
Committee on the Peaceful Uses of Outer Space

Script

Fifty-sixth session

666th Meeting

Monday, 17 June 2013, 10.00 a.m.

Vienna

Chairman: Mr. Yasushi Horikawa (Japan)

The meeting was called to order at 10:01 a.m.

The Chairman Distinguished delegates,

I would first like to inform you of our programme of work for this morning. We will continue and hopefully conclude our consideration of agenda item 4, General exchange of views, and continue agenda item 7, Report of the Legal Subcommittee on its fifty-second session. We will also begin our consideration of agenda item 6, Report of the Scientific and Technical Subcommittee on its fiftieth session, agenda item 8, Space and sustainable development, and agenda item 9, Spin-off benefits of space technology: review of current status.

There will be three technical presentations this morning. The first one is by a representative of Poland entitled "Introduction to Chopin in Space", the second one is by a representative of Japan entitled "Japanese proposal on Space and Sustainable Development", and the third one is by a representative of the United States, NASA Administrator Mr. Charles Bolden, entitled "Next steps in space exploration".

During lunch time today, there will be a screening of the video "Chopin: the Space Concert", here in Board Room D starting at 2.00 p.m. This video is 42 minutes in length, and it is presented by Poland.

During lunch time today, two expert groups of the Working Group on the Long-term Sustainability of Outer Space Activities will be meeting. Expert group A will be meeting in room C0739, on the 7th floor of this building, from 2.00 p.m. to 4.00 p.m. Expert group B will be meeting in room C6, also on the 7th floor of this building, from 2.00 p.m. to 3.00 p.m.

Also during lunch time today, there will be informal consultations, organized by Japan, on conference room paper 6, containing the proposal for a new agenda item for the Legal Subcommittee, and conference room paper 8 containing a proposal on "Space and Sustainable Development". The consultations will be held from 2.30 p.m. to 3.30 p.m. in meeting room C0431.

Are there any questions or comments on this proposed schedule?

I see none.

Distinguished delegates, I would now like to continue our consideration of agenda item 4, General exchange of views. The first speaker on my list, is the distinguished delegate of Malaysia. You have the floor.

Mr. M. Z. Mastor (Malaysia) Thank you Mr. Chairman.

Mr. Chairman, distinguished delegates, I would like to join other Member States in expressing our delegation's great pleasure at seeing you in the Chair, and Portugal and Poland as First Vice-Chairman and Second Vice-Chairman, respectively. We would also like to express our appreciation to the dedication and efforts of the Office of Outer Space Affairs, for their untiring efforts in ensuring the smooth running of this meeting.

The delegation of Malaysia would like to put in record, our country's highest appreciation to Datuk Dr. Mazlan Othman, Director of the Office for Outer Space Affairs, in light of her retirement this year, for a job well done. You have done well Datuk, and we are very proud of your achievements here at the United Nations. We hope for see your continued contributions to the global space community in the coming future.

Mr. Chairman, distinguished delegates, we had just completed our 13th General Election. The Federal government of Malaysia, led by our Prime Minister YAB Dato Sri Najib Tun Razak is back in power to continue the Government Transformation Program (GTP) program, in providing People first, performance now services. With this new mandate, our policy, plans and commitment in the development of the space sector will be continued.

Malaysia will continually seeking opportunities to collaborate and enhance its capacity and capability in implementing peaceful uses of outer space for the benefit of our nation and mankind globally, emphasizing on the principles of equal and non-discriminatory access to outer space and equal conditions for all States, irrespective of their level of scientific, technical and economic development.

Mr. Chairman, distinguished delegates, allow me to report progresses that we've made in the area of space and related sectors throughout the year 2012. Some of these could have been reported in the last 50th Session of the Scientific and Technical Subcommittee Meeting in February 2013.

Regional programme on space: as reported in the previous 50th Session of the Scientific and Technical Subcommittee Meeting, the 19th Asia Pacific Regional Space Agency Forum (APRSAF-19), was successfully conducted on the 11 to 14 Dec 2012 in Kuala Lumpur. About 400 participants from 33 countries and 14 organizations participated in the forum. With the theme 'Enriching the quality of life through innovative space programs', the forum realized the importance of highlighting benefits of various applications of space technology to the public at large, in enhancing their daily life. This is an important strategy to build their support to other space programs.

We acknowledged the important of this APRSAF as an important Asia-Pacific Regional initiative, spearheaded by the government of Japan, the Ministry of Education, Culture, Sports, Science and Technology (MEXT) and Japan Aerospace Exploration Agency (JAXA). We look forward to a continuous participation in APRSAF.

The Sentinel Asia Project; we continued to participate in the Sentinel Asia project, an application of WEB-GIS and space technology for disaster management, under the APRSAF initiative. The installation of the WINDS satellite receiving station has included Malaysia in the Sentinel Asia network. On the 23rd November 2012, operation of the Sentinel Asia Step-2 station has officially started.

Another important meeting back-to-back with the APRSAF-19 was the "4th Asia Oceania Regional Global Navigation Satellite System (GNSS)". This important meeting co-organized by JAXA, the European Union (EU), supported by the United Nation's International Committee on GNSS (UN-ICG), on the 8th to 10th December, was attended by 136 people from 17 countries. The main outcome of this workshop was identifying potential areas of collaborations in the GNSS system and applications within the Asia Oceania region.

Malaysia has also participated in the 16th Session of the Intergovernmental Consultative Committee (ICC) Meeting on the Regional Space Applications Program for Sustainable Development (RESAP), 17-18 December 2012 as well as the Intergovernmental Meeting on Asia-Pacific Years of Action for Applications of Space Technology and the Geographic Information System for Disaster Risk Reduction and

Sustainable Development, 2012 to 2017, on 18th to 20th December 2012. Both meetings which were held at the UNESCAP Office Bangkok, Thailand, are important regional initiatives to pursue collaborations in the applications of space.

Programmes under the International Space Weather Initiative (ISWI) are continued throughout the year. Installations of several ISWI-related instruments were successfully done. The National Space Weather Laboratory, an initiative set-up by the Malaysian Space Agency (ANGKASA) and the Malaysian Meteorological Department (MMD) continued to monitor the space weather and issuing notifications to various stakeholders as well as to the public.

Malaysian Space Agency and National University of Malaysia (UKM) in collaboration with Stanford University are currently preparing for a Malaysian national competition on "Enhancing Space Science Learning to High School Students through Space Weather Monitoring with VLF Receiver" in Malaysia. The purpose of this project is to provide exposure and to enhance science education through the study on space weather by using the Sudden Ionospheric Disturbances (SID) monitors. We are aiming for a maximum of 50 schools, consists of 2 to 4 students from each school, to be involved in this project.

Mr. Chairman, distinguished delegates, in 2012, we have given notice to the UN-OOSA, on the end-of-operation of our remote sensing satellite, the RazakSAT. Launched in 2009, RazakSAT was an important milestone in our nation's capacity building programme in satellite technology. As a continuation of this, we are currently embarking on the development of RazakSAT-2, another remote sensing satellite for the country, carrying 1 meter PAN, 4 meter MS, optical imaging capability. RazakSAT-2 is planned to be launched late 2015.

The third phase development of the Malaysian Space Centre was completed in the mid-of 2012, consisting of the Assembly, Integration and Testing (AIT) lab and the Administrative and Data Archiving (ADA) facility. The installation, testing and commissioning of the AIT equipment are expected to be completed this year, for it to be readied to undertake the RazakSAT-2 development work in 2014.

In the space science area, specifically the micro-gravity sciences, we continued our collaboration with JAXA on the Protein Crystallization (PCG) project utilizing the 'KIBO' facility at the International Space Station (ISS). Within this arrangement, the fifth flight was done in Jan 2012 with another four protein

samples which was returned on April 2012. The last flight will be done this year.

Our education and awareness programmes in space Science, Technology and Innovation continue to be an important one. Some of them are the following: the National Space Challenge Prime Minister's Trophy 2012 (NSC2012) is on its 15th year. A whole week of space camp-like programmes, targeting primary school children, employing various approaches, gives a wholesome experiences and learning in space science subjects. A collaboration programme with the Ministry of Education Malaysia, involves about 4,000 children nationally.

The Rocket Launching Competition 2012, on the other hand, involved secondary school children nationwide. Also done in collaboration with the Ministry of Education Malaysia, it has come to its 10th year of implementation.

Other important education programme include the Parabolic Flight Program 2012, under the initiative of APRSAF, organized on the 26th and 27th Dec 2012 in Nagoya, Japan.

Another interesting programme was the "Asian Version of Try Zero G in Space" program, done with JAXA, where Malaysian students were given opportunity to propose simple educational/experiments modules to be conducted at the ISS by the Japanese astronaut.

The National Planetarium with its full-digital shows and exhibitions continued attracting visitors, with record of more than 150,000 visitors in 2012. A special exhibition entitled "A Tribute to Neil Armstrong" was organized with collaboration with the United States' Embassy throughout the end of year school holiday, attracted around 10,000 visitors. Other special programmes are including the Yuri's Night celebration in April 12 and the A Night at the Planetarium for Earth Hour 2012.

Mr. Chairman, distinguished delegates, thank you for now Mr. Chairman, our delegation will provide more information under the coming relevant agenda items. Thank you.

The Chairman I thank the distinguished representative of Malaysia for his statement. The next speaker on my list is the distinguished representative of Mexico. You have the floor.

Ms. R. M. Ramirez de Araellano (Mexico) Thank you Chairman and once again good morning. It's a pleasure to say good morning to and to Madame Othman. Without detriment to the specific and relevant statements made by the Mexican delegation on specific agenda items, Mr. Chairman I would now like to refer

to some principles that Mexico has repeated at different work meetings, both in the Legal Subcommittee and the Scientific and Technical Subcommittee as well as in the plenary. Mexico's foreign policy as far as outer space is concerned is devoted to promoting and strengthening international cooperation for the peaceful exploration and use of outer space. The increase and perfecting of international law, specifically that which regulates the use of outer space which is guaranteed by the 5 space treaties requires universal application in our opinion so that it can help to promote international cooperation regarding the peaceful use of outer space and to foster greater transparency and trust in different space activities. It is indispensable that those States that have not yet ratified the treaties, nor have adhered to them consider the possibility of doing so in order to provide legal certainty and security to the activities regulated by those treaties.

Regarding the space treaties, space should be preserved as the inheritance of mankind. It should not be militarized, we should encourage international cooperation to promote the peaceful use of outer space with a very robust system for multilateral verification which will contribute to confidence-building amongst States. Knowledge on outer space should be shared as a starting point for joint growth for all countries because isolation and limitations lead to resources becoming dispersed and unnecessary efforts being made to achieve common goals. Mexico, thus, acknowledges and supports the work of COPUOS to foster international cooperation in the peaceful use of outer space and in fostering research and dissemination of information on space. This has been partially achieved so far.

At the beginning of the space race with the launch of Sputnik on the 4th of October 1957 by the former U.S.S.R., there were only two big powers; the U.S.A. and the U.S.S.R. which because of different circumstances, including the huge cost of space activities they agreed to use international cooperation to work with other countries that have access and resources for outer space. Thus, the International Space Station was established alongside other international projects such as the Galileo GPS. Given the lack of financial resources, because space activities involve huge investments private sector participation has been encouraged and outer space has been commercialized. We shouldn't lose sight of the fact that the State's parties to the space treaties are still responsible vis a vis the international community. I would like to stress the need to invite those countries who have not yet ratified those treaties to do so. Our country is responsible for the pro-temporary secretariat of the sixth space conference of the Americas 2011-2013 and

as part of its activities, international cooperation is one of our priorities.

