Committee on the Peaceful Uses of Outer Space

Script

Fifty-fifth session

647th Meeting
Thursday, 7 June 2012, 10 a.m.
Vienna

Chairman: Mr. Yasushi Horikawa *(Japan)*

The meeting was called to order at 10.03 a.m.

The CHAIRMAN Good morning distinguished delegates, I now declare open the 646th meeting of the Committee on the Peaceful Uses of Outer Space.

Distinguished delegates, I would first like to inform you of our programme of work for this morning. We will continue our consideration of agenda item 5, "General Exchange of Views". We will also begin our consideration of agenda item 6, "Ways and means of maintaining outer space for peaceful purposes", and agenda item 8, "Report of the Scientific and Technical Subcommittee on its forty-ninth session".

There will be two technical presentations this morning: by a representative of Japan entitled "Japanese International Cooperation", and by a representative of Ecuador entitled "Identification and evaluation of flooded areas using remote sensing and geographic information systems (GIS)".

Expert Groups of the Working Group on the Long-term Sustainability of Outer Space Activities are also meeting this morning on the margins of the session. Expert group A on Sustainable Space Utilization Supporting Sustainable Development on Earth is meeting from 9.00 am to 1.00 pm in meeting room MOE27. Expert group B on Space Debris, Space Operations and Tools to Support Collaborative Space Situational Awareness is meeting from 9.30 to 12.30 in meeting room MOE1OO. Expert group C on Space Weather is meeting from 10.00 am to 1.00 pm in meeting room MOE19.

During lunch time, at 1.00 pm, there will be a reception hosted by the United States of America and Secure World Foundation, on the occasion of the fortieth anniversary of the Landsat programme. The reception will be held in Special Function Room D, right outside the Mozart Room of the VIC restaurant. Are there any questions or comments on this proposed schedule?

I see none.

Distinguished delegates, I would also like to remind you that yesterday delegations have been provided with the draft list of the scheduling of technical presentations during this session of the Committee. The list of the scheduling of technical presentations will be closed by the adjournment of our plenary meeting this afternoon. Delegations should provide the Secretariat with any updates to that list by no later than 5.00 pm today.

Distinguished delegates, I would now like to continue our consideration of agenda item 5, "General exchange of views". The first speaker on my list is the distinguished delegate of India. You have the floor. Thank you, Mr. Chairman.

Mr. K. RAO (*India*) The Indian Delegation expresses its hearty congratulations to you on being elected as the new Chairman of UN-COPUOS. We are confident that your astute leadership will contribute significantly to the productive deliberations under all the agenda items identified for this 55th Session. The delegation also places on record its best wishes to Filipe Duarte Santos of Portugal and Piotr Wolanski of Poland on being elected as First Vice-Chair and Second Vice- Chair/Rapporteur respectively, for the period 2012-2013. At this moment, the Indian delegation fondly recalls the contribution of Astronaut Dumitru-Dorin Prunariu of Romania in successfully chairing the previous two sessions.

Indian delegation welcomes Costa Rica, Jordan and Armenia as the new members this committee.

The Indian Delegation is happy to note that during the current session, Special panel on the fortieth anniversary of the Landsat programme and the worldwide evolution of remote sensing from space was organized. Prof. UR Rao of India who served as Chairman of COPUOS for three years, from 1997-2000, has participated as one of the Panellists in this event.

Mr. Chairman, the Indian delegation expresses deep grief over the loss of precious lives due to the recent natural disasters globally including that of Cambodia, China, Colombia, Myanmar, Nigeria, Palestine, Philippines, Romania, Thailand, Turkey and Ukraine.

Mr. Chairman, while acknowledging the significant achievements of various member nations in space during the last one year, the Indian delegation would like to brief the Committee on the significant achievements made by India in the field of space since the last Session in June 2011.

On July 15 2011, India's Polar Satellite Launch Vehicle, PSLV-C17 on its eighteenth successive successful flight launched the GSAT-12 communication satellite which hosts 12 extended C band transponders.

On October 12, 2011, PSLV C-18 on its nineteenth successive successful flight, precisely placed Indo-French Joint Satellite "MEGHA-TROPIQUES" and three other auxiliary satellites, namely JUGNU, SRMSat and VesselSat-1 in their intended orbits. MEGHA-TROPIQUES satellite Is a joint contribution from India and France to the global scientific community engaged in research on climate and weather systems. JUGNU, SRMSat were built by Indian academic institutions while Vesselsat-1 was built by Luxembourg.

On April 26, 2012, PSLV C-19 on its twentieth successive successful flight, precisely placed Radar Imaging Satellite (RISAT-1), India's indigenously built microwave remote sensing satellite meant for natural resources management. RISAT-1 carries a C-band Synthetic Aperture Radar payload, operating in multi-polarization and multi-resolution modes.

In the coming months, India aims to augment her constellation of remote sensing and communication satellites. Currently, India is getting ready to launch ISRO-CNES joint mission SARAL for studying ocean surface and the first satellite of Indian Regional Navigation Satellite System or IRNSS. India's advanced communication satellite GSAT-10 and a meteorological satellite INSAT 3D would also be launched shortly.

India's Geosynchronous satellite launch vehicle, GSLV-Mk II, with Indian cryogenic stage, carrying GSAT-14 satellite, is also getting ready for launch. On May 12, 2012, the acceptance test of the indigenous cryogenic engine was conducted successfully for 200 seconds and the performance of the engine was as predicted.

India has achieved significant progress in the last one year, in realizing GSLV Mk III, a heavier class of launch vehicle capable of launching 4-ton class of communication satellites into a Geostationary Transfer Orbit.

Mr. Chairman, in the area of space science and exploration, India is currently working on realizing ASTROSAT-1, the first Indian space based observatory for multi- wavelength observations of the celestial bodies and cosmic sources; and ADITYA-1, a spacecraft to study the solar chronosphere.

Mr. Chairman, India's space programme continues to integrate the advances in space technology and applications with the national developmental goals, particularly in vital service areas such as telecommunication, television broadcasting, meteorology, disaster warning, as well as natural resources survey and management. Many national and regional programmes of societal relevance are continued apart from newer initiatives to reach the space-based products and services to the society.

Mr. Chairman, India places considerable importance on International Cooperation and pursues active cooperation with 33 countries and a few multilateral organizations on the peaceful use of outer space. A meeting of Heads of Space Agencies of ASEAN member countries will be organized in India this month to discuss the cooperation possibilities. It is also proposed to establish a reception and data processing station in one of the ASEAN member countries to receive and use data from Indian Remote Sensing Satellites for a variety of applications including disaster management support. A network of weather stations is planned to be established in SAARC countries to support severe thunderstorm predictions.

Mr. Chairman, India continues to share its expertise and services in the application of Space technology through capacity-building. The Center for Space Science and Technology Education in Asia and the Pacific, affiliated to UN and operating from India, has so far benefitted 1,129 scholars from 52 countries.

In the year 2012, India will be hosting two major global events: the COSPAR Scientific Assembly and Committee for Earth Observation System (CEOS) Plenary.

Mr. Chairman, in conclusion, the Indian delegation would like to greatly acknowledge the efforts of UNCOPUOS to maintain outer space exclusively for peaceful purposes and fully support it in all its endeavours. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of India for his statement. The next speaker on my list is the distinguished representative of Romania. Distinguished representative of Romania, you have the floor.

Mr. M. Piso (*Romania*). Thank you, Mr. Chairman. Dr. Horikawa, let me express to you and to the delegation of Japan our satisfaction for your election in the main chair of the Committee. I wish to extend the congratulations to professor Filipe Duarte Santos from Portugal and to professor Piotr Wolanski from Poland for their election as First Vice-Chair and Second Vice-Chair/Rapporteur. And Cosmonaut Prunariu, let me express our satisfaction for the excellent completion of the mandate of Romania as Chairman of the Committee, which produced significant work in promoting international cooperation in space. I want to extend congratulations also to the members of the Bureau, Nomfuneko Majaja and Raimundo González. I would also express the appreciation for Dr. Mazlan Othman, the director of the Office, and to the staff of the Secretariat.

Mr. Chairman, first of all, let me recognize the major relevance of the event celebrated during the current Committee session: the 40th Anniversary of the Landsat Earth Observation programme. The exceptional importance of the event for the global world development cannot be presented during this limited statement. I want to add only that my country, Romania, was utilizing the ERTS-Landsat data since 1973, initially for studies regarding the Danube basin and the Delta of the Danube. I will also mention that the GEO Group on Earth Observations Fifth Plenary, held in Bucharest, Romania, in 2008, where the U.S. Geological Survey announced for the first time the new Landsat policy on free data.

Mr. Chairman and distinguished delegates, we maintain our view saying that any country might practically contribute to the space endeavour. Both the global character and the wide multidisciplinary aspect of space activities clearly provide the possibility for most of the States and industries to become space actors. In the same time, the globalization of the industrial market but also the possible global effects of natural threats, put States in the position of users and beneficiaries of results. Continuing with this view, this realm provides the basis for both wider international and industrial cooperation and also support for a longer-term sustainability of specific space activities.

Romania is continuing to support its space development at the national level and together and with the international space community. I am happy to report to the Committee, Mr. Chairman, that on 22 December, Romania finalized the legal procedures of accession to the European Space Agency Convention and become officially the 19th ESA Member State.

I would like to mention that the cooperation of Romania with ESA is long-standing. Since 1992, Romania was one of the first Eastern European countries to sign a Cooperation Agreement in the field of the peaceful use of outer space with ESA, and since 1992 Romania has participated in several ESA mission, such as Cluster, Herschel, Planck, SOHO, Gaia, Earth Observation activities, microgravity, exploration and technology activities.

During the last two decades, Romania maintained a stabile space policy by keeping 3 constant objectives: this means participation in international space missions and programmes — in particular ESA — development of specific national projects and the third, capacity-building at the national level.

Mr. Chairman, I will report that a new national space programme me was launched in Romania during the last May. The purpose of this programme called STAR — the acronym for Space Technology and Advanced Research — was to provide an appropriate longer term development for the next 8 years of both scientific and industrial national capability of Romania in conjunction with the ESA progresses, but also with the agreements concluded with space-faring countries and towards our global view of space development.

Mr. Chairman, we would like to recognize the efficient activity of the expert groups constituted by the Scientific and Technical Subcommittee and we assure the Committee on the permanent support from my delegation.

One of the space activities we are considering as priority for space technology concerns security — security for humankind at its largest meaning. In my opinion, all the four areas discussed by the expert groups contain direct references to security issues.

In this respect, I would like to mention that Romania is one of the few countries which included space within the legislation concerning critical infrastructures. During the last January, a national law

recognized critical infrastructures in several societal and economic areas, including space assets, at the same time, the Romanian Space Agency will develop research concerning the study of space assets as critical infrastructure.

I am also reporting, Mr. Chairman, that a Romanian microsatellite was launched in February as a secondary payload of the maiden flight of the European launcher VEGA. This satellite mission was the first one completely designed, built and integrated in Romania. The satellite performed Earth observation and radiation dose measurement and a special experiment was devoted to the detection and measurement of micro-meteoroids flow with the aim to provide results for global space debris and situational awareness projects.

I will also recall that Romania had organized, together with the European Space Agency, the European Commission and Eurisy — and with the support of the Romanian space industry — a regional conference devoted to Global Monitoring for Environment and Security. This event happened in Bucharest in the beginning of last May within the premises and support of the Romanian Parliament with a view to help developments in the new 12 European Union Member States. Most of the countries in the region participated at levels of political and industrial decision and it was the willingness of the participants to make from this conference a permanent forum for GMES.

