
**Committee on the Peaceful
Uses of Outer Space
Fifty-seventh session**

Script

677th Meeting
Thursday, 12 June 2014, 10.00 a.m.
Vienna

Chairman: Mr. A. Oussedik (Algeria)

The meeting was called to order at 10.05 a.m.

The CHAIRMAN: Good morning distinguished delegates, I now declare open the 677th meeting of the Committee on the Peaceful Uses of Outer Space.

Distinguished delegates, I would first like to inform you of our programme of work for this morning.

We will begin our consideration of agenda item 15, Other Matters, by opening the floor only for comments on the proposed Strategic Framework on the Programme for the Peaceful Uses of Outer Space.

We will then continue our consideration of agenda item 5, General Exchange of Views, agenda item 6, Ways and Means of Maintaining Outer Space for Peaceful Purposes, and agenda item 7, Report of the Scientific and Technical Subcommittee on its Fifty-First Session.

There will be two technical presentations this morning by a representative of Italy entitled “The Science Data Centre of the Italian Space Agency as a Modern Multidisciplinary Data Centre Supporting Long-Experienced as well as Emerging Countries in the Field of Space Science”, and by a representative of the Secure World Foundation entitled “Results from Two Capacity-Building Workshops on the Prevention of and Response to Natural Disasters in Mesoamerica”.

The Space Missions Planning Advisory Group is holding its second meeting today, starting at 9.30 a.m. in Meeting Room C5 on the seventh floor of the ‘C’ Building.

Expert Group B of the Working Group on the Long-Term Sustainability of Outer Space Activities is currently meeting until 1.00 p.m. in Meeting Room C0739 to discuss its final report.

Also during lunchtime from 1.30 p.m. to 3.00 p.m., there will be a Planning Meeting to 2014 United Nations/International Astronautical Federation Workshop in Meeting Room C0739.

Are there any questions or comments on this proposed schedule?

I see none.

I wish to remind delegations that the draft list of the scheduling of technical presentations during this session of the Committee has been distributed to all delegations yesterday. The list of technical presentations will be closed by the adjournment of our plenary meeting this morning. Delegations should provide the Secretariat with any updates to that list by no later than 1.00 p.m. today.

Other matters (agenda item 15)

Distinguished delegates, I would now like to begin our consideration of agenda item 15, Other Matters, by opening the floor for comments on the proposed Strategic Framework for the Programme on the Peaceful Uses of Outer Space.

Delegations will recall that the proposal is contained in document A/69/6 and proposed amendments will be submitted to the Committee for Programme and Coordination, CPC, which will review the proposal.

Are there any delegations wishing to take the floor on the proposed Strategic Framework of the Programme on the Peaceful Uses of Outer Space 2016-2017, as contained in document A/69/6?

I see none.

Since there are no delegations wishing to take the floor on this matter, may I take it that the Committee agrees on the proposed Strategic Framework for the Programme, as contained in document A/69/6?

It is so decided.

We will, therefore, continue our consideration of agenda item 15, Other Matters, on Friday afternoon.

General exchange of views (agenda item 5)

Distinguished delegates, I would now like to continue our consideration of agenda item 5, General Exchange of Views.

The first speaker on my list is the distinguished delegate of the Syrian Arab Republic, Mr. Osama Ammar.

Mr. O. AMMAR (Syrian Arab Republic) (*interpretation from Arabic*): Mr. Chairman, Dr. Azzedine Oussedik, dear friends and colleagues, it is an honour for me to speak to you on behalf of my delegation. I would like to congratulate you on your election to the chairmanship of this Committee.

It is also an honour to congratulate Mr. Diego Moreno Stacey and Mr. Mohammed Raouf, the Deputy Chairs. And I would like to congratulate Dr. Simonetta Di Pippo, newly appointed as Director of the United Nations Office for Outer Space Affairs. We are sure that your experience will guarantee the success of our work. We will spare no effort to support you in your work.

I would also like to thank the last Chairman for all the efforts he made which have contributed to the success of our Committee's work.

I would also like to congratulate the new members of COPUOS, Belarus and Ghana. As you know, membership is constantly increasing which, I think, is proof of the huge interest by countries and international organizations in the use of space technology, especially remote sensing for development purposes. My Government is extremely interested in these technologies. They should be the basis for all research work to boost development and to make best use of space data. The Remote Sensing Agency, which is the institution responsible for those technologies in Syria, has played a leading role in using space technology for development. This institution has organized research work and several projects, including some which are purely national and others which are regional in scope with other international bodies. We are convinced that the interest of this subject goes beyond national borders. We have to consider climate change, drought, water resource management, etc.

The Remote Sensing Agency wants to do more than research work. It wants to disseminate its technologies throughout the country in different sectors. We believe we have to use space data and remote sensing in as many fields as possible in order to

boost development, best use of natural resources and have a comprehensive approach. That is why we have trained many specialists in the use of these techniques. We have established joint projects for life-long learning in order to make best use of remote sensing and other space technologies.

The Agency is a benchmark for expertise for capacity-building and for life-long learning. Our aim is to work with different universities. We have specialized training in our universities and other seats of higher education. We are interested in increasing our own capacity and we have established an Earth-based station for the direct reception of space data to analyze them and to harness them to make the best possible use of them for development and we hope to be able to take into account these technologies and their benefits for all.

My Government, through the Remote Sensing Agency, believes in international cooperation in order to best use these space technologies. We are members of different regional and international organizations in the field and, although our activities have suffered the impact of my country's particular circumstances over the last two years, but we hope that the Agency will continue with its work and we believe that space activity should be a collective effort with the United Nations family and we hope to return to our activities soon and implement the projects that we had planned.

Thank you Chairman.

The CHAIRMAN: I thank the distinguished representative of the Syrian Arab Republic, Mr. Osama Ammar.

The next speaker on my list is the distinguished representative of the United States of America, Mr. Ken Hodgkins.

Mr. K. HODGKINS (United States of America): Thank you Mr. Chairman. Mr. Chairman, on behalf of the United States delegation, I congratulate you and the other members of the Bureau on your election. We look forward to working with you towards a successful two years in leading this Committee.

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

And my delegation warmly welcomes Ms. Simonetta Di Pippo as the new Director of the Office for Outer Space Affairs. We are confident that under your leadership, the Office will continue its stellar work in support of the Committee in promoting international space cooperation.

And finally, Mr. Chairman, we would like to express our heartfelt thanks to the superb leadership that the outgoing Chair, Dr. Horikawa, exhibited over the past two years. We greatly appreciate the work that he put into promoting international cooperation in the peaceful uses of outer space.

This session of COPUOS is convened on the upcoming forty-fifth anniversary of perhaps the most significant technology feat of our time. The 20th July will mark the forty-fifth anniversary of the lunar landing of Apollo XI. On that date, in 1969, astronaut Neil Armstrong cemented in history the first time a human stepped on the lunar surface. This achievement was followed by five additional lunar landings by United States astronauts, each of which made significant contributions to our understanding of the Moon. The first clear pictures of the Earth taken from lunar orbit caused the people of the world to view Earth in a different way, that is, as an incredibly beautiful sphere hanging in the blackness of space.

Although much of our attention today is focused on the application of space techniques to the understanding and solution of terrestrial problems, space exploration remains the ultimate objective of the United States as we seek answers to fundamental questions of the origins of the Universe and life itself. Project Apollo was an important early step in that ongoing process of seeking new knowledge and we and our international partners have built upon this legacy with the International Space Station. We are leveraging to support future human missions to an asteroid and Mars with this critical exploration resource.

As part of our celebration of the first Moon landing, NASA astronaut Benjamin Alvin Drew will give a special presentation later in this session.

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

In accordance with the United States National Space Policy of June 2010, the United States is placing increased emphasis on international cooperation to promote the peaceful use of outer space. We are

working closely with the United Nations and with other countries and organizations to continue to address the growing problem of space debris and to promote the sustainable use of space for the benefit of all nations.

We also will continue to pursue pragmatic transparency and confidence-building measures to encourage responsible actions in, and the peaceful use of, space in order to mitigate the risks of mishaps, misperceptions and miscalculations.

The United States Space Policy reaffirms the long-standing view that we will consider concepts and proposals for arms control measures if they are equitable, effectively verifiable and enhance the national security of the United States and its allies.

Mr. Chairman, on 9 January this year, the United States hosted a very successful ministerial-level International Space Exploration Forum, or ISEF, in Washington D.C., which provided an opportunity for nations to strengthen international cooperative efforts, highlight the benefits to humankind of national investment in space exploration and discuss policy issues relevant to the exploration, long-term sustainability, development and utilization of outer space. Representatives from 32 nations plus the European Space Agency and the European Commission met to advance the exploration and utilization of space and to highlight the direct benefit of these activities to humankind. This ISEF meeting continued the global policy dialogue on space exploration initiated at the European Union-hosted Lucca Space Exploration Conference in November 2011.

Participants at ISEF considered three topics: National Policies and Public Support for Space Exploration; Exploration and Utilization: Strategies and Shared Goals; and International Cooperation in Exploration and Peaceful Uses of Outer Space. Delegates acknowledged that the International Space Station provides a visible symbol of the value of international cooperation and is a stepping stone for broader future collaboration.

Delegates acknowledged the importance of building public support for space exploration by demonstrating how investing in space benefits humankind, prepares our future in science and technology, and boosts innovation leading to economic growth.

With the participation by a number of developing countries in the ISEF Conference, delegates also

recognized the value of space activities in promoting sustainable development.

Discussions highlighted that human and robotic space exploration is clearly worth the investment of government resources, providing benefits, direct and indirect, foreseen and unimagined, for the citizens of Earth. It was also agreed that countries should continue to expand bilateral and multilateral work in order to maximize the benefits of space exploration. One key venue for this coordination will be through continued work of space agencies in the International Space Exploration Coordination Group, a useful forum for the preparation and coordination of a Global Exploration Roadmap. In the 2013 update of this Roadmap, there is recognition of the value of a stepwise approach to exploration, increasing synergies between human and robotic exploration and a shared long-term goal of going to Mars.

The discussion at ISEF highlighted that many of the space achievements of the last century would not have been possible without international cooperation. At the same time, competition-driven innovation at the industrial and scientific levels is also an important element in the evolution of space exploration.

Many countries at ISEF also recognized the amazing expansion in commercial spaceflight activities which expand economic growth and bring new vitality and ideas to space exploration. They agreed that steps should be taken to facilitate the development of this sector in accordance with existing national and international guidelines.

At ISEF, we also noted the need to expand the role of COPUOS as an important venue for developing guidelines on key emerging issues, building on the 1967 Outer Space Treaty. These globally important issues include ensuring the long-term sustainability of the space environment for all users, in particular from threats posed by orbital debris, and protecting Earth from asteroids and other potentially hazardous objects.

ISEF was noteworthy in that it involved the participation for the first time by a large number of developing countries. This demonstrates the growing utilization of space by newly emerging space-faring nations and the increased role they will inevitably play in future international space exploration cooperation. Participants noted the need for discussion of international frameworks and common principles for collaboration on future exploration, drawing on the experience of projects such as the International Space Station.

Finally, the ISEF participants welcomed the offer by Japan to host the next International Space Exploration Forum in 2016 or 2017 and agreed that policy-level consultations would continue in the interim until the next meeting.

We would also like to note that ISEF partnered with the International Academy of Astronautics to convene ISEF and the IAA Summit of Heads of Space Agencies on successive days in Washington, D.C. to ensure the success of both events.

Copies of the ISEF Forum Summary and Agenda are available in your document box.

And finally, at the ISEF, the United States announced its commitment to extending the International Space Station utilization to at least 2024. More than 80 nations have utilized the ISS, and the ISS, which recently celebrated 15 years in orbit, will continue to serve as a foundation for new exploration endeavours for years to come.

Thank you, Mr. Chairman.

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

The next speaker on my list is the distinguished representative of Portugal, Mr. Filipe Duarte Santos.