With the establishment of the Mexican Space Agency in 2010, Mexico pursues the strengthening of its scientific and technological capacities as well as its educational and industrial capacities in terms of aerospace through the exchange of experience and international cooperation to contribute human development and global peace and security. Part of the goal is to undertake space projects with other space agencies including Germany, Ukraine, Italy and the U.K. We have also signed an agreement with the European Union to increase Mexico's industrial capabilities. We have anticipated agreements with the Government of the Russian Federation too. And of course we have agreements with scientific institutions and academic institutions abroad, for example, with the National Aeronautics Space Administration, NASA, in the U.S. on capacity-building for our human capital and regarding national scientific and technological institutions, the Mexican space agency has established different collaboration agreements in order to make the most of its capacities in order to promote national development.

With regards to space security and regarding space capabilities, we have space infrastructure which includes space and Earth segments which show vital for international peace and security as well as national security as they are important for Mexico's environment. These subjects are of great importance, both in terms of the security of my country and also health, education, food, environment, disaster prevention and remediation and other activities that promote social wellbeing which is one of the priorities of Mexico as well as of other countries. It is relevant to point out the great impetus that the Government of the President of the Republic Enrique Peña Nieto is giving to space activities including the national development plan which now includes space infrastructure. We have defined this as the group of assets required for this full study, access, exploration, use of space.

In the national development plan 2013 to 2018 of the Government of Mexico, we have included among others, telecommunications, including the land infrastructure of satellites MexSat named Bicentennial, Centennial and Morelos 3. Then preparing the next generation of those satellites, the early warning system and GIS as well as GNSS systems and propulsion and launch, that's low orbit payloads and broadband satellites. They have to be included in specific programmes but that is what we are currently working on in Mexico. The first MexSat satellite to be launched on the 19th of December 2012 was bicentenary. This will enable of to close gaps in terms of space and will

provide a boost to the telecommunications sectors, especially for ITC's because all Mexicans need to participate in national development and we can do so by providing universal access to information and communication technologies and satellites such as Bicentenary play an essential role in this.

Mr. Chairman, I would like to thank you and the members of this Committee for having given me the opportunity to talk to you about some projects, aspirations and recommendations through guarding international cooperation which is one of the aims of this statement. Thank you.

The Chairman I thank the distinguished representative of Mexico for her statement. The next speaker on my list is the distinguished representative of EUTELSAT Intergovernmental Organisation. You have the floor.

Mr. C. Roisse (EUTELSAT IGO) Thank you Mr. Chairman. Before I start my statement, I wanted to pay tribute, on behalf of EUTELSAT IGO, the organizations that are present here, to you sir, commend you on your firm but also well-meaning and smiling way of conducting this session. I would also like to thank Madam Othman, director of OOSA, a person for whom I feel the greatest respect and also very friendly, affectionate feelings. And Mr. Niklas Hedman, we thank you for availability and for your efficiency.

Mr Chairman, distinguished delegates, let me inform you first of all, of the fact that EUTELSAT IGO has held the thirty-eighth session of its Conference of States Parties. In May 2013, all members of the organization were represented. The Conference of the Parties adopt the resolution on the use of satellites to reduce the digital gap and we call on all those present to make greater use of the opportunities provided via Internet and the institutional services. The website of EUTELSAT IGO makes this resolution available to all. Priority rights to frequencies assigned to radio communications by the ITU were priority issue. The matter of deliberate jamming and piracy of satellite transmissions, the important developments in the international rules and regulations and the future of the C-range for fixed services to be provided satellites. In anticipation of the twenty-fifth EUTELSAT assembly, we approved the report on the participation of EUTELSAT IGO in the work UN COPUOS specifically in regard to the ITU's digital services as well as the participation of other relevant international organizations.

I wanted to focus in my statement on two items and I refer to the written text of my statement which has been, or will be circulated in the next few minutes,

at least it will be made available at a specific spot in this room. EUTELSAT has been considering issues regarding the registration of all objects launched into outer space. At its last meeting which I had just mentioned in May 2013, the assembly of EUTELSAT noted that in accordance with article 7 of the UN convention of the registration of objects launched into outer space, the majority of EUTELSAT member states announced 8 parties to the registration convention. As well as to the treaty of principles governing the activities of States in the exploration and use of outer space including the Moon and other celestial bodies. I am referring of course to the 1968 outer space, 1967 outer space treaty.

At the request of the assembly, as Executive Secretary made a declaration of acceptance by the EUTELSAT of the rights and obligations provided for it and the registration convention for satellites launched by EUTELSAT as a launching state. Prior to the restructuring of this organization which happened in 2001, before that it was as well as an international organization, was an outer space operator. So, before that change, satellites were registered as launched by EUTELSAT in its capacity as a launching state. And those were registered in a provisional way by the French registry in accordance with the ad hoc agreement pending the fulfilment of the required conditions for the acceptance of the rights and obligations of the convention by the organization. So I will contact the French Ministry of Foreign Affairs and French National Centre for Space Studies to inform them of this and provide a necessary data so that my organization might be able to establish and maintain the register of EUTELSAT satellites launched prior to the restructuring of our organization.

The second issue on which I wanted to dwell has to do with the deliberate jamming of transmissions and the piracy of radio and television programmes using frequencies assigned by EUTELSAT IGO. You will recall, perhaps, that I made a statement two years ago on the same subject regarding this deliberate interference of jamming at the thirty-eight meeting of the assembly of the parties. We noted information regarding the developments on the repeated deliberate interference with radio and television programmes broadcast on EUTELSAT satellites and noted that this persistent issue is considered of great importance as it poses a threat to the security of satellite broadcasting. In 2011, during the thirty-seventh meeting of our assembly, it was agreed that regular reports on the matter of interference affecting satellites operated by EUTELSAT on frequencies assigned to our organization would be communicated to state parties on a quarterly basis. Was also noted that since October 2012, the repeated interferences have

continued and when I talk about interferences I mean deliberate jamming and in technical terms, they involve intervention of signals on specific frequencies that are assigned to certain broadcasts so this a way of interfering with the actual broadcast, not reception in a specific territory. It effects the entire coverage area of these satellites. So this is indeed deliberate interference and it has increased to an unprecedented level.

In particular, this happened when EUTELSAT informed EUTELSAT the intergovernmental organization that interference had been carried out to disrupt the broadcast of a specific radio and TV authority of a Middle Eastern country. And the period up to June 1st 2012, a number of such instances occurred and the organization asked States Parties to jointly look for a solution to this deliberate and repeated interference activity. A number of countries responded to this request well also officially communicated with the French administration, the radio communications office of ITU to raise this at the next meeting of the Committee of Radio and TV communications.

I'm not going to go into details of this work carried out jointly with the radio communications bureau and the administration in summing up its decisions in November 2012 the administration declared that it had closely studied the report and was deeply concerned about the situation. Wherein the assignment of frequencies to satellites in conformity with the ITU rules was subject to disruption and deliberate interference jamming. The committee asked the administrations involved all to show maximum goodwill and take the necessary steps in terms of putting into effect the relevant provisions of the ITU constitution to resolved the matter definitively. I wanted to also point out that in February 2013, there was a new meeting of B and EUTELSAT and it was decided that it would be desirable to launch international cooperation to control the transmissions and the sources of this interference and set up an independent monitoring of these instances to precisely identify the sources and to put an end to this interference. Specifically including deliberate interference.

For the moment this initiative undertaken by the radio communications office is being studied and we hope to see specific results in the near future. Beyond deliberate interference which continues with regard to satellites operated by EUTELSAT, there's a new phenomenon that we've observed, Mr. Chairman, the so-called piracy which also affects international public order. This type of actions occurred in January 2013, an increased number of pirated transmissions was observed which is distinct from what we typically refer

to deliberate interference. The objective of pirates is to broadcast a programme through a certain intermediary satellite without any authorization to do so. Whereas deliberate interference has the objective of disrupting an authorized broadcast. Well in any case, piracy is of the same nature as deliberate interference, it disrupts the legitimate broadcasting practices. So we observed two cases of piracy, one is continuing, affecting a territory where the transmission of a national radio and TV broadcast in a Middle Eastern country was disrupted, the same country I referred to earlier. And there seems to be no authorization, no contractual agreement for the broadcast that have been performed, taking over the legitimate broadcasting facilities of that country. And even though EUTELSAT is capable of precisely locating the source of piracy, no official report has yet been issued. These instances highlight the danger of legitimate and peaceful broadcast facilities being taken over and used or possibly used for military disruptive or otherwise illegitimate purposes. This is a serious threat.

To conclude, we all need to work on preventing deliberate interference, work jointly with the industry which has a way of insuring the security of satellites and EUTELSAT has to focus on that. There are other options being studied; electronic devices built into the aerials of the satellites to detect the sources of interference among others. The bureau of radio communications has taken the decision to proceed with this work. EUTELSAT has recently obtained a report from the official national independent authority that I referred to earlier confirming the cases of interference in 2012 in the geographic area defined. So evidence was provided, much of the evidence provided by the company, the private sector company involved or the technical means installed but also by a national regulatory authority to confirm the same information; the origin of the source of interference which provided additional and important data for EUTELSAT and for international organizations working to ensure respect for the international ITU rules and regulations in view of this long-term threat. Chairman, ladies and gentlemen, thank you for your attention.

The Chairman I thank the distinguished representative of EUTELSAT IGO for his statement. We will continue and conclude our consideration of agenda item 4, General exchange of views, this afternoon. Now, I would like to continue and hopefully conclude our consideration of agenda item 7, Report of the Legal Subcommittee on its fifty-second session. The first speaker on my list is the distinguished representative of South Africa. You have the floor.

Ms. Maelefani (South Africa) Mr. Chairman, the delegation of South Africa endorses the adoption of the Report of the Legal Subcommittee by COPUOS.

The South African delegation wishes to congratulate Dr Tare Brisibe of Nigeria on the successful completion of his term as chair of the Legal Subcommittee of the COPUOS. We in particular appreciated his commitment and efforts in making the Legal Subcommittee more effective. We also look forward to working with the new chair of the Legal Subcommittee.

Mr Chairman, the Working Group on National Legislation Relevant to Peaceful Exploration and Use of Outer Space finalised its multiyear workplan at the 51st Session of the Legal Subcommittee. We recall that it was not possible to reach consensus on the vehicle in which the results of this Working Group should be reflected, and that it was left to the 55th Session of the COPUOS to make that decision. However, due to complaints regarding translations of the document, it was referred to the 52nd Session of the Legal Subcommittee for adoption. At the 52nd Session of the Legal Subcommittee there was an objection to the revised text, and further informal negotiations was undertaken. The delegation of South Africa is of the opinion that the Working Group's draft separate General Assembly resolution contained in Annex III of the Report of the Legal Subcommittee on its 52nd Session, should be forwarded, as it encapsulates the work of this Working Group under the capable leadership of Professor Marboe of Austria. It represents a hard-won consensus in the Legal Subcommittee, and it has the potential to contribute to the growing body on international space law.

Mr Chairman, the delegation of South Africa welcomes the first new item on the Legal Subcommittee agenda in several years, namely the Review of International Mechanisms for Cooperation in the Peaceful Exploration and Use of Outer Space. The information provided by other States on this item already demonstrates a vast breadth and diversity of cooperative mechanisms utilized in space cooperation, ranging from multilateral and bilateral legally binding agreements; legally non-binding principles and technical guidelines; multilateral coordination mechanisms through which space system operators coordinate the development of applications of space systems for the benefit of the environment, human security and welfare, and development; to a variety of international and regional forums deliberations. My delegation also wishes to congratulate Prof Aoki of Japan on her appointment as the Chair of the new Working Group on this item, which will be convened in 2014. We look forward to the further information to

be provided by States Members of the COPUOS and international intergovernmental and non-governmental organizations having permanent observer status with COPUOS, in accordance with the work plan for 2014, on the range of mechanisms they utilize for space cooperation. We are sure that the Working Group will be able to develop an understanding of the range of collaborative mechanisms employed by States and international organizations, and that the circumstances in which States favour certain classes of mechanisms over others.

