United Nations COPUOS/T.634

Committee on the Peaceful Uses of Outer Space

Unedited transcript

Fifty-fourth session

634th Meeting
Monday, 6 June 2011, 10 a.m.
Vienna

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

The meeting was called to order at 10.10 a.m.

The CHAIRMAN Good morning distinguished delegates. I now declare open the 634th meeting of the Committee on the Peaceful Uses of Outer Space.

This morning we will continue and conclude our considerations of agenda item 6, implementation of the recommendations of UNISPACE III; agenda item 7, report of the Scientific and Technical Subcommittee on its forty-eighth session; agenda item 10, space and society and, agenda item 8, report of the Legal Subcommittee on its fiftieth session.

Following the plenary there will be three technical presentations. The first by a representative of Italy, entitled 'Operational services based on space data in support of seismic risk management'. The second one by a representative of the United States entitled 'The International Space Station' and the third, by a representative of Japan, entitled 'Example of the application of satellites under the Great East Japan Earthquake and others'.

During lunchtime, starting at 2 p.m. three videos will be screened in this meeting room by the Russian Federation, the United States and China.

Delegations are kindly requested to provide the Secretariat with written amendments to the provisional list of participants, which was distributed as CRP.2, so that the Secretariat can finalize the list of participants by tomorrow.

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

Distinguished delegates, I would now like to open and continue agenda item 6, implementation of the recommendations of UNISPACE III.

Are there any speakers wishing to address the session on this item? I see none.

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

Now we open agenda item 7, report of the Scientific and Technical Subcommittee on its forty-eighth session.

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

_____ (Japan) Mr. Chairman, distinguished delegates. On behalf of the Japanese delegation I am pleased to have the opportunity to address the fifty-fourth session of COPUOS.

Japan fully supports the report adopted by the last session of the Legal Subcommittee, I wish to express our sincere appreciation and respect for the excellent work of Mr. Ahmad Talebzadeh, Chairman of the last session of the Legal Subcommittee and Dr. Othman, Director of the Office for Outer Space Affairs and her staff.

V.11-83719 (E)

Mr. Chairman, there is an increasing number of nations and even private sectors which are embarking on space activities and these activities are becoming more diversified. Since many space-related issues have recently emerged, issues which were not envisaged at the time of the adoption of space-related treaties, it is very important to provide this ever-growing number of space activities with the necessary legal framework. Therefore, in order to meet the challenges of this changing situation, such as space debris mitigation, we should explore the possibility of developing appropriate new rules, including soft laws. The Legal Subcommittee has the fundamental role to consider various legal aspects to secure equal and free access to space activities. As a space-faring nation Japan does not spare any efforts to make the discussion under this Subcommittee more meaningful and effective while following appropriate procedure and policy.

Mr. Chairman. I wish to note that the general exchange of information on national legislation relevant to the peaceful exploration and use of outer space, is one of the most important agenda items in the Subcommittee's current discussion since it gives us the possibility to compare notes and share insights and experiences with other countries about the practices in governmental and non-governmental organizations.

Following our basic space law as well as the basic plan, we are now working on concrete legislation which covers a wider spectrum of private outer space activities. We expect that the report on this agenda item, which is to be completed by 2012, will be meaningful to all nations. During the exchange of information with other COPUOS members under this agenda item, Japan will continue to take necessary measures to fulfil its obligations to the space-related treaties. What is more, Japan participated in the discussion raising questions on registration in cases when operating satellites are transferred to a non-launching State.

Under another agenda item, general exchange of information on national mechanisms relating to space debris mitigation measures, Japan has introduced measures for debris mitigation and a debris mitigation standard which is being applied by JAXA. Japan will participate in the discussion at COPUOS for the establishment of appropriate rules in order to face new challenges such as debris mitigation.

Mr. Chairman, distinguished delegates. The COPUOS Legal Subcommittee is mandated with the important role of discussing legal aspects in order to ensure that space activities are conducted in a free and fair manner. As a space-faring country, Japan will continue to contribute to the Legal Subcommittee so that it may achieve its goals effectively and productively. Thank you for your attention.

The CHAIRMAN Thank you distinguished representative of Japan. We actually opened the agenda item 7, report of the Scientific and Technical Subcommittee. We take into account your statement on the Legal Subcommittee, always. If you want to delivery your speech for the Scientific and Technical Subcommittee, you are free to do it now.

_____ (Japan) Mr. Chairman, distinguished delegates. On behalf of the Japanese delegation I am pleased to have the opportunity to address the fifty-fourth session of COPUOS and Japan is pleased to announce its support for the report adopted by the forty-eighth session of the Scientific and Technical Subcommittee. I would like to express our deep appreciation and respect to the Chairman of the Subcommittee, Mr. Huth, and the excellent work of Dr. Othman and her staff at UNOOSA.

Taking into the account the increased number of space debris in outer space, we are of the view that there will be more items to be considered in this Subcommittee. Thus, Japan participated in the Subcommittee collaboratively and contributed examples of successes to each agenda taking advantage of our technical and professional backgrounds.

Mr. Chairman. Before we continue, we would like to express our deepest appreciation for the words of encouragement and support we received from many countries around the world following the Great East Japan Earthquake. With such support and encouragement we shall move forward towards full recovery and reconstruction at the earliest possible date. It is our sincere hope that Japan will once again regain its strength and confidence.

We recognize that space technologies have made significant contributions to the unprecedented disasters. We are deeply grateful to receiving about 5,000 scenes captured by satellites from a number of countries and organizations through international collaborative frameworks such as the International Charter on Space and Major Disasters as well as Sentinel Asia. In our country, our satellite Daichi captured more than 400 scenes and transmitted necessary information to 10 local governments and organizations. Upon request by Iwate Prefecture, satellite communication links were provided using the Wideband Internetworking Engineering Test and Demonstration Satellite, or WINDS, which is also

known as Kizuna, and the Engineering Testing Satellite Kiku No.8. We invite any interested delegates to our technical presentation a little bit later on our experience following the earthquake and to our exhibit booth in the Rotunda.

Through the framework of the Asia Pacific Regional Space Agency Forum (APRSAF) we continue to carry out Sentinel Asia with other related countries which provides disaster related information including satellite images acquired from Japan's satellites online.

Currently, 65 agencies from 24 countries and one province, as well as 10 international organizations, participate and collaborate in the Sentinel Asia project by not only providing satellite images but also preparing for the distribution of data using WINDS of Japan, Sentinel Asia is expected to provide more benefits for larger populations.

Furthermore, Sentinel Asia is much expected to contribute to carrying out the GEOSS 10-year implementation plan which calls for promoting the use of satellite images in disaster prediction and early warning systems to reduce loss of life and property. Recognized as a GEOSS early achievement at the GEO Ministerial Summit in November 2010, Sentinel Asia serves as a component of GEO System of Systems through the collaboration with the International Disaster Charter.

Through the network of the joint project team meetings of Sentinel Asia, we will continue our efforts to make Sentinel Asia more effective and user friendly towards achieving its wider use. Japan believes that Sentinel Asia and its achievements could serve as a model of disaster management support activities even in such areas where no similar initiative currently exists. Hence, we will continue to present its latest activities at COPUOS and other fora.

Besides our efforts through Sentinel Asia, you may recall that the Asian Disaster Reduction Centre (ADRC) was designated as a regional support office of UN SPIDER in June 2009. Within the framework of Sentinel Asia, ADRC provides lectures to seminars on the use of satellite images. ADRC also undertakes its own capacity-building projects for the benefit of ASEAN countries to facilitate their use of satellite images in disaster management. All these activities lead to broadening the base for using satellite images in disaster management activities thus making important contributions to advancing the UN SPIDER programme.

Mr. Chairman. In addition to Sentinel Asia there are other initiatives of APRSAF, such as the Space Applications for Environment (SAFE) and the Satellite Technologies for the Asia Pacific Region (STAR). The latter offers opportunities for joint development of small satellites.

SAFE is a Japan-led environment monitoring project with the use of satellites for Asia and the Pacific, through a long-term monitoring of impacts of climate change and human activities in Asia and the Pacific, SAFE aims to contribute to delivering societal benefits relating to the nine areas identified by GEOSS, namely agriculture, bio-diversity, climate, disaster, ecosystems, energy, health, water and weather. We are receiving various requests from other countries for long-term environmental monitoring such as land cover change, river water level change and glacier extension monitoring. Currently eight prototype activities proposed by seven countries namely Cambodia, Indonesia, Laos, Pakistan, Sri Lanka, Thailand and Viet Nam, are being carried out through international collaborations including Japan. We aim to expand our coverage of SAFE by working together with other Asian countries.

