is happy to note that COPUOS, under the mandate of the General Assembly, has been contributing significantly towards capacity building for sustainable development and strengthening international cooperation to maintain outer space towards serving the interests of all countries.

Azerbaijan places considerable importance on bilateral and multilateral relations with space agencies and space-related bodies with the aim of minimizing the cost of access to space, of taking up new scientific and technological challenges, defining international frameworks for exploitation and utilization of outer space for peaceful purposes and building and strengthening existing ties between countries.

Excellencies, we would like to take this opportunity to inform the Committee briefly on the latest developments and progress in Azerbaijan in the peaceful uses of outer space and international cooperation in this area.

In accordance with a presidential decree dated 17 August 2009 the State programme on establishment and development of a space industry in Azerbaijan has been adopted which was stipulated by the presidential decree dated 4 November 2008 on establishment of a space industry and placing a telecommunication satellites in orbit. Following these decisions the presidential decree dated 3 May 2010 on establishment of Azerspace Open Joint Stock Company was issued. Open Joint Stock Company Azercosmos was established under the Ministry of Communications and Information Technologies to launch the satellite orbit, manage and implement maintenance work. Council on Aerospace issues has been established to execute those decrees on establishment of Azercosmos Open Joint Stock Company.

Today, Azerbaijan works on launching the first national telecommunication satellite, AzerSpace. Built by Orbital Sciences Corporation, it is planned to be launched into orbit in the last quarter of 2012 from Guiana Space Centre in French Guiana at orbital position 46°East. The satellite will cover Europe and a significant part of Asian countries and Africa. AzerSpace is designed to provide digital broadcasting, Internet access, data transmission and governmental communications. The launch of its own satellite in orbit will be Azerbaijan's first action in realizing prospective projects to turn itself into a country with a space industry.

Along with activities on the national level, Azerbaijan is actively participating in a number of various space related international events. Striving to be an active participant of international outer space cooperation, the Government of Azerbaijan has expressed its readiness to host a regional workshop on applications of global navigation, satellite systems, which was held in Baku, Azerbaijan, from 11-15 May 2009 in the framework of the UN programme on space applications in partnership with the Office for Outer Space Affairs. It addressed, inter alia, the space technology applications such as remote sensing, precision agriculture, aviation, transport, communications, and e-learning. This workshop also addressed the areas of natural resources management and environmental monitoring by applying GNSS technologies to thematic mapping, forest management and water resources management.

We would like to reiterate that the Azerbaijan commitment to the use of outer space for peaceful purposes in the common interest of mankind. We support development and continuous evolution of the rule of law for the peaceful use and exploration of outer space so as to ensure benefits to all countries in particular to developing countries.

Azerbaijan is a strong supporter of a broader cooperation in the peaceful uses of outer space. The issues such as capacity building, application and knowledge based technology transfer, as well as _____(?) implementation are of special interest for Azerbaijan. Azerbaijan hopes that governments and international organizations will continue to support the efforts directed at strengthening the international cooperation for the peaceful exploration and uses of outer space.

Mr. Chairman, distinguished delegates. We believe that participation of my country as a full member of COPUOS will undoubtedly serve the further development of cooperation between Azerbaijan and COPUOS. It is an honour that the application of the Republic of Azerbaijan for the membership in COPUOS is presented for consideration by COPUOS at its fifty-fourth session. Azerbaijan acknowledges the vital importance of the peaceful use of outer space for sustainable development of countries and has been actively participating as an observer in the work of COPUOS and its subcommittees since 2003. Azerbaijan is confident that its membership in COPUOS will help further expand its capabilities in space technology and applications area as well as make an important contribution to international cooperation, economic development and social progress. Azerbaijan will demonstrate strong capabilities in the application

of space science and technology for development and make valuable contributions to the deliberations in COPUOS. We look forward to the valuable support of the member States of COPUOS and to the decision of the Committee to recommend to the General Assembly that Azerbaijan becomes the seventy-first member of COPUOS.

Summing up, my delegation would like to wish all participants interesting and constructive debates during the fifty-fourth session and express our strong belief that conclusions reached here will provide practical guidelines for further intensifying global cooperation, _____(?) contribution to the peaceful uses of outer space. Thank you very much for your attention.

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

The next speaker on my list is the distinguished representative of the United Arab Emirates.

Mr. A. AL MANSOORI (United Arab Emirates) Thank you Mr. Chairman. Mr. Chairman, Excellencies, distinguished delegates and representatives. It gives me great pleasure to address you here today at the fifty-fourth convening of the Committee for the Peaceful Uses of Outer Space.

Mr. Chairman, my delegation and I are happy to see you again as Chairman of this Committee and would like to thank you for your valuable leadership, commitment and work. We would also like to thank Dr. Mazlan Othman and the staff of the Office for Outer Space Affairs for their hard work and dedication. We are also very proud to take part in the fiftieth anniversary of COPUOS and the historic beginning of human space flight and my delegation firmly believes that reaching these heights is the result of cooperation of nations in achieving global interests.

Mr. Chairman, I have taken the floor here today to talk about three main topics. The first is to give a quick overview of the general activities of the United Arab Emirates in their space field. Secondly, to highlight some of the latest achievements over the past few years of the UAE in this field and take a look into where we are heading in the near future. Finally, turning to some of the UAE's joint work and cooperation with the Office for Outer Space Affairs and COPUOS.