The participants recognized the relevance of the GMES Programme as the European answer to the vital need for up-to- date information about our environment and resources. The conference recognized that GMES is moving from its research and development phase towards the operational phase and that GMES serves a large and diverse number of users all over the world. The participating States expressed the wish to establish this conference as a regular annual event in Bucharest, Romania, for the benefit of the Eastern European States and of all other countries in the world as a whole.

I would also like to mention that the UN-SPIDER regional support office in Romania, hosted by the Romanian Space Agency, continued to develop specific activities and that the office is coordinating a national group of experts and facilities from ROSA, the Romanian meteorological service, the Centre for Remote Sensing Applications in Agriculture and from several universities, and specific SPIDER issues were included in the ESA Earth Observation programme and the European GMES projects, as SAFER and RO-KEO.

Mr Chairman, I would like to mention that Romania is participating actively to global issues, as defined through its partners and by international organizations, as COPUOS, GEO, COSPAR, IAF and the International Academy of Astronautics.

We would like to recall, Mr Chairman, that COPUOS proved to be an unique global forum recognized by most of the governments and organizations, as for scientific, technical and legal issues.

Mr. Chairman, my delegation will ask you for taking the floor during the specific items of the Agenda. Thank you, Mr. Chairman and distinguished delegates, for your attention.

The CHAIRMAN I thank the distinguished delegate of Romania for his statement. The next speaker on my list is the distinguished representative of Burkina Faso. You have the floor.

Mr. P. R. TIENDREBEOGO (*Burkina Faso, interpretation from French*) Thank you, Mr. Chairman. The Burkina Faso delegation is very satisfied is be able to take a part in this session of the Committee on the Peaceful Uses of Outer Space and would like at the outset to join the statements made on behalf of the Group of 77 and China and of the African Group.

I would like at the outset also to address to you our congratulations upon your election, along with the elections of the two Vice-Chairman of the Committee and assure you of our full cooperation. We also would like to express our gratitude to Ms. Othman and the Secretariat for the quality of the preparation of the present session and for the activities of OOSA in general.

For countries such as Burkina Faso, a country of the Sahel, with few natural resources, COPUOS is of capital importance and can contribute fundamentally to the success to the success of policies and development efforts. Indeed, this is quiet important for us. Today the importance of the role that can be played by space technologies and activities in achieving sustainable development goes without saying and Burkina Faso believes that it is necessary for our Committee to develop even more its activities with respect to the spin-off benefits of space technology in order to ensure even more commitment on the part of States and other player from the international community.

In order to be able to make the most of the opportunities and draw as much benefit as possible from research in space technology applications, especially in the fields of tele-health and distance learning, agriculture and environmental monitoring, water management and disaster management, Burkina Faso has always committed itself and contributed to the development of its capacities — we've always been able to get the support of our partners also in this regard in implementing the projects that we've been to enjoy the results of, subsequently.

On 26 to 30 September 2011, we hosted a subregional awareness-raising and use of technologies training workshop for disaster management. This was jointly organized by the Burkina Faso Government — the OOSA of the regional centre for the training in aerospace techniques, RECTAS. This workshop enabled 30 experts from Western Africa and Central Africa to become familiar with remote sensing principles, space data acquisition, imagery processing and data analysis. I would like to, once again, on behalf of my Government, to thank OOSA for its valuable support in ensuring the success of this activity.

In May 2012, the Burkina Faso Geographical Institute, officially launched the project on digital cartography to the scale of 1/50,000. Spanning 24 months, this project estimated at 2.6 billion francs CFA, will give our country reliable geographical data on the basis of satellite imagery, covering the central and Sahel areas.

A term, the results of the project will allow us to get better quality data on agriculture, communications, infrastructure, vegetation and water resources, and thereby contribute to the prevention of natural disasters and the implementation of the strategy for accelerated development and sustainable development, which is our national development policy benchmark instrument. This project has seen the light of day thanks to the invaluable support of Japan and I would like to thank them, heartedly, once again.

In coordination with OOSA and any other partner, we are ready to explore new opportunities for cooperation, especially in the field of stepping up capacities and national infrastructures using geospatial data.

On the 1st September 2009, Burkina Faso was subjected to severe flooding and we are still undergoing the consequences at the socioeconomic level because this was followed by unusual rainy seasons. These disasters have indeed strengthened our conviction that it is imperious necessity for the international community to respond urgently and appropriately to the climate change issue.

The developing countries are those who are paying the most following the disasters which result from climate change and the work up to the upcoming Rio+20, we are happy that our committee has decided to contribute recommendations to promote international cooperation to make better use of geospatial data — certainly deserve our support. This would now allow us to better protect our environment to prevent disasters resulting from climate change.

In a world which is more and more globalized, only effective cooperation at the international level will allows to better make use of outer space and COPUOS should certainly contribute to this work. Thank you very much.

The CHAIRMAN I thank the distinguished representative of Burkina Faso. The next speaker on my list is the distinguished representative of Italy. You have the floor.

Ms. A. PASTORELLI (*Italy*) Thank you very much, Mr. Chairman.

Mr. Chairman, in thanking your predecessor, Dr. Prunariu, for his dedication and active role in leading our last two sessions to excellent outcomes, I would like to congratulate you, Dr. Horikawa, on your election for the biennium 2012-13: I am confident that under your able leadership our sessions will achieve fruitful and successful results.

I take this opportunity also to thank the Director of the Office for Outer Space Affairs, Ms. Mazlan Othman, and her staff for the excellent preparation of this session and for their commitment in conducting the mandated activities in COPUOS.

Mr. Chairman, the Italian Delegation fully endorses the statement pronounced by the EU Delegation on behalf of the European Union. We would like to add some specific comments at the national level on some points in our Agenda, and we would also draw your attention on some of the latest Italian achievements in the field of peaceful uses of outer space.

The peaceful use of outer space and the promotion of international partnerships and cooperation is pivotal in the Italian space policy. In the framework of the Italian document "Strategy Vision 2010-2020" adopted in 2010, my Government continues to consider outer space activities as one of

the major assets of the Italian Research system and a fundamental pillar of our foreign policy. In this respect, I would like to mention the agreement reached by ASI, the Italian Space Agency, and our Ministry of Foreign Affairs in 2011, which will allow to assign Italian space experts in support of our Embassies and Permanent Missions abroad to promote international cooperation in this field.

Italy remains, therefore, strongly committed in supporting the crucial role of UN-COPUOS in achieving its goal of promoting peaceful uses of outer space by strengthening international dialogue and exchange of information on technologies for human development and by the promotion of the universal accession and adherence to international Treaties and Principles on the Peaceful Uses of Outer Space. We remain committed in implementing the recommendation of UNISPACE III and we believe that the Vienna Declaration will continue to be a pillar for promoting international cooperation for peaceful uses of Outer space activities.

Mr. Chairman, Italy believes that sustainability of outer space exploration activities is a matter of concern for space-faring nations and regional space organizations, as well as for commercial satellite operators. Only clear common cooperation mechanisms among all countries and, in particular, among COPUOS Member States, could make space activities in Earth orbit more sustainable over the long-term.

The Italian experts continue to dedicate their utmost efforts in the Working Group on Long-Term Sustainability of Outer Space Activities, which was set up during the last Technical and Scientific Subcommittee and under the valuable Chairmanship of Mr. Peter Martinez from South Africa, in order to achieve the most effective results for the benefit of our precious resources in outer space and on Earth. I am sure that the dedication and the commitment of all COPUOS Members in the Expert Groups will produce important progress also during this session, according to the approved working plan.

In this exercise, Mr. Chairman, we believe that a special attention has to be paid to the space debris issues because of the need to advance the international cooperation in such a sensitive area. In this regard, I would also like to mention here the Italian full commitment in all international forums, in particular the Inter-Agency Space Debris Coordination Committee, and the ESA programme “Space Situation Awareness”.

Mr Chairman, I would also like to recall that Italy continues to be an active member of the International Committee for Global Navigation, having a national programme on space navigation and being a strong supporter of the EU programme Galileo.

Mr Chairman, we would like to express our particular appreciation for the fruitful discussions during the 51st session of the Legal Sub-Committee within the Working group on the Status and Application of the five UN Treaties on Outer Space, the Working Group on the definition and delimitation of Outer Space and the Working Group on National Legislation relevant to the Peaceful exploration and Use of Outer Space. In expressing appreciation for the way the discussions were conducted in all the Working Groups of the LSC, my delegation is ready to work to achieve consensus on the form to submit the recommendations on national legislation relevant to the peaceful exploration of outer space for approval at the General Assembly in New York.

Mr. Chairman, I would also wish to reiterate our appreciation for document A/AC.105/993 which has been presented by Dr. Othman as the contribution of UNOOSA to the Rio+20 Conference. We particularly value the role of UN-OOSA in promoting space-related technologies for sustainable development and the activities of the Office in facilitating regional and interregional cooperation in this field. My delegation is pleased to acknowledge that space derived geospatial data are taken into account in the present draft of the Rio+20 final document and we hope that this reference may lead to recognize the relevance of space technologies for sustainable development, especially in the fields of land resource management, agriculture, disaster prevention and early warning and environmental protection.

Mr. Chairman, my delegation would like to give an overview of the latest activities Italy carried out in outer space and the importance of their results on human daily life. Please let me start with mentioning the importance of the imagery provided by Cosmo SkyMed for the recent tragic earthquake affecting Emilia in North Italy. The continuous monitoring ensured by our satellites, days and nights, in spite of any atmospheric weather conditions, and the fast elaboration ensured by ASI and by the Italian Institute for geophysics few hours after the first earthquake, allowed our Civil Protection Authority to assess the kind of deformation, entity, and extension of the concerned area. In particular, thanks to the imagery, we could measure the entity of the phenomenon, being assessed that the ground has risen up to 15 cm, and we could take immediate action accordingly.

Mr. Chairman, I would like to highlight here also the commitment of Italy in the BluemassMed project, financed by the European Commission, in which Italy is co-chairing with France the implementation team, in order to realize a pilot European network of maritime surveillance system in the Mediterranean Sea. This project, which will be presented by our expert later on this session, is a particular example of how regional cooperation can produce useful synergies and enhance the sharing of information based on geo-spatial data for a more efficient use of resources in the field of maritime civil operations and commercial activities.

Mr Chairman, after the successful launch of VEGA, announced during the Technical Subcommittee this year, we are pleased to report another success for European cooperation in outer space, where Italy played an important role: the launch of the third European module for the International Space Station automated transfer vehicle, named as an important Italian Scientist who contributed with his vision to the European space policy, Edoardo Amaldi. Italy gave an important contribution in building this third ATV in terms of technological innovation and industrial capacities.

Mr. Chairman, the promotion of regional and interregional cooperation is key in Italian space activities, as we believe that international cooperation plays a major role in enhancing the peaceful uses of space technologies. In this regard, please let me conclude recalling an important event that Italy will hosting in 2012: the 63rd International Astronautic Congress, which will be held in Naples on 1-5 October 2012. We are looking forward to welcome you all in Naples. Thank you very much Mr. Chair.

The CHAIRMAN I thank the distinguished representative of Italy for her statement. Now, distinguished delegates, I would like to proceed to have the statements from observers. The first speaker is the distinguished delegate of Jordan. You have the floor.

Mr. I. ALBADDAWI (*Jordan, interpretation from Arabic*) In the name of God the compassionate, God the merciful, Chairman of COPUOS or President of COPUOS, and ladies and gentlemen, I would like first of all, on behalf of the Hashemite Kingdom of Jordan, I would like to congratulate the Chairman on his election and his two colleagues, the two Vice Presidents and the Rapporteur. Please allow me to thank you for giving me the opportunity to participate in this meeting and to address the Committee in the hope that our request to become members will be accepted. So allow me to thank you for having sponsored the regional centre for the launching of space techniques for our area, which was inaugurated last 25 May in Amman, Jordan. Eight countries participated and signed the basic documents creating this centre. Courses are going to be launched as of 2012-2013 school year to prepare a Master's in AGES and remote sensing in the initial phase. Enrolment for 9-month training courses are also going to be open and we are going to be adding space meteorology and techniques subsequently.