At APRSAF-17, held in November last year, Australia proposed a new initiative named Regional Readiness Review for key climate missions, or Climate R3. Working together with other interested countries, Australia would consider ways and means to implement the proposed initiative and undertake pilot activities. At APRSAF-18, to be held in Singapore in December this year, we are expecting Australia to report on the results of those activities.

We would now like to turn to the other APRSAF initiative, the Satellite Technologies for the Asia Pacific Region (STAR). Launched by APRSAF-15 in 2008, this capacity building initiative provides hands-on training opportunities through joint development of small satellites. Commencing its activities in April 2009 at Sagamihara Campus of JAXA, STAR has received young engineers sent from countries in Asia and the Pacific and provided them with training opportunities through satellite system design and micro satellite development. In the past two years, STAR has received 16 young engineers in total from space agencies of India, Indonesia, Malaysia, Republic of Korea, Thailand and Viet Nam. This year a part of STAR will evolve into a micro-satellite initiative of Japan named University International Formation Mission (UNIFORM). This initiative envisages collaborations with space entities, including space agencies, and aims to provide young engineers and students from other countries around the world

with training opportunities through micro-satellite development.

Mr. Chairman. Japan supports the rule making to establish governance in outer space. Our national policy sets out that Japan will proactively participate 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. Under the agenda item of long-term sustainability of outer space which Dr. Peter Martinez is chairing in this subcommittee, Japan insists on four basic positions as follows.

Firstly, the working group should discuss this issue in a practical and pragmatic manner in order to make the results more concrete. Thus, Japan has proposed a risk analysis approach which should be taken in the expert groups. Secondly, it is important to commence a full-fledged discussion and make progress on this issue as early as possible so that the working group can concentrate on technical examinations. Thirdly, COPUOS is not the venue to discuss military or security issues but peaceful uses of outer space. Thus, such discussions on national security should not be held under this item.

Finally in order to ensure consistency with the existing frameworks, COPUOS should neither duplicate nor overlap with existing mandates, ongoing operations or documents of other bodies of COPUOS or international organizations. Keeping these four aspects in mind, Japan agrees to the terms of reference submitted in the Subcommittee and will support the chairman of the working group as well as make its best efforts to ensure a practical and constructive outcome. Thank you very much for your kind attention.

The CHAIRMAN I thank the distinguished representative of Japan for your statement.

We continue with agenda item 7, report of the Scientific and Technical Subcommittee on its forty-eighth session.

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

Mr. F. DUARTE SANTOS (Portugal) Thank you Mr. Chairman. Mr. Chairman, since this is the first time that I address the Committee, I would like to express the appreciation and satisfaction of the Portuguese delegation to see you again as Chairman of the Scientific and Technical Subcommittee of COPUOS and to assure you of the contribution and full support of my delegation for the successful work of the Committee.

I would also like to express our appreciation to the Office for Outer Space Affairs for the work in the preparation and management of this meeting and for the excellent organization of the fiftieth anniversaries of the first human space flight and of COPUOS.

Mr. Chairman, distinguished delegates. I wish to express the condolences of my country's delegation to the people of Japan for the difficult situation that resulted from the earthquake and tsunami of 11 March this year and also to the people of other countries that have been recently hit hard by natural disasters including Russia last summer, Australia, New Zealand and Brazil this year.

The first space flight of Yuri Gagarin in 1961 opened a new chapter of human endeavour in outer space. Since that time significant developments have been made in space science and technology and also on its applications such as satellite communications, Earth observation systems and satellite navigation technologies. The space tools that have been developed in the 50 years, and nowadays indispensable, for providing long-term solutions to the challenges of sustainable development. Furthermore, it is expected that space applications will become ever more important to achieve some of the essential objectives that lead to sustainable development on Earth such as food security, addressing climate change, sustainable land use and rural development, monitoring drought and prevent desertification, early warning systems to help mitigate potential natural disasters and support natural disaster management, natural resource management and global health.

To achieve these objectives it is essential to ensure the safe and sustainable use of outer space. Thus, my delegation fully supported the establishment by the Scientific and Technical Subcommittee of a working group for the preparation of a report on the long-term sustainability of outer space activities. One of the first priorities of the working group should be the preparation of a set of voluntary guidelines and practical measures that could enhance the long-term sustainability of space activities in the context of an increased international cooperation to promote the peaceful uses of outer space.

My delegation wishes to thank Mr. Peter Martinez, chairman of the working group on the long-term sustainability of outer space activities, for the preparation of a draft terms of reference, scope and methods of work, for leading the informal

consultations and also for leading the informal consultations on this document at this session of COPUOS. My delegation considers it very important to approve, in this session, the terms of reference and methods of work of the working group precisely when we commemorate the fiftieth anniversary of COPUOS. Portugal wishes to indicate nominations of experts for the group of experts on sustainable space utilization supporting sustainable development on Earth, on space debris and on space weather.

Mr. Chairman, the Portuguese delegation fully supports the report of the Scientific and Technical Subcommittee on its forty-eighth session and allow me to take this opportunity to inform you that my delegation intends to participate in the discussion concerning agenda item 12, space and climate change and agenda item 14, on the future role of the Committee. Mr. Chairman, distinguished delegates, thank you for your attention.

The CHAIRMAN Thank you Mr. Santos for your statement on behalf of Portugal.

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

Mr. W. ZHANG (China) (*interpretation from Chinese*) Mr. Chairman. The forty-eighth session of the S&T Subcommittee in February this year was a resounding success. The Chinese delegation would like to congratulate its chairman and express thanks to the Secretariat for its excellent work.

Mr. Chairman. Chinese space activities continue to make headway in a vigorous manner this year. The No. 8 satellite of the Compass navigation system was launched on 10 April and, within this biennium, more satellites of the constellation will be launched to complete the construction of the Compass regional satellite navigation system which will offer navigation services in such fields as survey and marking fishery transportation and meteorology.

On 7 May the first space vehicle of the land-based east hemisphere meridian chain for integrated monitoring of the space environment was launched from Hainan launch site which is an important milestone in conducting China's autonomous space environment monitoring and ensuring the safety of space activities using _____(?) environment and disaster mitigation satellites while integrating satellites for remote sensing, navigation and communication. China's created a multidimensional disaster monitoring system linking outer space, airspace, Earth and specific locations as a whole to respond effectively to earthquakes, landslides, inundation and other potential disasters. Other space science research programmes in China being pursued enthusiastically.

Mr. Chairman, the UN SPIDER Beijing office is officially up and running in June and China will continue to back up its work for the benefit of global disaster preparedness and response. China has played an active part in space activities under the auspices of OOSA, ESCAP, and other organizations and the mutual cooperation has been fruitful.

As host country to the Asia Pacific Space Cooperation Organization, China will carry on with its support to the development of APSCO participating in projects like compatible navigation or terminal system and applications and reinforcing its educational training and other activities.

Bilateral cooperation is going on also between China's National Space Administration and national and regional space agencies of France, Ukraine, Kazakhstan, Brazil, Pakistan, and others, on the basis of equality and reciprocity and tangible results have been reaped.

China has always attached importance to the issue of space debris and has taken an active part in discussions and collaboration on the issue in COPUOS as well as the work of the Interagency Debris Coordination Committee in relation to debris monitoring, data analysis and prediction of falling of debris.

CNSA laid down China's first space debris related regulations in 2009 and intensive research on the subject has never stopped in developing the new generation of launch vehicles. The LM-5 series, debris control has been incorporated into the design at the very beginning.

Mr. Chairman, the Chinese delegation is in favour of conducting work in S&T Subcommittee on the long-term sustainability of space activities. We attach importance to the issue and expect that our work will contribute to the sustainability of space activities which, in turn, will serve sustainable development of the Earth.

China believes that long-term sustainability of space activities is closely associated with the wellbeing and interests of countries. Only by listening extensively to the concerns of all countries, developing ones among them, and assisting in equal and reciprocal international cooperation, can we push forward

sustainable development of space activities in a comprehensive and profound manner.

China endorses the adoption of the terms of reference and working methods of the working group at this session which will provide an institutional guarantee to its future work. In addition, China has already nominated quite a number of experts in related field to various expert groups and is ready to step up exchanges and cooperation with others within the context of the working group and various expert groups.

Mr. Chairman. This year marks the fiftieth anniversaries of COPUOS and human space flight. Over half a century human space endeavour has never ceased and the achievements are tremendous. Hand-in-hand with other countries China is willing to promote the cause of peaceful use of space and make new contributions to the progress of science, human peace and development. Thank you Mr. Chairman.

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

The next speaker on my list is the distinguished representative of the United States of America.

Mr. J. HIGGINS (United States of America) Mr. Chairman on behalf of my delegation I would like to express our appreciation for the excellent work of Mr. Ulrich Huth of Germany as chairman of the Scientific and Technical Subcommittee again this year. Under his guidance the forty-eighth session of the Subcommittee made significant progress and addressed a wide variety of current topics. In addition, the US delegation once again commends the outstanding work of the Office for Outer Space Affairs in supporting the Subcommittee meeting and its working groups.