The United Arab Emirates has been active in space for 15 years, starting in the 90s by launching commercial communication satellites we have moved towards expanding our space activities with a focus on domestic design, development and manufacturing of satellites along with a firm commitment to our involvement in international cooperation activities with other nations. The UAE, as an emerging space nation, is interested in growing its own talent and expanding its capabilities to find further avenues of peaceful cooperation with the nations of the world.

Our presence here today as observers highlights the desire of our government to communicate and cooperate with nations of the world in the peaceful use of outer space and also highlights our desire to become an active member in this Committee in the future. The space related projects in UAE are a mix of private, semi-government and government agencies. In the late 90s, three communication satellites were launched by Thuraya Mobile Satellite Communication Company. The services provided by Thuraya are benefiting many nations and providing communication services to remote locations around the Middle East, Africa, Europe and Asia.

In 2009, DubaiSat1 was launched, this is the first UAE government satellite as well as being the only UAE remote sensing satellite. Data from DubaiSat1 is widely used in the UAE and other areas of the world and we hope that this can be a platform for wider international cooperation in the field of remote sensing. On 22 April of this year Yahsat 1A was launched from Kourou in French Guiana on board an Ariane-5 rocket. The 6-ton communication satellite will soon be providing voice, data and broadcasting services to the region. The level of investment by the government in this project highlights the importance the UAE is placing in space-based solutions and how they can improve our daily lives. Yahsat 1A is currently the first and only fully owned communication satellite launched and operated by UAE and this milestone will open the door to further expansion and investment in this area.

Mr. Chairman, distinguished delegates. Looking into the near future, the UAE will be launching Yahsat 1B at the end of this year, this will double the capacity and offer wider coverage areas giving the United Arab Emirates a strong platform in the satellite communication sector in the region. Next year, our second remote sensing satellite, DubaiSat 2, will be launched. DubaiSat 2 has been jointly developed by EIAST of the United Arab Emirates and Satrec Initiative of South Korea. EIAST has a team of 16 engineers based in South Korea working on the design and manufacturing of DubaiSat 2. In the

development of DubaiSat 2 the UAE is looking at launching one of the most advanced satellite in its weight class as well as preparing a team of UAE scientists capable of starting domestic development of these technologies. DubaiSat 2 will be less than 300 kg with a resolution of 1 meter and a large capacity to accommodate commercial image sales as well as satisfy the needs of the UAE for spatial data. DubaiSat 2 is a good example of international cooperation work. Firstly the satellite, as I mentioned, is being developed in cooperation with the Republic of South Korea, it also includes new technologies which have been developed jointly. An example of this is the propulsion subsystem on board, it has been jointly developed with JAXA and will include a similar microwave cathode to the one used in the Japanese Hayabusa mission.

Looking a bit further in the future, plans are already in place to launch a third communication satellite and three more remote sensing satellites.

Distinguished delegates, Mr. Chairman. Finally, my delegation and I would like to look into some of the UAE collaborative work with UNOOSA and the Committee. The UAE is a member of ICG and has been participating, along with other delegations, in the important work carried out by this Committee. My delegation will be attending the next meeting in Japan in September. In January of this year, the city of Dubai hosted a GNSS regional workshop with the aim of spreading knowledge about GNSS in the UAE and the region I believe the result of this workshop will be presented here at COPUOS next week. I would like to thank Ms. _____(?) and her team for their effort and hard work in making that workshop happen.

The United Arab Emirates is also actively participating in the UN Basic Space Technology Initiative, workshops and conferences, and my delegation will be presenting some of our work at the next event in Graz later this year. Through remote sensing data, gathered by DubaiSat 1, the UAE has been actively participating in the UN SPIDER initiative by providing images whenever possible of disaster areas around the world. We are always looking to further our cooperation with the Office for Outer Space Affairs and its member nations and I look forward to the future in which I am sure we will all be working together on many projects. Thank you very much.

The CHAIRMAN I thank the distinguished representative of the United Arab Emirates for his statement.

The next speaker on my list is the distinguished representative of the Space Generation Advisory Council.

Ms. A. CORNELL (Space Generation Advisory Council) Thank you Mr. Chairman. The Space Generation Advisory Council is delighted to be working with you again this year and we look forward to your continued chairmanship of the Committee on the Peaceful Uses of Outer Space. We appreciate having the opportunity to report on our activities as we have been very busy since the last meeting.

The past 12 months for SGAC have been highlighted by continued growth for the organization. We strive each year to serve our purpose of acting as the international enabler for the next generation of space sector leaders, to contribute their opinions to the space policy debate. In the past year we have done this through directly supporting our members to attend various conferences internationally, building our SGAC project groups, delivering space policy output, and continuing to strengthen our organizational roots and strategic partnerships.

First, we are proud to say that in 2010 alone SGAC presented, or was officially represented, at more than 20 conferences around the world. From Ethiopia and Australia to Korea and Italy, SGAC's young professionals and university student members presented their perspectives in key space fora. SGAC not only attended conferences but drove the organization of two important events, our annual Space Generation Congress and a special event in partnership with the Space Conference of the Americas. I will provide a little more detail on each.