The establishment of this regional centre for the centre on space technologies for our regional is going to be something that encourages the countries involved in the centre — Jordan, inter alia — to participate in disseminating outer space techniques in our region. This is going to certainly step up our capabilities in this field. We hope that the countries in our region will be benefiting from the impact of this centre and its projects so that we have better research results and so that this will have positive impact on local regional development.

I would like to take this opportunity to thank all those who have contributed to this challenge, especially the United Nations Outer Space Office headed by Ms. Mazlam Othman and her team. I would like to thank of all the countries that contributed to the establishment of the centre and may the lord be with you. Thank you.

The CHAIRMAN I thank the distinguished representative of Jordan for his statement. The next speaker is the distinguished representative of the Scientific Committee on Solar-Terrestrial Physics. The distinguished representative SCOSTEP, you have the floor.

Mr. N. GOPALSWAMY (*SCOSTEP*) Good morning Mr. Chairman, distinguished delegates and representatives. The Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) is pleased to make a statement in support of its application for permanent observer status with the Committee on Peaceful Uses of Outer Space. SCOSTEP is an interdisciplinary body of the international Council for Science (ICSU), charged with the long-term responsibility to promote international, interdisciplinary programmes in solar-terrestrial physics.

Mr. Chairman, SCOSTEP is governed by a Bureau, whose members come from a number of international scientific unions and ICSU interdisciplinary bodies. These are: the Committee on Space Research (COSPAR), the International Association of Geomagnetism and Aeronomy (IAGA),

the International Association of Meteorology and Atmospheric Sciences (IAMAS), the International Astronomical Union (1AU), the International Union of Pure and Applied Physics (IUPAP), the International Union of Geodesy and Geophysics (IUGG), the Scientific Committee on Antarctic Research (SCAR), and the International Union of Radio Science (URSI). All those organizations have significant interest in how the Sun varies and how the variability affects life on Earth over various time scales.

Mr. Chairman, SCOSTEP is pleased to note that at the forty-ninth session of the Scientific and Technical Subcommittee of COPUOS, the Working Group on the Long-term Sustainability of Outer Space Activities established an expert group on Space Weather. SCOSTEP is striving to clarify the science behind the Space Weather phenomenon and hence it is highly beneficial to have a closer relationship between COPUOS and SCOSTEP. SCOSTEP's permanent observer status with COPUOUS will provide an opportunity for a close collaboration in Space Weather issues.

Mr. Chairman, SCOSTEP has run a number of international scientific programmes over the past thirty years. During the performance period of a scientific programme, which typically lasts for four years, SCOSTEP brings in experts from all over the world to assess the current state of knowledge in the chosen topic and develops the scientific framework needed to make significant progress. The current scientific programme of SCOSTEP is known as the Climate and Weather of the Sun-Earth System (CAWSES). The CAWSES programme was established to answer four key scientific questions in solar terrestrial physics: (1) What are the solar influences on Earth's climate? (2) How will geospace respond to an altered climate? (3) How does short-term solar variability affect the geospace environment? (4) What is the geospace response to variable waves from the lower atmosphere?

Task groups led by reputed scientists have been established to tackle these questions. The main functions of CAWSES are coordinating international activities in observations, modelling and applications crucial to achieving a better understanding of Earth's space environment and its impacts on life and society.

Mr. Chairman, discussion is under way to establish the next scientific programme when CAWSES ends in 2013. One of the proposed topics is "Extreme Space Weather Events". The objective would be to estimate the biggest possible eruption from the Sun in the form of a coronal mass ejection or a solar flare and the resultant extreme space weather.

Mr. Chairman, SCOSTEP is pleased to note that COPUOS reviews the scope of international cooperation in peaceful uses of outer space, devises programmes in this field and encourages continued research and the dissemination of information. These activities are in line with SCOSTEP's objectives, so there is clear opportunity for cooperation and leverage that will benefit many countries in the world, especially the developing countries.

SCOSTEP conducts periodic symposia attended by hundreds of scientists from all over the world. The quadrennial symposia provide opportunities to review the entire field of solar terrestrial physics, while other meetings focus on the current scientific programme. The proceedings of the symposia and meetings are promptly published and made available online for free.

Mr. Chairman, in addition to running scientific programmes, SCOSTEP is heavily invested in capacity-building in developing countries and public outreach. SCOSTEP has partnered with the International Space Weather Initiative (ISWI), the International Union of Radio Science (URSl) and ICSU regional offices to promote capacity-building and education activities throughout the world. The capacity-building activities consist of three main elements: (1) conducting advanced schools in Space Weather/Space Science; (2) organizing teacher workshops for the benefit of school teachers; and (3) conducting space instrumentation workshops to disseminate information on low-cost ground-based instruments that can be deployed in developing countries to gather valuable data on space weather. Three Space Weather/Space Science schools will be organized in the three key regions of the world where there is growing need and interest in solar-terrestrial research: Asia Pacific (2012), Africa (2013), and South America (2014). The 2012 schools hosted by Lapan in Indonesia, with major contributions from Japan and the United States.

SCOSTEP has also been developing outreach material in the form of comic books on topics of solar terrestrial physics. These books explain in simple terms how human society is affected by solar variability. The comic books are available online in many languages of the world.

Mr. Chairman, to summarize, SCOSTEP envisions an excellent synergy between its activities and the objectives of COPUOS. Thank you for your attention, Mr. Chairman and the delegates.

The CHAIRMAN I thank the distinguished representative of the Scientific Committee on Solar-Terrestrial Physics (SCOSTEP) for his statement. The next speaker on my list is distinguished representative of the Asia Pacific Space Cooperation Organization (APSCO). You have the floor.

Mr. M. A. CHAUNDHRY (*APSCO*) Mr. Chairman, distinguished delegates, it is my privilege to make this statement on behalf of the Asia Pacific Space Cooperation Organization, at this 55th session of the United Nations Committee on the Peaceful Uses of Outer Space. I would like to take this opportunity to congratulate Dr. Yasushi Horikawa for assuming responsibilities as the new Chairman and I am confident that under your leadership the space community will achieve new heights in using space more effectively for peaceful purposes. I would also like to thank Dr. Dumitru Dorin Prunariu for his illustrious leadership in achieving major milestones during the last two years.

Mr Chairman, please accept our trust and confidence in your leadership on chairing this session of COPUOS. We are appreciative of the efforts of Dr. Mazlan Othman, the Director of the Office of Outer Space Affairs and her staff for planning, preparing and organizing this session in a befitting manner.

Mr Chairman, owing to the consistent efforts of the nations in the Asia Pacific region for their desire to have multilateral cooperation in space relating programmes, APSCO came into being in 2005 and became functional in December 2008 when the APSCO Council approved six projects in its very first meeting in Beijing, China.

The Council has already held five meetings during last three years; four of them in Beijing, China, and one in Pattaya, Thailand. While observing a number of new projects, it reviewed the progress made so far on the earlier approved projects. APSCO has already made a significant progress on all of these prioritized projects. It may please be noted that for feasibility and system definition studies on each of these projects, besides experts from signatory states of APSCO, including Bangladesh, China, Indonesia, Iran, Mongolia, Pakistan, Peru, Thailand and Turkey, experts from interested countries like Brazil and Ukraine, also participated. As a result the feasibility studies were wholesome and complete. Some of these studies were completed during the last two years and presented to the APSCO Council for their approval for implementation.

Mr. Chairman, Data Sharing Service Platform and its Applications Pilot Project was the top priority project whose feasibility study was completed and the Platform has recently been commissioned to serve the needs of the Member States of APSCO. Member States of APSCO are encouraged to make proposals for the application pilot projects which are expected to be undertaken by respective Member States in the near future.

APSCO Applied High Resolution Satellite project was the second project on the priority list. Experts from all Member States of APSCO and Ukraine took part in its feasibility and system definition study, which has already been approved by the APSCO Council. The study envisages having a constellation of two satellites but the second will be developed after launching the first, so as to use the experience gained in the first. The manufacturer will be determined through competitive international bidding for a turnkey solution. After making necessary preparation for funding and organization, the project is expected to kick off as early as possible.

The Asia Pacific Ground Based Optical Space Objects Observation System is another prioritized project whose feasibility study was completed and is approved for implementation. In phase 1, the basic space surveillance network and its processing centre will be established with the existing resources of the Member States, and in phase 2 the observation nodes will be upgraded to observe objects in the geostationary orbit. This project will facilitate space object detecting, tracking and identifying, orbit determination and cataloguing, collision early warning, re-entering space object prediction, technical consultation and training. The first joint observation was undertaken in April this year in order to expand the observation network another joint exercise being planned towards the end of this year.

Mr. Chairman, Communication Satellite, Student Satellite and Electromagnetic Satellite Payload for Earthquake Prediction are other space technology related projects whose feasibility study is under progress. Besides, Applications of Compatible Navigation Terminal System and Communication Satellite Applications are also approved by the APSCO Council for conducting feasibility studies. Not closing our eyes to the space research areas, research on atmospheric effects on ka band and rain attenuation modelling, research on ionospheric modelling through study of radio wave propagation and research on determining precursor ionospheric signatures of earthquakes are some of the approved projects whose feasibility studies are in progress.

Exchange of information and sharing of knowledge is also a priority area for which seminars are organized regularly by APSCO. Just to mention about present efforts, last year APSCO organized a seminar on earthquake prediction using space technology in Beijing, China, and this year, a seminar on satellite communications will be held in Indonesia in November 2012.

APSCO also regularly organizes a number of short training courses for the benefit of Member States each year. Two years Master's degree programme has also become a regular feature to enhance space relating knowledge among the Member States. APSCO's Secretariat has also conducted feasibility study on APSCO Education and Training Center which will be presented to the APSCO Council for its approval in the next meeting. Besides, a large number of education and training activities have also been approved by the APSCO Council, which will be undertaken in forthcoming years.

Mr. Chairman, with increasing demand from Member States and rapid development in the Asia Pacific region in space science, space technology and its applications, APSCO is also venturing into the research on space policies and space law for promotion of regional peaceful uses of outer space. After the approval of the APSCO Council, the feasibility study on Asia Pacific Research Center for Space Law has been undertaken while APSCO is all set to organize APSCO Space Law Forum in Beijing, China, from 19 to 20 of this month.

Mr. Chairman, in accordance with the APSCO Convention, we kept close cooperation with agencies in the United Nation system by taking part in the UNCOPOUS and its Subcommittees, jointly organizing UN Space Law Workshops as well as UNESCAP and its programmes. As a regional space organization, APSCO was officially invited and visited the ESA Headquarters for discussing the future cooperation. APSCO joined the Group on Earth Observation as a Permanent Observer. APSCO participated in a number of international events organized by APRSAF, UN-SPIDER and IAC, and also received delegations from NASA, ESA, JAXA, COSMOS and various diplomatic missions. The New Year Reception of APSCO, being a regular feature, is held in December every year.

Mr. Chairman, distinguished delegates, seeing the activities APSCO is pursuing for the socioeconomic development of the Asia Pacific region, harnessing space technology tools, more and more countries of the Asia Pacific region — in particular and the world in general — are showing interest to become members, associate members or observers of APSCO. At present, applications of Malaysia and Tajikistan are being processed for becoming observers of APSCO. We in APSCO welcome all nations of the world to cooperate with us for exploring and exploiting peaceful uses of outer space. I thank you very much, Mr. Chairman. Thank you very much.