Mr. Chairman, the delegation of South Africa noted with interest the revised proposal by Japan in its Working Paper A/AC105/2013/CRP.6, and co-sponsored by Austria, Canada, France, Nigeria and the United States of America, that the Legal Subcommittee should include on its agenda a new item entitled "General exchange of information on non-legally binding instruments for outer space". We understand that the essence of this proposal is to gain knowledge about how States are putting into practice non-legally binding United Nations instruments for outer space activities. We further note with interest the information provided in the working paper on the objectives and scope, methodology, expected outcome of work, and the draft questionnaire contained in the Annex.

Mr Chairman, my delegation welcomes the new structure of the Legal Subcommittee agenda, and in particular the reorganization into regular items, single issues, items to be considered under the workplans and new items. We also note with interest the statement made by the delegation of Germany at this session on the further reorganization of the Legal Subcommittee agenda. The delegation of South Africa in principle supports this innovative idea from the German delegation, yet we have to caution that we remain of the opinion that the duration of the Legal Subcommittee should remain unchanged. We are convinced that the Legal Subcommittee has a historical mission that should not be underestimated or undermined; that there are a number of important questions to be discussed to guarantee the rule of law in space activities, the progressive development of space law, and the peaceful uses of outer space as the province of all mankind. Items of importance in particular for developing countries, such as international cooperation, long term sustainability of space activities, capacity-building, and space debris, amongst others, remain to be satisfactorily addressed.

Mr. Chairman, our delegation is looking forward to a fruitful consideration of this agenda item before us and would like to assure you of our full cooperation to

ensure the success of this session. Mr. Chairman, I thank you

The Chairman I thank the distinguished representative of South Africa for her statement. The next speaker on my list is the distinguished representative of Russian Federation. You have the floor.

Mr. Barsegov (Russia) Thank you Mr. Chairman. Chairman, as we noted an earlier statement on Friday, on April 19th of this year Russian President signed the Russian Federation's state policy foundations in the field of space activities until 2013 and beyond. This is a basic document, a set of guidelines defining the essence and interactive relationships among scientific, technical, economic, political, legal and other interests. As well as the principles, objectives, priorities and tasks that will define Russia's activities in outer space for a long time to come. A principles of state policy is as applied to space activities include strict adherence to Russia's international obligations in the space domain as well as respect for the generally recognized principles and laws of international law. The document states that Russia should actively participate in considering and resolving issues pertaining to the development of international outer space law. Thus, Russia has clearly linked its own interests in space to strengthening international law.

Our long-term policy is focused on the expediency of developing a universal United Nations convention on space law. The idea of a single or universal convention was institutionally supported in this highly important document and of course there is a good reason for that. The efforts undertaken by this Committee and other forums in terms developing additional regulatory functions for outer space activities, have led to an increasing understanding among States that agreement can be reached, even on the most complex issues. And this allows us, with all due reservations, to proceed on the assumption that a UN convention on outer space will be called for at a given time.

Mr. Chairman, we pay to tribute to the efforts designed to step up the Committee's activity with a view to introducing factors of renewal. In this context, we treat with the greatest interest and attention, the proposal received from Japan, the well known proposal. The fundamental idea of the proposal appeals to us. In principle, we would be prepared to agree with the solution that would give States an opportunity to provide on a voluntary basis, reports or reviews to the Subcommittee including sufficient information as to the which these States correlate their space activities with the appropriate and relevant UN guidelines. And the most topical, the most topical resolutions of the

UN General Assembly. Such reports or documents must not reproduce legal or statutory acts. On the contrary, they must be reports providing good information, analytical analysis, identifying if active and original solutions applied or implemented by States in their national activities. We believe that such materials could provide a basis for all of us to get a better understanding as to whether or not or more detailed analysis is required through questionnaires or a special working group to be set up by the Subcommittee. Mr. Chairman, we must state our satisfaction in view of the successful completion of the work on the set of recommendations on national legislation. That document summarizes by way of a general understanding provision that are of doubtless usefulness. Not only to countries that are joining outer space activities they contain important factors of discipline that apply to all States.

Russia believes it would be useful for the set of recommendations to be adopted as a separate resolution of the UN General Assembly. Would like to thank the distinguished representative of Austria, Madame Irmgard Marboe who was truly brilliant in her position as Chairwoman of this working group, a talented, gifted and constructive enthusiast. Thank you very much Mr. Chairman.

The Chairman I thank the distinguished representative of the Russian Federation for his statement. The next speaker on my list is the distinguished representative of Algeria. You have the floor.

Mr. A. Oussedik (Algeria) Chairman, under agenda item 7 I would like to pay tribute to the Chairman of the Legal Subcommittee. Our consideration also for the chairs of the different working groups within the same framework. And I would like to congratulate Professor Marboe for the significant results achieved by the group that she chaired. In this text my delegation would like to reiterate its support for the recommendations of this group becoming a separate draft resolution to be submitted to the General Assembly as recommended by the Legal Subcommittee. Mr. Chairman, we consider that the Legal Subcommittee is the best framework for drafting and developing space law without prejudice to the aptitude of member States of groups of States to make proposals or suggesting questions regarding to the peaceful use and exploration of outer space. What is essential is to enshrine the Legal Subcommittee as being the promoter and only body for the development of this law and its intergovernmental nature should be maintained. We share the concern for rationalizing our activities but my delegation considers that this should be the object of

global review of COPUOS' work in methods and groups, not just the Legal Subcommittee. Thank you.

The Chairman I thank the distinguished representative of Algeria for his statement. The next speaker on my list is the distinguished representative of China. You have the floor.

Mr. X. Ma (China) Thank you Mr. Chairman. The fifty-second session of LSC held this past April yielded fruitful results. My delegation would like to take this opportunity to thank LSC's Chairman Mr. Brisibe as well as the staff, the secretariat for their hard work. Since assuming chairmanship of the LSC, Mr. Brisibe, who has legal expertise and skilful leadership has contributed to the work of the Subcommittee. My delegation appreciates this. Mr. Chairman, dear colleagues, China has always held the view that the rule of law in outer space is the bedrock of efforts to ensure the peaceful use of outer space and its long-term sustainability for development. My delegation highly evaluates the role long-played by the LSC in promoting the development of the rule of law in outer space. And support its continued consideration of the legal aspects of the peaceful use of outer space to make sure that law governing outer space keep pace with the times.

Mr. Chairman, the last LSC session considered for the first time the item review of international mechanisms for cooperation in the peaceful exploration use of outer space. My delegation provided relevant information and exchanges in multiple ways. We have noted that a lot of delegations have provided relevant information, the Chinese delegation fully supports via conference room paper, information of Chinese practices in international cooperative mechanisms including modalities in areas of cooperation. Being of the view that strengthening international cooperation in outer space, serves the interest of all countries and peoples. The Chinese Government strongly supports and works hard to practice international space cooperation.

This cooperation should be guided by the spirit of UN declaration on international cooperation in peaceful exploration and use of outer space and proceed under the principle of equality and mutual benefit and will win. The LSC should continue to play a main role in this regard. The Chinese notes that the Chinese delegation at last LSC proposed the new agenda on general exchanges of information of practices in relation to non-legally binding instruments for outer space activities. The Chinese delegation appreciates the efforts of the Japanese delegation. Prior to this session, my delegation has consulted with the delegations concerned on many occasions. We are prepared to continue exchanges of views with those

delegations to improve the relevant proposal and lay the foundation to our future work.

Mr. Chairman, strengthening capacity building in space law is an important guarantee for rule of law in outer space. The Chinese Government has always attached with importance to capacity building in space law and taken multiple initiatives in this area. After many years of efforts, we have now in our country good situation of governmental departments, the space industry and the legal community working in concert on this issue. Worthy of special mention is the fact that the Chinese Government places great importance on strengthening cooperation with developing countries and capacity building in space law. Since 2005, the Chinese Government has via platforms like Beihang University trained over 300 space technology and application personnel from over 10 countries. These people are playing an increasingly important role in space research and applications in their respective countries winning appreciation from various parties. The Chinese delegation knows that the LSC at the last session adopted an outcome document of the working group on national legislation relevant to the peaceful exploration and use of outer space entitled "Revised text of the draft text recommendations on national legislation relevant to the peaceful exploration and use of outer space". My delegation commended working group chair Professor Marboe for her efforts and continues considered text really important outcomes of LSC in recent years which will now contribute to the capacity building in space law in developing countries.

In conclusion I would like to reiterate once again the Chinese Government's readiness to advance as always with capacity building in space law strictly abided by space activities by the basic principles via established in outer space and join others in working towards the peaceful secure harmonious outer space based on the rule of law. Thank you Mr. Chairman.

The Chairman I thank the distinguished representative of China for his statement.

Distinguished delegates, I have just been informed that informal consultations have been held on the proposal by Japan for a new agenda item to the agenda of the Legal Subcommittee, entitled "General exchange of information on non-legally binding United Nations instruments on outer space". A revised version of the proposal is being made available before you in conference room paper A/AC.105/2013/CRP.6/Rev.1.

I have been informed by the delegation of Japan that informal consultations on the proposal will continue, and will be held today in meeting room C0431 at 14:30.

Are there any other delegations wishing to make a statement under this agenda item at this time?

I see none.

We have therefore suspended our consideration of agenda item 7, Report of the Legal Subcommittee on its fifty-second session, pending the results of the aforementioned consultations.

Distinguished delegates, I would now like to begin our consideration of agenda item 6, Report of the Scientific and Technical Subcommittee on its fiftieth session.

The first speaker on my list is the distinguished delegate of Chile on behalf of GRULAC. You have the floor.

Ms. T. A. Munoz (GRULAC) Thank you Mr. Chairman. GRULAC would like to thank the secretariat for presenting the report of the Scientific and Technical Subcommittee. GRULAC would like to stress the importance of scientific progress in the fields of outer space and space technology applications in different field of human development such as environmental protection, natural resource management and natural disaster management. That progress reveals growing space activity that is just generating new challenges for the use of outer space and the way in which those activities take place. Problems such as the management of space debris, saturation of geostationary orbit and the use of nuclear energy sources are aspects that need to be considered by COPUOS and its Subcommittees. Regarding space debris, GRULAC believes that the approval of guidelines to mitigate space debris is progress, however, we believe that it is a priority to continue considering this subject by paying specific attention to debris coming from platforms with nuclear power sources, collisions of space objects with space debris and other aspects such as improving technology to oversee all of this. We also encourage States to implement the guidelines as well as to communicate to this Subcommittee, the Scientific Subcommittee, information and actions to reduce space debris. Especially those States who are more or less responsible for the current situation and those that have the capacity to adopt measure to mitigate space debris in conformity with UN resolution 62/217.

Along these same lines, we would like to stress international cooperation as a valid instrument upon which can be implemented and has been acknowledged by the General Assembly to tackle the problem of space debris from the perspective of those countries that could be affected by them, taking into account resolution 66/71 which reaffirms the importance of international cooperation to foster the rule of law and

stresses the importance of developing a legal framework to strengthen international cooperation.

With regards to the use of nuclear energy sources in outer space, GRULAC considers it necessary to continue with studies and analysis of this subject and especially paying specific attention to satellite platforms with nuclear energy sources in earthly orbit in light of reported errors and possible collisions which are a high risk for humanity as well as their negative impact on the Earth's environment. This would be in contradiction with the universal and indivisible guarantee of human rights, environmental balance and the protection of outer space environment as mankind's common heritage. GRULAC also reiterates that Governments have the international responsibility for national activities that include or involve the use of nuclear energy sources in outer space; either by Government bodies or non-governmental bodies. And GRULAC stresses the importance of these activities taking place to the benefit of humankind, never to its detriment.

On this basis, and referring to the safety framework for nuclear power source applications in outer space approved in the fifty-second session and especially new proposals made by the working group, GRULAC urges countries and this group to guarantee that any outer space activity be governed by the principles of maintaining life and peace and promoting international regulation and best practices. Mr. Chairman, the saturation of geostationary orbit is the subject which also concerns us. For this reason, GRULAC is paying specific attention to the fair access of all States to geostationary orbit and the orbital spectrum by virtue of its potential to implement social programmes which are beneficial to the poorest populations with education projects, medical assistance and as a way to guarantee communication and information without market interest.