SGAC hosted its 9th annual Space Generation Congress in Prague, Czech Republic, last September. The event was our most successful to date. One hundred delegates from 40 countries congregated to discuss pertinent space topics as well as to hear from today's international space sector leaders. Our featured speakers included Charles Bolden, NASA administrator; Berndt Feuerbacher, President of the International Astronautical Federation; Dumitru Prunariu, Chairman of UN COPUOS; and Jim Zimmerman, President of International Space Services and former IAF President. The reports from the discussions were released in December and the perspectives of the delegates were shared here in Vienna at the Scientific and Technical Subcommittee in February. Five of the reports generated by the Congress have also recently been accepted as papers of the 2011 International Astronautical Congress in Cape Town.

For the second event last October, SGAC provided the organizational framework for the Youth Forum at the Sixth Space Conference of the Americas in Pachuca, Mexico. Two hundred young professionals and university students from around the Americas joined us to discuss topics that paralleled the discussions of the main conference. The recommendations from these young people were then submitted to be merged into the final Pachuca Declaration.

It is the organization's growth over the past 12 years that has allowed us to directly support young people with financial assistance to attend these conferences. In 2010, Mr. Chairman, SGAC delivered 34 scholarships to young people to participate in events that they otherwise would be unable to attend. This broke our previous scholarship record by 50 per cent. These scholarship recipients came from 24 different countries: Austria, Belarus, Brazil, Cameroon, Canada, Ethiopia, France, Georgia, Germany, Iran, Italy, Mexico, Nigeria, Pakistan, Poland, Romania, Russia, South Africa, Sri Lanka, Turkey, United States of America, Uruguay, Venezuela and Zambia.

One of SGAC's measures of success is more young professionals involved in more space events more often. SGAC hopes to continue this trend for many years to come. By facilitating access and funding to world events, SGAC is directly fulfilling the goal set out for it at UNISPACE III, to enable the next generation of international space leaders to share its perspectives on space.

In addition to helping our members attend these conferences to contribute their views, SGAC acts as a forum for young people to hone their thoughts throughout the year through our organization's four working groups. SGAC will be presenting in more detail the work of these groups next week but as a short summary. SGAC's Youth for Global Navigation Satellite Systems or YGNSS Group, this year produced a brochure on GNSS and its benefits while continuing to support the working group C of the International Committee on GNSS. The Space Technology for Disaster Management Group has been attending disaster management meetings such as the one put on by the German Permanent Mission in December in Vienna and has been planning outreach projects. The Near-Earth Object Working Group put on its third annual Move an Asteroid technical paper competition and, just three weeks ago, put on a very successful outreach event in conjunction with the IAA Planetary Defense Conference in Bucharest, Romania. The event attracted 130 people and featured speeches from Bill Ailor, Director, Center for Orbital and Reentry Debris Studies at the Aerospace Corporation; Marius-Ioan Piso, Director General of the Romanian Space Agency; Rusty Schweickart, Apollo 9 astronaut and co-founder of the Association of Space Explorers; and, Dumitru Prunariu, Chairman of UN COPUOS.

Finally, a new group Space Safety and Sustainability, or the SSS group, has been developed in the last 10 months to research and perform outreach on topics affecting the long-term sustainable uses of outer space. The SSS Group, along with our national point of contact in Nigeria, are even starting today, as we speak, with a free workshop event put on in conjunction with the African Regional Centre for Space Science and Technology Education in English, or ARCSSTE-E, to teach university students how to use analytical graphic incorporated satellite toolkit software, the top software for space modelling, engineering and operations. In time the Space Safety and Sustainability Group looks forward to contributing to the Scientific and Technical Subcommittee's new working group on the long-term sustainability of outer space.

This growth in scholarships, intellectual output and professional development activities is built on a foundation of SGAC's continued efforts to improve its organizational governance. A key contributor to our governance framework in the past year has been our advisory board which has provided invaluable input.

SGAC's Advisory Board is made up of influential leaders of the international space community who are strong supporters of the goals of SGAC and of the organization itself. This year's Board with newly appointed members includes: Adigun Ade Abiodun, Founder of the African Space Foundation; Lance Bush, Chief Strategy Officer of the Paragon Space Development Corporation; Sergio Camacho, Secretary General of the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean; Agnieszka Lukaszczyk, Space Policy Consultant for the Secure World Foundation; Tanja Masson-Zwaan, President of the International Institute of Space Law; Clay Mowry, President of Arianespace, Inc.; Nicolas Peter, Exploration Strategy Officer in the Director General's Cabinet of the European Space Agency; and, Dumitru Prunariu, Chairman of the UN Committee on the Peaceful Uses of Outer Space.

SGAC's Advisory Board is designed to provide guidance on the strategic direction and management of SGAC in order to help guide the organization in fulfilling its goals and objectives. SGAC is delighted that over half of the board members are also contributors to COPUOS, which strengthens

our relationship and relevance to this body, and we know that they are well complemented by the other members who represent industry and agencies.

In addition to our internal growth, SGAC has strengthened its strategic partnerships and institutional ties. In just 12 months, SGAC has developed formal relationships, documented through MOUs or other similar instruments, with the Asia-Pacific Regional Space Agency Forum (APRSAF) where we have been accepted as associate members; the international law firm of Baker & McKenzie; Eclipse City; the German Aerospace Center (DLR); the International Association for the Advancement of Space Safety (IAASS); the International Space University; University of Lincoln at Nebraska's Programme for Space and Telecommunications Law; Space News; and, Yuri's Night, which started in SGAC and recently developed into its own independent organisation.