Mr. F. DUARTE SANTOS (Portugal): Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, I would like to express the congratulations of the Portuguese delegation to you and to the other members of the Bureau on being elected. I am sure that under your guidance, the Committee will achieve its goals and please be assured of the full support of my delegation for the successful work of the Committee.

My delegation wishes also to express its gratitude to Dr. Yasushi Horikawa for his excellent leadership as Chairman of the Committee during the last two years. It has been a great pleasure to work with him.

I also take this opportunity to congratulate Madam Simonetta Di Pippo on assuming the role of Director of the Office for Outer Space Affairs and to wish her success in the work. And finally to thank the Secretariat for the excellent preparation of this meeting.

Mr. Chairman, Portugal strongly believes on the common interest of all humankind in promoting and expanding the exploration and use of outer space for

peaceful purposes and supports the continuing efforts to extend to all States the benefits derived therefrom. To achieve these objectives, it is essential to ensure the safe and sustainable use of outer space. Thus, my delegation has fully supported the establishment by the Scientific and Technical Subcommittee, at its fifty-first session, of a Working Group on the Long-Term Sustainability of Outer Space Activities. Experts from Portugal have actively participated in the Expert Groups A, B and C. In this context, my delegation would like to thank Mr. Peter Martinez for his leadership as Chairman of the Working Group and for preparing the Conference Room Paper A/AC.105/2014/CRP.5 on the consolidation of the set of draft Guidelines on the Long-Term Sustainability of Outer Space Activities. My delegation hopes that significant advances in the process of adopting a set of guidelines can be made in the current session of the Committee and wishes to contribute constructively to this goal.

Mr. Chairman, my delegation fully endorses the statement of the European Union already made at this session of the Committee. It also recognizes that all States, in particular those with major space capabilities, should contribute to the goal of preventing an arms race in outer space as an essential condition for promoting and strengthening international cooperation in the use and exploration of space for peaceful purposes. We believe that space systems and applications contribute in a decisive way to address the challenges of sustainable development on Earth which integrates three components, social, economic and environmental. The challenges in these three fields are growing at the global level.

Portugal gives special attention to the agenda items of this session of the Committee on Space and Sustainable Development, Space and Water, Space and Climate Change and on the Future Role of the Committee and we will address the Committee as appropriate on these agenda items.

Mr. Chairman, I would now like to briefly report on some recent space activities in Portugal, including science, technology, training and public awareness.

Portugal is a member of the European Space Agency since 2000 and a large part of the space activities in the country are done in the context of ESA. Space activities in Portugal are coordinated by an Inter-Ministerial Commission involving the Secretary of State for Science and the Secretary of State for Telecommunications.

Portugal participates in the Galileo and Copernicus Programmes, in particular through the development of instruments for the Sentinel satellites. It also participates in the Alphasat and EDRS, the European Data Relay System, satellites for telecommunications and integrated applications. It is also involved in the ELISA Mission that will be the first Gravitational Wave Observatory in Space and in the PROBA-3 pair of satellites, the first precision formation flying mission. Furthermore, it is involved in the Solar Orbiter, Bepicolombo, Cheops, Gaia and ExoMars projects, among others.

Mr. Chairman, my country hosts key installations for space systems such as the facilities in the island of Santa Maria in the Azores Archipelago in the North Atlantic, that include an ESA tracking station of the ESTRACK Network and an EUMETSAT land surface analysis application facility.

From 2000 to 2013, the ESA contracts on space activities with Portuguese space businesses was on average 10 times larger than with academia.

The main universities where space research and graduate courses on space sciences are conducted are the Universities of Lisbon, Évora, Oporto, Beira Interior and Azores. A very important aspect of space science research in academia is the scientific impact of the publications. According to a recent research evaluation by Thomson Reuters Research Analytics, made in 2012, the scientific impact of the research papers on space science by Portuguese scientists in the period of 1990 to 2012 is the largest among all science fields at the national level. Furthermore, comparing the scientific impact of space science research publications in the group of 27 European Union countries, Portugal is in second place for that period of time.

Portugal hosts frequently conferences and workshops in space sciences, and just to mention one of the latest, this was the International Astronomical Union Workshop on “Statistical Challenges in 21st-Century Cosmology” that took place in Lisbon from 25-29 May this year.

Mr. Chairman, special attention is given to the teaching of astronomy and space sciences at the elementary and secondary school levels. The Institution Ciência Viva, Live Science, sponsored by the Ministry for Education and Science, has a network of centres throughout the country with small astronomical observatories that are used for training and public outreach. A Portuguese non-governmental organization in this field that is particularly notorious at the international level is NÚCLIO. This NÚCLIO is

involved in programmes such as the Galileo Teacher Training Programme, the “Hands-On Universe, Europe: Bringing Frontline Interactive Astronomy to the Classroom”, “Discover the Cosmos”, and “Inspiring Science Education”. Furthermore this Organization is involved in various projects that promote the teaching of astronomy in secondary schools in various African countries.

Mr. Chairman, my delegation believes that it is very important to disseminate the knowledge about space sciences and to demonstrate to students at all levels the importance of using outer space activities to extend our knowledge of the Universe, to promote social and economic development, to monitor and better understand our environment and the state of the planet and for disaster management.

Mr. Chairman and distinguished delegates, thank you for your attention.

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

The next speaker on my list is the distinguished delegate of Algeria, Mr. Karim Houari.

Mr. K. HOUARI (Algeria) (*interpretation from French*): Mr. Chairman, the Algerian delegation would like to congratulate you on your election to Chair COPUOS for 2014-2015.

We would also like to congratulate the members of the Bureau.

Your personal qualities and experience will doubtlessly contribute to the success of the work of this session and we wish you every success.

The Algerian delegation would also like to thank Mr. Yasushi Horikawa for the competence with which he chaired the Committee during 2012-2013 and we are convinced that he will continue to use his experience to COPUOS' benefit.

We would also like to congratulate Ms. Simonetta Di Pippo for her appointment as Director of the United Nations Office for Outer Space Affairs and I would like to pay tribute to Madam Mazlan Othman, her predecessor.

I would like to thank everyone who has contributed to the preparation of this meeting and I would like to congratulate Belarus and Ghana as new members.

Mr. Chairman, the issues reviewed by COPUOS and its two Subcommittees aim to promote space activity in the service of sustainable development and the well-being of the world's populations. The Algerian delegation would like to support the statement of the African Group and would like to recall the importance of the following, defining and delimiting outer space regarding its close link to national airspace, the prevention and management of conflicts in liaison with space activities, guaranteeing equitable access to orbital positions based on the principles of the peaceful use and non-appropriation of outer space as the aim is also to put an end to this concept of first come-first served in the use of geostationary orbit.

We would also like to combat the danger of the proliferation of space debris making sure that this does not hamper the space activities of developing countries. The Algerian delegation also would like to see the implementation of guidelines to reduce space debris, as established by the Inter-Institutional Coordination Committee on Space Debris and we would like to see a regulatory framework covering the commercialization of high-resolution satellite data to prevent the mis-use of these which could cause damage to people and assets.

Mr. Chairman, the projects and actions implemented in Algeria in the space arena aim to make space technology a way of achieving socio-economic development and to achieve regional and international cooperation. The implementation of our National Space Programme 2007-2020 is being pursued under the aegis of the Algerian Space Agency. The year 2013 was marked by the establishment of several practical projects in Algeria to also launch new projects to make the most of space techniques based on the updating of our National Space Programme in 2012.

In 2013 we launched two new technology projects to respond to our national concerns and to boost our own capacity. We have a medium-resolution observation satellite, ALSAT-1B, which carries out continuous Earth observations following the footsteps of ALSAT-1 to study and monitor the Earth and marine environments and to prevent and manage natural disasters.

We have designed and launched a space telecommunications system, ALCOMSAT-1 which will enable Algeria to have better communication links in the event of a major disaster and will contribute to better communication and accessibility in all our regions as well as providing commercial services for television and radio as well as tele-learning and tele-medicine.

We are using satellite imaging, especially from ALSAT-2A on the satellite locational navigation and on geographic information systems. We are using these to manage natural disasters such as forest fires and other possible fires, cartography, as well as management of flood areas. The energy and mining sector, housing, town planning, agriculture, environment and fishing have also been concerned by the development of these operational projects based on space techniques and GIS.

We are also trying to increase our human capacity and have launched a Training and Research Programme for Space Technologies at our Space Applications and Technology School, which was set up in 2007.

In terms of the African continent, Algeria is encouraging all initiatives to promote inter-African cooperation in space technology and applications in order to achieve sustainable development in Africa. Algeria has launched an African Exhibition on Space Technology and Applications in service of sustainable development in Africa and we actively participated in the Fifth African Conference on Space Science and Technology in the service of sustainable development, ALC-5, which took place from 3-6 December 2013 in Ghana and we contributed to the definition of Africa's Space Policy and ways and means of developing inter-African cooperation.

Thank you.

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

The next speaker on my list is the distinguished delegate of Venezuela, Mr. Roberto Becerra.

Mr. R. BECERRA (Bolivarian Republic of Venezuela) (*interpretation from Spanish*): Mr. Chairman, on behalf of my delegation, let me congratulate you on being in the Chair at this session.

We would also like to welcome the Director of the Office for Outer Space Affairs, Madame Simonetta Di Pippo, our Secretary, Mr. Niklas Hedman, Vice-Chairs, the Rapporteur and all of the officials and everyone who is here with us at this session.

Let me extend these greetings also to other delegations, my friends and colleagues. It is always a pleasure to see them come back here.

Mr. Chairman, our delegation fully associates itself with the statement made by the Ambassador of Nicaragua on behalf of GRULAC.

This is a very important forum. At this time, all of us have the opportunity to reflect on and comment on national space activities. We need to have sufficient time to express ourselves and know official(?) limits and also make an effort to be specific, concrete and sum up these activities in the most busy way. Very long statements are not easy to follow and to understand. Therefore, Mr. Chairman, I am going to take only seven minutes to try and cover what my country has been doing in outer space. Please stop me if I go beyond that limit.

My Government has three space programmes underway, VRSS-1, a remote sensing satellite called MIRANDA, VENESAT-1, which is a telecommunications satellite called Simón Bolívar, and the Space Research and Development Centre, which the Centre for the integration, testing and study of information provided by satellites.

Mr. Chairman, after a year of successful operation of the MIRANDA satellite, the Government of Venezuela has moved forward in such strategic areas as urban planning, agriculture, health, energy, food security, management and mitigation of natural disasters, border controls, control of illicit crops and sustainable use of natural resources. To date, we have catalogued a total of 76,612 images throughout the national territory of Venezuela. For its part, the VENESAT-1 Simón Bolívar Satellite Programme, was launched in 2008 and it provides rural telephone, Internet services, tele-health, education and the broadcast of regional and TV signals throughout the national territory and the hemisphere.

According to the data provided by the National Telephone Company of Venezuela, CANTV, for the first trimester of 2014, more than 5.4 million users in Venezuela were connected via the satellite communications system.

Using the MIRANDA satellite and the Simón Bolívar satellite, we have done this work and it is solely operated by Venezuelans in their national territory.

With regard to human development, it is of fundamental importance to space activities. To date, Venezuela will have more than 2,742 professionals trained in the outer space field.

The knowledge acquired as part of the aforementioned space programmes has given ABAE the capability to manage technological projects such as control and operation of communication and remote sensing satellites, administration of land-based stations for satellite data processing, remote sensing and systems of geographic information, ensuring space-based platforms, among others. We have benefited from cooperation and foreign(?) institutions, such as the Remote Sensing Institute of India, the Institute of Space Research of Brazil, the Mario Gulich Institute of Higher Space Studies of Argentina, the University of Aeronautics and Astronautics of Beijing, the Chinese Academy of Space Technology CAST, and European space institutions such as Airbus Defence and Space and Willis Limited.

Mr. Chairman, in the area of international cooperation, my country is currently negotiating cooperation agreements with Cuba, Ecuador, France and Russia and continues making progress and implementing space activities with Argentina, Bolivia, Brazil, China, India and Uruguay.