The CHAIRMAN I thank the distinguished representative of the Asia Pacific Space Cooperation Organization (APSCO). Now, the next speaker on my list is the distinguished representative of the International Astronautical Federation (IAF). You have the floor.

Mr. G. BRACHET (*IAF*) Thank you, Mr. Chairman. Mr, Chairman, distinguished delegates, distinguished observers, President Feuerbacher is unable to attend this session but sends his greetings to all of you. He asked me, as IAF Vice-President in charge of liaison with international organizations, to extend his sincere congratulations to Mr. Yasushi Horikawa, for his election as new Chairman of the Committee for 2012 and 2013, to Filipe Duarte Santos as new first Vice-Chair and to Piotr Wolanski as second Vice-Chair/Rapporteur. He also asked me to convey his regards to Dr. Othman, Director of the Office of Outer Space Affairs.

On behalf of the International Astronautical Federation, now in its 61st year, I am pleased to have the opportunity to report to you last year's achievements, its contribution to COPUOS activities and briefly mention the outline of its upcoming activities.

The International Astronautical Federation is a worldwide federation of institutions active in outer space. It is well-known as the organizer of the Premier Annual Global Space Conference, the International Astronautical Congress (IAC). Our activities, however, go far beyond this. Following our theme "A space-faring world: cooperating for the benefit of humanity", the Federation advances the knowledge about space and development and applications of space assets for the benefit of humanity. It maintains a significant worldwide network of experts in the development and utilization of outer space. It remains to this day the only international federation for the space community that addresses all aspects of outer space: research and technology, new system developments, exploitation of space systems, satellite-based applications, capacity-building, expertise, and preparing the future.

Our membership includes 227 organizations from 59 countries, with an increasing number of members who have joined in the last few years from Africa, Asia and Latin America. It includes the major space agencies worldwide, and most of the national space offices and authorities, in particular from emerging countries. In addition, we have the leading industrial companies, research institutes and professional societies as members. Recently, a large number of universities that include space technology or space applications in their curricula have become member of IAF.

At the beginning of this year, as was reported to you by Prof. Feuerbacher during the session of Scientific and Technical Subcommittee in February, there has been an important personnel change within the IAF, with Christian Feichtinger joining as our new Executive Director. Christian, formerly ESA's senior advisor on exploration, had spent many years in Russia as Head of the ESA permanent representation office in Moscow.

Mr. Chairman, let me now address the IAF activities in 2011. The 62nd International Astronautical Congress was held in Cape Town, South Africa, from 3 to 7 October. It was the first time that the Congress was held on the African continent. The Congress featured 15 public programmes and more than 150 technical sessions. It was a huge success and attracted a very large number of participants — nearly 3,000 — with an excellent quality of presentations and debates. The organization was superb and our thanks and sincere congratulations must go to the local organizing committee chaired by our good friend Dr. Peter Martinez.

Last year, the IAF celebrated its 60th anniversary. To celebrate this anniversary, the IAF's 60th Anniversary Award was created to honour an organization or key individual for a space project that has provided a measurable benefit to humanity. Of course, there were many worthy candidates for such an honour, such as the achievements that have come from human and robotic spaceflight, satellite communications, weather satellites, remote sensing, etc. However, faced with a difficult choice, our committee decided that the Global Positioning System (GPS) programme should receive the Award, as it touches and enhances the lives of people from around the world to a greater extent than any other space programme. The award was presented to the GPS team during the 62nd Congress in Cape Town.

The location of last year's Congress provided the perfect launch pad for the IAF's new regional group for Africa. The founding of this Regional Group follows the success of the Latin Americas and the Caribbean, on the one hand, and Asia-Pacific Regional Groups, on the other hand, which were established in 2009 and 2010. These are complementary to the IAF's global efforts and their aim is to promote cooperation and the exchange of information within these specific regions.

By establishing an African Regional Group and selecting South Africa as the host city for the 2011 Congress, the IAF has demonstrated its recognition and support of the scientific renaissance that is taking place in Africa. Indeed, the unique opportunities that space technologies offer Africa in terms of social and economic development were discussed during a round table discussion of African Space Leaders on the first day of the 2011 Congress. During this Congress we also held the 21st UN/IAF Workshop and looking beyond Africa to developing countries in general, this workshop, with the theme "Space for Human and Environmental Security", was held in Cape Town from 30 September to 2 October, in conjunction with the Congress. The aim was to raise awareness of the benefits of space science and technology for developing countries, such as using Earth observation satellites to monitor food security and model the spread of diseases. I am happy to report that we had a strong participation of African representatives during this workshop.

The 22nd UN/IAF Workshop will be held this year from 28 September to 30 September in conjunction with the 63rd Congress in Naples, Italy. The theme will be "Space Technology Applied to the Needs of Humanity: Experiences from Cases in the Mediterranean Areas". The IAF takes this opportunity to thank again the Director and staff of the Office of Outer Space for their excellent cooperation in the organization of this annual workshop.

We also organized, since 2009, a meeting of members of parliament in conjunction with the annual Congress. The 1st International Meeting of Members of Parliament was held during the 60th IAC in Daejeon, Republic of Korea, in 2009. This is an opportunity for law makers from around the world to gather, exchange views on the use of space technology for the benefit of mankind.

A follow-up meeting was then held during the 61st IAC in Prague, Czech Republic, in 2010. Following the important questions raised by decision makers at these meetings, the IAF has decided to make this a regular event on the IAC calendar, to be held annually on the day prior to the opening of the

Congress. The 3rd meeting of members of parliament was held in Cape Town in 2011, attracted 17 Members of Parliament from 8 different countries to discuss the use of space technology for water, food and energy resource management. The 4th meeting will be held in Naples during the 63rd IAC and will be devoted to the topic: "Satellite-based Application-Tools for Policy Implementation and Verification".

The 63rd IAC, as I said, will take place this October in Naples. This city of Naples was the hometown of a former president of the IAF, the late professor Luigi Napolitano.

Luigi Napolitano was a pioneer in many fields, such as microgravity and aerothermochemistry of re-entry. Therefore, in honour of his wide-ranging work, the theme of this year's IAC is "Space science and technology for the needs of all".

The Congress will feature 30 parallel symposia containing about 167 technical sessions, as well as 8 plenary events and 3 highlight lectures. The call for papers for IAC 2012 closed at the end of February and a total of 3,176 abstracts were submitted. The International Programme Committee Members gathered on 14 March 2012 in Paris to proceed with the selection process. The ratio of accepted contributions was 68 per cent (81 per cent for oral presentations and 19 per cent for poster presentations), meaning that 2,152 technical presentations have been accepted in the technical programme.

Furthermore, during the IAC 2012, the IAF will continue to highlight the issues of controlling the proliferation of space debris and of the long-term sustainability of outer space activities. The IAF, which is the only international federation for the space community that addresses all aspects of space, has a duty to facilitate communication on ways and means to maintain outer space as a safe and secure environment.

This issue became a high priority for the IAF, as it is for COPUOS, following a series of recent incidents that highlighted the threat of an increasing orbital debris population, the crowding of selected orbit families and various radio interference concerns between active spacecraft in geostationary orbit. Furthermore, high-profile incidents, such as the collision of two spacecraft that occurred in February 2009, can also have a negative impact on public support for space.

To this end, in 2008, the IAF established its Committee on Space Security, which consists of more than 20 experts on political, economic, legal and technical matters, including Dr. Peter Martínez, chairman of the COPUOS/STSC Working Group on Long-Term Sustainability of Outer Space activities. Since 2009, this Committee has addressed various issues relating to space safety and security at the IAC. At the initiative of Dr. Peter Martínez, a special session "Assuring the Long-Term Sustainability of Outer Space activities" was organized during the 62nd IAC in Cape Town, as part of the symposium on Space Policy, Regulations and Economics. Of particular interest to COPUOS delegations, the Committee on Space Security will hold a joint session with the Space Debris Symposium at the 63rd IAC, in Naples, dedicated to "Political, Economic and Institutional aspects of Space Debris Mitigation and Removal".

As part of its series of global conferences inaugurated in 2010 with the Global Lunar Exploration Conference held in Beijing, China, the IAF, together with the American Institute of Aeronautics and Astronautics, held recently its Global Space Exploration Conference (GLEX) in Washington D.C., in the United States. That took place on May 22 to 24 — that is quiet recently. The focus of this conference was to help build and maintain international relationships that will foster collaboration in space exploration.

GLEX was a very successful conference, exceeding all expectations. The attendance was very high with a total of 634 participants, and the quality of the conference was superb. Excellent plenary sessions were followed by well-structured and well-attended breakout sessions. An intensive dialogue with the audience was a characteristic in most sessions. Based on this success, IAF will look into a follow-on meeting, however not on an annual or biannual basis, but as the demand surfaces and time is ripe.

In 2012 — I would also like to highlight to COPUOS delegations two additional conferences that the IAF has organized. These are the International Meeting of Presidents of Space Universities, which was held in Paris on 13 March, and more recently the 3rd Space Propulsion Conference in Bordeaux, France, from 7 May to 10 May 2012.

For 2013 and 2014, first of all, the IAF is planning to organize a traditional IAF symposium during the session of IAC in February 2013 and will take the opportunity of this session of COPUOS to discuss the possible topic with the Secretariat so that you can make a decision for the topic of this symposium.

We are also actively planning for the 64th IAC, which will be hosted by the Chinese Society of Astronautics in Beijing from September 23-27, 2013. For 2014, the 65th IAC will be hosted by Canada and will take place in Toronto, Ontario, from September 26 to October 3, 2014.

Also planned for 2014 is another IAF Global conference, this time devoted to space applications, with special emphasis on the developing world and that IAF is preparing with UNESCO as its main partner. Preliminary plans are being drawn to hold it in Paris from 20 to 22 May 2014. Of course we will report in more detail on this plans for this conference next year at the IAC session as well as the plenary session in June 2013.

Mr Chairman, thank you for the opportunity to discuss these activities and plans of the International Astronautical Federation with your Committee.

The CHAIRMAN I thank the distinguished representative of the International Astronautical Federation for his statement. Are there any other delegations wishing to make a statement under this agenda item at this time?

I see none.

Distinguished delegates, I would now like to inform you that I have received a request from the Director of the Office for Outer Space Affairs for the opportunity to briefly address the Committee in the time left for this morning's meeting.

Therefore, if there are no objections, I would like to give the floor at this time to the Director of the Office for Outer Space Affairs, and, on behalf of the Committee, invite her to deliver her statement.

Seeing no objections, I give the floor to the Director, Ms. Mazlan Othman. You have the floor.

Ms. M. OTHMAN (*OOSA*) Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, on behalf of the Office, I warmly welcome you all to the fifty-fifth session of the Committee and thank you for the opportunity to address this session of the Committee on the work of the Office for Outer Space Affairs over the past year.

Before doing so, I would like to welcome you, Mr. Chairman, as Chair of the next two sessions of the Committee. I am confident that the Committee will continue to achieve significant accomplishments under your able guidance. I would also like to welcome Filipe Duarte Santos of Portugal and Piotr Wolanski of Poland, and congratulate them on their election as First Vice-Chair and Second Vice-Chair/Rapporteur of the Committee, respectively. I would like to assure you, Sir, of the support of the Secretariat in facilitating your work to our utmost ability.

I would like to warmly thank Dumitru-Dorin Prunariu of Romania, Nomfuneko Majaja of South Africa and Raimundo González Aninat of Chile for their dedicated and excellent work as Chair, First Vice-Chair and Second Vice-Chair/Rapporteur, respectively, of the Committee for the period 2010-2011.

Mr. Chairman, distinguished delegates, allow me now to briefly highlight key aspects of the work the Office is carrying out in the context of its operational priorities and expected accomplishments for 2011-2012.