SGAC is on an exciting trajectory as we continue into our second decade. Our success would be impossible without the kind and generous assistance of the organizations who support our activities. We would like to thank our various international sponsors who contributed to SGAC in the past year: Arianespace; Czech Space Office; DLR; European Space Agency; European Space Policy Institute; the Korea Aerospace Research Institute; IAASS; Lockheed Martin; NASA; the Secure World Foundation; the South African Astronomical Observatory; the Space Foundation; the Space Frontier Foundation; Space News; the United Nations Office for Outer Space Affairs.

SGAC is pleased to report to COPUOS on a very exciting and fruitful year, and we look forward to making the next 12 months even more productive. The organization and its 4,000 members in over 90 countries is looking forward to continuing this upward trajectory for SGAC in 2011 and invites all member States to support their young people in participating on the world stage. Thank you, Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of the Space Generation Advisory Council.

The next speaker on my list is the distinguished representative of the International Astronautical Federation.

Mr. G. BRACHET (International Astronautical Federation) (*interpretation from French*) Thank you Chairman. Chairman, ladies and gentlemen, delegates. President Feuerbacher is unable to attend this session of the Committee on the Peaceful Uses of Outer Space but he sends his best wishes to all of you. He asked me, as vice-president in charge of liaison with international organizations, to extend our sincere congratulations to the members of the Committee and to the Office for Outer Space Affairs for these 50 years of outstanding achievement, in particular promoting international cooperation and development of space applications for the benefit of human development.

The International Astronautical Federation is celebrating its sixtieth anniversary in 2011 and hence has witnessed the evolution of COPUOS from its earliest days. We have had the privilege to have benefited from the contribution of many key individuals who have actively been involved in the development of both organizations. Indeed, we shall be paying tribute to our cooperation on the occasion of the forum to be held on Friday, tomorrow, from 2-3 p.m. in this room. On behalf of the International Astronautical Federation I am pleased to have the opportunity to report to you on last year's achievements and briefly mention the outlines for forthcoming activities over future years.

Firstly with respect to IAF. It is a world federation of institutions that are active in space, it is well known as the organizers of the premier annual global space conference, the International Astronautical Congress. However, our activities go well beyond this Congress alone. Following our theme 'A space faring world: cooperating for the benefit of humanity' the Federation advances knowledge about space and development and applications of space assets for the benefit of humanity. It maintains a major worldwide network of experts in the development and utilization of space. It encompasses all aspects of space developments, exploitation of space, applications of space, present and future. It includes 205 organizations from 58 countries located throughout the world with an increasing number of members who have joined in the last few years from Africa, Asia and Latin America. It includes all the major space agencies worldwide and most of the national space agencies and authorities, in particular in emerging countries. Furthermore, the leading industrial companies, research institutes and professional societies are also members.

In 2011, as I said Chairman, the IAF celebrates its sixtieth birthday. Indeed, it was 1951 that leading astronomers and scientists from eight countries founded the International Astronautical Federation (IAF). During 2011, the IAF celebrates its sixtieth anniversary through a series of events that have already started during our annual Spring meeting in Paris in March and they will conclude with the 62nd International Astronautical Congress in Cape Town in

South Africa. These 60 years have seen many giant leaps for humankind, from Sputnik and Yuri Gagarin's flight to the Apollo missions and, more recently, the International Space Station.

From a space race at the time with only two players we now welcome many countries of the world who are active in outer space or using space assets. Today is a future which was scarcely conceivable to the early pioneers, a development which has largely come about thanks to innovations introduced by our scientists and industry. Over the last six decades, our Federation has changed remarkably. It has fulfilled its initial role as the mediator between the space powers and the rest of the world. It has contributed to broad dissemination of knowledge and skills as well as to worldwide access to the benefits of space assets.

Chairman, let me now address the IAF's activities in 2010. The 61st International Astronautical Congress was held in Prague, Czech Republic, from 27 September to 1 October 2010 and was hosted by the Czech Space Office. It attracted a record number of participants, nearly 3,500, and we have received excellent feedback on the Congress and its organization. Sixteen hundred, I repeat, sixteen hundred technical papers in 160 sessions and 12 public events were presented and an extensive professional space exhibition complemented the event. The IAF is proud to be continuously developing and improving the International Astronautical Congress.

We were pleased to organize a first parliamentary meeting on outer space, most of them were from developing countries with a view to exchanging views on space in support of managing natural disasters. We have extended the industrial exhibition through a so-called cluster forum with special events for small enterprises. A nano-satellite fair involved universities from all continents and triggered an IAF innovation, endorsed by the UN Basic Space Technology Initiative, that is to secure nano-satellite flight opportunities for developing nations in the fields of education, capacity building and humanitarian applications. If your country is interested in such flight opportunities do not hesitate to contact us.

To support this initiative the IAF Bureau recently decided to set up a new committee, the Space Universities Administrative Committee, which will encourage exchanges and coordination of activities among universities having significant space activities. In this context, I am pleased to inform you of the success of the Federation's initiative in support of rejuvenating the space community. At the IAC Congress in Prague more than 800 participants corresponding to more than 30 per cent of the delegates were students and young professionals below the age of 35. The IAF has established the Youth Grants Programme specifically geared to supporting students and young professionals wishing to attend the IAC. You will find information on this Programme on our website.