A highlight, moving away from my text at the moment, what I would like to say that as a highlight, during 2013 and 2014, we organized an integrated training course for space projects where Venezuelan professionals imparted knowledge to various functionaries from Bolivia and Argentina. This was an intensive educational course where we discussed all of our space projects since the satellites were launched into orbit. The second module was mostly about the safety and security of space activities. In the next module, we spoke about the practical aspects of space activities and satellite integration. And finally, we have just issues pertaining to international cooperation, outer space law and the implementation of existing treaties.

We will submit directly to the Director of the Office of Outer Space Affairs, the curriculum and the syllabus for this course.

And with this, I am wrapping up my presentation. This has been a very brief summary but I have covered most of the important space activities carried out by my country. There are many others, highlights and many items that could definitely qualify as good news but this is all I had time for, but we call on all countries to continue cooperation, to be productive and we wish everyone the greatest success in this giant endeavour.

Thank you very much.

The CHAIRMAN: I thank the distinguished delegate of Venezuela for his statement.

The next speaker on my list is the distinguished delegate of Kazakhstan, Mr. Murat Smagulov.

Mr. M. SMAGULOV (Kazakhstan) (*interpretation from Russian*): Mr. Chairman, the delegation of Kazakhstan would like to congratulate you on your election as Chairman of the fifty-seventh session of COPUOS and wish you every success in your important function.

We would like to thank Mr. Horikawa for his skilful leadership of the Committee and great contribution to its successful work.

We welcome Belarus and Ghana as new members.

Kazakhstan supports the Committee's efforts in addressing topical issue pertaining to the peaceful use of outer space. In the years of its existence, the Committee has made an important contribution to regulating space activities and the basis of international space law has rendered its assistance to countries in capacity-building in outer space.

We believe it is necessary to continue strengthening and developing the work of COPUOS to develop more effective and efficient mechanisms for the regulation of international space activities, ensuring equitable access to outer space, using the product of outer space research for the benefit of all countries regardless of the level of their economic developments.

Mr. Chairman, our efforts in outer space are designed to promote the peaceful exploration and use of outer space to address social, economic, development needs, rational management of natural resources, and promoting a more secure world and greater security of our country.

At the moment, Kazakhstan is working on the basis of a State Programme for industrial and innovative development for 2010-2014 and the outer space part of that Programme for the same period. As part of the Programme, the National Space Agency of Kazakhstan is working on the following projects.

First, there is a project to set up a satellite communications and broadcast, KAZSAT. On 16 June 2011, we used the Baikonur Launch Facility in Kazakhstan to launch a second telecommunications satellite, KAZSAT-2, which is currently successfully operating. On 28 April of this year, we launched

KAZSAT-3, which is now in the geostationary orbit and is being tested.

The commissioning of this third satellite is planned for September 2014. At the moment, we are working on the design for KAZSAT-4.

The city of Akkol in Kazakhstan plays host to a ground-based station Mission Control, which was set up as part of the KAZSAT-1 Project and has been in operation since December 2005. In June 2013, we also set up a reserve Mission Control Centre in the region of Almaty.

The KAZSAT system is managed by the National Centre for Space Communications, jointly with Russia's Khrunichev State Space Research and Production Centre and the Reshetnev Satellite Information Systems Enterprise.

The second project has to do with setting up a national remote sensing system that involves two satellites, high- and medium-resolution, respectively. The project is being managed by the Kazakhstan Gharysh Sapary company jointly with the French company Airbus Defence and Space, on the basis of an Intergovernmental Agreement between Kazakhstan and France, signed in October 2009.

On 30 April of this year, the Kourou Launch Facility in French Guyana was used to launch a Kazakh high-resolution remote sensing satellite into space, KAZEOSAT-1. At the moment, it is being tested in orbit.

The launch of KAZEOSAT-2 is planned for 20 June of this year from the Yasny Launch Facility in the Orenburg region of Russia.

In June 2014, we plan to commission a land-based segment of this system for the remote sensing of the Earth in the city of Astanada. It will happen in the fourth quarter of this year. That project will enable Kazakhstan to receive real-time monitoring information and remote sensing data that will help in addressing economic issues, develop geo-information services market, and create new employment.

The third project has to do with setting up an assembly facility for spacecraft in Astanada. For the first time, Kazakhstan will have a high technology enterprise specifically and exclusively designed for assembling and testing spacecraft. This is a joint project with Airbus Defence and Space of France.

A joint Kazakhstan-France company has been set up. It is called Galam. The complex will be commissioned in 2015.

The fourth project has to do with setting up a land-based infrastructure for the high-accuracy navigation satellite that will provide, in real-time, navigation services throughout the country using GLONASS-GPS and, in the future, Galileo signals.

At present, we have put into operation a local marine differentiation station in the Caspian Sea area. We have concluded the testing of the Centre and throughout the territory of Kazakhstan, we have put in place 60 differentiation stations, 50 of which were actually manufactured in Kazakhstan. We have also a mobile differentiation station in operation.

The fifth project has to do with the Kazakh Space System for Space Technological Research. Two research satellites will be launched in the fourth quarter of 2016. The Galam company, along with Surrey Satellites Technology Limited of the United Kingdom, have already embarked on that project.

In Kazakhstan, we attach great importance to developing the scientific and research bases for space activities. The National Space Research Centre in Almaty includes an Astro-Physical Institute pursuing research in remote space, the Ionosphere Institute for Near-Space, the Institute of Space Research, which manages the processing of remote sensing data and the monitoring of emergency situations from space, and the Institute of Space Techniques and Technologies, which develops space technology components.

One of the main objectives of our overall Space Programme is providing launch services from the Baikonur Launch Facility, constantly improving the safety and environmental qualities of the launch facility and the rockets used. Today, we are part of a project to launch conversion intercontinental ballistic missiles, RS-20. Besides, Kazakhstan is participating in the development of the ZENIS Rocket complex, based on the Baikonur Launch Facility.

Mr. Chairman, the National Space Agency of Kazakhstan interacts with space agencies and the private sector of a number of countries. Memoranda of Understanding and Cooperation Agreements have been signed with 15 countries around the world. Space agencies and well-known space companies are working together with Kazakhstan on payloads, components, new spacecraft, remote sensing projects and the training of professionals in these areas.

Kazakhstan is a participant in the Sentinel-Asia Project, which is designed to develop international cooperation in monitoring natural disasters in the Asia-Pacific region. It is coordinated by Japan's National Space Agency, JAXA, and we, in Kazakhstan, have excellent partnership relationships with this agency of a long-standing.

The Sentinel-Asia Project is particularly important to countries in the Asia-Pacific region because they are prone to all types of natural disasters, hurricanes, tsunamis, floods and earthquakes. Real-time information, helping to prevent and mitigate these events is truly a vital thing for these countries. Kazakhstan itself has earthquake-prone areas. Therefore, our participation in the Sentinel-Asia Project is extremely important.

Thank you very much.

The CHAIRMAN: I thank the distinguished delegate of Kazakhstan for his statement.

The next speaker on my list is the distinguished delegate of the Secure World Foundation, Mr. Michael Simpson.

Mr. M. SIMPSON (Secure World Foundation): Mr. Chairman, the Secure World Foundation extends its congratulations on your election to lead the Committee for the next two years. We look forward to supporting you and the work of the Committee in any way possible.

We also note with pleasure the presence of Ms. Simonetta Di Pippo as the new Director of the Office for Outer Space Affairs. We have had many opportunities to collaborate with Ms. Di Pippo in her previous assignments and we very much look forward to continuing such collaboration with her in her new role at the Office for Outer Space Affairs.

We also extend our deep appreciation to the former Director, Dr. Mazlan Othman, for her highly effective years of service and note that we shall continue to benefit from her counsel since she has consented to become a member of our Advisory Committee for a three-year term beginning this August.

Mr. Chairman, distinguished delegates, allow me also to congratulate your predecessor, Dr. Yashushi Horikawa, for his excellent work providing leadership for this Committee. We particularly acknowledge the extraordinary visibility he has given to COPUOS and to its mission of advancing peaceful uses of outer space

as he has appeared at numerous locations around the world.

Mr. Chairman, I appreciate the opportunity today to confirm the Foundation's support for the work and aims of COPUOS. Since the last session of this Committee, we have had many opportunities to address both the objectives of the Vienna Declaration and the Millennium Development Goals and I appreciate this opportunity to share some of that activity and the insights it has fostered.

Addressing the goal of "Using Space Applications for Human Security, Development and Welfare," the Secure World Foundation has placed major emphasis on the use of space technology to mitigate and respond to disasters. In this regard, we have partnered actively with UN-SPIDER and with the Group on Earth Observations, of which we became a participating organization earlier this year. Recognizing the value of increased communication between organizations applying space technology to the challenges of disaster mitigation and the need for greater exchange of information between users and providers of information, we organized a day-long side event on the subject in connection with the GEO Ministerial Summit and Plenary.

In this regard, we were also pleased to partner with the European Union and GEO in organizing a Conference on Using Space for Ensuring Food Security and to participate in the United Nations/Belarus Workshop on Space Technology Applications for Socio-Economic Benefits.

In regards to "Advancing Scientific Knowledge of Space and Protecting the Space Environment," we continue our efforts to address the problem of space debris. Last month, the Secure World Foundation Technical Advisor Brian Weeden, who represented our Foundation at this year's session of the Scientific and Technical Subcommittee, testified before the United States Congress as part of a hearing on space debris and space traffic management. The hearing, convened by the Subcommittee on Space of the House Committee on Science, Space and Technology, focused on the role and responsibilities of United States Federal agencies for oversight of private sector actors and space debris. His testimony highlighted the three main activities needed to address the debris problem: debris mitigation, debris removal and space traffic management, as well as the importance of space situational awareness in support of those activities. This testimony noted the importance of international participation and perspective. Outside of the United

States, we also organized events to address these important issues in China, Japan and Australia.

In terms of enhancing education, training and public awareness, we were pleased to sponsor the participation of young professionals at the International Astronautical Congress in Beijing representing six nationalities and five continents. By permitting these young people to physically present their accepted papers, this initiative contributed to the professional development of the next generation of space leadership and thinking.

Similarly, we were an active participant in the professional and capacity development work of the Space Generation Congress. We extend our appreciation to fellow observer SGAC for incorporating us into this important event and to China for their excellent work as hosts of both the IAC and Space Generation Congress.

Also worthy of note under this heading is our work with the Working Group on Capacity Development of the Committee on Earth Observation Satellites, with which we followed up on last year's successful training workshop on the use of digital elevation modelling data in Kenya with a similarly successful effort in Mexico.

This past April, we participated with CEOS in a fruitful planning session in India for future capacity development work.

This May, we co-organized and held with the United Nations-affiliated CRECTEALC and NOAA and other organizations a very successful Mesoamerican Capacity-Building Workshop on the use of free data and free, open-source software for disaster mitigation and response. Workshop participants resolved to create the Mesoamerican Open Source Disaster Activities Group, MOSDA, a Working Group for creating and spreading the use of geospatial information for Mesoamerican disaster planning and development.

Internationally, both through the United Nations system and in other international contexts, we have worked to foster cooperative solutions to space sustainability while also seeking to extend more broadly the benefits of space activity.

We were proud to have been a contributing sponsor to last year's African Leadership Conference and to the work of the Regional Centre for Space Science and Technology Education for Latin America

and the Caribbean with which we signed a formal Memorandum of Understanding last September.

Representing our work with other parts of the United Nations system, we also continue to be an active partner with UNIDIR in organizing an Annual Conference on Space Security in Geneva and we organized a side event on the work of the GGE for the benefit of members of the First and Fourth Committees during the United Nations General Assembly session last fall in New York.

Our work continues to persuade us that international cooperation in using space peacefully and in maximizing its benefits for humanity is essential for all who hope for a more secure future on Earth. Last month, we organized a panel on the benefits and challenges of small satellites at the SGAC's Third Annual Fusion Forum in Colorado Springs, United States. We also hosted a breakfast on Radio-Frequency Interference at the Thirtieth Space Symposium, which was also held in Colorado Spring.