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

We fully endorse the report of the 2011 Scientific and Technical Subcommittee. We would like to especially the note the progress made by the STSC to establish an approach for the working group on the long-term sustainability of space activities by which the working group, under the chairmanship of Peter Martinez of South Africa, can begin to carry out its workplan. We commend Mr. Martinez for his diligent efforts prior to, during, and since, the STSC session to organize the work of 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 the complete terms of reference for the working group during this Committee's session.

We note with pleasure that during the forty-eighth session of the STSC a representative of the United States Strategic Command provided an update on United States' efforts to improve its Space Situational Awareness Sharing Programme. This is an area that will get greater scrutiny during the work on the long-term sustainability of space activities.

On the matter of 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 multiyear workplan 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 outer 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 United Kingdom, 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 agenda topic of near-Earth objects, the United States supported the extension of the current workplan of the working group examining this topic. We note the progress made to expand the global network for NEO detection and characterization but understand that more time is needed to consider how international cooperation might be encouraged and formulated to design potential NEO deflection missions. Although there is more work to do in this area we remind all that the first 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 most supportive of the STSC consideration of the agenda item on the International Space Weather Initiative. This is a natural follow-on to the International Heliophysical Year (IHY) 2007 and it will allow valuable international cooperation, begun under IHY, to continue well into the future as we seek to understand more fully the effects of the Sun on our space infrastructure and our environment here on Earth.

At the STSC session we welcomed an update on the activities of the International Committee on Global Navigation Satellite Systems (ICG) which emerged from the third UN Conference on the Exploration and Peaceful Use of Outer Space and was formally established in November 2006. It continues to make significant progress towards the goals of encouraging compatibility and interoperability among global and regional space-based positioning, navigation and timing, or PNT system, in promoting the use of GNSS and its integration into infrastructures particularly those in developing countries. The United States will continue to coordinate with COPUOS member States in support of ICG and the Providers Forum.

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

Presently 41 countries and 2 organizations participate in the operation and management of the Cospas-Sarsat system. The United States along with its partners in Canada, France, Russia and Eumetsat, continues to provide a space segment consisting of geostationary and polar orbiting environmental satellite systems. Combined with contributions from our international partners, the Cospas-Sarsat programme now has six polar orbiting and five geostationary satellites that provide worldwide coverage for emergency beacons. In 2010, Cospas-Sarsat alert data helped save 2,398 lives in 660 search and rescue events worldwide. Since becoming operational in 1982 the Cospas-Sarsat system provided assistance in rescuing over 30,000 persons in some 8,400 search and rescue events.

The United States continues to assist in an effort to improve the usefulness of Cospas-Sarsat alert data. In February of this year, the United States hosted a search and rescue controller conference open to US and international search and rescue points of contact. The conference provided detailed information on the international system space segment operations and the messages provided by the United States Mission Control Center. The training was well received and plans are to continue this outreach on an annual basis.

Additionally, the United States and its partners continued to explore the use of satellites in mid-Earth orbit, or MEO, to improve international satellite-aided search and rescue operations. The United States and its partners have started the planning with the development and evaluation, or D&E phase, for using global positioning system satellites for search and rescue. The D&E phase will help characterize the operational readiness of the system and, when predefined criteria are met, will allow the new MEO-Sar system to become operational.

In January, Russia launched the first dedicated Sar instrument in a MEO orbit on a GLONASS-K satellite. It is expected to be operational by August of this year and help support D&E activities, joining nine GPS satellites currently in orbit providing search and rescue capability.

The international programme has developed a draft operational requirement document with a second generation 406 MHz beacon. This document will lead the way for technical analysis in the development of beacon specifications. Current plans call for the availability of the second generation 406 MHz beacons by 2015.

The Cospas-Sarsat programme has announced the retirement of the head of its secretariat, Daniel Levesque, who will leave at the end of August. Mr. Levesque had been the head of the secretariat since the inception of the programme in 1982. He has provided tremendous leadership and has been instrumental in the success of this programme. His leadership and experience will be sorely missed. After an extensive search, the Cospas-Sarsat Council has selected Mr. Steven Lett of the United States to be the new Cospas-Sarsat head of secretariat. Mr. Lett has already started work and will overlap with his departing colleague for three months to allow for an effective transition period.

Finally, Mr. Chairman, 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 illustrative examples of the application of space technology. Thank you Mr. Chairman.

The CHAIRMAN Thank you Mr. Higgins for your statement on behalf of the United States.

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

Ms. G. ARRIGO (Italy) Mr. Chairman, distinguished delegates. The Italian delegation is pleased to join other delegations in congratulating the Scientific and Technical Subcommittee on its forty-eighth session for the outstanding results achieved under the excellent chairmanship of Mr. Ulrich Huth. Italy follows with attention the workshops organized by the Office for Outer Space Affairs and supported by ESA in the framework of the United Nations Programme on Space Applications following UNISPACE III.

In 2010, nine workshops, symposia and training courses were successfully organized. Italy is supporting the organization of the fourth African Leadership Conference on Space Science and Technology focusing on the theme 'Building a shared vision for space in Africa' which will be hosted by Kenya and held in Mombasa in September 2011.

Regarding the agenda item, matters relating to remote sensing of the Earth by satellite, I would like to renew the strong commitment of the Italian Space Agency in this field. Italy promotes international cooperation at the bilateral level with the confidence that it can enlarge the potential of the national space technologies for remote sensing, resulting in higher mutual benefits. Among other partners in the field of Earth observation, I would like to mention Argentina, France, Japan, and new opportunities are opening with Canada and China.

Italy cooperates at the multilateral level as well through the ESA programmes and both within the Group of Earth Observations (GEO) and the Committee on Earth Observation Satellites (CEOS). It is a pleasure to inform you that the Italian Space Agency, as chair of the Committee on Earth Observation Satellites for the year 2011, will host the next plenary meeting which will be held in Lucca, Tuscany, 8-9 November 2011.

On the topic of space debris, I would like to underline that Italy is among those States that are implementing space debris mitigation measures consistent with the Space Debris Mitigation Guidelines of COPUOS and the Space Debris Mitigation Guidelines of the Interagency Space Debris Coordination Committee. Italy also promotes the further development of the Space Debris Mitigation Guidelines.

Concerning the agenda item, space based disaster management, the Subcommittee noted the contributions by member States to increase their availability and use of space-based solutions in support of disaster management including COSMO-SkyMed operated by Italy. In all the latest natural disaster events all over the world, the Italian Space Agency was asked by the national civil protection institutions to contribute, through the data of the COSMO-SkyMed radar constellation, to support the post-disaster monitoring and management activities.

I am pleased to inform you that, today, Dr. Stefano Salvi, Senior Researcher of the National Institute of Geophysics and Vulcanology (INGV), is going to make a dedicated presentation of operational services based on space data in support of seismic risk management. SISMA, Seismic Information System for Monitoring and Alert, is a pilot project managed by INGV and ASI which aims at developing and demonstrating different services to tackle earthquake consequences in support of the decision making system of the national civil protection institutions.

Mr. Chairman, distinguished delegates. I would also here record important results achieved by the fifth meeting of the International Committee on Global Navigation Satellite Systems which was held in Turin, last October 2010.

In conclusion, Italy is strongly involved and committed in the activities of the International Committee on Global Navigation Satellite Systems so as in the working group on nuclear power sources in outer space and in the working group on long-term sustainability of outer space activities. In particular, Italy hopes that during this session we will be able to adopt the terms of reference of the working group on long-term sustainability in order for the group to start working at the next session of the Scientific and Technical Subcommittee in February 2012. Mr. Chairman, distinguished delegates, thank you for your kind attention.

The CHAIRMAN I thank the distinguished delegate of Italy for your statement.

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

Mr. D. KENDALL (Canada) Thank you Mr. Chairman. In February 2010, Canada welcomed the adoption of a new agenda item within the Scientific and Technical Subcommittee on the long-term sustainability of outer space activities. This agenda item is the result of many years of informal meetings and consultations, led by France, within the United Nations Committee on the Peaceful Uses of Outer Space (UNCOPUOS) as well as the result of a consensus among member States on the necessity to address important and urgent issues integrated under the general title of sustainability of outer space activities. Canada contributed to the discussions of the draft terms of reference and method of work for the working group that are generally supported by all UNCOPUOS member States.

Mr. Chairman, Canada is highly appreciative of the work and leadership provided by the chair of the working group on the long-term sustainability of outer space activities. Meetings of the working group were organized on the margins of the plenary session in June 2010, at the International Astronautical Congress in September 2010, as well as during the 2011 session of the Scientific and Technical Subcommittee.