GRULAC would like to repeat its position in terms of geostationary orbit which is a limited natural resource and is thus running the risk of saturation, this would be a threat to the sustainability of space activities in this field. GRULAC therefore believes that its use should be rationalized and made available to all States in equal conditions independently of their current technical capacity, bearing in mind the needs and interests of developing countries and the geographic position of certain countries in accordance with principles established by the ITU and the United Nations. For this reason, in order to guarantee the peaceful and sustainable nature of geostationary orbit. GRULAC considers it is necessary to continue keeping this subject on the agenda of COPUOS and its

2 Subcommittees through setting up of working groups or intergovernmental panels whenever necessary.

Mr. Chairman, regarding the UN programme on the application of space technology, GRULAC acknowledges the socioeconomic benefits of space activities and those stemming from the use of instruments based on space technology in the field of the environment, weather forecasting, natural disaster management, tele-education, telemedicine and stresses the importance of promoting activities to build and increase capacities related to the use of space technology applications. In this sense we would like to stress that four important activities took place in our region last year. First the forum on the use of space for human and environmental safety in the Americas space policy long-term sustainability and cyber health in Mexico City from 23 to 25 of April 2012. The UN Ecuador workshop on the international space weather initiative in Quito from the 8 to 12 of October 2012. The UN Chile workshop on the applications of space technology for socioeconomic benefits in Santiago de Chile from the 12 to the 16 of November 2012 and the UN Argentina workshop on space law entitled the contribution of space law to economic and social development in Buenos Aires from 5 to 8 November 2012.

Regarding the activities of the UN programme on the application of space technology, GRULAC expresses its thanks to OOSA for sending experts to the third international school on advanced training in panoramic epidemiology at the national commission for space activities Konai in Argentina from 27th of May to 7th of June. This initiative was organized in cooperation with the UN programme for the application of space technology and was aimed at providing answers, answering the needs of specialist in epidemiology regarding the use of space technology instruments to generate early warnings and to monitor outbreaks of epidemics in South America. Our region would encourage further development of initiatives linked to the UN space technology programme in our region of Latin America and the Caribbean and would like to see more activity in 2014. Thank you.

The Chairman I thank the distinguished representative of Chile on behalf of GRULAC for her statement. The next speaker on my list is the distinguished representative of United States of America.

Mr. J. Higgins (USA) Thank you Mr. Chairman, on behalf of my Delegation, I would like to express our appreciation for the excellent work of Mr. Felix Menicocci of Argentina as chair of the Scientific and Technical Subcommittee (STSC) this year. Under his guidance, the 50th session of the Subcommittee made

significant progress and addressed a wide array of current topics of interest to the space community. In addition, the U.S. Delegation once again commends the outstanding work of the Office for Outer Space Affairs in supporting the Subcommittee meeting and its working groups.

We fully endorse the Report of the 2013 Scientific and Technical Subcommittee. We would like to especially note the progress made by the STSC and its Working Group on the Long-Term Sustainability of Space Activities, under the Chairmanship of Peter Martinez of South Africa. We commend Mr. Martinez for his diligent efforts prior to, during, and since the STSC session to continue work on this agenda item. We also appreciate the work of the four Expert Groups supporting the Working Group. The United States believes this topic is very timely due to the increasing number of space actors, spacecraft and space debris. It is essential that we come together to agree on measures that can be employed to reduce the risks to space operations for all. We are prepared to work productively in the working group to achieve that objective, and hope that we can reach consensus on best practices guidelines during the course of the work plan for the Working Group.

With regard to space debris, discussions at the STSC this year confirmed that national experts will continue to pursue research to mitigate the effects of space debris, and we look forward to hearing in the future how Member States are implementing the UN space debris mitigation guidelines that were approved in 2007.

We would also like to note the progress made at the STSC on the multi-year work plan for the Working Group on the Use of Nuclear Power Sources in Outer Space. Following up on its excellent work in developing a safety framework for the use of nuclear power sources in space, the working group is now examining, through a series of workshops, any obstacles to implementing this framework through national mechanisms. We congratulate the Chairman of the NPS Working Group, Mr. Sam Harbison of the UK, for his dedicated work to ensure that a consensus model for the use of nuclear power sources in space is now a reality.

On the topic of Near Earth Objects, we note the progress made to expand the global network for NEO detection and characterization, and the efforts undertaken by Action Team 14 to develop a draft Terms of Reference for an independent space mission planning advisory group which can develop viable approaches to dealing with an Earth-threatening NEO. We are pleased that the STSC approved the recommendations of its NEO Working Group with

respect to international detection and mission planning groups. Although there is more work to do in this area, we would remind all that the key to any successful campaign to deflect a threatening NEO is to find it early. Thus, cooperation in further developing detection capabilities and information sharing networks is of utmost importance.

Mr. Chairman, I would also mention that the United States is pleased that the STSC has taken up a new regular agenda item on Space Weather. This is a natural follow-on to the International Heliophysical Year (IHY) 2007 and the International Space Weather Initiative. The new agenda item allows COPUOS to stay involved with developments and activities begun under the IHY and continued under ISWI as we seek to understand more fully the effects of the sun on our space infrastructure and our environment here on Earth. We understand that plans are underway to have a special workshop on space weather on the margins of the 2014 STSC session here in Vienna.

We welcomed an update on the activities of the International Committee on Global Navigation Satellite Systems (ICG), which emerged from the 3rd UN Conference on the Exploration and Peaceful Uses of Outer Space and was formally established in November 2006. The ICG continues to make significant progress towards the goals of encouraging compatibility and interoperability among global and regional space positioning, navigation, and timing (PNT) systems and promoting the use of GNSS and its integration into infrastructures, particularly in developing countries.

As General Assembly Resolution 58/89 has provided, reports on activities of the International Satellite System for Search and Rescue are to be considered under this agenda item. Accordingly, I would like to briefly address U.S. participation in the international Cospas-Sarsat satellite search and rescue program.

Presently, 41 countries and two organizations are formally associated with the International Cospas-Sarsat Program, and several more have shown interest in associating with the Program in the future. The four founding Parties — Canada, France, Russia and the United States — along with EUMETSAT and India, continue to provide a space segment consisting of geostationary and polar-orbiting satellites. Supported by ground segment contributions from an additional 26 countries, the Cospas-Sarsat Program now has six polar-orbiting and six geostationary satellites that provide worldwide coverage for emergency beacons. In 2012, Cospas-Sarsat alert data helped save more than 1,900 lives in 662 search and rescue events worldwide. From becoming operational

in 1982 until the end of 2012, the Cospas-Sarsat system provided assistance in rescuing more than 34,900 persons in almost 9700 search and rescue events.

The United States and its partners started the Development and Evaluation (D&E) phase for the use of mid-Earth orbit search and rescue (MEOSAR) in January 2013, using the Global Positioning System (GPS) satellites, as well as similar satellites operated by the United States' partners. The D&E phase will help characterize the operational readiness of the system and, when predefined criteria are met, will allow the new MEOSAR system to become operational.

Finally, I would like to reiterate that my Delegation welcomes the special presentations made before this Committee and the Scientific and Technical Subcommittee on a wide variety of topics. We continue to believe that these presentations serve to provide complementary technical content for our deliberations and provide timely information that is useful in keeping delegations informed about new programmes and developments in the space community, as well as providing illustrative examples of the application of space technology. In this regard, I would like to note that under this agenda item, later today, Mr. Charles Bolden, the NASA administrator will be here to make a special presentation on the next steps in space exploration. 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 Japan. You have the floor.

Ms. C. Saito (Japan) Thank you Mr. Chairman. Mr. Chairman, Distinguished Delegates, on behalf of the Japanese delegation, I am pleased to have the opportunity to address the 56th session of COPUOS. Japan supports the report adopted by the fiftieth session of the Scientific and Technical Subcommittee. I would like to express our appreciation to the Chairman of the Subcommittee, Mr. Menicocci and acknowledge the excellent work of Dr. Mazlan Othman and her devoted staff of UNOOSA.

Mr. Chairman, taking into account the increasing number of operators and space debris in outer space, we are of the view that the United Nations Space Debris Mitigation Guidelines, adopted in the STSC in 2007, is essential for tackling the issue of space debris critical to maintaining the long-term sustainability of space activities. Japan encourages all countries to maintain these guidelines in order to promote the responsible and fair use of outer space.

During this year, Japan will continue its participation in rule making processes to ensure the long-term sustainability of outer space activities for which international response is necessary, and encourages all actors both at home and abroad to play an active role in the discussion. In this vein, Japan fully welcomes the discussions of the Working Group of the Long-term Sustainability of Outer Space Activities in the STSC. Our sincere gratitude goes to all of the experts participating in the Expert Groups, the Co-Chairs, and of course to the devoted Dr. Peter Martinez, Chair of the Working Group for your achievement in submitting A/AC.105/1041 for comments from Member States. Japan submitted our comments through the Chair of the Working Group and would like to encourage further discussion on this topic among other Member States. My delegation views that the discussions within the Expert Groups have already matured, therefore discussions among member states should be accelerated at this time.

In addition, I would like to acknowledge the great efforts of Dr. Takahiro Obara, Chairman of the Expert Group of Space Weather. Japan will continue to contribute to the work of the Working Group and the Expert Groups in order to ensure practical and constructive outcomes for maintaining the long-term sustainability of space activities.

Mr. Chairman, I would also like to take this opportunity to introduce some Japanese contributions to the UN initiatives on space activities. We are very pleased with the work of Dr. Takao Doi, Chief of Space Applications Section of OOSA, to establish the Human Space Technology Initiative (HSTI), under the framework of the UN Program on Space Applications, which promotes international cooperation in the field of human space exploration. Japan is supporting his initiative with the United Nations Trust Fund for International Cooperation for Development. We believe that our activities, geared toward the advancement of peaceful uses of outer space, are in line with those of HSTI.

Japan has contributed in particular to those activities of the Program relating to small satellites and supports the Basic Space Technology Initiative. In cooperation with OOSA, the Kyushu Institute of Technology (KIT) has provided opportunities to developing countries to participate in a post-graduate programme through the Long-term Fellowship Program on Nano-Satellite Technology from 2011. KIT enhanced its programme this year with the support of the Japanese Government. For the class of 2013, there were 83 applications from 28 countries for 6 fellowship programme slots.

Kyushu University established the International Center for Space Weather Science and Education, or “ICSWSE (ikusei)” in 2012, which conducts space weather research including the operation of MAGDAS global network of magnetometers and space weather education including the implementation of MAGDAS Schools for international capacity-building. In addition, ICSWSE actively supports a wide range of space weather activities supporting workshops and events.

The University of Tokyo and UNOOSA successfully co-hosted the UN/Japan Nano-Satellite Symposium in October last year in Nagoya, Japan. Additionally, the University of Tokyo supports capacity-building programmes related to space engineering, particularly for developing countries, through the CanSat Leader Training Program (CLTP) and the Mission Idea Contest (MIC). These projects are executed in close cooperation with the University Space Engineering Consortium (UNISEC), a Japanese non-profit organization. Thanks to these programs, a new network has been forming among participants and their organizations around the world. Thank you for your kind attention.

The Chairman I thank the distinguished representative of Japan for her statement. The next speaker on my list is the distinguished representative of Canada. You have the floor.

Mr. D. Kendall (Canada) Thank you Mr. Chairman. Canada acknowledges the work accomplished by the Scientific and Technical Subcommittee at its 50th session in February 2013. Fruitful discussions took place among participants of the session, and significant progress was made under the leadership of the Chair of the Subcommittee, Felix Menicocci, notably by the three working groups of the Subcommittee.

Mr. Chairman, Canada supports collaboration and information sharing to provide early detection and precision tracking of Near Earth Objects as these are the most effective tools for the near-term management of threats posed by these objects. Canada also endorses the establishment of a mechanism to develop appropriate measures in order to coordinate the most effective international response to any future threat.