This leads us to a belief that the success of radio-frequency communications and space sustainability are intimately connected. Radio-frequency communications is essential to satellite functioning as well as communication between satellites and their controlling entities. Our work in this field includes publication of a fact sheet on "Radio-Frequency Spectrum, Interference and Satellites", available, without charge, on our website.

Mr. Chairman, as this is the year when our special consultative status with ECOSOC requires us to complete a quadrennial report, I am pleased to note that we have fulfilled that obligation and that many more of our activities in support of this Committee's objectives are detailed in that document.

I am also pleased to report that we were able to identify specific actions that we have taken in support of Millennium Development Goals 1, 7 and 8.

Conscious that our primary responsibility here is to provide one additional voice of civil society in the work of this Committee, we nonetheless continue to draw inspiration from the Committee's work. We also derive satisfaction from the opportunity to partner throughout the year with it, the Office for Outer Space Affairs, other elements of the United Nations system, other observers and many member States in advancing strategies set forth in the report of the UNISPACE III conference.

We also appreciate very much the privilege of observing the Committee's work and reporting on our actions that have supported it since the last session.

Lastly, the Secure World Foundation's latest publication, "Space Sustainability: A Practical Guide", has been updated for 2014 and I have brought at least some copies that are available for free to delegations at the publications table outside this meeting room.

Mr. Chairman, distinguished delegates, thank you for your attention.

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

The next speaker on my list is the distinguished representative of the Prince Sultan Bin Abdulaziz International Prize for Water, Mr. Abdulmalek A. Al-Alshaiikh.

Mr. A. A. AL-ALSHAIKH (Prince Sultan Bin Abdulaziz International Prize for Water): Thank you Mr. Chairman and I would like to congratulate you for your election and we wish you all success.

Also I wish Ms. Simonetta Di Pippo, Director of the United Nations Office for Outer Space Affairs, all success.

I would like to thank COPUOS, its honoured Chairman and its esteemed delegates, for the opportunity to provide this update on the activities of the Prince Sultan Bin Abdulaziz International Prize for Water, which is now accepting nominations for its Seventh Award.

As most of you know, PSIPW was established back in 2002 by His Royal Highness, the late Crown Prince Sultan Bin Abdulaziz. It is a bi-annual scientific award and it was first awarded in 2004.

Honoured Chairman, esteemed delegates, PSIPW is a prize that awards innovation. We want to recognize the efforts that scientists, inventors and research organizations around the world are making in all water-related fields. PSIPW wishes to acknowledge exceptional and innovative work which contributes to the sustainable availability of potable water and to solving the escalating global problem of water scarcity.

Applications for the Sixth Award 2014 officially closed on 31 December 2013. Nominations were received from 47 countries, with many countries represented by multiple nominations. Once again, more

nominations were submitted than at any time in the Prize's history. All of these nominations are now undergoing a rigorous international referee process, a process which will conclude in October 2014 with the Prize Council's official announcement of the Prize winners for the Sixth Award. The Awards ceremony for the Sixth Award will be held near the end of 2014.

Meanwhile, nominations have re-opened for the Seventh Award 2016. Nominations can be made online at the PSIPW website. We cordially invite scientists, researchers, inventors and organizations having innovative water-related published research or registered patents within the past five years to apply. Nominations are made online at our PSIPW website. All works and documentation can be uploaded as part of the application process. The deadline for submitting applications and all nominated works is 31 December 2015.

Honoured Chairman, esteemed delegates. I am happy to say that the Third International Conference on the Use of Space Technology for Water Management, which was held in Rabat, Morocco. From 1-4 April 2014, was a success. It was attended by more than 200 space technology and water experts representing 42 countries.

The United Nations Office for Outer Space Affairs, UNOOSA, and the Prince Sultan Bin Abdulaziz International Prize for Water, PSIPW, co-organize the Conference every three years to promote the use of space technology for the benefit of the developing countries.

Since its inception, this Conference has been a joint venture of the United Nations and PSIPW, in cooperation with various host countries and other organizations. The first United Nations/UNESCO/Saudi Arabia International Conference on the Use of Space Technology for Water Management took place in Riyadh, Saudi Arabia, in April 2008, and the second United Nations/Argentina Meeting was held in March 2011, in Buenos Aires, Argentina. This year, it was hosted by the Royal Centre for Remote Sensing, on behalf of the Government of Morocco and co-sponsored by the European Space Agency, ESA, the Inter-Islamic Network on Space Sciences and Technology, and the Group on Earth Observations.

Information on all three conferences, including downloadable working reports, are available on a dedicated section of the PSIPW website.

This Conference is born of the idea that space technologies are vital for water research, which is right

now critical for the future welfare of the human race. Space technologies, particularly remote sensing and GIS, are indispensable for effective water resources management.

A major feature of the Conference was a PSIPW Special Session, held right after the opening session, highlighting the past prize winners whose work involved the use of space technologies. Dr. Larabi, a past prize winner, was the special guest speaker at the session and he spoke about his research since winning the Prize in 2006, which involved using GIS to study the endemic problem of saltwater intrusion in coastal aquifers.

There were two Working Groups at the Conference, one for "Cooperation and Capacity-Building" and the other for "Future Challenges for Water Resources Management". Each Group presented a long list of recommendations, including the establishment of resource centres, strategic public-private partnerships, trans-boundary integrated water resource management projects and data-sharing initiatives such as the existing International Water Portal established by the United Nations and Prince Sultan Bin Abdulaziz International Prize for Water.

In conclusion, I would like to add that PSIPW is committed to the advancement of space technologies for water research, resources management and conservation.

Please visit our website www.psipw.org for more information on our activities as well as nomination conditions for the Prize and complete details of the prize processes.

Thank you very much.

The CHAIRMAN: I thank the distinguished delegate of Prince Sultan Bin Abdulaziz International Prize for Water for his statement.

The next speaker on my list is the distinguished delegate of the International Academy of Astronautics, Mr. Jean-Michel Contant.

Mr. J.-M. CONTANT (International Academy of Astronautics): Dear Ambassadors, distinguished delegates, I would like to join other delegations in congratulation of the Chair, Dr. Oussedik from Algeria and Mrs. Simonetta Di Pippo for their new appointments and their active roles to conduct the COPUOS Committee meetings in a successful manner.

The International Academy of Astronautics is an international community of leading experts. 1,200 people committed to expanding the frontiers of space. To foster the development of astronautics, the Academy undertakes a number of activities, including the recognition of outstanding contributors through election and awards. On this occasion, I would like to mention that last January our highest award, the "von Karman Award" was given for the second time to a lady and for the second time to a Chinese space expert, Professor Wu Meirong. The Academy also facilitates professional communication, develops and promotes new ideas and initiatives, engages the public and fosters a sense of community among the members.

The International Academy of Astronautics is a unique non-governmental organization, 86-nationality body, established in the Sixties by most of the space pioneers and recognized by the United Nations in 1996. This is an honorary society with an action agenda. Our members work closely with national and international space agencies, industry and the academic community, as exemplified by our current Board of Trustees, including 11 Heads or former Heads of space agencies and our recent Heads of Space Agencies Summit, held in Washington, D.C., on 9-10 January and attended by 600 participants and attended by an unprecedented gathering of 34 Heads of space agencies.

The theme was "Planetary Robotic and Human Spaceflight Exploration". The first day, while Ministers gathered for the restricted Ministerial Conference, the Space Exploration Conference, as mentioned by the delegate of the United States a few minutes, the IAA held a pre-Summit Space Exploration Conference on Planetary Robotics and Human Spaceflight Exploration. There were parallel sessions on human spaceflight aspects, scientific goals in robotics missions, technical factors, private industry's role in space exploration and exploitation, space exploration, the imperative of global cooperation, and the last Space Stations utilization for robotics and human spaceflight exploration. The official release of 16 ground-breaking IAA studies from Study Group leaders on robotic exploration topics was also presented.

The second day was the Summit where 34 Heads of Space Agencies discussed the Summit Declaration follow-on implementations and new fresh ideas on international cooperation. Heads of Space Agencies discussions and roundtables interactively addressed the following exploration topics, the importance of international cooperation, the space stations, the space

exploration: LEO and beyond, and the benefits of Space Exploration.

The Academy works particularly with the national science and engineering academies to determine needs and objectives and to help shape policy and forge cooperation by means of conferences and cosmic studies. We have nearly 50 studies under preparation and eight studies ready for publication.

We have produced a 24-language multilingual database and we have published five space dictionaries or lexicons in the last 15 months. The last dictionary published was the Swahili and this is the second African language after the Afrikaner.

The International Academy of Astronautics have just published a Study on Space Debris Environment Remediation. The Study presents the last status and forecast of the space debris environment, with a focus on the LEO, GEO and MEO regions. The need for space debris removal emerges from this forecast. An extensive review of different technologies and methodologies for space debris remediation is provided. Laser, drag augmentation, tethers, capture and tugging, etc., as well as their application to the different orbital regions. The legal aspects of space debris remediation are discussed showing that there are a lot of questions to be solved from the present space laws.

The International Academy of Astronautics is also close to publishing a "Study on Space Life Science for Africa: International Cooperation for Space Life Sciences Knowledge-Sharing and Development in Africa". Through international cooperation was the compelling theme of the two Heads of Space Agencies Summit. This Study aims at building the IAA's strategy for space life sciences knowledge development and sharing for emerging space-faring African nations in general and for the NASDRA, from Nigeria, in particular, the Summit's theme, as well as the IAA's mission. The study assesses existing space-related activities among African nations and suggests strategies for enabling and promoting space life sciences research and educational outreach in African countries that wish to expand their role in the space science community through increased international cooperation.

Our Academy publishes a Peer-Reviewed Journal named "Acta Astronautica", which appears this year in the top 10 scientific aerospace journals with the eighth rank in the world and also published new book series for small satellite, Earth Observation and Proceedings of Conferences.

In 2013, the Academy conducted 18 international conferences and contributed to one third of the IAC in Beijing with 13 Symposia totalling more than 500 papers. In addition to the IAC Toronto, we will have in July, a Conference on Space Flight Safety, in St. Petersburg, Russia, an Academy Day in Moscow, Russia, on 2 August, and a cooperation with COSPAR Assembly in Moscow, Russia, the first week of August, and then in December, there will be a Climate Change and Disaster Management Conference, in Thiruvananthapuram, South India, and also a little bit later, 8-11 December, the First Latin America Cubesat Workshop, in Brasilia, Brazil.

You can be ensured, Mr. President, that the International Academy of Astronautics will remain proactive in contributing to the goals and programmes that make the United Nations Committee on the Peaceful Uses of Outer Space a very unique organization for the benefit of all nations.

I thank you for your attention.

The CHAIRMAN: I thank the distinguished delegate of the International Academy of Astronautics for his statement.

It was the last speaker on my list and are there any other delegations wishing to make a statement under this agenda item at this time?

I see none.

We will, therefore, continue our consideration of agenda item 5, General Exchange of Views, this afternoon.

Ways and means of maintaining outer space for peaceful purposes (agenda item 6)

Distinguished delegates, I would now like to continue our consideration of agenda item 6, Ways and Means of Maintaining Outer Space for Peaceful Purposes.

The first speaker on my list is the distinguished delegate of Japan, Mr. Hidehiko Hamada.

Mr. H. HAMADA (Japan): Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, on behalf of the Japanese delegation, I am very pleased to address the fifty-seventh session of COPUOS.

In order to develop and maintain space technology applications for the peaceful uses of outer space, Japan believes that international cooperation is a

key factor. Japan also recognizes that international cooperation plays an important and essential role in enhancing transparency and confidence-building among member States.

Mr. Chairman, I would like to share Japan's experience with the International Space Station, ISS, Programme, which serves as an excellent example of outstanding and successful multilateral cooperation. The ISS programme, started in 1988, is one of the largest international programmes in history. In fact, international cooperation has been driving this programme for more than 25 years. Together, through cutting-edge research and development, we have constructed a huge, crewed, orbital facility, which is utilized for peaceful purposes. Based on the agreement among ISS partners, we share the ISS's resources, including the opportunity to use facilities, crew operation time and the capacity of transfer vehicles to the ISS.