Now with respect to the UN/IAF workshop. In conjunction with the United Nations Office for Outer Space Affairs our Federation actively supports a series of workshops known as the UN/IAF workshop essential geared to experts and managers from developing countries. The twentieth such workshop on GNSS applications for human benefit and development was held in Prague in the week preceding the IAC. It was co-sponsored by the European Space Agency and the International Committee on Global Navigation Satellite Systems (ICG). The workshop discussed navigation technologies, applications and services stemming therefrom which contribute to sustainable economic and social development programmes essential in developing countries. Funding provided to participants from developing countries has allowed them to benefit from the wealth of activities of the Congress.

The twenty-first UN/IAF workshop will be held this year from 30 September to 2 October in Cape Town in conjunction with the 62nd Congress. The theme chosen is that of space for human and environmental security with the aim of promoting the use of space technology for the benefit of developing countries. OOSA has received more than 100 applications to participate in this workshop.

In May 2010, the IAF and the Chinese Society of Astronautics co-organized the Global Lunar Conference in Beijing. This symposium gathered the China National Space Administration and its Lunar Office, the Manned Space Engineering Programme, the China Aerospace and Technology Corporation and the China Academy of Space Technology, together with international players such as NASA, the Canadian Space Agency, the Indian, Japanese and Russian space agencies as well as the European Space Agency and many other key players in lunar programmes. The issues addressed included lunar programme aspects, exploration, human missions and life sciences, lunar habitats and architectural, economic, social, legal, and cultural aspects. A set of special technical visits were provided by our Chinese hosts to give a unique insight into Chinese lunar space activities for delegates, attended by nearly 500 experts, this was a clear demonstration that lunar exploration and science utilization is an international venture.

In the context of its mission to foster international cooperation in space, the IAF has recently established the concept of regional groups. Two such groups were set up and met for the first time at the IAC in Prague in October 2010, one convening our members from the Latin American countries under Colombia's presidency Ciro Arevalo, a previous Chair of COPUOS. The other for Asia Pacific members under the presidency of _____(?) the representative of Korea who organized the sixtieth Congress in Daejeon. An African regional group is being prepared and should be launched at the Cape Town conference with the involvement of participants from the fourth Conference of African Leaders on Space Science and Technology for Sustainable Development.

OOSA has continued its commitment to Highlights in Space initiatives, an almanac that annually summarizes the space activities worldwide. The IAF this year, along with its partner the International Institute of Space Law, has produced on behalf of OOSA, this document in a new format. This year's edition, included on a CD, distributed to delegates at the Scientific and Technical Subcommittee in February is more comprehensive than ever and can be viewed online.

The IAF strongly emphasizes the relevance of the issue of long-term sustainability of outer space activities. Its Committee on Space Security, chaired by Professor Kazuto Suzuki of the Hokkaido University, addressed this topic at special symposia and plenary sessions during past congresses. A member of this Committee is Dr. Peter Martinez the chairman of the working group of the Scientific and Technical Subcommittee of COPUOS on long-term sustainability of outer space activities. He is also the chairman of the local organizing committee for the 62nd International Astronautical Congress in Cape Town. Particular attention will therefore be paid to this issue during our forthcoming congress in October of this year.

This 62nd International Astronautical Congress will take place in Cape Town from 3-7 October 2011 on the issue, African Astronaissance or the astronautical birth of Africa if you like, this is the first time in the 62 years history of the Congress that the Congress will have come to the African continent. The selection of papers for presentation at the 2011 Congress is now completed, our colleagues in South Africa are very busy preparing what appears destined to be an exciting event with top level plenary events and an integrated space exhibition in the vibrant city of Cape Town. It will include a professional exhibition, a cluster forum for small and medium enterprises, and will convene international members of parliament to discuss matters relevant to the use of space for the benefit of humanity. The 62nd Congress will be organized as an all-African event. The IAF will have a special role to play at the fourth African Leadership Conference on Space Science and Technology to be held the week before the Congress in Mombasa in Kenya at that government's invitation. The intention is to encourage inputs and recommendations for an African Space Leaders round table organized on the opening day of the Congress on Monday, 3 October 2011.

Beyond 2011, Chairman, the Federation is actively preparing for the 63rd Congress with the host country, Italy. The Congress will be held in Naples, from 1-5 October 2012, it is also in the planning phase for the 64th Congress which will be held in China, in Beijing, in September 2013.

Chairman, thank you for this opportunity to present the activities and plans of the International Astronautical Federation to your Committee and, through you, I would like to restate to delegations and members of the Committee as well as the States that have observer status, the congratulations of the IAF on the fiftieth anniversary of this Committee. Thank you.

The CHAIRMAN (*interpretation from French*) I would like to thank you for your statement on behalf of the International Astronautical Federation.

(*continued in English*) The next speaker on my list is the distinguished representative of the Secure World Foundation.

Ms. A. LUKASZCZYK (Secure World Foundation) Mr. Chairman, we of Secure World Foundation extend our congratulations on your steadfast and thoughtful guidance of this Committee. Secure World Foundation looks forward to supporting you and the work of this Committee in any way it can.

We also note the continued ceaseless efforts by the Office for Outer Space Affairs under the direction of Dr. Mazlan Othman to foster the peaceful uses of outer space. We are confident that this Committee and OOSA will continue successfully to provide effective support for the peaceful uses of outer space resources especially for emerging space States.