The responsibilities of the Office towards the Committee and its subsidiary bodies kept the Office and, in particular, the Committee Services and Research Section, fully engaged in the past year. As customary, the Office provided the full range of services needed for facilitating the work of the Committee and, when requested, provided assistance in matters of substance and guidance on organizational issues. Time and documentation management continue to present the Secretariat with unique challenges, but I am confident that with your assistance, the Office will continue to respond to the changing needs of the Committee, particularly in the context of organizational matters, which were discussed in detail at the meeting of the Legal Subcommittee recently.

During the past year, the Office continued to discharge the responsibilities of the Secretary-General under the United Nations treaties on outer space. So, with regard to the United Nations Register of Objects Launched into Outer Space maintained by the Office, in the past year, Brazil, Denmark, France, Germany, India, Italy, Japan, Kazakhstan, Pakistan, Republic of Korea, Russian Federation, Turkey, United Arab Emirates, United Kingdom of Great Britain and Northern Ireland and the United States of America, as well as the European Space Agency, furnished information on their space objects under the Registration Convention. The information received has been disseminated to all Permanent Missions and is also available on the Office's website.

In addition, the Office is pleased to report that following the launch of their first satellites earlier this year, Hungary and Poland have recently submitted

registration information in accordance with the Registration Convention. During the course of this year, the Office intends to revise the model registration form and would be grateful for feedback from States and organizations in this regard. The Office would also like to invite those States and organization that have not done so, to provide the Office with contact details of their designated focal point for registration issues.

With regard to other obligations under the Registration Convention, the establishment of space object registries is often overlooked by Parties. The Office is therefore pleased to report that Kazakhstan has recently informed the Secretary-General of the establishment of its national registry. The Office would like to invite Parties that have not done so, to inform the Secretary-General accordingly.

With regard to implementing the other obligations of the Secretary-General, the Office is pleased to inform delegates that it has received and disseminated supplementary information provided by the Netherlands on telecommunications satellite "NSS 5" under Article XI of the Outer Space Treaty.

In addition, the Office received information provided by Uruguay under Article VI of the Rescue Agreement on the recovery of a space object within its territory.

In accordance with principle 4 of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, the Office also received and disseminated information received from the United States of America and the launch of its nuclear-powered Mars Science Laboratory in November 2011.

Distinguished delegates, the Office conducts activities that specifically aim at promoting greater understanding, acceptance and implementation of the international legal regime on outer space. In this regard, the Office is organizing, jointly with the Argentinean Space Agency (CONAE), a workshop on space law, which will become the eighth in the series of capacity-building workshops on this topic, held by the United Nations jointly with various member States since 2002. This year the workshop is aimed at building capacity in space law for the benefit of States of the Latin America and Caribbean Region. The workshop will be held in Buenos Aires from 5 to 8 November 2012, and will be co-organized with European Space Agency.

Mr. Chairman, distinguished delegates, enhancing use of space science and technology and their applications is one of the priorities of the Office Space Applications programme. Currently the main thematic areas of the Programme include natural resource management, environmental monitoring, global health, basic space technology, human space technology, climate change and space weather.

More details on these areas of work and related activities planned by the Programme will be provided to you by the Expert on Space Applications in his statement to the Committee later.

At this juncture, allow me to inform you that following a recommendation of the UN Office of Internal Oversight Offices Services, the Office had undertaken a review of this organizational structure and during 2011 it consolidated the space applications programme with the United Nations SPIDER programme. More programmes now come under this space applications section and we expect that this merger will result in an integrated, consorted approach towards planning and organizing activities related to issue that transcend both programmes, such as climate change, tele-health and search and rescue. This consolidation should also increase coherence and synergy in the work of the Office. The consolidated section is headed by the United Nations expert on space applications who develops and implements the activities of the programme on space applications, and now the United Nations SPIDER programme. In this regard, the section will fully leverage on the United Nations SPIDER regional support offices and the United Nations affiliated regional centres for space science and technology education.

I am pleased to inform that the Rio+20 event we will organize for the first time an official side-event entitled "Space for sustainable development". It focusing on the contribution of Space-based Information and Technologies to Support the Implementation of Rio+20 Outcomes and Actions. The side event, which will be chaired by our Chairman, Mr. Horikawa, moderated by Mr. A. Abiodun, and will be held on the 19th June 2012, just before the beginning of the high-level conference. The panel includes speakers from Argentina, Austria, Brazil, CEOS and the World Food Programme.

Mr. Chairman, distinguished delegates, as the 2015 deadline for the Millennium Development Goals is approaching and in the midst of an already intense global discussion on what the post 2015 agenda should look like, the United Nations Secretary-General established the United Nations task team on post 2015 development agenda in order to coordinated the United Nations wide response to the post 2015 development agenda. I am pleased to say the Office has been

actively involved in the work of that task team. In this exercise, the Office strived to get the inclusion of reference to the issues of the space environment and the promotion of the need to address inequality in access to and capacities to use geospatial data. These issues are reflected in various paragraphs of the final draft report submitted by the task team to the Secretary-General and it is our hope that such references will be retained in the final report.

Mr. Chairman, distinguished delegates, I would now like to report on our priorities in securing global public goods through space science and technology, our activities in 2011 and our plans for 2012. To continue reviewing and discussing developments in global navigation satellite systems, the Sixth Meeting of the International Committee on GNSS (ICG) was held in Tokyo, Japan, from 5 to 9 September 2011. It was hosted by the Government of Japan. China will host the Seventh Meeting in Beijing, from 5 to 9 November this year and the United Arab Emirates the Eighth Meeting in 2013. The Office for Outer Space Affairs, as the Executive Secretariat of ICG and its Providers' Forum, will assist in the preparations for these meetings and working group activities.

Still within the context of global public goods, the UN-SPIDER programme during the first five months of this year, has been busy with the implementation of the activities included in the revised 2012-2013 plan-of-work, which includes building up the information contained in the UN-SPIDER Knowledge Portal and the technical advisory support being provided to requesting countries, including the recent technical advisory missions to the Kingdom of Tonga and Myanmar. In the implementation of these activities UN-SPIDER staff work closely with the network of UN-SPIDER Regional Support Offices, leveraging on the resources being made available to the programme, which have been steadily increasing.

The UN-SPIDER is being funded mainly from extrabudgetary resources, both financial and in-kind, and we are grateful to Austria, China, Germany and Turkey for the commitment and financial support demonstrated to the Programme up to now. We do continue seeking contributions from additional Member States, and it is a concern that we have not succeeded in securing any additional funds, which was in fact the reason for the revision of the proposed 2012-2013 plan of work, and hence the reduction of several activities.

Finally, I am delighted to inform you that on 30 May 2012 the Regional Centre for Space Science and Technology Education for Western Asia was inaugurated in Amman, Jordan, with 8 signatory countries as we heard from the Jordan delegation earlier. The new Centre hosted by the Royal Jordanian Geographic Centre, and in conjunction with the Inauguration Ceremony, a meeting of the Directors of the Regional Centres was held on 31 May to discuss the status of the Centres and their educational activities.

The Office continues to coordinate and enhance inter-agency cooperation in space-related activities within the UN system by organizing, and serving as the secretariat of the UN Inter-Agency Meeting on Outer Space Activities, which is the primary coordination mechanism of the UN system to achieve better cooperation in space-related activities.

The thirty-second session of the Inter-Agency Meeting was held in Rome from 7 to 9 March 2012 and was organized by the Office jointly with the United Nations World Food Programme. The Committee will be briefed in detail about this meeting later during the session.

With respect to increasing public awareness of the benefits of space, the Office continues to conduct activities for the general public and the young.

I am pleased to report that the Space exhibition, held in 2011 in conjunction with the fiftieth anniversaries, attracted a record number of visitors. The total number of individual visitors daily reached 740 during working days, with an additional 550 coming on the Space Day Open Day. The total number of visitors who visited the international space exhibition peaked at 7,803, which is the highest number of visitors to any exhibit in the Vienna International Centre in the last 15 years according to the statistics of the Visitor's Centre.

In 2011, our Office commenced a new approach to celebrating World Space Week: we plan to commemorate it by partnering each year with a developing country to organize an outreach and educational event. In 2011, the Office for Outer Space Affairs partnered with UNESCO and the Bangladesh Astronomical Society to organize a three-day long capacity-building workshop on astronomy for secondary school teachers in Bangladesh, bringing recognition to the ongoing endeavours to develop and raise space awareness in education and society in general across the country.

As a follow-up to this workshop, I can report with great pleasure that there are now concrete plans to

integrate space science in the national school curriculum in Bangladesh. For 2012, the Office plans to implement this activity model in a country in Africa. We will be cooperating with the Government of Ethiopia and the International Astronomical Union.

Once again, as part of our role in outreach activities, we have assisted in the organization of the Landsat exhibition during the session of the Committee.

Mr. Chairman, distinguished delegates, I would now like to inform you on the strategic and operational priorities for the medium term of the Office to cover the period from 2012 to 2015.

In formulating its priorities, the Office relies on the direction provided by Member States and the Strategic Frameworks for the Programme "Peaceful Uses of Outer Space" for the current and next biennium. These frameworks require the Office, as the entity responsible for implementing the Programme, to commit to specific expected accomplishments which are measured through explicit indicators of achievement.

The proposed Strategic Framework of the Programme (Peaceful Uses of Outer Space, which is Programme 5) for the period 2014-2015 is contained in document A/67/7. This document will be made available to the Committee at the current session in a conference room paper, which will be distributed later. The Strategic Framework of the Programme will be reviewed by the Committee on Programme and Coordination (CPC) formally with the Office tomorrow afternoon, that is 8 of June. To that end, the Office would like to invite the Committee to review this document and provide any comments, as appropriate.

Let me now turn to the financial resources of the Office for 2012. As you are aware, our programme is funded both from the regular budget and voluntary contributions, in-cash and in-kind.

From the regular budget, the Office has received, for 2012, $466,700 for implementing the activities of the Office, the Programme on Space Applications and UN-SPIDER. This amount will be supplemented by voluntary contributions to be received from Member States, space-related entities and industry this year.

With respect to voluntary contributions, I am pleased to report that, from the last session of the Committee, in June 2011, Austria, China, Germany, Japan, the United States of America, the European Space Agency, the Japan Aerospace Exploration Agency, South African Astronomical Observatory and the International Astronautical Federation provided cash contributions to the value of 679,000 Euros for activities to be implemented in 2011 and 2012.

Austria, China, Germany, Japan and Turkey provided, in-kind, the cost of salaries for 3 associate experts and 9 senior experts of non-reimbursable loans, as well as related overheads.

The Office also benefitted greatly from the in-kind contributions of Governments, space-related entities and industry for activities organized from June 2011 until the present time under the Programme on Space Applications, ICG and UN-SPIDER. The list of contributors include Austria, China, Islamic Republic of Iran, Latvia, Malaysia, Nigeria, South Africa, United Arab Emirates, United States of America, Viet Nam, the Asia Pacific Space Cooperation Organization, China National Space Administration, China Manned Space Engineering Office, the Argentinean Space Agency (CONAE), the German Aerospace Agency, Institute of Remote Sensing Applications of China, the Iranian Space Agency, Japan Aerospace Exploration Agency, National Disaster Reduction Centre of China, Secure World Foundation, Vietnamese Academy of Science and Technology, University Kebangsaan Malaysia, Beijing Huadimap Information Technology Co. Ltd., Digital Globe Inc., Google and Turksat.

The total value of the in-kind contributions received for the year 2011 is assessed at approximately $1,300,000.