In addition to the more tangible results of the ISS programme, I would like to also point out that there has been a great spirit of cooperation among the ISS participating countries.

Mr. Chairman, I would also like to introduce our efforts to promote regional and interregional cooperation. The Asia-Pacific Regional Space Agency Forum, or APRSAF, plays a key role in returning the benefits of space technologies to societies in the Asia-Pacific region. Space agencies, governmental bodies and international organizations, such as the United Nations, as well as companies, universities and research institutes from over 30 countries and organizations take part in APRSAF. In view of the diversity of needs in the Asia-Pacific region for space utilization and developments, APRSAF provides a framework that is more flexible than one which legally-binding agreements would create. The open framework of APRSAF enables various entities to participate in APRSAF.

Sentinel-Asia is an example of a unique and successful initiative that uses WEB-GIS and space technologies, including Earth observation and communication satellite data, to support disaster management activities in the Asia-Pacific region. Participation in Sentinel-Asia is on a voluntary basis. Sentinel-Asia benefits from interregional cooperation through collaboration with other disaster management initiatives such as the International Charter on Space and Major Disasters. Within such a collaborative framework, we are able to access space-based data provided by both initiatives.

Last year, APRSAF celebrated its twentieth anniversary. We are pleased to continue our productive discussions within APRSAF in the Asia-Pacific region as a model for regional space cooperation. The twenty-first session of APRSAF will be held in Tokyo, Japan, from the 2-5 December this year with the new Working Group framework. We welcome your participation in the APRSAF in Tokyo.

Mr. Chairman, Japan has been taking part in multilateral discussions through COPUOS since its establishment and has contributed to the development of a number of principles and guidelines. We believe that an agenda item on "Long-Term Sustainability of Outer Space Activities" under the Scientific and Technical Subcommittee is essential. This agenda item would contribute not only to the sustainability of space activities but also to the sustainable development of many countries that use space-based technologies and services on a daily basis. Utilization of these technologies and services has increased rapidly, thus necessitating the development of guidelines on the long-term sustainability of outer space activities.

My delegation is of the view that the Group of Governmental Experts, GGE, on Transparency and Confidence-Building Measures in Outer Space Activities in the General Assembly and the discussion of an International Code of Conduct for Outer Space Activities are indispensable for maintaining the long-term sustainability of the peaceful uses of outer space. Japan is looking forward to actively contributing to these discussions.

Mr. Chairman, on behalf of the Japanese Government, I would like to reaffirm the important role of COPUOS in the promotion of the peaceful uses of outer space, not only for those countries that have already conducted space activities by themselves, but for all countries.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished delegate of Japan for his statement.

The next speaker on my list is the distinguished delegate of the United States of America, Mr. Ken Hodgkins.

Mr. K. HODGKINS (United States of America): Thank you Mr. Chairman. Mr. Chairman, the United States has a long and successful history of civil space cooperation with other partners; cooperation that continues to increase every year. For example, NASA currently has over 600 active international

agreements with over 120 countries and international organizations. The number of nations investing in space activities has also steadily grown and we now have a significant private sector presence in outer space. Looking to the future, international space cooperation will continue to be fundamentally important to the United States.

Since our last meeting, the United States has engaged in a variety of international ventures that will produce significant benefits in the use of outer space. For example, the United States has many productive bilateral relationships in the area of Earth and space science; nearly two thirds of the NASA missions in this area have international partnerships.

In the area of global navigation satellite systems, we meet regularly with India, Japan, Russia, China and the European Union to discuss ways in which we can enhance interoperability among our systems and improve services for the global user community.

From a broader perspective, the United States is reaching out to other nations to promote common space exploration objectives and cooperative or complementary space exploration missions.

The United States works through the Group on Earth Observations, the GEO, with the other 89 member countries, the European Commission and 77 participating organizations to establish a Global Earth Observation System of Systems.

The GEO vision for a System of Systems is to realize a future wherein decisions and actions for the benefit of humankind are informed through coordinated, comprehensive and sustained Earth observation data and information. The United States is a member of the Committee on Earth Observation Satellites which has been recognized as the principal space segment coordination mechanism for GEO.

We are pleased to participate in the International Charter Space and Major Disasters. The Charter works with global and regional partners such as the United Nations, the Group on Earth Observations and the Sentinel-Asia Programme to expand access to space-derived disaster data and information products. The Charter provides a unified system of space data acquisition and delivery to those affected by natural or technological disasters. In 2013, numerous data and information products from USGS, NOAA and NASA as well as United States-based commercial providers DigitalGlobe and GeoEye were made available via the Charter and utilized by disaster response and relief agencies.

In 2012, the Charter launched the implementation of the Principle of Universal Access, which allows any national disaster management authority to submit requests to the Charter for emergency response. Proper procedures will have to be followed but the affected country will not have to be a Charter member. Universal Access benefits national disaster management authorities in countries previously unable to make direct requests to the International Charter during emergency situations.

Mr. Chairman, the United States was pleased to join Russia and China in co-sponsoring United Nations General Assembly resolution 68/50 on transparency and confidence-building measures in outer space. It specifically highlights the contributions of COPUOS to the development and implementation of TCBMs that increase the security, safety and sustainability of space. The resolution also refers the report of the Group of Governmental Experts (GGE) on Space TCBMs, and that report is (A/68/1 89), to COPUOS and several other United Nations bodies for further consideration. The GGE report contains a wealth of valuable information and highly relevant recommendations on what States and the United Nations can do to ensure the sustained and safe use of outer space.

Pursuant to resolution 68/50, the United States suggests that the Committee consider in detail at its fifty-eighth session the contributions it has made in promoting TCBMs and what specific actions could be taken in the future to implement the conclusions and recommendations of the GGE report. The results of this work could be submitted to the General Assembly for consideration by the Fourth Committee as well as the First Committee and other elements of the United Nations system.

In this regard, we would like to highlight several parts of the report that deserve attention.

In the GGE report's discussion of "Information Exchange and Notifications Related to Outer Space Activities" and "Risk Reduction Notifications," the experts suggested measures that are directly relevant to the work we are doing on the long-term sustainability of space activities. Additionally, the report's discussion of "Coordination" suggests that a United Nations interagency mechanism could provide a useful platform for the promotion and effective implementation of TCBMs for space activities.

It is also worth noting that the Secretary-General of the United Nations has stated his support for the Group's recommendation to establish coordination between various entities of the United Nations

Secretariat and other institutions involved in outer space activities. In this regard, perhaps the Inter-Agency Meeting on UNSPACE, organized by the United Nations Office for Outer Space Affairs, could fill this role.

We note that the GGE recommends that as specific unilateral, bilateral, regional and multilateral TCBMs are agreed to, States should regularly review the implementation of such measures and discuss additional ones that may be necessary.

There could be a role for COPUOS in this regard. We look forward to hearing the views of other delegations on how we can best use the results of the GGE.

In light of these developments, and the accomplishments of COPUOS, my delegation remains unconvinced of the need for action to be taken by this Committee relating to concerns regarding the so-called weaponization of outer space. COPUOS was not created to deal with disarmament. More than five and a half decades ago, the thirteenth session of the General Assembly adopted resolution 1348, which established the Ad Hoc Committee on the Peaceful Uses of Outer Space. The resolution marked a significant step forward for the world community in that it established COPUOS as the only standing body of the General Assembly concerned exclusively with promoting international cooperation in the peaceful uses of space in all its aspects. It was clear that there would be entirely independent efforts to deal specifically with disarmament issues. These would include fora such as the First Committee of the General Assembly and the Conference on Disarmament in Geneva.

This Committee has played a key role in advancing space cooperation and provides a unique forum for the exchange of information among developed and developing countries on the latest developments in the use and exploration of outer space. In our view, there are tangible opportunities to enhance cooperation in keeping with the Committee's mandate. Our consideration of the ways and means of maintaining outer space for peaceful purposes has produced measurable results in the revitalization of COPUOS.

An indication of the success of our efforts to revitalize COPUOS is the growing relevance of our Committee's work to the international community more generally, as shown in part by the steady increase in the number of other intergovernmental organizations as well as non-governmental organizations and private firms that seek participation in the Committee's work.

The presence of nongovernmental entities and the willingness of experts to make special presentations have enriched the Committee and its Subcommittees and the ultimate success in solving sustainable development and exploration challenges will depend heavily on their continued involvement.

Thank you, Mr. Chairman.

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

The next speaker on my list is the distinguished delegate of Egypt, Mr. Alaaeldin El-Nahry.

Mr. A.H.M. EL-NAHRY (Egypt) (*interpretation from Arabic*): Chairman, before we deal with the ways and maintaining outer space for peaceful purposes, I would like to congratulate you on your election to chair the Committee.

I would also like to congratulate the First Vice-Chair, Mr. Ambassador Diego Stacey Moreno, and the Second Vice-Chair, Mr. Salim Mohammed Raouf.

Mr. Chairman, ladies and gentlemen, the Space Treaty is the framework for international law on the use of outer space. The Basic Principles of this Treaty ban nuclear weapons or other weapons of mass destruction from the Earth's orbit or the surface of the Moon or any other celestial body or on a space station. All of those objects and bodies are to be used for peaceful purposes. No arms testing or weapons testing is allowed nor are military or para-military facilities allowed. The Treaty also states that the exploration of outer space should be for the whole of humankind and for non-profit purposes.

The Treaty explicitly bans imposing any charges or tariffs from the use of the Moon as they are a joint heritage and cannot be subject to national appropriation or subject to any national authority.

A State that launches a rocket can control that rocket and member States may suffer from space debris. Egypt, Mr. Chairman, fully believes in the shared interest of humankind and to use outer space for purely peaceful purposes. We have seen, that is, a source of benefits for the whole of humankind and not individual States. We believe in the importance of international cooperation in this field and, therefore, the need for the United Nations to promote Regional Cooperation Centres for Development. The United Nations should also promote the rule of law and space law as well as playing a role in the peaceful exploration

and use of outer space whilst stressing the need to respect the space treaties.

The Outer Space Treaty also deals with liability and speaks of non-governmental institutions in outer space, including on the Moon or other celestial bodies, and that these institutions require the agreement of the Treaty Signatories. Countries are liable for national activities, either governmental or non-governmental.

Mr. Chairman, ladies and gentlemen, Egypt is seriously concerned about the proliferation of weapons in space. Egypt is convinced that all States, especially space powers, need to work to prevent a space arms race. This is a prerequisite for strengthening international cooperation in the peaceful use and exploration of outer space.

The space debris question is a source of concern for all States but we continue to see that it is a problem. We see that national programmes include more and more space activities so we need to reinforce international cooperation in this field. Egypt would like to see measures to keep outer space for peaceful purposes, for example, we urge those countries who have not yet done so to become Parties to the space treaties as soon as possible. Secondly, nuclear power sources should not be used in outer space. Thirdly, we should strengthen inter-institutional cooperation in outer space under the auspices of the United Nations. Fourthly, we need to develop a global space regime to combat natural disasters, and, fifthly, we need to mobilize the necessary financial resources to develop capacities in that field, and six, to request all governments, institutions and, as well as United Nations bodies and intergovernmental and non-governmental bodies involved in space activities, to take the necessary measures to implement United Nations guidelines on the peaceful use and exploration of outer space.

Thank you Chairman.

The CHAIRMAN: I thank the distinguished delegate of Egypt for his statement.

The last speaker on my list is the distinguished delegate of the Russian Federation, Mr. Georgiy Barsegov.

Mr. G. BARSEGOV (Russian Federation) (*interpretation from Russian*): Thank you Mr. Chairman. Mr. Chairman, at the last session of the Committee, we were entirely candid in our critical assessment of the way this priority item of the agenda is being treated. We believe that many delegations here

are in agreement with our assessment. In fact, we are sure they are in a majority. The state of inertia in our work on this important item is clear and it is irrational. What we have here is some kind of self-induced lack of confidence in the Committee's capabilities which leads on to think that under this priority issue, one can only reaffirm one's allegiance to peace in outer space.