Canada would like to congratulate the Chair of the Working Group on Near Earth Objects, Sergio Camacho, for the adoption of the final report of the Working Group by the Scientific and Technical Subcommittee. The report provides recommendations to ensure awareness, the coordination of protection and mitigation activities, as well as to encourage international collaboration with regards to Near Earth Objects. The recommendations identify solutions to

address how international efforts should be defined and conducted.

Canada strongly supports the adoption of the Working Group’s Report and its recommendations by this Committee. Canada is in favour of the creation of an International Asteroid Warning Network (IAWN) as well as a Space Mission Planning Advisory Group, SMPAG. Canada looks forward to participate in the meetings planned to establish both the IAWN and the SMPAG, and will support the work of the AT14 to assist with the establishment of these two bodies.

Mr. Chairman, the S and T Subcommittee has been very active in discussing the challenging topic of space debris. My delegation would like to note the constructive symposium organized by the International Astronautical Federation on the theme “Overview of studies and concepts for active orbital debris removal” held in February of 2013. Informative presentations were provided on the efforts being pursued by Member States and organizations on the removal of space debris. Space debris is a subject of increasing concern within the global space community and information sharing is essential to achieve and implement sustainable solutions.

Approaches and concrete actions to mitigate space debris, including the improvement of the design of launch vehicles and spacecraft, the deorbiting of satellites, passivation, end-of-life operations, and the development of improved software and models related to space debris mitigation are needed with urgency. In addition, the discussion of progress and the open sharing of developments and information through forums such as UN COPUOS and the Inter-Agency Space Debris Coordination Committee, IADC, are essential in order to make progress on this urgent issue that has the potential to affect all humanity.

Canada continues to be actively involved in orbital debris issues by supporting a continued dialogue between national and international groups, and developing and implementing new measures. Canada is a member of the IADC, and collaborates closely with its international partners, notably on close approach alerts. The two Canadian satellites, NEOSat and SAPPHERE, launched in February 2013, will directly contribute to this effort of sharing data on space objects orbiting the Earth and therefore increasing our knowledge within the appellation Space Situational Awareness.

Dextre, the Canada’s “handyman” on board the International Space Station, made space history last January by successfully refuelling a mock satellite on the exterior of the station. Topping-off of the satellite’s fuel tank was the pivotal task in the experimental

Robotic Refuelling Mission (RRM), a collaboration between NASA and the Canadian Space Agency to demonstrate how robots could service and refuel satellites on location in space to extend their useful lifetimes.

A couple of months later, Canadarm2 successfully installed SpaceX's Dragon capsule on the ISS, marking the first time this delicate operation has been controlled remotely from Earth. Canadarm2's role has changed significantly over the years: the arm having shifted gears from building the ISS to supporting its maintenance, including helping to catch and dock free-flying cargo vehicles.

Canada is committed to developing new technologies, techniques and missions that can contribute to resolve issues related to space debris. Canada will continue to work with its international partners to search for solutions and encourage continued dialogue and the sharing of information among members of the Subcommittee.

Mr. Chairman, Canada believes that a major accomplishment of the work undertaken by the S and T subcommittee will be the adoption of the report of the Working Group on the Long-Term Sustainability of Outer Space Activities in 2014, which will propose guidelines and best practices to ensure a secure environment and safe access to space for all nations as well as consider ways that space can contribute to supporting sustainable development on Earth. Canada is very appreciative of the work of the four Expert Groups under the direction of the international co-chairs including Dr. Ian Mann of Canada working with Professor Obara of Japan in leading Expert Group C on Space Weather. Furthermore, Canada would like to acknowledge the outstanding management of Dr. Peter Martinez, the Chair of the Working Group, for his conscientious, diplomatic and perspicacious leadership of this challenging activity. Canada believes that important progress has been accomplished over the past twelve months, notably the adoption of the mandates of the Expert Groups, the submission of Expert Groups' draft reports, as well as the timely circulation of an initial compilation of proposed guidelines.

In May 2013, the Canadian Space Agency and Canada's Department of Foreign Affairs and International Trade invited Canadian stakeholders from government, industry and academia, including associations and non-governmental organizations, to attend a Second national workshop to examine the Working Group's proposed guidelines. This second workshop was highly constructive and allowed Canada to initiate an in-depth review of progress accomplished by the four Expert Groups. Comments and suggestions

were collected and will be reflected in positions that Canadian Experts will express this week in Expert Group meetings. My delegation will also provide an overview of those comments at the first Working Group meeting planned today.

It is important that Member states within COPUOS work together to bring constructive and implementable ideas forward for the future sustainability of space activities. Canadian experts will again be attending this session and continue to actively participate in the Expert Groups and Working Groups meetings to fully support this important initiative.

Mr. Chairman, data provided by Global Navigation Satellites Systems have become essential for governments, companies and, in a global sense, for humanity. Canada is not a provider of GNSS space assets per se, however, as a significant GNSS data user, our country continues to optimize the access to and use of information from its international partners. Canada attended the 2012 Annual Meeting of the International Committee on GNSS, commonly known as the ICG, hosted by China last November, and officially became an Observer of the Committee. The ICG is a key example of successful international collaboration in the space arena and Canada encourages such international activities to facilitate the use of GNSS services globally.

Finally, Mr. Chairman, Canada would like to remind delegates that it hosted a meeting on the margins of the 2013 STSC session in order to discuss current activities under the Action Team 6 follow-up initiatives which promotes an open community approach to tele-health and tele-epidemiology to support Global Health. Canada would like to thank the Office of Outer Space Affairs and the University of Landau, Germany for their continued support and involvement. Health is a very important social driver to sustainable development on Earth and space technology is a key element to achieve this objective. Canada would be pleased to support initiatives of this Committee if it decides to pursue cooperation on this important topic in the future. Thank you Mr. Chairman.

The Chairman I thank the distinguished representative of Canada for his statement. The next speaker on my list is the distinguished representative of the Russian Federation. You have the floor.

Mr. Barsegov (Russia) Thank you Mr. Chairman. Mr. Chairman, the agenda of the Scientific and Technical Subcommittee's topical and dense. The work of the Subcommittee is in our opinion, developing in a positive way. The Subcommittee has reached a necessary level on analysis of the ways and means of addressing major issues related to averting the asteroid

danger and of course ensuring the long-term sustainability of outer space activities. In these two areas, we particularly feel that interactive impact of the efforts pursued by the Committee. The systems approaches being developed to the near Earth object issue call for additional measures to be implemented nationally. I mean, Russia as well. Such measures are in fact a focus for Russian authorities; both its executive and legislative branches. We see growing interaction among various relevant departments and the Russian Academy of Sciences to ensure Russia's participation in the international mechanisms being planned on that issue. We're satisfied that in recent years it's been possible to update and breathe a new life to interdepartmental interaction within Russia on the issues that fall under the long-term sustainability heading. Important decisions have been taken in that regard and new ones will be made as necessary in the future. The seriousness of our intent and the evolving Russian policies in this regard, are evidence by the Russian Federation's working documents that are now four, there are four such documents present.

Those of our colleagues who think it my benefit them to read these documents, well, I'm sure see for themselves, how serious constructive and well-meaning our approach is. We're convinced that having widened the focus of the issue as it were, having examined it from various technical, political and legal perspectives, we would see quite clearly that there's a lot of work that remains to be done before we can address the objective need to develop effective mechanisms to ensure safety of outer space operations and other related issues that all fall under the heading of the long-term sustainability of outer space activities. We believe that the set of safety guidelines being prepared should be further enriched, made more meaningful and that would be a step toward to a new reality which would involve a highly effective regulatory system.

What is needed here, in the substantive way, is a set of more specific and more far reaching principles. As they stand now, a lot of them are incomplete. That quality or perhaps I should say the lack of quality or thoughtfulness that characterizes some of them, is not helpful if we want to work toward an effective and universal implementation of such safety guidelines. Any good course can be killed if it's not implemented in a thoughtful enough manner. Let us avoid that scenario. As a long road from concept to its implementation and it will be a longer road in this case because even the concepts of the various States do not entirely coincide. This is something that we need to be aware of but we shouldn't make any drama about it. We should interact, work together, exchange opinions, share views and working together, dig deep into the issues and develop practical approaches to tackling

complex issues. As informal consultations have demonstrated, many of our partners in these negotiations fully understand that the process will require more time. Thus, all of us should demonstrate a readiness for collective action, jointly define the political and methodological terms of reference and the set of tools required to reach our objectives. Thank you very much Mr. Chairman.

The Chairman I thank the distinguished representative of the Russian Federation for his statement.

Distinguished delegates, delegations will recall that the Scientific and Technical Subcommittee at its fiftieth session endorsed the report of the Working Group on Near Earth objects including the recommendations contained therein for an international response to the Near Earth object impact threat; the document, A/AC.105/1038, para. 198, and annex III.

Distinguished delegates, if there are no objections, may I take it that the Committee endorses the recommendations for an international response to the near-Earth object impact threat, contained in the report of the Working Group on Near-Earth Objects, in document A/AC.105/1038, para. 198, and annex III?

I see no objections. It is so decided.

Are there any other delegations wishing to make a statement under this agenda item at this time?

Yes, I recognize the distinguished representative from Saudi Arabia. You have the floor.

Mr. M. A. Tarabzouni (Saudi Arabia) Thank you very much to the Chair and Mr. Felix for chairing the meetings of the Subcommittee who has made a huge effort to reach positive conclusions to guarantee the prosperity of all countries and peoples. The report is a balanced one, the mission of the Subcommittee is to study the scientific and technical aspects of outer space and to establish studies that will lead to security and prosperity for humanity. Based on this principle, the Subcommittee should through cooperation of its members deal with the principles relating to all items on the agenda including the definition and delimitation of outer space as well as space debris, to name but a few. All member States should benefit on an equal footing from satellite data as well as remote sensing applications for peaceful purposes. We should also support the study on the sun to find out more about changes there. And we also support all the publications of the Subcommittee and we appreciate the work of all the working groups. For example, a near Earth object, the use of nuclear power sources in outer space, the work of these groups should protect humanity from all dangers and perils in this field. Thank you.

The Chairman I thank the distinguished representative of Saudi Arabia for his statement.

Are there any other delegations wishing to make a statement under this agenda item? Yes, I recognize the distinguished representative of Mexico. You have the floor.

Ms. Ramirez (Mexico) Thank you Chairman. Mr. Chairman, my delegation takes note of the report containing the important results achieved by the Scientific and Technical Subcommittee in its most recent session. As the other delegations we commend the work of the Subcommittee support. The adoption of the agenda for the session to be held in February 2014. We also highlight the contributions of my colleague, Dr. Camacho sitting next to me, regarding near Earth objects. I'm of course referring to the working group. It's commendable and very important. An important contribution to the work of the Scientific and Technical Subcommittee. Chairman, we agree with the report and its assessment of the work accomplished, the recommendations formulated and we're thankful for this opportunity to continue working together to make sure that we as a country live better as a result of this work. Thank you very much.

The Chairman I thank the distinguished representative of Mexico for her statement. Are there any other delegations wishing to speak?

I see none.

We will continue our consideration for agenda item 6, Report of the Scientific and Technical Subcommittee on its fiftieth session this afternoon.

Distinguished delegates, because of the time limitation, we will postpone agenda item 8 and 9 to this afternoon.

I would now like to proceed with the technical presentations. Presenters are kindly reminded that technical presentations should be limited to 15 minutes in length.

The first presentation on my list is by Ms. Natalia Ustynowicz of Poland entitled "Introduction to Chopin in Space". Ms. Ustynowicz, you have the floor.