Mr. Chairman. I appreciate the opportunity today to present the Foundation's work in support of the aims of COPUOS. Secure World Foundation focuses its work on four primary themes: the long-term sustainability of outer space activities; the development of sound space policy in law; governance of the use of

space technology in support of human and environmental security; and, protection of Earth and its peoples from near-Earth objects.

Under its efforts on space sustainability, this Spring the Foundation organized two events focused on key space sustainability concerns. The first of these was a small workshop hosted by our Brussels office centred on verification of space agreements. This March event examined both the technical and political challenges to verification of activities in the space environments.

In April, Secure World Foundation, in collaboration with the United Nations Institute for Disarmament Research (UNIDIR), organized a conference entitled 'Building on the past, stepping towards the future'. This meeting covered a range of space security topics including space situational awareness and the role of civil society in contributing to space sustainability. One session that was of particular importance to this Committee was the session entitled 'Cross institutional cooperation: linking and learning'. We were pleased to have the participation of the Chair of this Committee, Mr. Dumitru Dorin Prunariu in that panel.

It is the position of Secure World Foundation that many of the challenges that we face in making the space environment sustainable in the long term cannot simply be divided along the traditional lines of peaceful or non-peaceful uses of space. Space debris mitigation, adherence to rules of the road and standardized operating procedures all build predictability and stability in space. Achieving them should be a goal of all space actors, whether civil, military or commercial. Effective institutional and intellectual cross fertilization between and among all involved parties can play a key role on dealing with such cross-cutting foundational issues. Secure World Foundation stands ready to assist in this process.

One way in which Secure World Foundation seeks to bridge the gap in understanding and interests between different stakeholders of the space community on space sustainability matters is through our support of the Space Security Index Report, which is now in its eighth year of publication. The executive summary of this free publication which examines trends in space security and sustainability is available to delegates of COPUOS and distributed broadly throughout the world. The full report is available online and in a limited print edition distributed to libraries and other interested institutions upon request. The findings of the latest Space Security Index report will be presented by Project Ploughshares, the Canadian non-governmental organization that manages production of the report, at this COPUOS meeting next week.

Secure World Foundation is also pleased to be co-organizing an 'Improving our vision' workshop, 28-29 June in Luxembourg, along with our partners at the Eisenhower Center for Space and Defense Studies and the commercial satellite operators, SES, Inmarsat, and Intelsat. This fifth workshop in the series of international Space Situational Awareness (SSA) workshops we have co-sponsored will focus on policies to support and enhance SSA sharing and examine ways in which shared SSA data can be applied to enhance the safety, stability, and security of operations in space.

Secure World Foundation also pursues a programme in fostering the development of sound space policy and law, consistent with the international treaties and agreements on outer space. Last year we have conducted a space policy conference in Colombia with the great support of Ambassador Ciro Arevalo. In May 2011, we were pleased to partner with the China Academy of Sciences in organizing a workshop on the topic of space policies and laws in Asia. This workshop brought together a number of well informed regional and international experts from China, Europe, Japan, India, and the United States to examine the history, current state affairs and future of space policy in those countries and Europe and the role played by space cooperation at the national and regional level.

Later this year in September, Secure World Foundation and the Ifri Space Policy Programme will hold a jointly organized conference in Brussels on 'European space governance: the outlook'. This one-day conference will provide a snapshot of the current governance situation in three panels. The first one on space governance after the Lisbon Treaty, will assess the overall policy and institutional consequences of the Treaty, thus providing analysis on the structural framework of European space governance. The second panel will look in more detail at governance issues of the Galileo and GMES programmes. The last panel will be dedicated to the governance of security-related space programmes, emphasizing both the role of specific institutions such as the European Defence Agency and the European External Action Services and the development of concrete programmes such as SSA and MUSIS. Finally, a keynote speaker will address the current diplomatic activity around the adoption of the international code of conduct in space proposed by the European Union.

Secure World Foundation also has a limited effort focused on improving the governance of efforts

to make better use of data acquired from space in support of human and environmental security. The advent of smart phones, tablet computers and GPS-linked cameras has ushered in a dramatic change in how environmental data collected by ordinary citizens can be collected, analysed, and put to use for human benefit. These modern communication tools also make it possible for the public to participate in analysing and distributing information from space-based Earth observation systems. Recently, several organizations have sprung up to employ these technologies for broad public benefit in responding to natural disasters. For the past two years, Secure World Foundation has sponsored or co-sponsored several activities focused on revolutionizing the ways in which Earth observation from space can be linked with these new approaches and technologies.

Next month, we are pleased to co-organize with UN SPIDER and the Government of Austria, a workshop on 'Space-based information for crowdsource mapping'. Taking note of the need to connect these pioneering communities with the space industry and the disaster management community, UN SPIDER is carrying out a one-year project aimed at identifying ways in which to ensure a closer cooperation among the three communities. The first step in this project is an expert meeting to be held in Vienna next month focused on building strategies for using crowdsource mapping to support civil protection and emergency management agencies in their effort to prepare for and respond to emergencies. It will also help crowdsource mapping organizations to understand the specific needs of the disaster management community.

During the Polish presidency of the European Union in the second half of the year, Secure World Foundation will participate in a seminar presenting and discussing optimal use of space applications in support of humanitarian efforts during large scale crises. The seminar will combine discussions and a full-day simulation of humanitarian operations, with active involvement of all participants. The event will be organized in coordination with relevant activities of Civil Protection Mechanism of the European Union. This seminar should be an opportunity for the meeting of two communities, international humanitarian organizations and providers of space applications. On the humanitarian side, several humanitarian NGOs will be present, together with some representatives of governmental civil protection entities.