We suggested that colleagues should embark on a practically useful endeavour and analyze the legal foundations and the modalities for implementing in a hypothetical way, the right to self-defence under the United Nations Charter as it applies to outer space.

Article 51 of the United Nations Charter, as well as its Article 2, are key elements of the international security system. The relationship between the norms proclaimed in these two articles is complex. Outer space is at once the kind of environment where a potential conflict of interests can cause turbulence where such a conflict of interests leads to the risk of extreme situations arising. This geometry, if I can say so, or configuration of a potential conflict in outer space, makes it imperative that countries should engage in joint situation analyses, a discussion of the impact of specific actions to mitigate threats. The very discussion of these issues would help us gain a better understanding of all the factors that go into the safety of space operations and security in space as a whole.

On that basis, it might be possible to develop a systemic approach to ensuring safety and security in all its aspects and all its segments. And there is a lot to analyze here. There is a lot to elucidate.

As is well-known, a norm is a general rule and no general rule can, in all cases, envisage the entire diversity of actual conditions that might be extraordinary and might define countries' conduct.

Article 51 of the United Nations Charter, which was, of course, written long before the start of the space exploration era, needs to be adapted and fine-tuned as an instrument. Such adaptation and fine-tuning that would take on board the new trends in technology development and the specificity of the highly complicated security system that is outer space. Objectively, it is necessary to take into account the fact that the principles and maxims(?) that go into the way States interpret this norm, do not coincide, in part because the relationship between legality and feasibility is not always understood in the same way by States. Thus, of interest of us are not only the legal aspects but also the various technocratic interpretations of self-defence in outer space.

A whole array of circumstances can impact the stability and clarity of what is understood by Article 51 of the United Nations Charter when it is extrapolated to outer space. For that reason, it would be highly important to abide by the principle of universal interpretation of that norm, established a relationship between the self defence concept and the non-use of force concept, both between themselves and between these norms and the system of international law as a whole.

The Russian delegation suggests that colleagues approach the issue from a prudent and rational standpoint.

As for ourselves, we always act on the basis of pragmatic considerations and we hope our colleagues are committed to pragmatism as well.

Serious agreements on the safety of space operations, if they are reached, as part of the efforts pursued by the Scientific and Technical Subcommittee, would be designed to provide conditions under which pragmatic considerations might prevail in respective areas of politics. We would like to hope that the lack of motivation that we still have to deal with will be addressed by each delegation and that all of us become truly committed to pooling our efforts in this fascinating and extremely important endeavour.

One has to understand the most important thing. Unless States set before them the task of elucidating all aspects of self-defence in outer space, they will not be in a position to move to a qualitatively higher level of perception and comprehension of the realities that exist in ensuring security in space as well as the genesis(?) nature and forecast for the future changes in this area.

Mr. Chairman, colleagues, the task of considering self-defence in outer space would not mean to have a cynical understanding regarding the rules for waging war in outer space. This would be an erroneous interpretation. On the contrary, the objective is to proceed on a constructive basis using newly-agreed instruments and achieve a partnership in establishing and maintaining a highly adaptive regulatory system which would make it possible to adequately alleviate potential tensions and problems which might, under certain conditions, lead to a conflict of interests in outer space. Potential solutions in this sphere touch upon the safety of space operations and these are issues that should form the basis for the concept and the practice of maintaining of sustainable activities in outer space in the long term.

Nevertheless, a discussion of self defence in outer space must be conceived as a separate negotiating track and potential understanding in this sphere would, if I may put it this way provide the overall outline of a future coordinated policy in the sphere of safe space operations.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished delegate of the Russian Federation, Mr. Georgiy Barsegov.

Another speaker on my list is the distinguished delegate of the Republic of Korea.

Mr. Y. LEE (Republic of Korea): Thank you Mr. Chairman. Good morning colleagues and distinguished delegates.

Mr. Chairman, the most critical element and problem on this item of the agenda would be what is the meaning of peaceful purposes. This would be somewhat legally, political or sometimes philosophically to be interpreted. It is this evident that peace and security should be maintained in outer Space, like on Earth, as shown in the clear provisions of the Outer Space Treaty and Principles. However, there has been a controversy over whether all the relevant activities in outer space should be totally of a non-military nature. In that respect, there is some room for us to move for this purpose and we would be able to form a peaceful order and security in outer space.

Mr. Chairman, outer space is the common province of mankind where any State and individuals can go there and use that space to the extent applicable legal norms permit. The environment of outer space has been compared with one generation ago, so much changed with space science and technology development, heavier traffic and use of outer space, diversification of space activities, entities, including the private sector and confidence-building matters also.

Mr. Chairman, ways and means for such purposes open wide before us, and it is us that have to choose which and what to do. It is no doubt that this forum is the universally mandated organ to deal with those matters. It is of my opinion that in dealing with these matters, we should not be so ambitious as to believe we will be able to, in a reasonable and foreseeable future, succeed in getting to an agreement on long-lasting and hyper-political issues like disarmament and an arms race in outer space. We need to be so realistic as take a step-by-step and a gradual approach, rather than to aim too high to take a single

comprehensive method. In this respect, Mr. Chairman, I would like to suggest at the initial stage, we should intend to take a bottom-up approach starting with softer and less controversial technical issues such as making rules of outer space activities.

Mr. Chairman, in terms of outer space activities and the peaceful use of outer space, safety and the sustainability and security are the most important three pillars.

Mr. Chairman, as we all know, even though we are recommended to the organ of the United Nations but either we cannot monopolize all the debate on these matters.

The previous speakers who did take note of the sum outcome and the work now being done by the International Code of Conduct through meetings and Governmental Expert Group Meetings whose outcome and what will also be in _____ (*not clear*) in our work ways.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished delegate of the Republic of Korea for his statement.

We will continue and hopefully conclude our consideration of agenda item 6, Ways and Means of Maintaining Outer Space for Peaceful Purposes this afternoon.

Report of the Scientific and Technical Subcommittee (agenda item 7)

Distinguished delegates, I would now like to continue our consideration of agenda item 7, Report of the Scientific and Technical Subcommittee on its Fifty-First Session.

The first speaker on my list is the distinguished delegate of the Russian Federation, Mr. Georgiy Barsegov.

Mr. G. BARSEGOV (Russian Federation) (*interpretation from Russian*): Thank you Mr. Chairman. Mr. Chairman, the Russian Federation has a positive assessment of the results of the Scientific and Technical Subcommittee session this year. However, this does not mean a very complacent assessment of the way work proceeds on the subject matter of ensuring the long-term sustainability of outer space activities.

Let me note that the Chairman of the Scientific and Technical Subcommittee's Working Group, Mr. Martinez, did make an effort to try and turn the current text of the draft guiding principles into a logically organized document with a clearer structure.

We believe that the need to streamline or rationalize the text and to get rid of the redundancies in some of its parts is indeed necessary. This work to reconfigure the text, however, even though important in and of itself, does not resolve all the challenges we have before us in this complex endeavour to develop the concept and guiding principles for ensuring the long-term sustainability of outer space activities.

We would like to hope that the Chairman of the Working Group, who is highly motivated and experienced and shows profound intuition and a deep understanding of the still pending important issues, will, at the end of the day, create every necessary premise for the Subcommittee and its Working Group to be capable of making pragmatic decisions.

At this point in time, the greatest challenge, as we see it, the main task as we see it at this point in time, is to objectively analyze the results attained and define the prospects for continued meaningful cooperation in this regard.

We believe that the systemic project to develop the concept and guiding principles for ensuring the long-term sustainability of outer space activities has not yet been fulfilled. Without underestimating the importance of the results already obtained, we have to say frankly that the current text of the draft guidelines does not yet produce the impression of a task completed. Quite frankly, it is not felt to be optimum. First and foremost, one does not get the sense of optimal solutions as to the framework proposed for regulating issues of safety in space operations.

A more emphatic policy in this regard would make it possible to highlight and predict important details that are of primary relevance to the task of forming a viable model and effective mechanisms for ensuring the safety of space operations. One needs to find the right motivation. One must understand that we are all faced with a choice. In principled terms, two options are before us. Either we continue an interested discussion and constructive efforts to resolve very important issues that remain outside the current format of draft guidelines, or the objectives defined in 2011 will not be reached and we will be content with adopting some kind of compilation of guidelines whereby we will not be able to adequately regulate the safety of space operations.

We call on all colleagues not to allow this paradoxical discrepancy between the true potential of the concept of ensuring safety and long-term sustainability of space activities and its, let us say, adapted or streamlined version which would be stripped of essential elements of real regulation as it applies to real existing problems.

We believe that, unfortunately not everyone is prepared to develop a politically strong concept of long-term sustainability. Therefore, we constantly hear of the wish to narrow down the array of tasks addressed. (*interpreter*) The speaker is asked to speak normally at a normal pace. This will be easier to interpret.

In this context, one deals with an artificial concept of a certain template or matrix for guidelines which would reduce them to slogans or rather simplistic texts. And it is suggested that Russia, too, should simplify beyond all recognition the draft guidelines that it introduced. However, colleagues, simplified texts will not be conducive to a clear understanding of the changes needed in the area of the safety of space operations. Nor will simplified texts be conducive to standards that would underlie serious coordinated actions by States in this regard. Maybe we should look to the Guidelines for the Use of Nuclear Power Sources as an example to emulate. When their document was developed, it did not occur to anybody to suggest simplified or streamlined language to describe the essence of the issue. The imperfect implementation of the methods of work has led to an exaggerated emphasis on the work of subsidiary expert groups while neglecting the exchange of views in the Working Group itself. As a result, it was not always possible to have a purposeful and convincing conversation. Furthermore, at times one gets the impression that the authenticity of the dialogue is left by the wayside and we risk replacing it for purely formal procedures. Russia resolutely rejects that prospect.

Let me speak for ourselves. Real(?) sort wants to go further than the current intermediate results. Our perception of the issue and its components is constantly being enriched and the well-known Russian proposals confirm that. Our proposals are designed to define interests shared by all States in the key aspects of the safety of space operations and space security. They are free of any type of politicization which makes them all the more valuable and interesting in terms of practical, real politics and in terms of analysis. Russia has injected a considerable foundation into its position. We have proposed the basic elements of a concept of creating, under the auspices of the United Nations, a

Centre for Information and Monitoring of Near-Earth Outer Space. It is designed as a pivot for a system to exchange genuine and complete information on objects and events in outer space. Such a system would be collectively formed by States with a great responsibility, States that have the right potential on the basis of the principles of non-discrimination, equality and free access for all interested users. That Centre would be a compact and low-cost entity and it could easily become a functional addition to the Office for Outer Space Affairs. Not to consider the idea of setting up such a Centre would be a great mistake.

There is a certain irony to the fact that attempts are being made to strip the draft guidelines proposed by Russia of the specific and concrete details which are precisely the type of details that make it possible to make these proposals practically useful and give one the hope that in regulating safety issues, vitally important new elements might be taken on board. We are open to discussing any constructive proposals to further refine the draft guiding principles proposed by Russia. The discussion must have the format of a profound dialogue. It must be public. The lack of willingness or readiness to accept these proposals or even to discuss them publicly can mean one thing, the lack of convincing counter-arguments.

We suggest agreeing on the following.

If the discussion of Russia's set of draft guidelines does not happen in the necessary format, then we should have every reason to consider these proposals accepted. And then they should be included in the consolidated text of the draft guidelines that are being formed right now.

Thank you Mr. Chairman.

The CHAIRMAN: I thank the distinguished delegate of the Russian Federation, Mr. Georgiy Barsegov.

And the next, and last, speaker on my list is the distinguished delegate of the UN-SPIDER, Mr. Luc St. Pierre.