Ms. N. Ustynowicz (Poland) Thank you Mr. Chairman. Honourable Mr. Chairman, distinguish delegates,

My name is Natalia Ustynowicz. I am aero-space engineer from Poland; a country which is proud to be a new member of the European Space Agency. For me and my colleagues, students of Warsaw University of Technology it was a dream to work with international team on space exploration. Now this dream turns into reality. Now, let me ask you: what is

the best example of a romantic human dream that became the reality only because of technology development? In my opinion the answer is: space flights. During the lunch time you will see the film about the greatest creation of the Mankind — the International Space Station — our home in Space. George Zamka, NASA astronaut of Polish ancestry, commander of the space shuttle mission who in February 2010 brought to the ISS the cupola module and the CD record of the music of Frederic Chopin said: "Each spaceflight carries the dreams and achievements of thousands of people from around the world".

This every day, joint effort of thousands of people — engineers, mechanics, politicians, designers, workers in fact turned into the realization of the ISS, where people from different countries and cultures share the same ideas, enthusiasm and dreams. They are working together as one, beyond the boundaries. This dream could not be ever fulfilled without the sophisticated technology and inventions. Each country represented here, has contribution in such great achievement.

However, there are many people who are still asking: why? Why should we follow this dream, send human beings to Space, risk their lives, spend such a great amount of money of taxpayers? What gain do we have from manned Space flights? Why, for instance, not to send robots? I think that the best answer was given by Henri Poincaré — one of France's greatest mathematicians, theoretical physicists, and a philosopher of science. One hundred years ago he wrote: "The scientist does not study nature because it is useful; he studies it . because it is beautiful." In our technology-driven times, such idea sounds strange. Nowadays, We develop new inventions just because they should be useful and are not considered to attract the feelings. We leave the role to search for the beauty to artists, not scientists. However, by this film you will see, that perhaps Henri Poincare, (called as the last Universalist) was, in fact, right.

The Space flight is a rendezvous of technology with the pure beauty of the planet we live on. The seven wide windows of Cupola, designed by engineers, created by the joint effort of thousands people, when opened for the first time, enabled astronauts to see the magnificent, breath-taking panorama of Earth, that no one can even imagine until he sees it. Commander Zamka and his crew agreed that it is hard to describe this experience with words and only the music of Chopin could express his feelings and emotions. Will more technically efficient robots be able to learn from such experience? Certainly not. To relive such deep emotions, to dream, to be delighted and inspired by the

music of Chopin and amazing photographs is definitely not a task for a robots.

Why then should we continue the space programs? Because the exploration of space is not only a matter of technology. It is also a new space awareness which helps us to understand our responsibility for our beautiful and fragile planet. The aim of science is to follow the pure beauty. And this I consider to be the most important message for the next generations shared by the movie of the “Chopin the Space concert”. Honourable delegates, Let’s search for the beauty and follow our dreams! Thank you for your kind attention and I invite you to watch the screening of the “Space Concert” right after this session.

The Chairman Thank you Ms. Ustynowicz for your presentation. We look forward to seeing the film later today.

The second presentation on my list is by Mr. Tomofumi Nishinaga of Japan, entitled “Japanese proposal on Space and Sustainable Development”. Now Mr. Nishinaga, you have the floor.

Mr. T. Nishinaga (Japan) Thank you Chairman. I am Mr. Nishinaga, Director of Space Policy Division, Ministry of Foreign Affairs, Japan.

Today I would like to explain to you our proposal regarding “Space and Sustainable Development”. My delegation conducted several informal consultations during the Scientific and Technical Subcommittee in February of this year with the aim to encourage Member States to discuss and find a way for COPUOS to contribute to the global agenda in matters such as sustainable development. My delegation would like to put forward this proposal to your delegations as food for thought in order to find a concrete way of working on this issue within the Committee.

My presentation will start by touching upon Dr. Yusushi Horikawa, the current Chairman of the Committee’s initiatives. Since our proposal stems from one of Dr. Horikawa’s ideas, I would like to start by briefly mentioning his contribution to this Committee. I will then show you some findings and examples of the contribution of space technologies to the development agenda, including some Japanese experiences. Lastly, I will explain our work plan proposal for your consideration.

At the last session, Dr. Horikawa presented his vision of COPUOS for the next half century. His proposed initiative consists of 3 pillars.

The first one is to strengthen the role of the Committee and its Subcommittees as a unique platform for global cooperation in long-term sustainable space activities. This pillar fosters cooperation schemes to

integrate space-based services and products into the implementation of regional and national plans to achieve sustainable development. The Chair suggested that in order to avoid duplication of efforts for overall consideration and outputs, the Committee might wish to consider how COPUOS could combine a number of relevant items on its agenda in order to create an efficient method of work to meet future demands at the global level.

The second pillar is to promote fruitful dialogues between COPUOS and the regional and interregional cooperation mechanisms. The Chair mentioned that regional and interregional cooperation is essential to strengthen the peaceful uses of outer space, and that the Committee should consider holding further dialogues with the main regional policymaking mechanisms for space cooperation and coordination.

The third pillar is to promote global knowledge and expertise bridging lessons learned and best practices of retiring experts in the interest of emerging space countries.

Our focus is on the first pillar of the Chair’s initiatives. We recognize that sustainable development is one of the major points on the international community’s agenda. Space technologies have been contributing to this agenda item for decades but they still have great potential to provide further solutions for sustainable development. Protecting and managing the natural resource base of economic and social development such as water management, disaster management or climate change are the main areas which space-based services and products can contribute to. We are of the view that these contributions should be continued and further elaborated for the Post-2015 development agenda.

As you may know, the Millennium Development Goals established in September 2000 included 8 goals and 21 targets for global development. The follow-up meeting 20 years after the United Nations Conference on Environment and Development held in Rio De Janiero in 1992 was held last year and created a worldwide momentum to discuss the post MDGs agenda, to be developed by 2015. A high-level panel, task team, consultations and working groups have already started their discussions. Negotiations on the governmental level will begin very soon. Our proposal relates to how we can contribute to these negotiations. As you can see, these negotiations are foreseen for the year 2015, so in order to give our unified input to these negotiations, we should reach an agreement on our standpoint by 2014, which means next year.

Information regarding the contribution of space technologies to sustainable development has been

provided on many occasions. Especially during the United Nations Coordination of Outer Space Activities, annually held by space related UN bodies including OOSA, where a vast amount of information on space technologies contributing to the development agenda is presented.

I would also like to introduce to you several examples of contributions made by Japan. One of these examples can be found in the cultivated area mapping and forest management using Earth observation satellite data. On this slide you can see that the combination of data produces many useful results. I'm sure that plenty of this kind of data was already submitted to the international community e.g. via the United Nations Coordination of Outer Space Activities or this Committee of COPUOS.

So what should we, as members of COPUOS, do? Among the many space related bodies within the UN system, the advantage of COPUOS is that we can report directly to the General Assembly. This means that we are the one body that can give direct input to the international community. We are unique space community that gives direct input to the international community. We have already done this last year to the Rio+20, and we should continue with this for the post-2015 development agenda. Furthermore, we should consider what should be done beyond 2015.

My delegation is proposing a work plan for deliberations in COPUOS under the agenda item "Space and Sustainable Development". The proposed work plan is divided into 3 designated packages. The work package 1 is for awareness-raising of space for the post-2015 development agenda and information gathering. In this phase, identification and organization of existing information regarding contributions of space technologies to sustainable development should be conducted. Direct intervention by Member States proved to be more effective for a proper reflection of contribution of space technologies to the global development agenda. This should be encouraged as well.

The work package 2 is for analysis. Categorizing information according to the space technologies that contribute to sustainable development from the view point of the post-2015 development agenda should be conducted in this phase.

Lastly, the work package 3 is for drafting recommendations as input to the international community. This will be a drafting process including possible recommendations for Member States to give full recognition to the significance of space technology.

This work plan is proposed for the agenda item "Space and Sustainable Development" but it could also

be a work plan of the Working Group of the Whole of the Scientific and Technical Subcommittee for the deliberation of the agenda item "Space Technology for Social Economic Development in the Context of the United Nations Conference of Sustainable Development and the post-2015 Development Agenda". This could also be used as a bridging solution between COPUOS and STSC on this issue.

Let me reiterate that this is just food for thought for your consideration of the future of this Committee. We are delighted to have this proposal in honour of Chairman Horikawa and we would like to have discussions with interested delegations. Thank you for your attention. My delegation would be very pleased to hear your ideas and looks forward to discussing the future of COPUOS with you. Please feel free to contact us at any time. In this context, we would like to hold an informal meeting today, from 2:30 as mentioned by Chairman Horikawa. Thank you very much.

The Chairman Thank you Mr. Nishinaga for your presentation. I thank you also, for referring to my conference room paper in your presentation.

Since we have informal consultations during lunch time on this subject, is there any delegate who has questions for the presenter at this time?

I see none.

Thank you very much again, Mr. Nishinaga for your presentation.

Distinguished delegates, we now hear a presentation by NASA administrator Mr. Charles Bolden. Now you have the floor, sir.

Mr. C. Bolden (NASA) Mr. Chairman and distinguished delegates, it is my distinct pleasure to be here today and to have the opportunity to address the Committee at its 56th session. I have noted that the history of this Committee as a permanent body to the United Nations and the history of NASA both date from the late 1950s, and I am proud to say that NASA has been involved in UNCOPUOS activities continuously since that time.

Over the years, UNCOPUOS has proven to be an effective catalyst for international cooperation in the peaceful use of outer space. I commend you for your continuing efforts, and the work being done by the two subcommittees, to stimulate cooperation and to assist developing nations in creating the capacity to use space-based systems to improve the health and welfare of their populations. I recognize that the work of the Committee was instrumental in the development of the international legal framework under which we all operate in space today. Under this framework, the use

of space by nations, international organizations, and private entities has flourished.

I have followed closely the work of the Committee over the past several years, and note with pleasure the successful development of the UNCOPUOS guidelines for space debris mitigation, approved by the General Assembly in 2007.

Also noteworthy is the development in 2009, with the International Atomic Energy Agency (IAEA), of the Safety Framework for the Use of Nuclear Power Sources in Outer Space. I also want to thank the Committee for your decision to add space weather as an item on your agenda. As I recently told a gathering of space weather experts in Washington, with the United Nations now involved, we are assured of even greater global coordination in the effort to increase our understanding of space weather and its impact on Earth and throughout our solar system.

These achievements represent significant steps to improve the safety and sustainability of space operations. I understand that you are in the midst of work to achieve consensus on best practice guidelines for space operations, and I pledge NASA's full support to that activity. As most of you know, NASA has a long history of international cooperation. In fact, "cooperation with other nations and groups of nations" in the peaceful exploration of space was envisioned as a key element in the legislation that created NASA back in 1958. While we are proud of NASA's global leadership, we are also mindful that the scientific and human space flight achievements of the past half century would not have been possible without international cooperation.

Fifty-two years ago, it was a Russian, Yuri Gagarin, who became the first human to orbit the Earth. NASA's Alan Shepard followed him a month later. America's historic 1969 moon landing was the result of the collective contributions of generations of astronomers and scientists — from Galileo to the brilliant German rocket scientist, Werner Von Braun, designer of the Saturn V rocket that made that first moon landing possible. Though quite ironic, it is significant that both Gagarin and Von Braun were from nations formerly hostile to the United States.

But there is something intrinsically unifying about humankind's exploration of the heavens. Beyond the scientific and economic benefits of launching into space, there is the great possibility that when viewed from orbit, our borderless Earth inspires a sense of both oneness and wonder. As the great British astronomer Sir Fred Hoyle said in 1948, "Once a photograph of the Earth, taken from outside is available, a new idea as

powerful as any in history will be let loose" How very true!

President Obama has also made space exploration a key element of America's commitment to building a more peaceful world. In his speech at Kennedy Space Center in Florida three years ago he said, "No longer are we racing against an adversary; in fact, what was once a global competition has long since become a global collaboration" That is why we vigorously support the goals of the United Nations and its various space-related entities, including the Office for Outer Space Affairs and the Committee on the Peaceful Uses of Outer Space. That is also why the United States will be hosting the ministerial-level International Space Exploration Forum (ISEF) in Washington, DC on January 9th, 2014.