I would now like to present to you the Office's staff movements in the last year. Mr. Hans Haubold of Germany and Mr. Viktor Kotelnikov of the Russian Federation retired from the Space Application Section in May and November 2011, respectively. The Office is grateful for their long services, spanning more than 20 years each, and we wish them all the very best in the next phases of their lives.

In March 2012 the Office welcomed Mr. Luc St-Pierre (Canada) as Senior Programme Officer under the Space Applications Section. Ms. Ingrid Dietlein of Germany will shortly leave HSTI upon a successful completion of her one-year assignment. The Government of Germany has generously offered to continue supporting HSTI with a non-reimbursable loan staff and the process of selection of a candidate is ongoing. The Office would like to express its appreciation also to the Governments of China and Japan for making their experts available to HSTI.

In 2011, the UN-SPIDER Bonn Office saw the departure of Ms. Natalie Epier, Associate Expert from Germany and Mr. Joerg Szarzynski, Senior Expert, provided by DLR. Mr. Michael Leitgab, Associate Expert from Austria left in 2011. Their contributions were greatly appreciated. Ms. Li Suju, Senior Expert, provided by NDRCC, and Ms. Liu Jing, Programme Assistant, joined the UN-SPIDER Beijing Office in 2011 and we expect another NRL from the Government of China to join that office in a few weeks. In 2012 the Office welcomed another Associate Expert from Austria, Mr. Markus Woltran, who will be supporting activities of the Office under the UN-SPIDER Programme.

In November 2011 the Office welcomed Ms. Heli Pahlman of Finland who joined the Committee Services and Research Section as Associate Programme Officer. Ms. Sama Payman of Australia, Legal Officer, is now again seconded to the Office of the Director-General of UNOV.

Ladies and gentlemen, distinguished delegates, allow me to inform you about the significant milestone of the Office for Outer Space Affairs. With the first substantive session of the permanent Committee on the Peaceful Uses of Outer Space in March 1962, OOSA, or some form of it, formally became the Secretariat for COUPOS and was established as a unit under the department of Political and Security Council Affairs, and we have since then evolved into the Office for Outer Space Affairs. Hence, we this year celebrating 50 years of our existence and we will be celebrating it, not so much in the form of glamorous events, but in the quiet reflection of the role we have to play in the United Nations system, as well as the world at large.

Mr. Chairman, distinguished delegates, I would like at this juncture to remind delegations that according to the agreement of the Committee, nominations for the bureaux of the Committee and its Subcommittees for the period 2014-2015 should be made at this present session of the Committee. According to the established rotation scheme, the nominations by the regional groups should be made as follows: Chair of the Committee: Group of African States; First Vice-Chair of the Committee: Group of Latin American and Caribbean States; 2nd Vice-Chair/Rapporteur of the Committee: Group of Asian States; Chair of the Legal Subcommittee: Group of Western Europe and Other States. The African Group, the Eastern European Group and the Western European and Others Group have already made their respective nomination and the Committee will have before it the information about these nominations in conference room papers.

Mr. Chairman, distinguished delegates, as is evident from the information I have just shared with you, the ability of the Office to deliver activities on a broad range of thematic areas, is only possible through cash and in-kind contributions. I would therefore like to extend our deep gratitude to those Governments, space-related entities, as well as industry for their indispensable support. I can assure the Committee that the Office will strive to obtain extrabudgetary resources which have become so critical to the success of our Programme and in this regard, I will be convening a meeting to raise funding for our programmes on this coming Wednesday.

Let me conclude by assuring the Committee of the commitment of my Office and my colleagues to increasing the awareness of the relevance and importance of space exploration and applications to the betterment of the human condition, and particularly, to strengthening the capacity of developing countries to partake in those benefits.

Thank you, Mr. Chairman; thank you, distinguished delegates.

The CHAIRMAN I thank the Director of the Office for Outer Space Affairs for her informative and comprehensive statement. We will therefore continue our consideration of agenda item 5, “General exchange of views”, this afternoon.

Distinguished delegates, I would now like to begin our consideration of agenda item 6, “Ways and means of maintaining outer space for peaceful purposes”.

I have two speakers. The first speaker on my list is the distinguished delegate of Japan. You have the floor.

Mr. T. OZAWA (*Japan*) Thank you, Mr. Chairman, and distinguished delegates, on behalf of the Japanese delegation, I am pleased to address the 55th session of COPUOS.

Mr. Chairman, in order to develop and maintain space technology applications for peaceful uses of outer space, Japan believes that international cooperation is a most important key factor. Japan also recognizes that international cooperation plays an essential role in enhancing transparency and confidence-building among Member States.

I would like to share Japan’s experience with the International Space Station (ISS) Programme, which serves as an excellent example of the value of

international cooperation. The ISS programme, launched in 1988, is one of the largest international programmes in human history. In fact, international cooperation has been driving this programme for 25 years. Together, through cutting-edge research and development, we have constructed a huge, manned, on-orbit facility, and are now operating and utilizing it for peaceful purposes. Based on the agreement among ISS partners, we are sharing the Station's resources, including the opportunity to use facilities, crew operation time, and the capacity of transfer vehicles to the ISS. In addition to this significant international achievement, I would like to draw attention to the fact that there has been great spirit of cooperation among ISS participating countries.

Furthermore, JAXA has been promoting the cooperative utilization of "Kibo", the Japanese Experiment Module, among the Asian-Pacific countries. Japan will continue to promote international cooperation in utilizing the space environment. We will give a technical presentation of this topic next Wednesday (13th of June).

In relation to this, we are pleased that Dr. Takao Doi, chief of Space Applications Section of OOSA, has worked to establish the Human Space Technology initiative (HSTI), under the framework of the UN Programme on Space Applications, which actively promotes International cooperation in the field of human space exploration. We believe that our activities, geared toward the advancement of peaceful uses of outer space, are in line with those of HSTI. We are looking forward to an HSTI Expert Meeting on the International Space Station Humanitarian Benefits which will be held on next Monday and Tuesday. Participants of this meeting are expected to engage in productive discussions that will contribute to and advance the relevant issues, resulting in a valuable outcome.

Mr. Chairman, I would also like to introduce our efforts to promote regional and interregional cooperation. As we explained before, Japan promotes APRSAF to enhance space activities in the Asia-Pacific region. APRSAF also plays a key-role in returning the benefit of space technologies to society. APRSAF is an open and flexible forum where space agencies, governmental bodies, and international organizations, as well as private entities, universities and research institutes, can participate. To date, 325 organizations from 35 countries and regions and 24 international organizations have participated. APRSAF aims to yield tangible results by way of an action-oriented approach to address issues of concern to the Asia-Pacific region. Interested countries and organizations take part in collaborative projects on a voluntary basis.

One such example is "Sentinel Asia", a unique and successful initiative that uses WEB-GIS, as well as space technologies, including earth observation data and communications satellites, to support disaster management activities in the Asia-Pacific region. Participation in "Sentinel Asia" is on a voluntary basis. "Sentinel Asia" benefits from international cooperation through collaboration with other disaster management initiatives, such as the International Disaster Charter. Within such a collaborative framework, we are able to access space based data provided by both initiatives when we need it. We recognize that synergetic effects, which strengthen regional cooperation, also function to contribute to cooperation inter-regionally.

In collaboration with United Nations Initiatives, you may recall that the Asian Disaster Reduction Center, or ADRC, serves as a Regional Support Office of UN-SPIDER. Within the framework of "Sentinel Asia", ADRC provides lecturers for 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 broaden the base for using space technology within regional and interregional frameworks, while at the same time making important contributions to and promoting peaceful uses of outer space.

Mr. Chairman, Japan has been taking part in multilateral discussions through COPUOS since its establishment, and has contributed to the development of regulatory frameworks, principles and best practice guidelines. In order to encourage wider participation in adherence to the rules, Japan feels it is practical to accumulate State practices under voluntary frameworks and will cooperate fully in the process of their formulation.

Japan believes that an agenda item dealing with the "Long-Term Sustainability of Outer Space Activities", considered by the Scientific and Technical Subcommittee, is essential, not only for the sustainability of space activities, but also for the sustainable development of many countries that use space-based technologies and services on a daily basis. Utilization of these technologies and services has increased rapidly, thus bringing the development of best practice guidelines.

Japan is delighted that the Expert Group discussions on the "Long-Term Sustainability of Outer Space Activities" are in full swing. I am confident that the Working Group and its Expert Group, will yield tangible results under the leadership of their able chairmen. Japan will continue to actively participate in these Groups and contribute to the discussion.

Mr. Chairman, on behalf of Japan, I would like to reaffirm the important role of COPUOS in the promotion of the peaceful utilization of outer space, not only for those countries which conduct space activities themselves, but also for other countries that have the ambition or desire to participate in space activities in the future. Thank you for your kind attention.

The CHAIRMAN I thank the distinguished representative of Japan for his statement. The next speaker on my list is distinguished representative of the United States of America. You have the floor.

Mr. K. HODGKINS (*United States*) Thank you, Mr. Chairman. Mr. Chairman, my delegation once again welcomes the opportunity to address specific measures for maintaining outer space for peaceful purposes.

Today, there is an unprecedented level of international cooperation in space. The United States has a long and successful history of civil space cooperation with other partners. Over the past five decades, the United States has concluded over 4,000 agreements with more than 100 nations and international organizations; and the level of new cooperation is rising each year. Since COPUOS last met, NASA alone signed 97 new international agreements with other governmental and non-governmental entities bringing the total for 2011 to an all-time high of 147 agreements. The number of nations investing in space activities has also steadily grown, and we now have a significant private sector presence in outer space. Looking to the future, international space cooperation will continue to be fundamentally important to the US.

The United States wishes to compliment Japan on its successful hosting of the sixth meeting of the International Committee on Global Navigation Satellite Systems (ICG-6) and the meeting of the related Providers' Forum in Tokyo, Japan, September 4 to 9, 2011. We commend the Office for Outer Space Affairs for its outstanding performance in assisting with the planning and Organization of this meeting and for its continued support as the Executive Secretariat for the ICG and Providers' Forum. The United States continues to provide financial support to OOSA in support of GNSS-related activities, including regional Workshops and its support to the ICG.

The United States also has many productive bilateral relationships on satellite navigation issues. We meet regularly with India, Japan, Russia and the European Commission to discuss ways in which we can enhance interoperability among the systems and improve services for the global user community.

From a broader perspective, the US is reaching out to other nations to consider international cooperation. Our objective is to promote common space exploration objectives and cooperative or complementary space exploration missions, along with the development of new technologies that will open up many opportunities for exploration and discovery.

The United States also works through the Group on Earth Observations (GEO) with the other 79 member countries, the European Commission and 46 participating organizations, in order to establish a Global Earth Observation System of Systems. The GEO vision for this System of Systems is to realize a future wherein decisions and actions for the benefit of humankind are informed via coordinated, comprehensive, and sustained Earth observations and information.

In light of these developments, and the accomplishments of COPUOS, my delegation remains unconvinced of the need for action to be taken by this Committee relating to concerns regarding the weaponization of outer space. There is no scarcity of appropriate multilateral mechanisms where disarmament matters can be discussed. COPUOS is not and should not become one of them. COPUOS was not created to deal with disarmament. More than five decades ago, the General Assembly adopted resolution 1348, which established the Ad Hoc Committee on the Peaceful Uses of Outer Space. The resolution marked a significant step forward for the world community in that it established COPUOS as the only standing body of the General Assembly to consider international cooperation in the peaceful uses of outer space. At the time, the concept, still valid today, was to establish COPUOS as the body of the General Assembly concerned exclusively with promoting international cooperation in the uses of space. It was clear that there would be entirely independent efforts to deal with disarmament issues. These would include forums such as the First Committee of the General Assembly and the Conference on Disarmament in Geneva.