Mr. L. ST. PIERRE (United Nations Platform for Space-Based Information for Disaster Management and Emergency Response - UN-SPIDER): Thank you Mr. Chair, distinguished delegates. UN-SPIDER is the United Nations Platform for Space-Based Information for Disaster Management and Emergency Response. Since the last session of COPUOS, we were 13 staff members working in the offices of Vienna, Beijing and Bonn in Germany. The Programme continued to

receive important voluntary in-cash and in-kind contributions from the Governments of Austria, China and Germany. We also want to note the new location of the UN-SPIDER Beijing Office since late last year in the premises of the National Disaster Reduction Centre of China, a move that is greatly facilitating our collaboration with NDRCC colleagues.

In 2013 and 2014, eight missions for advisory support were so far organized, including in Bhutan, El Salvador, Ghana, Indonesia, Kenya, Malawi, Viet Nam and Zambia, just recently. Additionally we are going to have one more advisory mission in Mongolia in August 2014 and we are now also considering the financial feasibility of having one more advisory mission in Africa later this year.

As a follow-up to previous technical advisory missions carried out in previous years, we delivered targeted trainings in Bangladesh, the Dominican Republic, Mozambique and in the Sudan. Additional training is taking place this week in Nepal in collaboration with one of the Regional Support Offices associated with UN-SPIDER, ICIMOD, and others are planned later this year in Viet Nam and possibly in Sri Lanka.

In support of emergencies, the Office for Outer Space Affairs, through UN-SPIDER, requested the activation of the International Charter on Space and Major Disasters during the typhoon Bopha in Palau and the Philippines. It provided satellite images through ISRO from India during the typhoon Haiyan in the Philippines and supported the Government of Iraq for flood monitoring in Northern Iraq and Baghdad, with again the assistance of ISRO in India and NDRCC in China.

The Programme is also coordinating very closely with the Charter Secretariats, Peru(?), because we have been working with DLR last year, with CONAE in 2013 and 2014 and now with the NCSA Secretariat of the Charter for this year. We coordinated mostly for the promotion and implementation of the Universal Access Initiative, notably in highlighting the roles the SPIDER network of 16 Regional Support Offices could take and also the network of National Focal Points we have do have in different countries.

UN-SPIDER conducted two Expert Meetings in Bonn last year in June on early warning, and just recently last week again on Space Technologies for Flood and Drought Risk Reduction. In Beijing, we held an International Conference on Space-Based Technologies for Disaster Management and a training course on space technology for flood and drought risk

mapping and assessment, that was last November. We are planning for this September again, a back-to-back action in Beijing, a Conference and training.

We had in Central America, a Regional Workshop with all the countries but one member of CEPREDENAC which is a regional organization with the mandate for disaster risk reduction. We had training on drought early warning last May.

Knowledge management and dissemination of knowledge are also central elements of UN-SPIDER and a constant focus of our whole team. During the Scientific and Technical Subcommittee last February we demonstrated how the UN-SPIDER Knowledge Portal has been improved following a comprehensive evaluation we did in 2012. Following that evaluation, a clear roadmap where user expectations have been prioritized, we are now monitoring this progress on the Portal as a criteria of success of the Programme. It is a central element and we want to be able to make sure it responds to the requests of member States. The Portal is now available in Spanish, as it was announced at the Scientific and Technical Subcommittee, and the Bonn Office is also working on a French version. You may have noted outside the plenary room we have table with a couple of computers. I have colleagues waiting for you there. We are available to show you either a quick tour of the Knowledge Portal or more in-depths discussions on what you would like to see and what you would like to do with the Portal. So I invite you to go and visit our colleagues. We should be there also up to tomorrow afternoon.

You will have seen also in your pigeon holes a new brochure of the UN-SPIDER, which I am very proud of. This is, of course, a promotional and outreach material. I invite you to consult it and if you want any clarification on any of the content, please do not hesitate to contact us.

Distinguished delegates, following the Work Plan for the biennium 2014-2015 which was submitted at last year's COPUOS session under CRP.5, UN-SPIDER is currently implementing about 15 activities in 2014, which will be reported upon fully at the next Scientific and Technical Subcommittee session in 2015. It is an ambitious list of activities considering, I mentioned we have 13 staff, but we are doing that in close collaboration and with good support from our 16 Regional Support Offices. This RSO network was joined last year by ICIMOD in Nepal, LAPAN in Indonesia and EMERCOM from the Russian Federation. On 13-14 February of this year, we held the Fifth Meeting of this network, here in Vienna, attended by 13 of the 16 members. The Meeting agreed

to work through an online collaborative platform on issues such as monitoring the impacts of our advisory services, on identifying and preparing joint project proposals, which is already happening, and on preparing and developing recommended practices for disaster risk reduction and emergency response. These will be disseminated through the Knowledge Portal.

The report on this meeting and the Work Plan of Activities, or Joint Work Plan of Activities, were submitted to this COPUOS session under CRP.10 and CRP.11, respectively.

UN-SPIDER and the Office for Outer Space Affairs are also now preparing for important global milestones, the Summit of the Post-2015 Development Agenda next year in September and the World Conference on Disaster Risk Reduction, which will be held in Sendai, Japan, next March 2015 in Japan. The Office is looking into means to support member States in the promotion of space-based geo-information and any recommendation on how to increase our impact on these platforms is welcome.

We are thankful to many national, regional and global entities which have supported or participated directly to the implementation of our Programme of Activities in 2013 and 2014 or which have already committed to our future activities in 2014 and 2015. We are thankful for the renewed commitments of the Governments of China and Germany for their financial and in-kind contributions until at least end of 2016. The Bonn and Beijing offices are well supported by Junior Professionals and Secondments from those Governments.

Finally, the Office is making efforts to diversify the sources of funding of the UN-SPIDER Programme, including through project funding and innovative collaborations. On this, I invite you to visit the "Building Partnerships" page of oosa.org where a minimum of five opportunities to work with SPIDER are described.

To conclude, Mr. Chair, coming back to our intention to measure our impacts, specifically regarding our advisory services to member States, I am proud to show you a one-minute video of the statement of President Danilo Medina of the Dominican Republic which was delivered at the Sixth Summit of the Association of Caribbean States, in Mexico early this April. Although President Medina does not refer specifically to UN-SPIDER, we like to link his announcements at this Summit to recommendations that were made through our Technical Advisory Mission that took place in 2012 and a follow-up

training we had in the Dominican Republic for public servants in 2013. Those recommendations were specifically about the need to develop the capacity-building strategy and on effective institutional arrangements for disaster risk reduction and emergency response. This, to us, is a great example of a high-level commitment to promote space-based data and products for sustainable development.

Apologies to interpreters. This short video starts quite abruptly. It is about one minute.

Thank you Mr Chair.

(Video)

"It is also the aim of the Dominican Government to invest in training more professionals devoted to prevention, mitigation and timely responses to disasters that are a threat in our region. We are also strengthening our possibilities with the intensive views of new information communication technologies by setting up a Geo-Spatial Information Team for Risk Management. This will bring together information for prevention, mitigation, preparation and response to possible disasters.

We will be signing an Agreement with the Government of Taiwan, a Cooperation Agreement on Remote Sensing and Geographic Information Systems. This will include monitoring and emergency zones but also in the event of drought and other phenomena and training staff to follow up this information.

We will also have access to technology which will enable us to have live images of the affected areas to have a better coordinated response."

(End of video)

The CHAIRMAN: I thank the distinguished delegate of UN-SPIDER for his statement and for this video.

We will continue our consideration of agenda item 7, Report of the Scientific and Technical Subcommittee on its Fifty-First Session this afternoon.

Technical presentations

Distinguished delegates, I would now like to proceed with the technical presentations.

The presenters are kindly reminded that technical presentations should be limited to 15 minutes.

The first presentation on my list is by Mr. Paolo Giommi entitled "The Science Data Centre of the Italian Space Agency as a Modern Multidisciplinary Data Centre Supporting Long-Experienced as well as Emerging Countries in the Field of Space Science".

Mr. P. GIOMMI (Italy): Thank you Mr. President. Mr. Chairman, my technical presentation is about the Data Centre of the Italian Space Agency which is a facility that has been established about 13 years ago in the year 2000 to support space data in the field of space science.

These type of facilities is the front page which is the main way of communicating with our services and this is something that was actually deployed just yesterday. It is very new and it gives access to information about all the space missions dedicated to space science that we support and it provides also access to all the data that we provide in a public form but also in a restricted way depending on the policy of each satellite.

We also provide through this page access to a number of facilities to download otherwise this play dating various ways as I will show you in a few minutes.

This is our address. Anyone can have a look at it if you are interested and the content is more or less is what I will be describing in the next few minutes.

This is the location of ASDC and it is a building next to the Italian Space Agency Headquarters in Rome. We host data from the 22 space missions. Of those 22, 13 is actually operational now which means they are producing data which is acquired and processed and analyzed and distributed according to the rules.

This is what is available now but we have plans for the future to host a number of possible projects as cooperation with a number of countries like China, Chang-E1, EUCLID, CHEOPS and PLATO which are ESA missions, DAMPE(?) which is with China, it is an experiment with the cooperation with Japan and perhaps a new NASA SMEX(?) mission. And then also MIRAX(?) which is a mission from Brazil.

What we do is we basically support many activities within the what we call the ground segment of a space mission. So for the AGILE mission which is fully Italian mission dedicated to gathering astronomy,

we provide a lot of things like science, operation centres but apart from AGILE, we distributed data through our multi-mission archive as I will show, data from many different missions can be downloaded in a simple way.

We provide also, this is one of our specialties, we provide software for a sophisticated mission like SWIFT, which is a NASA international Italian-UK mission. NUSTAR which is also a new NASA mission. We are responsible for the software for data reduction.

We participated in the Virtual Observatory which is a global initiative and we also do research.

As opposed to many centres similar to ours, which are focused on a particular topic, we provide support of a wide variety of topics like astrophysics, cosmology, astro-particles and exploration of the solar system. And we are probably one of the largest scientific data centres currently operating in Europe.

This is what normally happens, and this is just an example with the AGILE satellite which goes around the Earth in Equatorial orbit, when it goes over Malindi the data is dumped to the ground and then the data is transferred to Fucino through another satellite, called INTERSAT, and then from Fucino the data arrives within a few second in our facility where it is actually processed.

Then once the data is stored, the data can be accessed through many different ways and the heart of our system is called the Multi-Mission Interactive Archive which gives access to many different missions in a very similar way. This is an example of the NUSTAR mission which, as I said, it is the NASA(?) mission with the participation of also Italy. In this case, we have observation of particular stars and we can download the data in a simple way by clicking and then you can visualise, we can also visualise the data without having to download any software. And you can also analyze the data directly online without having to be an expert or downloading any complicated software. And the data that is actually retrieved and analyzed is what we call science data. That means these results can be published in a professional journal for science.

This is just an example of a NUSTAR, as I said, which operates in the hard x-ray band. These data are from the FERMI mission which again is an American NASA mission with Italian participation and Italy particularly built the large-area telescopes. These are multi x-ray data as like before, these are gamma ray data about 100 MeV but they are displayed and they

can be retrieved and analyzed and viewed in a very similar way to other x-ray.

Continuing the across the electro-magnetic spectrum, these are data from the Ultraviolet Experiment onboard the SWIFT. This is the Ultraviolet Optical Telescope and again you can see many things. And this is another example of the satellite from ESA. It is a Herschel data and it can be again retrieved in a very simple way. And just to complete the tour of the electro-magnetic spectrum, these are data coming from the Planck satellite which is an ESA mission dedicated to the study of microwave background, causing microwave background, so these are microwave data.

Coming away from the electro-magnetic spectrum and moving on to the cosmic rays which is something that is 100 years old topic but it is producing a lot of data. Recently this is probably the first cosmic ray database. We do not provide photons of the messenger of the light but we provide access here to the cosmic rays and these charged particles arriving to the Earth and these are particularly this initial version of the database and includes data from a PAMELA Experiment which is an Italian payload onboard of a Russian mission.

This is just an example how to plot the data coming from this mission.

MATISSE is something that we are developing in support to the instruments that explore the solar system so a different field again. This is just an example. There are many of them. Just saying in a few minutes and I can show you. This is just simulated data of a comet in its approach to the Sun and you see the surface of the nucleus of the comet changing colours, it is meaning changing temperature and moving so things can be represented in 3D and meaning with colours meaning different things like in this case the temperature.