Canada was pleased with the open discussions and frank exchange of information that took place during these meetings and with the consultations conducted by the chair on the terms of reference and the methods of work of the working group. As many other member States, Canada sees the opportunity to submit comments and views on the terms of reference and therefore agreed and supported the adoption of the terms of reference as submitted by the chair of the working group at the beginning of the STSC session in February. We were disappointed that the Subcommittee could not adopt the document on the terms of reference during its February session and we hope that member States have responded positively to the note verbale, OOSA/2011/002, distributed during the intersession period and have provided constructive comments on the terms of reference for its adoption.

Canada was pleased to provide to the chair of the working group, names of experts for the four clusters of topics identified to structure the work of the working group. These experts will collaborate with their peers to advance the agenda of this working group.

As a space-faring nation, Canada is keenly interested in ways and means to address the long-term sustainability of space activities at the international level. Canada's main priorities within this working group will be with regard to:

1. Tools supporting collaborative space situational awareness. Canada is of the view that collaborative mechanisms should be developed to set up (a) a registry of operators; (b) data centres for the storage and exchange of information on space objects and operational information; and (c) information sharing procedures.

2. Space debris. Canada is a new member of the IADC and looks forward to the exchange of information on (a) measures to reduce the creation and proliferation of space debris; (b) collection, sharing and dissemination of data on space objects; and (c) re-entry notifications.

3. Space operations. Canada has had to conduct a number of spacecraft manoeuvres over the last year and we would be highly interested to address (a) collision avoidance; (b) pre-launch and pre-manoeuvre notifications; and (c) common standards, practices and guidelines.

4. Regulatory regimes. Canada believes that the establishment of national regulatory regimes could contribute to the implementation of the measures mentioned above.

5. Space weather. Canada currently contributes to the development of several space weather assets and we are very interested in working with member States of the working group to strengthen existing networks, facilitate the exchange of information among experts and encourage the development of new international partnerships. Canada will also provide its support and attention to the work initiated under other subjects of interest of the working group, such as guidance for new actors in the space arena as well as sustainable space utilization supporting sustainable development on Earth.

Mr. Chairman, there is no doubt that this working group offers a timely opportunity for member States to collaborate on major concerns and will help consolidate our common knowledge while developing essential capacities. Thus, Canada encourages strongly the adoption of the terms of reference and methods of work of the working group on the long-term sustainability of outer space activities during this plenary session as they will provide clear direction for further activities of this working group.

On behalf of my delegation, I would like to reiterate our complete support to the chair of the working group and commitment to be an active member of this initiative. Thank you Mr. Chairman.

The CHAIRMAN Thank you Mr. Kendall for your statement on behalf of Canada.

Is there any other delegation wishing to speak under agenda item 7, report of the Scientific and Technical Subcommittee on its forty-eighth session? I see none. We will therefore continue our consideration of agenda item 7, this afternoon.

Report of the Legal Subcommittee on its fiftieth session (agenda item 8)

Now I would like to begin our consideration of agenda item 8, report of the Legal Subcommittee on its fiftieth session.

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

Mr. L. ZHOU (China) (*interpretation from Chinese*) Thank you Mr. Chairman. Mr. Chairman the LSC convened its fiftieth session in March this year and achieved a complete success. The Chinese delegation would like to take this opportunity to express its appreciation to its chairman and the Secretariat for their hard work.

Mr. Chairman. This year marks the fiftieth anniversary of COPUOS and manned space flight, it marks also the fiftieth anniversary of the first session of the LSC and the resolution 1348 to set up COPUOS. One of its main tasks is to study possible legal issues regarding the peaceful use of outer space. Over the past 50 years, with the assistance of the LSC, COPUOS has completed the job brilliantly by providing a sound legal basis for the development of humankind's space undertaking. China supports COPUOS and its LSC in their efforts to continue the improvement of legal systems governing outer space.

Mr. Chairman. The Chinese government has consistently emphasized and taken an active part in the development of legal system governing outer space. China strictly observes the basic principles in all outer space treaties in her space activities and is committed to building a peaceful outer space characterized by development, cooperation and _____(?). We have noticed that the rapid developments in space activities have brought about many challenges to the current outer space legal regime. Faced with increasing privatization and commercialization, the international community should establish effective regulatory measures and institutional norms. The long-term sustainable development of outer space activities need the guidance of new rules and the rights of developing countries to the peaceful use of outer space also need to be guaranteed. On these issues, the international community needs consensus and coordination. The LSC should continue to lead the process.

The Chinese delegation appreciates UNIDROIT's effort to draft the space assets protocol and expresses satisfaction at the progress achieved in the fifth intergovernmental meeting held this year. The formulation of legal norms, space assets financing is in the interest of promoting an orderly development of the space financial market and accelerate the transformation and application of space technologies. It is therefore _____(?) international community to go along with trends in space activities and improve the outer space legislation. China takes the draft seriously by taking a constructive part in a series of important negotiations, we also continue to study the real issues so as to promote interactive and harmonious development of the protocol and existing outer space laws.

Mr. Chairman. Space laws and the development of space technologies are closely linked and of vital importance to regulating and guiding an orderly development of space activities. China has all along been committed capacity building in space law, attaching importance to basic research on space laws, striving to promote pioneering research and with positive outcomes.

China is also ready to step up exchanges and collaboration with countries and international organizations and support efforts in this regard by COPUOS and regional cooperation organizations to promote jointly, the legal development regarding outer space. Thank you Mr. Chairman.

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

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

Mr. J. CHOUINARD (Canada) Thank you Mr. Chairman. Canada was pleased with the discussions that took place at the fiftieth session of the Legal Subcommittee, this body continues to play an important role in the development of space law by providing a forum which States can exchange information and best practices relevant to the regulation of outer space activities.

Canada notes that each year the core outer space treaties witness a few new ratifications or accessions, however, many States still remain outside the framework created by these treaties. Canada strongly encourages those countries which have not yet ratified the key conventions governing the exploration and use of outer space notably, the Outer Space Treaty, the Rescue and Return of Astronauts Agreements, the Liability and Registration conventions, to do so as soon as possible.

These treaties have served, and continue to serve, the international community well. Canada welcomed the presentation by several member States on their national space laws particularly those that highlighted the implementation of the Space Debris Mitigation Guidelines. Canada has taken steps to implement the Guidelines into its regulatory framework and practices and will continue to search for innovative ways to address the issue of space debris mitigation. The inclusion of an exchange of information on national mechanisms relating to space debris mitigation measures on the agenda is one meaningful way the Legal Subcommittee can promote the implementation of the Space Debris Mitigation Guidelines by all States. Canada sincerely hopes this item will again be included on next year's agenda and looks forward to another productive exchange of information at the fifty-first session in 2012.

Canada was pleased with the efforts of the working group on national legislation relevant to the peaceful exploration and use of outer space which produced its first draft report on national space laws. The discussions and exchanges of information under this agenda item have been extremely useful for Canada. It was agreed, during the last session, to extend the mandate of the working group for one more year to allow it to finalize the report, Canada fully supports the extension of this mandate and looks forward to the completion of this very valuable report.

Mr. Chairman. An important and effective Legal Subcommittee which is able to address the most pressing legal issues confronting space exploration has been emphasized repeatedly over the years. Canada encourages all member States to actively participate in the Subcommittee meetings by expressing viewpoints and posing questions that can guide the work in a useful direction. Canada encourages the members of the Legal Subcommittee to focus on practical matters of direct relevance to space law. Discussion of such practical matters have the greatest potential to produce concrete benefits today and in the future.

The work of the Legal Subcommittee over the past 50 years has created the legal framework within which we have seen truly prolific accomplishments in outer space. A focused Legal Subcommittee can continue to strengthen the foundation of international space law, to foster an equally impressive period of development over the next 50 years. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Canada for your statement.

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

Mr. J. AIGNER (Austria) Thank you Mr. Chairman. Mr. Chairman, Austria welcomes the work of the Legal Subcommittee at its fiftieth session and the adoption of its report. Austria would like to express its appreciation for the excellent work of the Director of the United Nations Office for Outer Space Affairs and the Secretariat during the session and for their support to delegations.

Mr. Chairman. During this year's session of the Subcommittee, substantial discussions on various agenda items took place in particular on national space legislation and on the status and application of the five UN treaties on outer space. Under the agenda item, general exchange of information on national legislation relevant to the peaceful exploration and use of outer space the working group, chaired by Professor Irmgard Marboe from Austria, elaborated a comprehensive report which will be finalized next year. In this context, we welcome the extension of the mandate of the working group, we are also looking forward to discussing the possible elaboration of recommendations of the Legal Subcommittee and COPUOS.

Austria already expressed its strong support for the adoption of such recommendations. Let me take this opportunity to underline once again the importance of this agenda item and the work achieved so far.