Mr. Chairman, this Committee has played a notable role in advancing space cooperation and provides a unique forum for the exchange of information among developed and developing countries on the latest developments in the use and exploration of space. In our view, there are tangible opportunities to enhance international cooperation in keeping with the Committee's mandate. Our consideration of the ways and means of maintaining outer space for peaceful purposes has produced measurable results in the revitalization of COPUOS. Under this item, Member States concluded that reinforcing international cooperation in space implies the need for the Committee to improve the form of its work; and this has been reflected in the restructured agendas of the Scientific and Technical and Legal Subcommittees and their long list of accomplishments that have a real and positive impact on space cooperation.

An indication of the success of our efforts to revitalize COPUOS is the growing relevance of our Committee's work to the international community more generally, as shown in part by the steady increase in the number of other intergovernmental organizations, as well as NGOs and private firms that seek participation in the Committee's work. This is an extremely positive development. The presence of non-governmental entities and the willingness of experts to make special presentations have enriched the Committee and its subcommittees, and the ultimate success in implementing the recommendations of UNISPACE III will depend heavily on their continued involvement.

In this regard, Mr. Chairman, I am pleased to note that my delegation includes representatives from the Space Foundation, the Satellite Industries Association, and the George Washington University's Space Policy Institute. Thank you, Mr. Chairman.

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

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

I see none.

We will therefore continue our consideration of agenda item 6, "Ways and means of maintaining outer space for peaceful purposes", this afternoon.

Distinguished delegates, I would now like to begin our consideration of agenda item 8, "Report of the Scientific and Technical Subcommittee on its forty-ninth session".

The report of the Scientific and Technical Subcommittee on its forty-ninth session is contained in document A/AC. 105/1001. Delegations will recall that at its forty-ninth session, the Subcommittee agreed on a draft provisional agenda for its fiftieth session to be held in 2013. The working groups on items considered under workplans, and the Working Group of the Whole, will therefore be reconvened in 2013.

I would like to bring to the attention of delegates that it was agreed by the Subcommittee in February that the topic for the symposium to be organized in 2013 by the International Astronautical Federation, in accordance with the agreement reached by the Subcommittee at its forty-fourth session, in 2007, should be considered by the Committee at this current session.

I would also like to remind delegations that during its forty-ninth session, the Subcommittee welcomed the adoption of the terms of reference and methods of work of the Working Group on Long-term Sustainability of Outer Space Activities at the Committee's session in 2011. The Working Group also agreed that its expert groups should prepare working documents containing their draft inputs to the Working Group on the basis of their work, and that these documents should be made available for comments by member States and permanent observers of the Committee, preferably on the margins of and/or during the sessions of the Committee in June 2012 and 2013.

I am pleased to inform you that these working documents, which are documents belonging to the fiftieth of the Scientific and Technical Subcommittee in 2013, have been made available to delegations for comments, in all official languages of the United Nations, and they have been distributed in the pigeon holes as documents A/AC.105/C.1/L.324, 325, 326 and 327.

I would also like to inform delegations that the following two Working papers, A/AC.105/C.1/L.322, submitted by the Russian Federation and Ukraine, and A/AC.105/C.1/L.323, submitted by the Russian Federation, which were distributed to the Scientific and Technical Subcommittee in February as conference room papers, are now being made available in all languages.

The first speaker on my list is the distinguished delegate of Slovakia. You have the floor.

Mr. K. KUDELA (*Slovakia*) Mr. Chairman, distinguished delegates and representatives. Mr. Chairman, let me express my sincere appreciation seeing you chairing this meeting. Wish you all the very best and every success in your mandate.

Dear Colleagues, allow me to touch upon briefly the Scientific Committee on Solar Terrestrial Physics mater. In the statement of Mr. Nat Gopalswamy, President of the Scientific Committee on Solar Terrestrial Physics (SCOSTEP), the Slovak delegation supports the SCOSTEP's application for observer's status with the Committee on the Peaceful Uses of Outer Space.

There are several scientific and educational institutions in Slovakia working for a rather long time in the subjects covered by SCOSTEP. In recent years, several activities in Slovakia have been targeted to the subjects of SCOSTEP. For example the International Space Weather Initiative Summer school last year, participation in the International Heliophysical Year, the International Year of Astronomy, and continuing the International Living With a Star and others.

Via SCOSTEP, as a permanent observer, the relevant institutions and scientists in Slovakia will provide the information about their own current activities. The forum will be important also for obtaining information about activities running in other countries, stimulating the international cooperation in various aspects of solar-terrestrial physics. Thank you, Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Slovakia for his statement. The next speaker on my list is the distinguished representative of the United States of America. You have the floor.

Mr. J. HIGGINS (*United States*) Mr. Chairman, on behalf of my delegation, I would like to express our appreciation for the excellent work of Mr. Felix Menicocci of Argentina as the chair of the Scientific and Technical Subcommittee this year. Under his able guidance, the 49th session of the Subcommittee made significant progress and addressed a wide array of current topics of interest to the space community. In addition, the U.S. Delegation once again commends the outstanding work of the Office of Outer Space Affairs in supporting the Subcommittee meeting and its working groups.

We fully endorse the Report of the 2012 Scientific and Technical Subcommittee. We would like to especially note the progress made by the STSC and its Working Group on the Long-Term Sustainability of Space Activities, under the Chairmanship of Peter Martinez of South Africa. We commend Mr. Martinez for his diligent efforts prior to, during, and since the STSC session to continue work on this agenda item. We also appreciate the work of the four Expert Groups supporting the Working Group. The United States believes this topic is very timely due to the increasing number of space actors, spacecraft, and space debris. It is essential that we come together to agree on measures that can be employed to reduce the risk to space operations for all. We are prepared to work productively in the working group to achieve that objective, and hope that we can reach consensus on best practices guidelines during the course of the workplan for the Working Group.

We note with pleasure that during the 49th 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 is getting greater scrutiny in 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 multi-year 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, we note the progress made to expand the global network for NEO detection and characterization, and the efforts undertaken by Action Team 14 to develop a draft Terms of Reference for an independent NEO threat mission planning and operations group. We look forward to discussions next year in the STSC on how Member States might cooperate in the event an Earth-threatening NEO is discovered. Although there is more work to do in this area, we would remind everyone 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 pleased that the STSC recommended a new regular agenda item on Space Weather. This is a natural follow-on to the International Heliophysical Year (IHY) 2007 and the International Space Weather Initiative, which will wind up later this year. This new agenda item will allow COPUOS to stay involved with developments and activities begun under the IHY and continued under ISWI as we seek to understand more fully the effects of the Sun on our space infrastructure and our environment here on the 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 3rd UN Conference on the Exploration and Peaceful Uses 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 (PNT) systems and promoting the use of GNSS and its integration into infrastructures, particularly in developing countries. The United States will continue to coordinate with COPUOS Member States in support of the ICG and the Providers' Forum.

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

Presently, 41 countries and two organizations are formally associated with the International Cospas-Sarsat Programme, and several more have shown interest in associating with the Programme in the future. The four founding Parties — Canada, France, Russia, and the United States — along with EUMETSAT, continue to provide a space segment consisting of geostationary and polar-orbiting satellites. Supported by ground segment contributions from an additional 26 countries, the Cospas-Sarsat Programme now has six polar-orbiting and six geostationary satellites that provide worldwide coverage for emergency beacons. In 2011, Cospas-Sarsat alert data helped save at least 1,650 lives in 630 search and rescue events worldwide. From becoming operational in 1982 until the end of 2011, the Cospas-Sarsat system provided assistance in rescuing at least 32,300 persons in almost 9,000 search and rescue events.

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

Finally, I would like to reiterate that my delegation welcomes the special presentations made before this Committee and the Scientific and Technical Subcommittee on a wide variety of topics. We continue to believe that these presentations serve to provide complementary technical content for our deliberations and provide timely information that is useful in keeping delegations informed about new programmes and developments in the space community, as well as providing illustrative examples of the application of space technology. Thank you very much, Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of the United States of America for his statement. The next speaker on my list is the distinguished representative of Ecuador on behalf of GRULAC. Distinguished delegate of Ecuador, you have the floor.

Ms. R. O. VÁSQUEZ OROZCO (*Ecuador on behalf of GRULAC, interpretation from Spanish*) Thank you, Chairman. Before I begin GRULAC's statement, please allow me to thank Ambassador Raimundo González for his excellent work as Second Vice-Chair of COPUOS. I will now start my statement.

Mr. Chairman, GRULAC thanks the Secretariat for the presentation of the report of the Scientific and Technical Subcommittee. GRULAC would like to stress the importance of scientific progress in the field of outer space and the applications of space technology in different fields of human of development, such as environmental protection, natural resource management and natural disaster management. This progress shows that there is increased space activity generating new challenges for the use of outer space and the way in which these activities are conducted. Problems such as the management of space debris, the saturation of the geostationary orbit and the use of nuclear energy

sources, are subjects which continue to be dealt with within this Committee and its Subcommittees.

Regarding space debris, GRULAC would urge Member States to implement guidelines for the reduction of spade debris considering that the future of space activities depends on reducing space debris. The Scientific and Technical Subcommittee should study this subject further and pay more attention to debris from platforms with nuclear power sources in outer space, collision of space objects with space debris and other subjects, as well as improving technology and cooperation that works to supervise this.

Regarding the use of nuclear power sources in outer space, especially in the geostationary orbit and low Earth orbits, GRULAC reiterates that the regulatory activity associated with the use of nuclear power sources in space is exclusively the duty of States without considering their degree of social, economic, scientific or technical development and involves the whole of humanity.

GRULAC also reiterates the international responsibility of States for their national activities when they use nuclear power sources in outer space, either by government or non-governmental entities, and the importance of this being undertaken in favour of peoples and not to their detriment.

Mr. Chairman, the saturation of the geostationary orbit is a subject that concerns us. GRULAC attaches special importance to the equal access of States to the orbit spectrum in the geostationary orbit, Considering its potential through space technology in the implementation of programmes that can have a [?] social impact and benefit; populations with educational projects and telemedicine and technical assistance. We would also like to reiterate our position regarding this natural resource, which is limited and could be saturated. Therefore we believe that rational use should be made of it by all States, taken into account the needs and interests of developing countries and the geographic position of certain countries in accordance with the principles established in the regulatory framework of the ITU and the UN.

Taking into account the discussion that is taking place within the Legal Subcommittee on criteria to optimize the working methods of that Subcommittee, GRULAC considers that the same criteria of rationalization should be applied to the activities of the Scientific and Technical Subcommittee. In this sense, GRULAC points at the need to pay attention to the excessive time allocated to technical presentations during the meetings of the Scientific Subcommittee to the detriment of substantive issues. GRULAC also considers that any change meant to optimize the working methods of the two Subcommittees should be examined and approved by the plenary.

And finally, GRULAC welcomes Argentina's offer of hosting a UN-SPIDER office in the region. Thank you.

The CHAIRMAN I thank the distinguished representative of Ecuador on behalf of GRULAC for her statement.

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

I see none.

We will therefore continue our consideration of agenda item 8, "Report of the Scientific and Technical Subcommittee on its forty-ninth session", this afternoon.

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

The first presentation on my list is by Mr. Takaaki Iwasa of Japan, entitled "Japanese International Cooperation". Mr. Takaaki Iwasa, you have the floor.

Mr. T. IWASA (*Technical presentation*) Thank you very much, Dr. Horikawa, for your kind introduction. It is my great pleasure and honour to participate in this session. I would like to focus on Asia-Pacific Regional Space Agency Forum, or APRSAF, as an example of Japanese international space cooperation.

APRSAF was established in 1993, with the aim of promoting regional cooperation in space activities and utilization of space technologies and their applications. APRSAF is attended by space agencies, governmental bodies and international organisations, such as UN entities, as well as universities, research institutes and private sectors.