This Forum will build on a process started at the European Union-hosted High Level International Space Exploration Dialogue, held in 2011. There is strong international consensus to continue this process to build support for global cooperation in space exploration. Such a forum for informal policy discussions among the key space faring nations will be useful, especially given fiscal constraints and growing interest worldwide. I believe that the success of our modern space programmes will be judged, in part, on how well we continue to make space exploration about global partnership, particularly since it is clear that no one nation can do it alone and the benefits to be gained are for all of humanity.

With NASA's long history of successful international cooperation, and more and more nations reliant on space-based capabilities to support their day-to-day lives, I have every reason to believe that we will continue to build strong relationships around the world and create a unified effort for expanding humanity's horizons beyond this planet. Whether that means sending an astronaut to orbit, designing experiments, being the main supplier of a crucial part on one of our new observatories, or being a researcher who analyses data from our spacecraft, there is going to be a role in exploration for everyone who wants to participate.

The period in which we now live represents a once-in-a-generation shift from a flagship program, the space shuttle, to a new way of doing things — a new paradigm, and a new set of priorities. What does this mean for the future? NASA is in the future business and that means shaping tomorrow and helping us to reach our higher potential as human beings. It is a very exciting time to be involved in space exploration. The retirement of the space shuttle after 30 incredible years of flight represented a bittersweet time for NASA, but the next great era of space exploration is quickly taking

shape. In fact, our most recent call for astronauts drew more than 6300 applications, the second highest we have ever had. And later today, in the US we'll introduce the eight astronauts who will make up the NASA Astronaut Class of 2014 — Black, white, Native American, male and female, civilian and military — they represent the tapestry of humanity that is so truly America. These explorers will help NASA achieve the agency's next generation exploration goals — they will fly on commercial vehicles to low-Earth orbit, continue cutting-edge research on the International Space Station, travel in Orion to an asteroid and lead the way for those who will go to Mars in the 2030's.

President Obama's 2014 budget for NASA advances a strategic plan for the future that builds on our nation's continuing interest in science and technology, improves life on Earth, and protects our home planet, while creating well-paying jobs and strengthening the American economy.

Let me give you a few examples of how this affects our international partnerships. First, the President's budget extends the life of the International Space Station — the springboard to NASA's next great leap in exploration — to at least 2020. All the partners agreed to this extension. The ISS is a convergence of science, technology, and human innovation that is helping us learn what it means to be a spacefaring people by demonstrating new technologies and making research breakthroughs not possible here on Earth. In addition to all the science and research on human health that has been and continues to be conducted on the International Space Station (ISS), one of the Station's historic achievements is how it demonstrated that many nations could work together on a project of enormous scope, can complete it, and then keep it going.

Fifteen nations contributed to the development and assembly of the International Space Station and to date more than 68 nations have participated in some form of ISS utilization. With improved future access to ISS, it is anticipated that even more nations will become involved in the programme through their utilization of this amazing research facility on-orbit. The ISS represents our toehold to the rest of the solar system. What we learn there is going to make it possible for us to venture farther. Already, we have had people continuously in orbit 24/7 for more than 12 years. Just the thought of this would have been science fiction when I was a child.

Not only is the ISS the largest, most complex international scientific and engineering programme in history, it is a test bed for future technologies and systems and is a tangible symbol of unprecedented

international cooperation. Just look outside on a clear evening and you might see a very bright shining star moving overhead. That is the International Space Station — the temporary home for international crews living and working in space on a world-class laboratory that conducts full-time research. Now that its construction is completed, we expect many more partnerships in the future with academia, industry, other U.S. agencies, and as I mentioned earlier, other countries, to help bring it to its full potential and fully utilize this incredible investment.

A second area of shared interest is the global space community's interest in traveling farther than we have ever gone before into deep space. During President Obama's visit to Kennedy Space Center in April 2010, he set goals of sending humans to an asteroid for the first time in history by 2025 and making a crewed journey to Mars by the 2030's. The President's recently announced \$ 1.7 billion 2014 budget request for NASA keeps us on track for fulfilling those ambitious goals. It fully funds the Space Launch System (SLS) heavy lift rocket and Orion Multipurpose Crew Vehicle (MPCV) needed to carry astronauts to deep space. There is an international component to this mission. Just this past January, NASA and the European Space Agency announced that when the Orion spacecraft blasts off for its initial fully integrated test flight in 2017, it will be powered by an ESA-supplied service module. I want to thank ESA for this important partnership. This is further evidence of the international cooperation that is so vital to the future of space exploration.

A third area of shared interest is our desire to improve international cooperation in the detection and characterization of Near Earth Objects, and for developing plans for dealing with these objects that threaten the Earth. NASA strongly supports the recommendations of the Scientific and Technical Subcommittee regarding NEOs and is moving out on new work in this area. NASA's vision is to reach for new heights and reveal the unknown so that what we do and learn will benefit all humankind. It is hard to imagine anything more beneficial to humankind than protecting our planet from a dangerous, wayward asteroid that could strike the Earth with devastating force. To that end we have begun work on an asteroid initiative that will engage every part of our agency as well as America's scientific, academic, aerospace and manufacturing industries in a collaborative effort that will benefit all humankind while bolstering the American economy. We also envision an important role for international participation in all aspects of this initiative.

This first-ever mission to identify, capture, and redirect an asteroid will allow NASA to accomplish multiple goals. First, it takes advantage of the hard work on our deep space technologies and will provide valuable experience in future mission planning and operations. These missions will include, but not be limited to, future crewed deep-space missions, including our planned visit to Mars.

Second, it will allow our astronauts to interact with an asteroid for potential resource utilization in space. And third, it will inform our efforts to prevent an asteroid or other Near Earth Object (NEO) from colliding with devastating force into our planet. Planning and design of this initiative have already begun and will continue into this coming summer. Leveraging capabilities throughout the Agency, we plan to use a high-power solar electric propulsion system to rendezvous with, capture, and redirect a small asteroid into a stable orbit in the lunar vicinity. From there our astronauts will be able to visit and return samples using the Orion spacecraft, the ESA service module, and our SLS rocket.

The events of February 15 were a stark reminder of why NASA has for years devoted so much attention to NEOs. The predicted close approach of a small asteroid and the unpredicted entry and explosion of a very small asteroid about 15 miles above Russia, have focused world-wide attention again on the necessity of tracking asteroids and other NEOs and protecting our planet from them. The coincidence of having these two very rare events happening on the same day, along with the unfortunate injuries to over 1,000 people on the ground in Russia, made this a very big news story.

While the probability of any sizable NEC impacting Earth anytime in the next 100 years is extremely remote, we cannot ignore this potential. The 1908 explosion of an asteroid over a remote part of Siberia devastated 830 square miles and flattened 80 million trees.

NASA currently leads the world in the detection and characterization of NEOs, and is responsible for the discovery of about 98 per cent of all known NEOs. We are regularly monitoring the risks to our planet and constantly updating our knowledge. Seizing and isolating an asteroid will demonstrate our new deep space technologies, will move us closer to the goal of sending humans to Mars and enhance our ability to protect our planet and prevent natural disasters from space.

While all of this is going on, our American industry partners are developing new ways to reach space, creating jobs and enabling NASA workforce to

focus on new technologies that benefit all of our missions.

A little more than one year after the end of the Space Shuttle Program, an industry partner, SpaceX, began resupplying the International Space Station with cargo launched from the US, and the recent successful test launch by Orbital Sciences marks another significant milestone in NASA's plan to rely on American companies to launch supplies and astronauts to the International Space Station, bringing this important work back for us to the United States.

Under NASA's budget, the American cargo resupply programme is funded to keep these operations on track. The Administration is also committed to launching American astronauts from US soil within the next four years, and the budget provides the necessary resources to achieve this goal as well. The President's budget is also driving the development of space technologies such as solar electric propulsion that will power tomorrow's missions and help improve life on Earth.

Our technology investments not only increase the capabilities of NASA, but other government agencies and industry as well. This budget continues to build on our nation's record of breath-taking scientific discoveries and achievements in space, with science missions that will reach farther into our solar system, reveal unknown aspects of our universe and provide critical knowledge about our home planet.

On the heels of Curiosity, the most daring mission to Mars in history, the 2014 budget includes funding for another mission to the Red Planet, continues operations of our rovers and orbiters already there, and makes possible the MAVEN mission's launch this coming November to study the Martian upper atmosphere, the InSight mission to launch in 2016, and NASA's continued cooperation with the European Space Agency's ExoMars program. In close cooperation with partners around the world, NASA's budget will sustain our Agency's vital role in helping the global research community to better understand Earth's systems and the climate and the dynamics between our planet and the sun. These efforts will provide critical knowledge about our home planet and potential threats.

We will continue our steady progress toward our next Great Observatory as we develop and conduct critical tests on the James Webb Space Telescope. Its planned launch in 2018 will again revolutionize our understanding of the universe. Like most of our science missions, JWST will be an international collaboration as we launch on an Ariane launcher from Curou, We've had to make tough choices in the current fiscal

environment, but NASA is using its resources strategically for a unified, cohesive exploration programme that raises the bar of what humans can achieve. This keeps us on track to turn low-Earth orbit transportation of both cargo and crew over to commercial companies while it frees NASA up and its international partners to take the next big leap into deep space and put the first footprints on Mars.

For more than 50 years the United States, working in partnership with UNCOUOS and many of its member States, has taken a leadership role in the peaceful use of outer space. This partnership is driven by a clear understanding that issues of global importance, such as those addressed by this Committee, call for global involvement. Together, we have been working to share discoveries and knowledge of the universe, bringing the benefits of space technology to developing countries, and encourage the use of space as a tool for sustainable development here on Earth. Together, we are embarked on an incredible new journey of exploration and discovery.

Please accept NASA's thanks for your continuing efforts, and our commitment to work with you to achieve goals that can only be achieved by peoples of all nations working together. Thank you very much, Mr. Chairman.

The Chairman Thank you Mr. Bolden for your presentation. This is a great opportunity to have Mr. Bolden, NASA administrator here. I would like to ask the question from delegates. Yes, I recognize the distinguished representative of Holy See. You have the floor.

Mr. J. Ortner (Holy See) Thank you Mr. Chairman. I think we have to congratulate Mr. Bolden for this very impressive presentation. I was especially impressed when he said 84 nations are already working, one way or another, together with the International Space Station. China who does independent Space Station activities and my question would be, Mr. Bolden, are there any intentions to collaborate also in future, with China in the space exploration programme? Thank you.

Mr. Bolden (NASA) Right now, unfortunately, NASA is under prohibition of working bilaterally with China. But that does not prevent us from working in multilateral capacities. For example, we will be attendants at the International Astronautical Congress being held this upcoming September and October in Beijing. I think I speak for all of our international partners on the International Space Station, do collaborate with China and so we are able to get information about potential cooperation sometime in the future. But right now, we do not cooperate

bilaterally with, although, we are engaged with multilateral activities with, that involve the Chinese.

The Chairman I thank the distinguished delegate of Holy See for your question and answering his question from Mr. Bolden. Thank you very much. Are there any other questions?

Yes, I recognize the distinguished representative of Mexico. You have the floor.

Mr. S. Camacho (Mexico) Thank Chairman. I will ask a question in English. Do you envision possibilities by participation in some of these initiatives from some of the smaller space agencies and other space entities, particularly in developing and emerging countries.