Secure World Foundation's fourth focus area is the governance of response to the threat of a near-Earth object on a collision course with Earth. The Foundation has been very active in Action Team 14 and, over the past year, has co-hosted with the Association of Space Explorers two workshops in support of the work of AT-14.

In May, we helped sponsor and organize the International Academy of Astronautics Planetary Defense Conference, held in Bucharest, Romania. This was the fourth in a series of conferences held since 2004 to discuss the threat of asteroids and comets to the Earth and potential responses. Nearly 200 scientists, astronomers, students and other international experts participated in the four-day conference. Secure World Foundation staff co-chaired panels at the conference focused on examining efforts to respond cooperatively to the threat that near-Earth objects pose to Earth. Highlights and recommendations from the conference will be discussed in Action Team 14.

In conclusion, Secure World Foundation is dedicated to maintaining the secure and sustainable use of space for the benefit of Earth and all its peoples. It acts as a research body, convener and facilitator to advocate for international cooperation in solving the problems of space debris, orbital crowding and other man-made threats to the space environment. The Foundation believes that the challenge of sustaining the space environment into the future must be met in a truly international and cooperative manner.

Secure World Foundation strongly supports the work of COPUOS. As the benefits of space activities expand in number and improve in quality, keeping outer space available for peaceful activities will become ever more important. As the space age evolves, the world community has a unique opportunity to safeguard the secure and sustainable use of the space environment. We look forward to supporting the Committee's efforts to achieve such a future. Many thanks.

The CHAIRMAN I thank the distinguished representative of Secure World Foundation for her statement.

Is there any other delegation wishing to speak under the general exchange of views at this afternoon's meeting?

Greece? You already had the floor.

Mr. V. CASSAPOGLOU (Greece) Yes, it is a kind of point of order. It is a problem we discussed for at least five years, for the duration of interventions. In ITU we decided for the national delegations of member States, five minutes. In our parliament, the Prime

Minister and the ministers they have only five minutes. I think it is extremely abusive to hear non-delegations, the private associations to spend, in our State expenses, 15 minutes for interpretation and so on.

I would propose, because for historical reasons I do not know why, in 59 the two superpowers at the time they do not succeed to have internal rules of the Committee and we apply *mutatis mutandis* the General Assembly's for half century. I think, with the economic crisis, that most countries not only in Europe and the Eurozone but all over the world, I think it is abusive and in contesting, even challenging, the existence of the international organizations. So I propose for State interventions, member State interventions, maximum seven minutes, the observer States, five minutes and for all others representing here of the private sector or otherwise, just three minutes. We have the possibility to receive their annual reports by Internet and _____(?) economic and also protect the environment for not using paper. So please, please, please, not to raise the question to make an ad hoc group to produce internal rules and _____(?) we are using, because I think this is extremely abusive and in case we do not succeed to have an approval of this approach, I retire my consensus concerning the duration of intervention. Thank you very much.

The CHAIRMAN Thank you very much distinguished representative of Greece. During the last years we already decided to have 10-minute interventions from member States and we strongly recommend to all member States to have statements of no more than 10 minutes. Thank you very much.

Are there any other member States or organizations wishing to speak under agenda item 4, general exchange of views? I see none.

We pass to the technical presentations, we do not open now the next agenda item. I would like now to proceed with the technical presentations and presenters are kindly reminded that technical presentations should be limited to 20 minutes in length.

The first presentation on my list is by Mr. Yasushi Horikawa of Japan entitled 'Effectiveness of satellite data for disasters - the Great East Japan Earthquake'.

[Technical presentation]

The CHAIRMAN Thank you Mr. Horikawa for your presentation. Is there any delegate who has questions for the presenter? I see none.

The second presentation we will hear this afternoon is by Mr. Juan Fernando Acuña Arenas of Chile on 'Chilean Space Agency: Activities and International Cooperation 2010-2011'.

[Technical presentation]

The CHAIRMAN Thank you Mr. Acuña Arenas for your presentation and to your colleague as well. Is there any delegate who has questions for the presenter?

Yes, distinguished representative of Brazil.

Mr. J. MONTSERRAT FILHO (Brazil) (*interpretation from Spanish*) Thank you Chairman. I would like to begin by complimenting my brothers from Chile for their presentation, it really is amazing to see all of the things that they are doing with their space programme. We in Brazil and our space agency are more than willing to cooperate with you in your endeavours but one question springs to mind. The gentlemen who is giving us a detailed presentation on the programme based in Antofagasta, I would like to know, more or less, what is the price tag on that kind of programme? What is your budgetary forecast that you are using as a baseline for this? Thank you.

Mr. J. ACUÑA (Chile) (*interpretation from Spanish*) Thank you very much for the question. The initial estimate for the first two stages is about $20 million. Most of these funds come from private corporations. As I said in my presentation, most of the world's largest mining companies are operating in this area of our country and they are very keen on investing in projects that will have a global impact. Just one example, there is a _____(?) company, Minera Escondida, and they do a lot of mining in the region and they have given us $15 million, so the money is there and there is also an interest to go forward with these kind of programmes. So it is our feeling that this kind of programme will only snowball in the future and we just want to thank people in advance for their support.

The CHAIRMAN Thank you. The next question by Mexico.