The exchange on national space legislation is of particular value to States that are about to draft or to review their national space laws. Austria is currently in the process of drafting a space law and the discussions in the Legal Subcommittee provided an essential input in this process.

I would also like to highlight agenda item, status and application of the five UN treaties on outer space, where pertinent legal issues related to the treaties on outer space were raised in particular the

notion of _____(?) and the transfer of ownership of objects in outer space. Furthermore, we continued the conceptual discussion on the Moon Agreement. The working group, under the chairmanship of Jean-François Mayence, established an excellent structure for the discussion next year. We consider this agenda item to be one of the main ones in the Legal Subcommittee 2012.

Furthermore, I recall that an intensive debate on the working methods of the Legal Subcommittee took place. Austria supports the efforts to enhance the efficiency of the Legal Subcommittee. In the course of these discussions it has become clear which proposals may find consensus and which may not, for this reason we recommend to focus on the viable proposal next year and to try to come to an early conclusion of this debate in order to use the time for substantial issues.

Mr. Chairman. On the margins of the Legal Subcommittee, a conference at the University of Vienna entitled 'Soft law in outer space: the function of non-binding norms in international space law' was organized by the Austrian national point of contact for space law. The conference was well received by the delegates and the function of soft law in international space law and its influence on the actual conduct of space activities was regarded as an important issue also in the deliberations of the Legal Subcommittee.

Mr. Chairman. There are still many other important challenges in the field of space law that have been raised during the discussions of the fiftieth session of the Legal Subcommittee, such as space debris, commercialization of the space sector or nuclear power sources. In order to contribute to legal certainty, there is a need to further address these issues with a view to strengthen existing legal regimes and to discuss the need for new regimes. Austria is confident that productive work in this sense will be achieved in the upcoming sessions of the Legal Subcommittee.

In concluding, allow me to emphasize that the Austrian delegation will continue to provide strong support to the work and the deliberations of the Legal Subcommittee as well as to the Office for Outer Space Affairs. In this spirit we are looking forward to productive and rewarding future sessions of the Legal Subcommittee.

As a very last remark, I would like to remind delegates of the Austrian reception, a traditional Austrian heurigen, Wednesday evening. In case delegates want to participate, please let us know because we do need a definite confirmation of your participation by today. Thank you Mr. Chairman.

The CHAIRMAN I thank you Mr. Aigner for your statement on behalf of Austria.

The next speaker on my list is the distinguished representative of the United States of America.

Mr. K. HODGKINS (United States of America) Thank you Mr. Chairman. Mr. Chairman, my delegation has noted previously the positive developments in revitalizing the agendas and methods of work of COPUOS and its subcommittees. The last session of the Legal Subcommittee demonstrated once again the encouraging results that have emerged from our efforts. Under the able leadership of its chairman, Mr. Talebzadeh, the Subcommittee produced a number of highly useful results.

As we have in the past, we would like to take this opportunity to note that COPUOS and its Legal Subcommittee have a distinguished history of working through consensus to develop space law in a manner that promotes space exploration. The Legal Subcommittee played a key role in establishing the primary outer space treaties, the Outer Space Treaty of 1967, the Rescue and Return Agreement and the Liability and Registration conventions. Under the legal framework of these treaties, space exploration by nations, international organizations and now private entities has flourished. As a result space technology and services contribute immeasurably to economic growth and improvements in the quality of life around the world.

Notwithstanding the continued relevance of the space law instruments, many States have not accepted key treaties including some members of COPUOS. The United States has encouraged the Subcommittee to invite States to consider ratifying and implementing the four main space law instruments cited above and, of course, it should encourage States that have accepted the core instruments to look at the sufficiency of their nation's laws to implement them.

At the most recent session of the Legal Subcommittee, some States called for the negotiation of a new comprehensive convention on outer space. It is my delegation's view that such an approach would be counterproductive. The principles contained in the space law instruments establish a framework that has encouraged the exploration of outer space and benefited both space-faring and non-space-faring nations, it is important that we not lose sight of how much has been, and continues to be, achieved for humanity's common benefit within this framework.

Articles I and II of the Outer Space Treaty established that the exploration and use of space is to be carried out for the benefit and in the interests of all peoples, that outer space exploration and use are open on a non-discriminatory basis, that there is freedom of scientific investigation in outer space and that outer space is not subject to national appropriation. The United States fully supports these principles and believes that the Subcommittee should undertake activities that support the continued vitality of these principles. The United States remains convinced in particular that to entertain the possibility of the negotiation of a new comprehensive space law instrument might undermine these principles in the existing space law regime.

At its most recent session, the Legal Subcommittee continued its consideration of several items recently added to the agenda. Under the item on national legislation relevant to the peaceful exploration and use of outer space, delegations engaged in an informative exchange of information that provides insights as to how States oversee their governmental and non-governmental activities in space. The working group has benefited from the strong leadership of its chair, Irmgard Marboe of Austria, and we are pleased with the progress made by the working group on its review of the draft report. We will look forward to working to conclude the report of the working group at the next session of the Subcommittee.

The Subcommittee also continued its consideration of an item on the national mechanisms relating to space debris mitigation measures. This item, which gives member States and observers the opportunity to exchange information on what steps have been taken by States to control the creation and effects of space debris, provides a useful vehicle to continue the important work this Committee has done in the area of space debris mitigation.

Equally encouraging was the Subcommittee's consideration of the item on capacity building in space law. Member States and observers had the opportunity to exchange views on efforts underway at the national and international levels to promote a wider appreciation of space law. Such efforts, including the draft curriculum on space law developed by OOSA and the regional workshops, are vital to our work to build capacity in this area. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of the United States for your statement.

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

Ms. G. ARRIGO (Italy) Mr. Chairman. The Italian delegation is pleased to congratulate the Legal Subcommittee for the results achieved during its fiftieth session from 28 March to 8 April 2011 under the wise leadership of the chairman, Mr. Ahmad Talebzadeh. We wish to reiterate the importance of the activities of the Legal Subcommittee and of the Office for Outer Space Affairs as directly contributing to the progress made towards a more universal acceptance of the United Nations outer space treaties and the progressive development of international space law.

Mr. Chairman. The Italian delegation supported the recommendations that the mandate of the working group on the status and application of the five outer space treaties be extended for one additional year. Indeed, the debate within the working group was particularly fruitful thanks to the set of questions prepared by the chair as a basis for discussion in the working group. The Italian delegation considers that the issue concerning the transfer of ownership of objects in outer space deserves further debate. While assessing the status of the five UN treaties we should recognize that these treaties, essential for the peaceful development of space activities, are aging treaties and they seem no longer sufficient for addressing legal issues arising from the technological development to expansion of space activities and the increasing participation of the private sector. How to face these challenges is a matter of consideration by the Legal Subcommittee.

Similarly, the Italian delegation underlines the positive outcome of the working group on matters relating to the definition and delimitation of outer space. We look forward to the proposal and possible ways of finding a solution to the matters relating to the definition and delimitation of outer space that the chair of the working group announced for the session of the Legal Subcommittee in 2012.

Concerning the UNIDROIT draft protocol on space assets to the 2001 Cape Town Convention, Italy is one of the supporters to this legal instrument and to the creation of a bridge between UNIDROIT and COPUOS. We welcome the decision of the Legal Subcommittee to keep the item, examination and developments of the draft space asset protocol among the points of its agenda for 2012 session.

The novelty is that the fifth meeting of governmental experts, held in February 2011 in Rome, was the last one. In the text adopted by the Committee of Governmental Experts was presented to the UNIDROIT Governing Council in May 2011 and the Governing Council decided to submit the draft protocol

to a diplomatic conference for adoption. The diplomatic conference will be convened in the first half of 2012. Our delegation is particularly satisfied with its result which clones several years of experts.

Mr. Chairman, during the Legal Subcommittee session, the Office for Outer Space Affairs distributed a _____(?) documents concerning capacity building in space law together with the preliminary draft curriculum on space law education as well as the proceedings of the UN/Thailand workshop on space law activities of States in outer space in the light of new developments, meeting international responsibilities and establishing national legal and policy frameworks, held with the support of ESA and APSCO in Bangkok from 16-19 November 2010. The Italian delegation strongly supports the dissemination of the knowledge of space law especially in developing countries and welcomes an initiative in this important field.

Mr. Chairman, according to its workplan, the working group on national legislation conducted a detailed review of the draft report that had been prepared by the chair. While commending the results already achieved, the Italian delegation agrees that a number of elements primarily concerning the conclusions of the report should be subject of additional reflection. This is why we welcome the decision that the mandate of the working group should be extended to 2012 in order to allow the finalization of the report.