We normally use satellites that look out into space. However, sometimes things are seen by these satellites that are not coming from the cosmos but they are coming from the atmosphere and this is the case of a phenomenon that has discovered only a few years ago and it is called the TGF, the Thresher Gamma Ray Flashes. These were discovered by an American satellite, by the Italian satellite AGILE and has onboard an instrumentation which is very fast and can detect many of these events. Essentially these are sudden flashes of gamma rays all the way up to 100 MeV but originate in very heavy thunder storms and these can be particularly important because they can disturb many things including flying.

So we are studying these not as a primary goal but as something that we learned as we were on orbit and again this is just an example of using data that was not conceived to be used in this way but as we were operating the satellite, we discovered something we can add to that.

This is another example of a possible coupling of the lithosphere, that is the Earth's crust when during the magnetosphere and there is a hypothesis which is supported by some results actually that when a very strong earthquake happens, then there are some waves, very reactive waves, that go away from the Earth and they impinge the magnosphere and this causes the particles that are normally trapped in the magnetosphere to drop and to provide dust of these events and using satellites we can see these events that are correlated to earthquakes. Of course, this is not mature and certainly you cannot predict earthquakes but we can certainly demonstrate that there is a link between the two and it is certainly worth studying these things. In fact, there is a mission in cooperation with the Chinese that is being built to study this phenomena in a more deeper way.

This is just a small movie, thank you, to show you the power of combining data coming from different satellites. This is the spectrum of the famous stars from away and this is the optical band where normally astronomy was born but there is also radio, microwave, infrared, ultraviolet, soft x-rays, hard x-rays, all these sources emitting various bands and to observe these things we need different technology. And if you put the things together, data coming from different satellites, we can have a much better view especially in time when we can study cosmic sources in a much deeper way, in a more modern way, different from the way from the reason for which the money was spent to build the original satellite but by combining these things, a new type of source, two new types of research can be done. I usually say this is the most expensive movie they have ever produced because there are data coming from 20 different satellites and so many telescopes on Earth. Usually if you have to build something like this, it would cost many, many billions of Euros, of course. But at the same time, this is the cheapest because I did not pay anything for this. I just used data coming from public archives. So this shows you the power of combining data that actually can be put together to provide a new view into the cosmos for free essentially.

So these are the last few slides just to summarize. The digital archives that we host, actually a lot of public and private data. The public data means that anyone in the world can just go to the site and

download the data and work with it so with no restriction, no cost, just free. We also provide software so that people do not have to be experts in the field and this means that there is a very large potential for top quality research because these data can be very expensive satellites and normally only a small percentage of the data is really exploited. The rest just sits there in the archives and this is an enormous potential that is available to everyone immediately.

In addition to this, this is the data story but together with the data, we have built the expertise to support the new space scientific missions in terms of trading data but also in writing software for the data analysis for the interpretation of results and this experience can be passed from one satellite to the next and in principle cooperation can be made with other countries if they are interested and we can provide our expertise in a cooperative way.

As an example of international collaboration, we start from the closest and more traditional partners, which is the EU, we were in Italy so we are partner of ESA and we work with ESA very closely, with various institutions. We also work with the Integral Science Data Centre in Geneva but also traditionally we cooperate very much with the United States, in particular with the Goddard(?), JPL, Caltech, Stanford, Cambridge and many others.

These are the traditional ones but more recently we started cooperation with other countries emerging in the field of advanced space data, like Brazil, we have a relationship with Rio and Porto Alegre and the S.J.D Campos and the INPE which is the science part of the Brazilian Space Agency. With China we have a relationship with the National Remote Sensing of China and the High Energy Physics Institutes of Beijing and we are actually starting something through INCRA Net, which is an international organization also in Armenia, in particular in Yerevan.

This is what we doing now but we are certainly open to cooperating with other countries and we would be happy help and provide our support to any other countries that is actually interested.

This is just my last slide and it just shows you of the first page of a Science Centre that we are building in Rio de Janeiro in Brazil, which is something which is based on initially with a copy of public data and basic knowledge of expertise is a simple initial page. It is called the Brazilian Science Centre but this is the start of a cooperation that will transfer, if you want, and cooperate through a cooperation the expertise that we have developed through our international and long-

lasting expertise, also to Brazil and this will be useful for their community to provide new data for maybe to grow a new generation of people using high-level, high-quality data but also in support to new scientific missions from the Brazilian Space Programme.

And with this one, I would like to thank you very much.

The CHAIRMAN: Thank you Mr. Giommi for your presentation.

Is there any delegate who has questions for the presenter?

I see none.

I give the floor to the Secretariat for some explanations. Thank you.

Mr. N. HEDMAN (Secretary, Office for Outer Space Affairs): Thank you Mr. Chairman. Distinguished delegates, unfortunately we will lose interpretation in about five minutes so the suggestion is that the Chair now proceeds by reading out what we will do and consider in the afternoon, the programme of work for the afternoon, and immediately thereafter we will have the second presentation of this morning which is by the Secure World Foundation. And if this is agreeable to all delegations, the presentation by the Secure World Foundation will be in English only.

Thank you. So Mr. Chairman, please proceed.

The CHAIRMAN: Distinguished delegates, I would like to inform delegates of our schedule of work for this afternoon.

We will meet promptly at 3.00 p.m. At that time before opening the floor for statements by delegations, I will invite the Executive Director of the United Nations Office on Drugs and Crime and Director-General of the United Nations Office of Vienna, Mr. Yuri Fedotov to address the Committee.

We will then continue our consideration of agenda item 5, General Exchange of Views, and continue and hopefully conclude our consideration of agenda item 6, Ways and Means of Maintaining Outer Space for Peaceful Purposes.

We will also continue our consideration of agenda item 7, Report of the Scientific and Technical Subcommittee on its Fifty-First Session.

There will be four technical presentations this afternoon by a representative of Germany entitled “Technology for Disaster Management and Humanitarian Assistance”, by a representative of Chile entitled “The Contributions of Chilean Satellite FASAT-C to the Development of Chile”, by a representative of China entitled “China Lunar Exploration Programme”, and by a representative of Austria entitled “OPSAT: An Advanced Nano-Satellite Mission by the European Space Agency”.

This evening after the conclusion of the afternoon meeting, delegations are cordially invited to attend a reception hosted by the Asia-Pacific Space Cooperation Organization, APSCO, to be held in the Coffee Corner outside this Board Room D, starting at 6.00 p.m.

During lunchtime today, from 1.30 p.m. to 3.00 p.m., there will be a Planning Meeting to the 2014 United Nations/International Astronautical Federation, IAF, Workshop, in Meeting Room C0739.

The Space Missions Planning Advisory Group, SMPAG, will continue its second meeting from 2.00 p.m. to 5.00 p.m., in Meeting Room C5, on the seventh floor of the ‘C’ Building.

Expert Group B of the Working Group on the Long-Term Sustainability of Outer Space Activities will meet from 3.00 p.m. to 5.30 p.m., in Meeting Room C0739, to discuss its final report.

Are there any questions to this proposed schedule?

I see none.

The second presentation is by Mr. Ray Williamson of the Secure World Foundation entitled “Results from Two Capacity-Building Workshops on the Prevention of and Response to Natural Disasters in Mesoamerica”.

Mr. R. WILLIAMSON (Secure World Foundation): Mr. Chairman, distinguished delegates, I am pleased to be able to report today on two capacity-building workshops carried out by the Secure World Foundation and the Regional Centre for Space Science and Technology Education for Latin America and the Caribbean, known by its Spanish acronym, CRECTEALC. These workshops were held as part of the activities indicated in the Memorandum of Understanding signed between CRECTEALC and the Secure World Foundation in October 2013.

The first workshop was held in the facilities of the Mesoamerican Centre for Theoretical Physics, MCTP, located in Tuxtla Gutiérrez, and the capital of the State of Chiapas, Mexico, indicated on the map by the red teardrop.

The second workshop was held in Tonantzintla, in the State of Puebla, Mexico, on the campus of the Instituto Nacional de Astrofísica Óptica y Electrónica, INAOE, which also houses CRECTEALC activities. CRECTEALC, NCTP and SWF, supported travel for those participants in need of assistance.

The range of partners for these workshops is noted in this slide. In addition to those already mentioned, they include the United States National Oceanic and Atmospheric Administration, NOAA, the Group on Earth Observations, the Committee on Earth Observation Satellites, the Association of Institutions for the Promotion of Mexican Space Science, and the Mexican Space Agency.

In organizing these workshops, we were attempting to address the fact that Mesoamerican countries are subject to a range of natural disasters, the damage from which has set back development in the region. We were also attempting to assist with building the technical capacity to mitigate the effects of disasters and to respond quickly when one strikes.

Our objectives were, one, as noted, to build technical capacity in the region, two, to provide information on sources of free data and open-source software, and three, help build an Mesoamerican network of technically proficient GIS experts and image analysts.

The workshops covered current disaster mitigation work in Mesoamerica, available free data resources and practical demonstrations on GIS and risk analysis software. Participants included representatives of civil protection organizations and regional GIS and remote sensing experts from nine different countries between the two workshops that are listed on this slide.

Workshop one confirmed that more awareness and capacity-building are needed, both for the disaster response managers and for the analysts who support them. It also made clear that there exists a range of relatively simple tools that local communities could make use of if only they were aware of their existence and how to use them.

We recognize that changing the way disaster managers work by introducing new tools is difficult for several reasons. As a result, the GIS/image analysis

community needs to focus more effort on helping disaster managers to see how best to introduce these methods into their workflows.

Finally, workshop participants indicated that they would greatly welcome more training in using free open-source software.

Following workshop one, CRECTEALC stepped up to build a network by beginning a Mesoamerican list(?) serve of GIS analysts, developing a web portal to facilitate development of a network of activities, expertise and interest in the use of GIS for disaster mitigation and response and a web-based GIS e-learning platform.

Several organizations offered to hold the second workshop. The Secure World Foundation offered to co-organize the second workshop full focused on training.

As it turned out, financial considerations led us to hold it outside Pueblo on the INAOE campus. Some 27 persons from nine different countries took part.

In the second workshop, we emphasized again the wide range of free data and analytic tools available online by providing about 15 different presentations from different organizations. We also devoted nearly three days to training in the use of GIS and TerraMA-2 packages. The training was supplemented by several hundred pages of detailed instructions left with the participants. They were prepared by the trainers, Dr. Scott Mabry of the University of North Carolina, and Dr. Leaseo(?) Nakigawa of the Brazilian Space Institute of Space Research.

Finally, we also urged the creation of a Mesoamerican network of GIS professionals to help and support each other.

Here are the presentations made in that workshop.

We chose to provide training in 2-GIS because it is widely used and supported in several different languages. It also has a planning module for preparing responses to a natural disaster. We chose TerraMA-2, or TerraMA², because it had a very powerful risk analysis software suitable for most geospatially-related risk situations and is used by municipalities throughout Brazil.

Like 2-GIS, it is free and open-source which means that individuals can add new modules or adapt the code to fit specific situations.

In a surprise presentation, during the last hour of the last day of the second workshop, participants revealed that in the evenings they had been discussing the creation of a new organization entitled “The Mesoamerican Open-Source Disaster Activities”, or MOSDA. For us, this was an exciting development. Among other things, this Organization, if successfully, will be able to provide timely and accurate information to decision-makers.

These are the founding members of MOSDA.

It is, of course, much too early to say whether MOSDA will be successful but it is an important step forward. We wish them well. It is now up to us, CRECTEALC and SWF and others in the region, to help this fledgling group prosper and reach their goals, among which is a reduction in risk and from losses resulting from natural disasters.

Mr. Chairman, distinguished delegates, this ends my presentation. I would be happy to take questions if there is time.

The CHAIRMAN: Thank you Mr. Williamson for your presentation.

Are there any questions for the presenter?

I see none.

This meeting is adjourned until 3.00 p.m. this afternoon.

Thank you.

The meeting adjourned at 1.10 p.m.