Mr._____ (Mexico) (*interpretation from Spanish*) I just wanted to ask for more information regarding the meeting that is going to take place as part of the international space affair. I know that the Director of the agency should be there. One of the things that we assigned to ourselves in Pachuca was that we would meet with them, so on behalf of the Government of Mexico and as the Pro Tempore chair

to meet with all of the agency directors and we hope to have a very useful meeting with them.

Mr. J. ACUÑA (Chile) (*interpretation from Spanish*) Yes, we will extend to you an invitation. In fact we would urge you to work together with us in helping to organize this event. Would the distinguished Mexican delegate be willing to help us organize this event?

The CHAIRMAN Thank you very much. The final presentation we will hear this afternoon is Mr. Michael Schmidt of Mexico entitled 'Satellite-based operational monitoring of the environment in Mexico government'.

[Technical presentation]

The CHAIRMAN Thank you Mr. Schmidt for your presentation. Is there any delegate who has questions for the presenter? I see none.

I would now like to inform delegates of our schedule of work for tomorrow morning. We will reconvene promptly at 10 a.m. We are already very crowded with presentations and we really want to start at exactly 10 a.m. Also I would ask delegates to not have statements more than 10 minutes. Ten minutes usually means three pages in a normal font for a normal reading because we will not finish next week with the report and we will be in big difficulties. We have already lost one day with the commemorative segment and everything that was presented last year it is always recorded and is accessible to anyone. Just please leave in your statements only what is new from the last year to this year. Thank you very much.

At that time at 10 a.m. we will continue our consideration of agenda item 4, general exchange of views, agenda item 5, ways and means of maintaining outer space for peaceful purposes and agenda item 8, report of the Legal Subcommittee on its fiftieth session.

Following the plenary there will be two technical presentations by the United States and Mexico. Are there any questions or comments on this proposed schedule? None.

The Secretariat has an announcement.

Mr. N. HEDMAN (Secretariat) Thank you Mr. Chairman. Actually three announcements regarding informal consultations and panel discussion to be organized tomorrow.

From 9-10 a.m. in the morning, there will be informal consultations open to every interested delegate on the terms of reference of the working group on long-term sustainability under the guidance of the Chair of the working group of the Scientific and Technical Subcommittee. Those informal consultations will be held in Room M7 in this building. I would like to point out for your attention that today, some documents related to the long-term sustainability of outer space activities have been provided to all delegations in their pigeon holes. I am referring to CRP.10 with comments received by the Russian Federation. CRP.11 with comments received by Mexico. A non-paper with a compilation by the Secretariat of all those proposed amendments by the Russian Federation and Mexico. A second non-paper which relates to nominations of members of expert groups and a list of points of contact, communicated to the Secretariat under the same topic. I repeat, informal consultations tomorrow morning 9-10 a.m. in Room M7, it will be communicated on the monitors.

Secondly, right after the plenary session in this conference room M1, there will be informal consultations at 1 p.m. related to the contribution of COPUOS to the Conference on Sustainable Development, the so-called Rio+20, and the draft contribution of the Committee to the conference has been circulated in CRP.9 today. This is an opportunity for the Secretariat to explain the document and for delegations to ask any questions and then the Secretariat would be pleased if delegations could read through this document over the weekend so that we can take action on the document next week. I repeat, informal consultations in this conference room, M1, starting immediately after the plenary session tomorrow.

Likewise, in this conference room, tomorrow starting at 2 p.m., there will be a special panel session, a panel discussion on 50 years of COPUOS and the sixtieth anniversary of the International Astronautical Federation (IAF). The aim of this panel discussion is to review the history of cooperation between COPUOS and the IAF, to look into how the UN/IAF workshops have been initiated and discuss ideas and models to make this cooperation even more dynamic in the future in line with the main issues on the agenda of COPUOS. The panel discussion will comprise a group of prominent personalities within the history of IAF and I refer to them as follows. Mr. Rao of India that all of you know very well, he was chairman of COPUOS in earlier times and he was also chairman of the UNISPACE III conference. Mr. Karl Deutsch of Canada who was chairman of the Scientific and Technical Subcommittee earlier and also has been a

former president of the IAF, he is not in the room but he will be present through video conference link. Mr. Vladimir Kopal, who has been chairman of COPUOS and the Legal Subcommittee and as well former director for outer space affairs and legal counsellor of the International Astronautical Federation. Mr. Gérard Brachet who also has been chairman of COPUOS, vice-president of IAF and also chairman of the IAF Committee on Liaison with International Organizations and Developing Nations. Mr. Johannes Ortner, former president of IAF and also former delegate of Austria to COPUOS and Mr. Philippe Willekens who is Executive Director of IAF. So this is, as you can see, a very prominent panel. I repeat, a panel discussion on 50 years of COPUOS and the sixtieth anniversary of IAF which will take place in this conference room M1 from 2-3 p.m. tomorrow. It will also be announced on the monitors. Thank you Mr. Chairman.

The CHAIRMAN Thank you Mr. Hedman. I would also like to remind delegates that this evening at 7 p.m. in the Vienna City Hall (Volkshalle), the international astronauts and cosmonauts panel discussion will take place. Me and my colleagues, astronauts and cosmonauts, cordially invite you to attend the panel discussion.

This meeting is adjourned until 10 a.m. tomorrow morning.

The meeting closed at 6.05 p.m.