Last, but not least, our delegation wants to express satisfaction for the space law symposium held by IISL and ECSL during the first week of the session of the Legal Subcommittee. The subject ‘A new look on the delimitation of airspace and outer space’ was treated with a fresh mind by all the highly qualified speakers. We welcome that IISL and ECSL have been invited to hold another symposium on space law at the Subcommittee’s next session.

We would also like to take this opportunity for thanking the delegation of the Russian Federation to the Legal Subcommittee for the organization, jointly with ESPI, of the event celebrating the fiftieth anniversary of COPUOS and its Legal Subcommittee with panel discussions on the perspectives for space law which not only addressed the present challenges of space law but also the future of space law making.

Mr. Chairman. Coming now to organizational matters, many delegations expressed a feeling of dissatisfaction with regard to the current working methods of the Legal Subcommittee and the strong desire for the optimization of its sessions. Several proposals were put forward for the streamlining of the work including the abandoning of the system of rotation between agenda items and the organization of working group meetings in parallel to the plenary meetings of the Subcommittee. We appreciated very much the information given by the services of UNOV in order to clarify some points that were raised during these discussions. Our delegation was among these that proposed a shortening of the session of the Legal Subcommittee. As there was no consensus, we continued to look for other ways and means for streamlining the work of the Legal Subcommittee. In this respect, we are convinced that it is time to agree on new items to be treated in the Legal Subcommittee and on creating a more efficient bridge between the activities of the two bodies of COPUOS, the Scientific and Technical and the Legal subcommittees.

Mr. Chairman. With this statement, Italy fully supports the adoption of the report of the Legal Subcommittee on its fiftieth session. Thank you very much.

The CHAIRMAN I thank the distinguished representative of Italy for your statement.

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

Mr. M. CASTILLO (Venezuela) (*interpretation from Spanish*) My distinguished and dear Mr. Chairman. Since this is my first statement, I would like to greet you and say how pleased I am to see you chairing this session of COPUOS and also, through the chair, I would like to extend a greeting to all the delegates and to say how very pleased I am to see all of you once again. Nonetheless, I have say that I am now getting used to this new set up nonetheless I find you very far distant from me but I am certain that you can see us quite well.

All these changes are not so negative because we have near us a group of non-governmental organizations and, therefore, I think that I can defend myself from not having my head or anybody else’s head cut off either. Now getting down to perhaps more serious issues I would like to read out our declaration.

Mr. Chairman. The delegation of our country wishes to say that the subcommittee on legal aspects has played an active role over 50 years in space development and it is important to bear in mind that it is fundamental to continue the gradual development of outer space and its codification as well. It is important to invite all States to subscribe to the agreement but we

have to make much more progress. In this respect, the Legal Subcommittee has the immense responsibility of revising, updating and amending, the five UN treaties regarding outer space, the definition and delimitation of space in addition to addressing the new challenges deriving from worldwide space activities.

On this basis, our delegation regards with some circumspection the proposal made by other delegations to limit the time and length of the subcommittee in order to make its work more efficient when in fact and, in our view, it is necessary to address quite acutely the current space issues. It is necessary to have greater interaction between the two working subcommittees of COPUOS, the Scientific and Technical Subcommittee and the Legal Subcommittee, in order to strengthen the guiding principles which govern the space activities of States and in particular the peaceful use thereof. It is also necessary to strengthen international cooperation and address efficiently the critical issues which are currently of concern as regards space development.

We can see by way of example the items relating to the reduction of space _____(?) and the use of nuclear power sources in outer space are addressed in technical aspects and do not have the necessary legal framework and it is true that we need to have greater interaction between these two bodies. In this respect and making specific mention of the use of nuclear power sources in outer space and within the framework of the security framework relating to the implementation of nuclear power sources in outer space, as approved by COPUOS at its fifty-second session, the Venezuelan delegation urges member States to seek legal revision as well as the promotion of binding standards with a view to guaranteeing that all activities carried out in outer space be governed by the principles of the conservation of peace and life. I would like to conclude by recalling a proposal made by my delegation regarding changes in the relevant principles on the use of nuclear power sources in outer space.

As to the guidelines for the reduction of space _____(?) approved by the General Assembly in resolution 62/217 of 22 December 2007 and to be consistent with our approach, this delegation is of the view that there needs to be a legal analysis thereon. Here I would like to ask myself the following questions. Should there be time taken away from the Legal Subcommittee? Or is it a matter of making the work of the Committee more efficient?

I would like to recall what happened at the Legal Subcommittee's last session when the delegation of the Czech Republic presented a proposal to analyse space debris. This was virtually not accepted and we fail to see therefore how in another subcommittee where there has been an introduction of things and there was a great deal of work done on this whereas in this important issue it was brought to the fore, it was not accepted and we could not hear anymore about it. Therefore interaction between the two subcommittees is essential. Technical work has to go hand-in-hand with the legal aspects which are critical in the areas which I have just been referring to.

Let me continue. In connection with the geostationary orbit, this delegation reaffirms its position that this natural resource because it is limited and is in danger of being saturated and therefore we believe that it should be rationalized and extended to all States. The national delegation believes that equitable access to the shadow orbit resources could be guaranteed if these principles are ensured by international instruments and for this reason in order to ensure the peaceful and sustainable use of the geostationary orbit it will be necessary that consideration of this item be maintained on a regular basis within COPUOS and on the agendas of its two subcommittees in a fully interState environment through the establishment of action groups, working groups or intergovernmental panels which may be necessary to this end.

There I would like to share a few thoughts with you. We have been spending years discussing the whole aspect of the geostationary orbit but we have got nowhere and now when we are talking about sustainability I am wondering how we are going to approach this and I would hope that good work will be accomplished but let us bear in mind that legal aspects are important in this connection.

Let me conclude with great optimism and this delegation urges States to focus on the critical aspects which are currently endangering space activities in order to upgrade, modify and update international space legislation which exists and continue with the progressive development of international law which is one of the main aims of the United Nations through its COPUOS committee. Thank you very much Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Venezuela for your statement.

Is there any other delegation wishing to speak under the agenda item 8? France, you have the floor.

Mr. L. SCOTTI (France) (*interpretation from French*) Thank you Mr. Chairman. My delegation has

already had an opportunity to express, during this session, its support for and dedication for the work of this Legal Subcommittee. For example, our delegation made a presentation which last time dealt with matriculations and a number of delegations present here, and we would like to thank them for this, are continuing to contact us regarding the follow-up to this presentation.

Nonetheless at the last session of the Legal Subcommittee my delegation expressed the view, like other delegations, that the present agenda of the Legal Subcommittee and the absence of substantive progress in legal matters merited the suggestion that the length or duration of the session be shortened. The report and in particular paragraph 176 reflects this idea and it was indicated that the time that could be gained by shortening the Legal Subcommittee duration could be reassigned to the other subcommittee.

My delegation also suggested other measures which are reflected in paragraph 184 of the report of the Legal Subcommittee, for example the inclusion of certain items on the agenda of the Legal Subcommittee every two years. We would also like to stress, and with regret, the short effective length of the plenary sessions of the Legal Subcommittee indicated in paragraph 179 of the report of the Legal Subcommittee.

So we wish to convey our concern over the situation where only 45 per cent of the available time was actually used in 2011 which means that there is a considerable financial burden borne by countries, in particular developing countries, who have to send experts to Vienna.

Lastly, my delegation indicated that, in the case of a reduction of the duration of the session, we would not be opposed to a subsequent lengthening of the session when the future agenda of the Legal Subcommittee when and if it justified such an extension thereof. Thank you.

The CHAIRMAN I thank the distinguished representative of France for your statement.

The distinguished representative of Germany has the floor.

Ms. A. FROEHLICH (Germany) Thank you Mr. Chairman. Germany just wants to add that we fully support the statement made by France.

The CHAIRMAN Thank you very much.

Is there any other delegation wishing to speak under the agenda item 8, report of the Legal Subcommittee on its fiftieth session?

Belgium you have the floor.

Mr. J. MAYENCE (Belgium) (*interpretation from French*) Thank you Mr. Chairman. Very much in line with what has just been said by the previous delegations I, too, wish to express the support of my delegation for the sessions of the Legal Subcommittee rationalized in order to derive the maximum benefit therefrom. I would like to refer to a reference made to the Legal Subcommittee and I would like to say that all the remarks made as regards that Subcommittee would also be applicable to the Scientific and Technical Subcommittee. We have to maintain a balance between all the political, economic, juridical and scientific and technical aspects of the remit of COPUOS. We have to be aware that there are many more technical presentations in February than is the case in March and that might give the impression that one subcommittee has a fuller agenda than another. My experience is that the presentations to the Scientific and Technical Subcommittee are very useful but we are not convinced that they are part of the core business says the speaker in English of this subcommittee and therefore we would like to concur with the views expressed by our colleagues from the European Union and other colleagues as well. We would like to stress the fact that for us this is an issue which applies equally to the two subcommittees and must be seen as a whole. Thank you very much.