Mr. C. Bolden (NASA) We definitely do, I think you probably are very well aware of when, during the space shuttle era, we actually flew a Mexican astronaut on the shuttle. I have recently met with the new head of the Mexican Space Agency. When I became the NASA administrator, almost 4 years ago next month, one of the things that President Obama told me he wanted us to do was to expand our, the number of, what we call non-traditional partners in space exploration. And that means nations that are small enough that they don't have a space programme or they don't have the financial wherewithal to get involved in space endeavours and so we spend time travelling around the world or entertaining representatives of smaller nations who want to get involved. As I look at the delegation from Kenya, I am reminded that just 2 years ago I actually had an opportunity to visit in Nairobi because there, along with the United Nations, the U.S. agency for international development, we are partnered with 15 East African nations in an environmental centre where we focus a programme that is called SEVERE and SEVERE is the provision of 30 years of Earth archived Earth science data plus real-time data from active satellites where we help working with USAID, we help scientists decision makers in those nations with such things as we were doing in Kenya, helping 15 member nations scientists develop drought and flood models using the data from space. We recently, in 2010, travelled to Kathmandu, Nepal to open a third SEVERE hub that is there in Kathmandu and it serves 8 of the Himalayan region, nations. You talk about things someone mentioned China, China is one of those 8 nations in [...] that is headquartered in Kathmandu that are working on environmental issues and so SEVERE serves the 8 membered nations of that. But in essences, the answer to your question is yes. We are actively trying to, we welcome all comers. Let me put it that way.

The Chairman Thank you Mr. Bolden. Is there any other delegates? To ask questions?

I see none

Thank you very much Mr. Bolden again. We will give the floor for his presentations.

Distinguished delegates, in order to use our time efficiently, with your agreement, I intend to open item 8, Space and sustainable development. If I see no objections I would like to proceed agenda item 8.

I see no objections. It is so decided.

Now, distinguished delegates, I will ask the distinguished representative of Nigeria. You have the floor on this agenda.

Mr. T. C. Brisibe (Nigeria) Thank you very much Mr. Chairman. Definitely is a tough act to follow Mr. Bolden and Japan on sustainable development, but I will try. Mr. Chairman and distinguished delegates, from time immemorial, the observation and study of the Earth has always been a human preoccupation; the space age we have today continues to offer us the tools and the opportunities to know our world better. These opportunities have resulted in a growing human dependence on space tools and their multi-various applications to address human problems and meet most of our basic daily needs. Between July 1972 when the USA launched the first civilian Earth observation satellite, Landsat-1, to aid in such an effort and June 1992 when the world convened at Rio de Janeiro for the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit, over 15 Earth observation, meteorological and environmental monitoring satellites had been successfully launched, by a number of countries, to provide critical information about planet Earth and its environment. Nevertheless, the official report of the Earth Summit made no mention of the use of such space tools to meet human needs. The same was true of the Draft report of the 2002 World Summit on Sustainable Development held in Johannesburg.

With the aid of the launching capabilities of ten nations, today, over 50 countries have assets in space. Result? Over 75 per cent of the world has some knowledge about space and consumes a large number of space products and services daily. That be the case, one would expect that such knowledge should advance the use of space tools for sustainable development which in turn would accelerate the attainment of the major elements of the Millennium Development Goals (MDGs). All of that notwithstanding, the word "space" did not even appear once in the first draft of the Rio+20 Conference document; indeed, the discussion on the relevance of space technology to

sustainable development, at the Conference, was relegated to a side event, which I had the honour to moderate.

Over the years, COPUOS has addressed such sustainable development challenges as water resources, food security, healthcare, impact of climate change, weather forecasting, disaster management and a host of other space applications themes. The same goes for UN agency that you have seen for practical applications for the benefit of the developing countries. Yet, the use of space has barely been acknowledged, let alone understood, by decision makers at the various UN and international meetings on the environment and development.

In our collective effort to see action on the recommendations of UNISPACE III as compared to those of UNISPACE 82 which were left to the Secretariat to implement without any increase in its budgetary allocations, this Committee established action teams. As of 2005, twelve of the 14 action teams completed, in one form or the other, their mandates, and submitted their reports. I went back to re-examine a number of these reports and noted that only a few of them actually addressed sustainable development-related issues. In order to ensure that the work of this Committee contributes to the attainment of the goals being championed by the United Nations Commission on Sustainable Development, we mandated UNOOSA to report annually to the Commission on the work of this Committee on the role of space in sustainable development. Mr. Chairman and distinguished delegates, the question is: Is this process that we have adopted having any meaningful impact on the work of the Commission?

Fast-forward, this Committee has a number of pending opportunities to make a difference in the future work of the United Nations on sustainable development. Specifically, today, because no sustainable development agenda will work without any significant input from proven space technology capabilities, the challenge facing this Committee now is how space can be brought into the mainstream of sustainable development agenda. Conference Room Paper 7 (CRP. 7) circulated by the Secretariat at this Session of COPUOS offers this Committee three opportunities to reinforce the role of space in sustainable development. These the sixth (December 9-13, 2013), the seventh (January 6-10, 2014) and the eighth (February 3-7, 2014) Sessions of the Open Working Group of the General Assembly on Sustainable Development, a process that has been devised to attain the Future we want in the post Rio+20 era. Among the sustainable development related thematic areas to be addressed by these sessions of the

Open Working Group of the respectively, are “Means of implementation: Global partnership for achieving sustainable development” “Climate change and disaster risk reduction;” and “Oceans and seas, forests, biodiversity.”

Conscious of these developments, last week, a number of delegations, particularly Austria, Canada and Japan, addressed the need for this Committee to be bold in its future work with an agenda that would have a significant impact on our lives. In his own submission on the future work of this Committee, titled “Next Phase in Global Governance for Space Research and Utilization (CRP 10)” our Chairman challenged this Committee, “To promote greater dialogue between the Committee and the regional and international cooperation mechanisms in space activities for sustainable development.” This particular CRP 10 has just been illustrated by the technical presentation by Japan.

At this juncture, Mr. Chairman and distinguished delegates, my delegation welcomes these initiatives on sustainable development and would like to propose that this Committee should focus its immediate attention and contribution on “Oceans and seas” with particular emphasis on “Space and marine ecosystems.” In this connection, we wish to recall paragraph 113 of A/RES/66/288 — The Future We Want, and that resolution states as follows: we also stress the crucial role of healthy marine ecosystems, sustainable fisheries and sustainable aquaculture for food security and nutrition and in providing for the livelihoods of millions of people.

Although the oceans and seas cover 72 per cent of the Earth’s surface, support life, drive the climate and hydrological cycles and provide vital resources; they are also critical for global food security, for sustainable economic prosperity and for the wellbeing of many national economies, however, my delegation is not aware of any concerted effort by this Committee, to date, to give priority attention to this very important subject called “Space and marine ecosystems.” The Nigerian delegation takes this opportunity, Mr. Chairman and distinguished delegates, to request this Committee, at this its 56th Session, to make “Space and marine ecosystems” a priority item within its sustainable development agenda from now on.

Now, with your permission. I would now like to illustrate our justifications with some slides and a 4 minute video.

Now, I have an outline of more or less of a technical presentation but I am not going to go through that. But you can see, I am going to summarize what is on the screen for you.

Now, ecosystems, by their very nature, are functional units that comprise the organisms of a particular place and with the help of NOAA and Rhode Island University in the 1980s the world’s ecosystems were divided into 64 large marine ecosystems. Totalling about, each of them, about 200,000 square kilometres.

And the next picture shows you this particular division globally, and so, within each of these ecosystems, you have series of wealth, potential wealth, very useful to us. Now, here you have them in all kinds of colours, showing the concentration and the wealth around the continental shelves, globally. Now, part of the reason why this worth is here because of upwelling bringing quite a lot of the food in the ocean to the surface for the fish population to feed on around the shores. Now, in West Africa, in the world, not only West Africa, if you look at those two slides, left is Senegal, the right is on West Africa and the Atlantic coast of Africa. And I go back to the last portion there. In 2009, fishing constituted 13 per cent of the Senegalese exports and 1.7 per cent of its GDP. Whereas, on top, the total economic value for West Africa amounted to 18 billion per year. Where is this coming from, from this resources. Sea turtles, whales, elephant seals, manatees, tilapia, catfish and host of other things.

But we have problems. What are the problems? A lot of the countries have oil deposits, they have gas and they have all kinds of minerals. And harvesting these resources are creating problems that have a major impact. Gas flaring is one of them. Hauling the crude oil to the international market is another. So we have all kinds of varieties of problems. Now, there you have forest fires, deforestation problems, oil pollution, here you have them and coastal erosion problems. Including sand harvesting, harvesting the mangrove trees to do fishing. Then you have Banjul area being damaged by the ocean. But the greatest problem today, or one of the greatest problems today is space science and technology being used by the international fisheries people and trawlers to harvest the shores, particularly in West Africa, which is one of the richest in the world. What is happening, you have a lot of people that are mostly involved in artisan fishing, being deprived of their livelihood because the big trawlers are bringing the space technology to harvest the fish population. So, and what is the impact? That is the economic impact, where a number of countries are getting money from Europe in particular, for their fish. And here is a World Bank assessment of the value of the fisheries assisted in West Africa on the left side but on the right side is the impact of their value on Africa itself. So what do we do here. We have to engage in sustainability to the fisheries. Mozambique and Angola are doing some

things by creating marine reserves in their respective countries. Particularly to conserve and regenerate some of the depleted population.

Then there is space technology that can provide a water and can provide the data needed, getting used to understanding and making use of the data is another step. Again, we have, let me go to this slide, there is a need to learn from the experience of India. For example, where India has done quite a lot of work in educating the local people. So, before I conclude, Mr. Chairman, I need to go to the conclusion right now, I need to see the 4 minute video please.

Video presentation

Mr. Chairman and distinguished delegates, in conclusion, let me add, just in one minute that I also analysed paragraph 29 of CRP 7 that you all have and noted that 40 of the 69 member States, that is 58 per cent COPUOS member States and also members of the Open Working Group of the General Assembly on Sustainable Development, including its two co-Chairs, who are also permanent members of COPUOS. These same 40 member States of the open group also constitute 54 per cent of the total membership, that is 74 of COPUOS. Today, because no sustainable development agenda will succeed without critical input from space technology, this Committee, called COPUOS, is counting on its 40 member States within the Open Group to work arduously to ensure that space becomes an integral part of the global and United Nations sustainable development agenda. Mr. Chairman and distinguished delegates, thank you for your attention.

The Chairman I thank the distinguished representative of Nigeria for his statement. We will discontinue our interpretation service from now. We will continue our consideration for agenda item 8, Space and sustainable development, this afternoon.

Distinguished delegates, I will shortly adjourn this meeting. Before doing so, I would like to inform delegates of our schedule of work for this afternoon. We will meet promptly at 3.00 pm. At that time, we will continue and conclude our consideration of agenda item 4, General exchange of views, continue our consideration of agenda item 6, Report of the Scientific and Technical Subcommittee on its fiftieth session. We will begin agenda item 8, Space and sustainable development, and begin agenda item 9, Spin-off benefits of space technology: review of current status.

There will be one technical presentation this afternoon: by a representative of India entitled "Indian earth observation, space science and planetary". The Working Group on the Long-term Sustainability of Outer Space Activities will then hold its first meeting.

A conference room paper, containing a revised draft outline for the Working Group report, will be distributed today during lunch in the pigeon holes.

This evening, starting at 6.00pm there will be a reception in the Mozart Room of the VIC Restaurant, hosted by the United States of America.

Are there any questions to this proposed schedule?

I see none.

I wish to remind delegations that today during lunch time, there will be a screening of the video "Chopin: the Space Concert", here in Board Room D starting at 2.00 pm. This video is 42 minutes in length and it is presented by Poland. Also during lunch time today, there will be informal consultations, organized by Japan, on conference room paper 6, containing the proposal for a new agenda item for the Legal Subcommittee, and conference room paper 8 containing a proposal on "Space and Sustainable Development". The consultations will be held from 2.30 to 3.30 p.m. in meeting room C043.1

Also during lunch time today, two expert groups of the Working Group on the Long-term Sustainability of Outer Space Activities will be meeting. Expert group A will be meeting in room C0739, from 2.00 p.m. to 4.00 p.m. Expert group B will be meeting in room C6, from 2.00 p.m. to 3.00 p.m. And action team 14 on Near Earth Objects will meet today during lunchtime from 1 p.m. to 2 p.m. in room C0435

This meeting is adjourned until 3.00 p.m. Thank you very much.

The meeting adjourned at 1:10 p.m.