Also, APRSAF has offered opportunities to discuss concrete actions to further strengthen international cooperation in space activities, with a view to yielding tangible results. So far, Australia,

India, Indonesia, Malaysia, Mongolia, the Republic of Korea, Singapore, Thailand and Viet Nam have hosted APRSAF.

APRSAF stands out as unique forum for its characteristics. It is an open and flexible forum where any entity interested in space activities can participate. Participation in its meetings and activities is on a voluntary basis. Yet, APRSAF focuses its efforts on carrying out activities that will have concrete results and that address issues of common interest and concern among the countries in the region.

APRSAF currently consists of the plenary and the following working groups: the Earth Observation, Communication Satellite Applications, Space Education and Awareness, and the Space Environment Utilization. Based on the exchange of information and discussions in those working groups on the on-going and planned activities, APRSAF started joint projects, or "Initiatives", as they are called in the APRSAF community.

I will mention some of examples of new initiatives which were launched by the working groups of the APRSAF. Sentinel Asia, which is well-known for achieving significant results when it comes to disasters in the Asia Pacific region, was launched at APRSAF in 2005. It represents the collaboration between space agencies and disaster management agencies, applying space technologies, including Earth observation and satellite communications, and web GIS technologies to support disaster management in Asia and the Pacific.

The Joint Project Team, which is responsible for the implementation of Sentinel Asia, consists of more than 80 organizations, including ESCAP, OOSA, ASEAN, the Asian Institute of Technology (AIT), and the disaster management community such as the Asian Disaster Reduction Center (ADRC) and its member countries.

Five organizations serve as Data Provider Nodes to provide high resolution optical images, and 26 organizations serve as Data Analysis Nodes to provide value-added information.

At the time of the Great East Japan earthquake last year, JAXA received 5,000 scenes obtained by 27 satellites from 14 countries and regions, through the International cooperation frameworks such as the International Disaster Charter and Sentinel Asia.

I would like to express once again, on behalf of the people of Japan, our deepest appreciation for the overwhelming support and assistance that we received from around the world. Through Sentinel Asia, ISRO of India and GISTDA of Thailand provided high resolution optical images. Optical images obtained by FORMOSAT-2 of NARL were utilized for capturing the overall situation of damages at the very first stage.

As for SAFE, or Space Applications For Environment, started in 2008, prototyping activities have been carried out in eight countries to use space-based technologies to detect environmental changes, such as water-related disasters, sea level rises, land cover and coastal zone changes, decreasing of forests, impact of drought on rice production, and ecosystem changes.

"Climate R3", which is the short name for the Regional Readiness Review for Key Climate Missions, was launched at the last session to assess and improve regional ability to benefit from satellite data, in support of the development of well-informed regional climate policy, with the aim of strengthening the regional capacity to use space technologies and applications, through the multilateral cooperation, for climate change adaptation.

Another new initiative launched by APRSAF at its last session is to promote Asian Cooperation on Kibo/ISS. This initiative aims to share the significant importance and values that the Kibo/ISS will bring to human beings and promote the establishment of Kibo utilization cooperation projects in the region.

We have been working on the promotion of Kibo utilization among Asia-Pacific countries for several years through the APRSAF Space Environment Utilization Working Group. The new initiative will enhance the cooperation among Asia-Pacific countries.

Through the collaborative project named "Space Seed for Asian Future", plant seeds from four Asian countries, Indonesia, Malaysia, Thailand and Viet Nam, had delivered to the Japanese Experiment Module "Kibo" of the International Space Station (ISS) by "KOUNOTORI 2", a Japanese cargo transfer vehicle to ISS. Those seeds were retrieved to the Earth, returned to each countries and are being utilized for research or educational activities.

The "Try Zero G" project facilitated by JAXA allowed for scientific experimental micro-gravity demonstrations on board of the ISS for Australia, Bangladesh and Malaysia for educational purposes.

Bilateral collaboration between the Malaysian Space Agency, ANGKASA, and JAXA, which is a

series of protein crystallization experiments in Kibo, is ongoing as well.

Under the theme entitled "A Regional Collaboration for Tomorrow's Environment APRSAF-18" was held from 6 to 9 December last year and co-organized by the Singapore Space and Technology Association, SSTA, and the Centre for Remote Imaging, Sensing and Processing, CRISP of the National University of Singapore, as well as JAXA and the Ministry of Japan.

It was attended by about 280 participants from 28 countries and regions as well as 11 international organizations.

I would like to note with satisfaction that the new initiative and other joint activities were successfully established at APRSAF-18. Several side events took place in conjunction with the APRSAF-18, such as the water rocket event, SAFE workshop, and poster contest.

During the session of APRSAF, a special astronaut event entitled "Asians in Space: Achievements of Human Spaceflight in Asian Countries", was also organized to celebrate the fiftieth anniversary of human spaceflight. The event featured panel discussions by astronauts and cosmonauts from four countries, including Dr. Prunariu and from Kazakhstan, Malaysia and Japan on how the coalition of space explorers could help build a better society and future in Asia.

Recognition of the expansion of space development and utilization and the accomplishment by Asian astronauts have mutually contributed to each other.

APRSAF also wishes to continue organizing this kind of event in partnership with OOSA, and Japan will continue to actively promote these activities initiated by APRSAF.

Finally, I would like to announce that the next session, APRSAF-19, will be held from 11 to 14 December 2012, in Kuala Lumpur, Malaysia, co-hosted by ANGKASA, Ministry of science technology and innovation of Malaysia and JAXA and MEXT. And as a theme, enriching the quality of life through innovative space programmes.

Before concluding my presentation, I would like to mention that we have agreed to set up a new task team among the APRSAF members, to take steps forward to further strengthen the cooperation framework through APRSAF, which may result in the of launching more initiatives by more participating countries.

Any new measures to be introduced into the operation of APRSAF are expected to be discussed at APRSAF-19. I look forward to seeing many of you at APRSAF-19. You are most welcome. Thank you very much for your attention.

The CHAIRMAN I thank Mr. Iwasa for your presentation. Is there any delegate who has questions for this presentation? No question? I thank the distinguished representative of Japan, Mr. Iwasa, for your presentation.

The second presentation on my list is by Mr. Ricardo Urbina of Ecuador entitled "Identification and evaluation of flooded areas using remote sensing and geographic information systems (GIS)". You have the floor.

Mr. R. URBINA (*Technical presentation, interpretation from Spanish*) Thank you very much. It is an honour for me to be here and give a presentation on one of our experiences in Ecuador that we use space technology for. This is was the identification and assessment of flooded areas on Ecuador's coast using space technology and GIS in March 2012. Here we have the map of South America, and Ecuador. The whole of Ecuador's coast suffered floods, seven provinces were affected in March 2012.

I am representing the CLIRSEN Institution and we had the opportunity to work during the floods and we used methodology, which involved planning. The president of the Republic declared a state of emergency for the seven flooded provinces and we used the international charter for that. We processed the images, which were radar images, because in Ecuador, unfortunately, it is always very cloudy and this system requires clear images. So we used satellite images from ENVISAT from the European Space Agency. We used RADARSAT-2 images so these were satellite images. We used DMC optic images — there were all multispectral optic images. We processed the images and we used the geographic information system to classify the images with a multi-temporal study and we saw where the damage was to crops and infrastructure.

The secretariat for risk management in Ecuador worked with us because they needed to make decisions based on the situation. I should also point out that after doing this work, we had to do some field work, so we did an over flight to verify the situation in situ. We were able to be very accurate regarding the

impact on agriculture, infrastructure, the road network and towns and villages.

What were our aims? Our aims were to identify and evaluate the flooded areas in March 2012 using remote sensing and geographic information systems based on the information from the international charter. The institution I represent as project manager for natural disaster in Ecuador, so we drew out the cartography based on an automatic classification process using radar images to determine and evaluate the affected area; the flooded areas and the impact on territory and we had to determine significant damage to road infrastructure and services, and we also had to determine which areas had suffered ground soaking.

We used the ENVISAT from the European Space Agency — that was the 12 of March 2012. We used this image — RADARSAT-2 — from SCANSAT from the 12 of March 2012 and then we used this radar satellite image from TERRISAT-– from the 13 March 2012, this has an 8 metre resolution. We also used the DMC satellite image, which has a multispectral camera with a 20 metre resolution. This is from the 12 of March 2012. And, we then selected a radar-type image from the 12 of March 2012 and we processed it with a polarity description HH, HV, VV and VH used for the best discrimination of surfaces and detection of different objects. We did the processing and these were the results that we achieved. So, we had a false colour composition, where we were able to see water, urban areas, banana crops, sugar cane and the relieve map.

These were the results obtained: we were able to determine which land had been flooded, which had been saturated. We were able to determine which banana crops had been affected, which sugar cane crops had been affected. The information that we obtained, with a series of data, enabled us, to draw the physical characteristics of the objects and this was ideal for automatic classification to see whether it was flooding and ground saturation.

We were able to visually identify significant data patterns to be extracted and correctly codified. In order to verify these data, we did verification field work with over flights of the affected areas. We thus obtained satisfactory and accurate results. We did two over flights on the 3 and 4 of April over the most affected areas. We then obtained the results which included data that the secretariat for risk management could use to make the right decisions regarding the management of this natural disaster.

Here we have an example. The map shows the most affected areas. The crops that had suffered, infrastructure that was affected and we also made a comparison with 2008, because something similar happened in the same places around the same dates and four years later, the same thing happened. So we were able to make a comparison, in yellow in 2008 corresponds to the floods in 2008, in red 2012, and green shows areas that were affected both in 2008 and 2012.

To conclude, our experience in CLIRSEN, we were able to provide an early response regarding data processing and then the quality and accuracy of the data we obtained, we were able to show complementarity in data handling as a key factor in making the right decisions and we realized that we did have installed capacity due to our human resources and available historical data. To conclude, I would like to give special thanks to the National Committee of Space Activities and Mr. Gabriel Platzeck, who was the manager who freed the information that we used to manage this natural disaster in March 2012. I would like to thank Ms. Brenda Jones, who triggered the activation of the international charter in Ecuador, and I would like to thank DMCii of the UK, the European Space Agency, CSA of Canada and DLR of Germany. Thank you for your attention.

The CHAIRMAN I thank you Mr. Urbina for your presentation. Is there any delegate who has questions for the presenter?

No.

I thank you for proving us your significant results of data analysis and this significant example of such application of Earth observation data will enhance further Earth observation applications. Thank you very much, again.

Distinguished delegates, I will shortly adjourn this meeting. Before doing so, I would like to inform delegates of our schedule of work for this afternoon. We will meet promptly at 3.00 pm. At that time, we will continue our consideration of agenda item 5, “General exchange of views”, agenda item 6, “Ways and means of maintaining outer space for peaceful purposes”, and agenda item 8, “Report of the Scientific and Technical Subcommittee on its forty-ninth session”.

There will be one technical presentation this afternoon: by a representative of Canada entitled “Space Security Index 2012”.

Expert Groups of the Working Group on the Long-term Sustainability of Outer Space Activities are also meeting this afternoon on the margins of the session. Expert group B will meet from 3.00 pm to 6.00 pm in meeting room MOE 100. Expert group C will meet from 2.00 pm to 5.00 pm in meeting room MOE 19.

Are there any questions to this proposed schedule?

I see none.

Finally, I wish to remind delegations of the lunch-time reception, hosted by the United States and the Secure World Foundation, on the occasion of the fortieth anniversary of the Landsat programme. The reception will begin after this meeting at 1.00 pm in Special Function Room D, right outside the Mozart Room of the VIC restaurant.

This meeting is adjourned until 3.00 pm this afternoon.

Thank you.