The CHAIRMAN I thank the distinguished representative of Belgium for your intervention.

Actually we could discuss this item at the organizational matters and to continue these topics there.

We conclude the considerations of agenda item 8, report of the Legal Subcommittee on its fiftieth session.

Space and society (agenda item 10)

We now open the consideration of agenda item 10, space and society.

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

Mr. J. HIGGINS (United States of America) Mr. Chairman, my delegation is pleased to address the

special theme of space and education at COPUOS. We acknowledge the important role of space education for inspiring students to pursue careers in science, technology, engineering and mathematics. To increase the number of professionals entering those fields, to strengthen national capabilities in the fields of science and industry and to enhance educational opportunities using distant learning technologies such as tele-education and e-learning. In that regard, we were pleased that Mr. Leland Melvin, the NASA Associate Administrator for Education, was able to provide a special presentation on space and education last Friday.

The United States civil space programme continues to emphasize the importance of space to education and education to space. Let me highlight several NASA programmes to illustrate the types of projects we have underway.

First the International Space Station continues to play an important role in education and reaching out to international educational communities. For example, the amateur radio on the International Space Station, or ARISS programme, inspires students worldwide to pursue careers in science, technology, engineering and math, through amateur radio contacts with the on-orbit crew of the ISS. The programme is maintained by a dedicated group of international amateur radio operators who have helped millions of people from around the world interact with astronauts and cosmonauts.

Likewise, the NASA sponsored ISS EarthKAM programme, that stands for Earth Knowledge Acquired by Middle School Students, allows students and teachers to directly benefit from the International Space Station's tremendous educational potential. During EarthKAM missions where periods when the EarthKAM camera is in operation, middle school students from across the globe use the World Wide Web to direct a camera onboard the ISS to photograph specific locations on the Earth. The most recent mission took place in April of this year with more than 14,000 students participating from 132 different schools in the United States and 39 from around the world.

The International Space Station is also playing an important role as a research platform for students and educators of all ages. Under the US/ISS National Laboratory Concept, NASA continues to pursue a strategy through which available ISS resources can be used as a national education centre accessible to teachers, students and kindergarten, through post-doctoral studies and university and college faculty.

NASA's Mission Directorates and its Center Education Offices also provide a variety of educational programmes and resources for NASA's elementary, secondary, higher education and informal education partners, both in the United States and abroad.

NASA's Digital Learning Network with studios at each of NASA's 10 centres uses video conference and webcast technologies to connect students from across the United States and the world to NASA educators and specialists. During Digital Learning Network events, international schools are regularly paired with US schools when a video conference with NASA providing a unique opportunity for students to not only learn about space but also to interact with others and learn about other cultures.

In 2009, NASA and the Arab Youth Venture Foundation in Dubai, UAE, partnered to provide 3-12 UAE engineering students each year the opportunity to work with US students, scientists and engineers on NASA missions.

This year, nine UAE students in the programme will work alongside their US peers on an internship project at the Ames Research Center in California. Earlier this year, 84 teams from 22 US States, Puerto Rico, Canada, Ethiopia, Germany, India, Pakistan and Russia, competed in NASA's 18th annual Great Moonbuggy Race at the Marshall Space Flight Center. The race challenges students to design, build and race lightweight human powered buggies that tackle many of the same engineering challenges dealt with by Apollo-era lunar rover developers at the Marshall Space Flight Center in the late 1960s.

The NASA Explorer Schools programme is another key initiative designed to strengthen science, technology, engineering and mathematics education in the United States. Since 2003, the NASA Explorer Schools has partnered with schools in diverse and under-served communities across the country to provide greater access to NASA's educational resources.

The international counterpart to the NASA Explorer Schools, the Delta Researcher Schools in the Netherlands, has also been a successful platform for enhancing international educational collaboration. NASA is proud of the cultural and educational exchange made possible with the European Space Agency and the Netherlands Ministry of Education, Culture and Science through the Delta Researcher Schools programme and the NASA Explorer Schools. Delta Researcher School educators and students have participated in unique learning opportunities including

professional development at NASA centres and live in-flight communications with astronauts and cosmonauts on board the ISS.

NASA is also leading a number of projects designed to educate post-secondary students in space related careers and prepare them for future employment. This summer students from across the United States as well as from such countries as Australia, Canada, France and Japan, will work directly with NASA scientists on cutting edge research as part of the NASA Academy Internship Programme. The NASA Academy's unique combination of scientific, career and internship training, makes it valuable platform for cultivating the next generation of international leaders in space science and exploration.

NASA is also once again heavily involved with the annual International Astronautical Congress (IAC) which will be held this October in Cape Town, South Africa. During these events, NASA will co-host a series of educational programmes at the International Space Education Board's international student zone. Students from around the globe who visit the ISEB's international student zone will have a unique opportunity to share and learn from each other.

Exposing our students to the activities of international scientific conferences in allowing them to be active in presenting their own space related research will open new doors for these prospective space professionals. Our next generation of researchers and engineers will increasingly need global perspectives and experiences to solve the challenges we face as space explorers.

One challenge using the unique environment of space to inspire students to study science and technology in all nations is the availability of resources. NASA continues to welcome opportunities for international collaboration where resources can be leveraged, where collaboration supports NASA's educational strategic goals and objectives.

Mr. Chairman. I have presented a number of examples of ways in which my country is working to inspire the next generation of explorers and to strengthen our national educational posture by using content, materials and applications, unique to space activities. We look forward to sharing ideas and experiences with the Committee and to learning more about the successes achieved by other member States. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of the United States for your statement.

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

Mr. M. SUBARI (Malaysia) Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, ladies and gentlemen. I am pleased to report to this meeting progress in space education activities of my country that have been carried out since the last UNCOPUOS meeting in June last year.

As I stressed in my earlier intervention on agenda item 4, educating the nation on the strategic importance of space has been and will continue to become our main agenda. One strategy in our education programmes is the focus on the aspects of innovation and creativity.

Mr. Chairman, we are actively taking part in global space related celebrations such as the World Space Week, Yuri's Night and the Earth Hour. Within the Space Week programme, space camps, sky observations, workshops and public lectures were organized. The national broadcasting TV channel was also involved to propagate the event to the public at large. This year Yuri's Night was organized together with the Russian Embassy in Kuala Lumpur involving _____(?) schoolchildren at the National Planetarium. The Earth Hour celebration has _____(?) the participation from large industry players in the country. Overall the _____(?) general public to set up the Earth for sustainable living was achieved. Within the regional initiatives, our involvement in Asia Pacific Regional Space Agency Forum (APRSAF) education programme in the form of participation of our schoolchildren in the poster and water rocket competition has continued last year.

Mr. Chairman. Malaysia believes that human capital is of prime importance in its development programme. Furthermore, in the new economic strategy of the country, innovation and creativity has been given significant focus. For that, year 2010 has been declared as the Year of Innovation and Creativity, or Malaysia Innovative 2010. Realizing the fundamental importance of science and mathematics in enabling innovation and creativity, the year 2011 has been declared Year of Promotion of Science and Mathematics with the motto 'Go Science, Love Maths'. The government has also prepared to celebrate the year 2012 as the Year of Science following the global celebration.

The National Planetarium, Kuala Lumpur, continues to champion the space education effort in the country. The newly installed full dome digital planetarium system and the new exhibits has attracted

more than 150,000 visitors last year. In the effort to encourage more visitors hence increase more interest and awareness in space science, the Malaysian Parliament has recently approved free entry to the Planetarium. Our education programme targets all level of students namely the pre-school, primary and secondary school as well as university students, targeted programmes for the public as well as youth groups were also planned.

Let me just read some of the programmes in the list: Books on space exploration for pre-school children; the National Space Challenge for primary schoolchildren with more than 100,000 participants; the water rocket competition for secondary school with more than 10,000 participants; the _____(?) competition for university students; the parabolic flight competition on micro-gravity for post-graduate university students. All of these education programmes were organized together with the respective ministries, namely the Ministry of Education and Ministry of Higher Learning of Malaysia.

Mr. Chairman, please take note also that some of these programmes were organized with our regional collaborators, namely the Japan Aerospace and Exploration Agency (JAXA) and APRSAF.

Mr. Chairman, the space weather programme is a new subject for the general public in the country. Due to the coming of solar maximum, expected in 2013, it is of paramount importance in the need to educate the public as well as the highest decision making body on the subject matter. For this, the National Planetarium has started this year showing a movie entitled 'The Solar Storm'. We have also informed the Cabinet on the coming solar maximum 2013 through a Cabinet paper which was presented just a week ago.

Mr. Chairman our delegation would like to reiterate our standing and believing the importance of educating our nation in science, technology and innovation, especially in space science, technology and utilization. Only with preparing the right human resources we can make progress in this sector. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Malaysia for your statement.

We will continue our consideration of agenda item 10, space and society, this afternoon.

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

I open now the agenda item 6, implementation of the recommendations of UNISPACE III.

Is there any speaker wishing to address the session on this agenda item?

Mr. D. KENDALL (Canada) Thank you Mr. Chairman. The Action Team 6 on improving public health, commonly referred to as AT6, has been created more than 10 years ago following recommendations of the third United Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III). Today, on behalf of the members of this action team, I am pleased to present to the Committee the outcome of the work undertaken over the years by this action team and to propose ways to further pursue national, regional and international efforts in the use of space applications for public health purposes.

Mr. Chairman, the AT6 was established in 2001 with the mission of fostering the implementation of projects and programmes related to tele-health applications and improving public health services by facilitating space technology applications. The leadership of AT6 was initially provided by representatives of Canada and the World Health Organization serving as co-chairs. Since 2008, Canada and India have acted as co-chairs. 2010 was a transition year for the AT6 members as they pursued the goals of their workplan surrounding the finalization of consultations that began three years ago on the topic of tele-health and tele-epidemiology. Consultations took place through workshops organized by the Office for Outer Space Affairs in various parts of the world to gather information and best practices from international partners.

Thanks to these activities, AT6 was able to make a number of specific observations that had been considered in a 15-page report that we presented to member States at the forty-eighth session of the Scientific and Technical Subcommittee in February 2011. This report entitled 'The use of space applications to improve public health' A/AC.105/C.1/L.305, summarizes important observations on the current state of the application of tele-health and tele-epidemiology around the world, stresses the need for better delivery of health and public health services through space applications and provides concrete recommendations that can be

undertaken at the national, regional and UN levels, both by member States and organizations. The report noted the increased interest by government, academic and private organizations, for the cross disciplinary fields of tele-epidemiology and tele-health. There are also broad expected applications in these fields in the delivery of core public health programmes both for developed and developing nations.

Lessons learnt from global and local tele-health programmes have demonstrated clear, positive outcomes such as an improved quality of life, an improved knowledge transfer. However, the sustainability of applications in tele-health is still a challenge due to obstacles such as insufficient and unstable bandwidth access, insufficient funding, management issues and inadequate training for end users. These obstacles may be resolved by creating synergies at the global level to foster innovation and reduce the gap in health care services of regions in need.

In the area of tele-epidemiology, there is a growing use of remote sensing technologies applied in the assessment of risk and to help manage public health issues linked to the environment and animal populations. This rise of interest and applications may be rooted in an increased need to frame regional health issues into a global context and with recognition of a higher complexity in the transmission of, and exposure to, important human pathogens. This leads to a need to work across many disciplines in order to gain new knowledge and sustainability for proposed interventions and policies. However, significant challenges exist in the operational integration of space technologies within health organizations in different parts of the world. Both industrialized and developing countries face considerable challenges related to trans-disciplinary collaboration among scientists and organizations with different mandates.

These key findings brought members of the AT6 to present three recommendations that were adopted by the Working Group of the Whole and reported in the report of the forty-eighth session of the Scientific and Technical Subcommittee namely:

1. To request the Secretariat to transmit the final report of Action Team 6 to the World Health Organization with an invitation to report to the STSC during the 2012 session on the possible development of long-term tele-health and tele-epidemiology activities;

2. Request the Secretariat to consider the creation of an international committee on tele-health and tele-epidemiology; and

3. Recommend that the outcomes of the June 2011 Montreal workshop on tele-health and tele-epidemiology be presented to the Scientific and Technical Subcommittee in 2012 under its agenda item on the UN programme on space applications.

Mr. Chairman, member States. Members of AT6 will officially conclude the work of the action team at the forty-ninth session of the STSC next year. In the coming months we will follow up with the Secretariat of the Office for Outer Space Affairs and we will also present to member States at the forty-ninth session of the STSC the outcomes of the June 2011 Montreal workshop on tele-health and tele-epidemiology and will organize meetings, on the margins of the session, for discussions between member States and the Secretariat on the possibility to consider the creation of an international committee on tele-health and tele-epidemiology.

On behalf of the organizing committee of the June 2011 Montreal workshop, I would like to invite all member States to attend the event and to share their views and comments on the way forward and future actions. This workshop is organized by the Canadian Space Agency, the Canadian Public Health Agency and the Institut de la santé publique du Québec supported by the Office for Outer Space Affairs and the European Space Agency. The workshop will be held in Montreal from 19-21 June and will include technical presentations as well as a day to discuss future strategic directions at the international and regional level. The programme of the workshop has been distributed in your pigeon holes.

On behalf of the Action Team 6 members, I would like to thank delegates, delegations and organizations that have contributed over the years to the success of this action team by sharing their respective experiences and visions with members of the team. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Canada for your statement.

Distinguished delegates we will continue our consideration of agenda item 6, implementation of the recommendations of UNISPACE III, this afternoon.

I would like now to proceed with the technical presentations. Presenters are kindly reminded that presentations should be limited to 20 minutes but I would ask them if it is possible to limit them to 15 minutes. Please try to shorten your presentations, as long as our debates are more important and we have to gain time.

At the same time, I would remind distinguished delegations that for the discussion and approval of the report we need at least one and one half days, three meetings. Starting with this afternoon, we will have only six meetings to finish all agenda items that we already have on the agenda. Only if time permitting, I will agree to re-open some agenda items where some delegations ask for the floor. Please stick to the schedule already published with the days for each agenda item and please take into consideration that, especially this year, we have a very limited time, taking into account the first day of the session where we had a special anniversary meeting.

The first presentation on my list is by Mr. Stefano Salvi of Italy, entitled 'Operational services based on space data in support of seismic risk management'.

Venezuela has the floor.

Mr. M. CASTILLO (Venezuela) (*interpretation from Spanish*) Mr. Chairman, we listened very closely to your proposal and we agree largely. All States of course have the right to speak obviously respecting the time limits but do not limit us in our opportunity to speak. Why limit us rather than technical presentations? We have time for technical presentations but the participation by States, if for some reason they want to come back to an agenda item, certainly they have the right to do so and if we were to save time maybe we should look at the technical presentations. The way the session is structured it is a little too rigid but it seems to be flexible when it is something we need and rigid at other times but definitely States need time to speak when they want. Thank you very much.

The CHAIRMAN Thank you for your comments distinguished delegate of Venezuela.

I remind delegates that last year we tried to conclude some considerations of the way of approaching the items, to limit any statement to 10 minutes and to not re-open agenda items if there were no more delegations to speak under that agenda item when the time was scheduled for that agenda item. I always, before concluding any agenda item, ask if there are any other delegations wishing to speak under that agenda item.

So, I remind you. I re-open agenda items only if time permitting. Thank you very much.

The distinguished delegation of Italy has the floor.

[Technical presentation]

The CHAIRMAN Thank you Mr. Salvi for your presentation.

The second presentation on my list is by Ms. Lynn Cline of the United States entitled 'The International Space Station'.

[Technical presentation]

The CHAIRMAN Thank you Ms. Kline for your presentation.

The third presentation on my list is by Mr. Takao Akutsu entitled 'Example of the application of satellites under the Great East Japan Earthquake and others'.

The CHAIRMAN Thank you Mr. Akutsu for your presentation.

I would now like to inform delegates of our schedule of work for this afternoon. We will reconvene promptly at 3 p.m. At that time we will continue our consideration of agenda item 6, implementation of the recommendations of UNISPACE III; item 7, report of the Scientific and Technical Subcommittee on its forty-eighth session and item 10, space and society.

Following the plenary there will be three technical presentations. The first one by a representative of the United States, the second by a representative of Indonesia and the third by a representative of Colombia.

In the evening there will be a reception hosted by the United States at 6 p.m. in the VIC Restaurant. I would also like to inform delegates that, during lunchtime today starting at 2 p.m. in this meeting room, three videos will be screened. The first one at 2 p.m. entitled 'Yuri Gagarin: chosen by stars' by the Russian Federation. The second one at 2.15 p.m. entitled 'Anniversary of the golden years' by the United States. The third one at 2.30 p.m. entitled 'China's manned space programme' by the People's Republic of China. All delegates are cordially invited to the screening at 2 p.m.

Are there any questions or comments on this proposed schedule? I see none.

I give the floor to the Secretariat.

Mr. N. HEDMAN (Secretariat) Thank you Mr. Chairman. Just to announce that the foreseen informal consultations on long-term sustainability that was planned to be held now, in this conference room, has been cancelled. So there is no informal consultations in this room now at 1 p.m. Thank you.

This meeting is adjourned until 3 p.m.

The meeting closed at 1 p.m.