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

The meeting was called to order at 3.11 p.m.

The CHAIRMAN Good afternoon distinguished delegates. I now declare open the 635th meeting of the Committee on the Peaceful Uses of Outer Space.

I hope that delegates had a chance to enjoy the lunchtime screening of the videos. This afternoon we will continue our consideration of agenda item 6, implementation of the recommendations of UNISPACE III; item 7, report of the Scientific and Technical Subcommittee on its forty-eighth session and, item 10, space and society.

Following the plenary there will be three technical presentations. The first by a representative of the United States on human space flight. The second by a representative of Indonesia entitled 'Space weather and space debris awareness in Indonesia' and the third by a representative of Colombia entitled 'Colombian Space Commission: a strategy for the sustainable development of Colombia'.

In the evening there will be a reception hosted by the United States at 6 p.m. at the VIC Restaurant. Delegations are kindly reminded to provide the Secretariat with written amendments to the provisional list of participants which was distributed as CRP.2 so that the Secretariat can finalize the list of participants by tomorrow.

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

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

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

Mr. T. SANO (Japan) Thank you very much Mr. Chairman. Mr. Chairman, distinguished delegates. On behalf of the Japanese government I am pleased to present Japan's activities relating to the implementation of the UNISPACE III recommendations. We also commemorate the fiftieth anniversary of both COPUOS and human space flight once again.

Mr. Chairman. Japan has actively participated in, and contributed to, a number of action teams established to implement the recommendations of UNISPACE III as contained in the Vienna Declaration of 1999. As a follow-up, among other things, Japan has been making efforts to obtain further support for the space education activities through the Asia Pacific Regional Space Agency Forum (APRSAF) which promotes space education. In recent years, space education has become one of the main activities of APRSAF. For example, in cooperation with APRSAF-17, APRSAF water rocket event including a poster contest was held with a high level of participation. In

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the APRSAF Space Environment Utilization working group, the participating agencies considered the promotion of utilization of the Japanese experiment module named Kibo. Resulting from the work of this working group, protein crystal growth experiments as well as a series of parabolic flights with Asian students has been undertaken through international cooperation. Following a proposal made by the working group, the Asian seed project is ongoing. Seeds from various countries, launched by HII transfer vehicle or HII-B or known as Kounotori, delivering them to Kibo and returning them to Earth by Space Shuttle.

_____(?) capacity building and education are also being considered with the utilization of Kibo sharing the _____(?) with the Human Space Technology Initiative (HSTI) initiated by the UN Office for Outer Space Affairs on the basis of the recommendations of UNISPACE III and complimenting its efforts towards making ISS available for use by and for, the benefit of humanity.

Japan contributes to carry out activities in support of education and capacity building in the Earth observation area as well. JAXA provides training opportunities for and promotes the use of, remote sensing technologies through various applications verification processes. We would like to invite all delegations to our presentation to be made later during this session under agenda item 11, space and society, which will provide further details on space education activities of JAXA.

Mr. Chairman. With regard to implementing action item 10, improvement of universal access to, and compatibility of, space-based navigation and positioning systems called Global Navigation Satellite System (GNSS). Japan participates as a member country in the International Committee on Global Navigation Satellite Systems. Japan will take an active role in preparations for the sixth ICG meeting scheduled for September of this year. Japan is promoting two GNSS, the Quasi-Zenith Satellite System (QZSS) and MTSAT Satellite-Based Augmentation System (MSAS). QZSS is an augmentation system of the Global Positioning System (GPS) which enables to expand available area and time of using GNSS as well as enhanced accuracy positioning. Last year the first demonstration satellite was launched. Japan will develop and maintain the high accuracy positioning system and endeavours to increase the use of positioning navigation and the timing in the future.

This year although Japan experienced a very large earthquake its satellite navigation system remained effective during various situations. For instance just after the earthquake the GPS wave gauge monitored a wave measuring over six metres offshore a minute before the tsunami reached the coast.

Next, the application was able to process the data and consolidate the information on a traffic map based on tracking data of each vehicle by GPS which has been corrected by Japanese _____(?) companies. The information _____(?) provided by the administrators of _____(?), at governmental and regional levels, was useful and efficient for transportation of relief material to the affected areas. After the earthquake, it was proven that the Earth had moved about 5.3 metres to the east-south-east and had sunk about 1.2 metres in the peninsula of Miyagi. Furthermore, Japan performed _____(?) GNSS demonstration campaigns in the Asia Oceania region to discuss interoperability in ICG and held a second Asia/Oceania regional workshop in Melbourne, Australia, to discuss promotion of demonstration experience.

Additionally, the MSAS service is for civil aeroplanes enforces the GPS signals and is fully interoperable with both the _____(?) AAS system operated by the United States and the EU's EGNOS. Therefore all systems are able to be applied with the same equipment on board. Japan aims to provide high quality system globally while seamlessly advancing the level of interoperability among these services.

Mr. Chairman. Regarding the implementation of the integrated global system to manage natural disaster mitigation, relief and prevention efforts, called for in action item 7, Japan is working together with relevant countries and organizations to support Sentinel Asia. Sentinel Asia can contribute to the UN SPIDER project promoted by UNOOSA. Following the earthquake in March, we received thousands of satellite images through the International Disaster Charter and Sentinel Asia. I wish to express my sincere gratitude for this heartfelt support and assure you that Japan will implement numerous efforts to reduce natural disasters.

Mr. Chairman. At this year's session the statement made at Rio+20 which contains contributions of COPUOS and _____(?) peaceful uses of outer space will be considered. We have been discussing this issue for 50 years, it is very meaningful to us to have the opportunity to present the outcome of our discussion. Japan agrees with the current draft statement submitted and will implement its activities as one of the space-faring nations in adherence with the statement. Thank you very much for your attention.

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

Is there any other delegation wishing to speak under this agenda item at this afternoon's meeting? I see none.

We will therefore continue and hopefully conclude our consideration of agenda item 6, implementation of the recommendations of UNISPACE III, tomorrow morning.

Distinguished delegates, I would now like to continue our consideration of agenda item 7, report of the Scientific and Technical Subcommittee on its forty-eighth session

Before we proceed with the statements, and with your permission, I would first like to give the floor to Mr. Takao Doi, United Nations Expert on Space Applications, who will brief the Committee on activities of the programme on space applications in 2011 and 2012.

Mr. DOI (Secretariat) Thank you Mr. Chairman. Mr. Chairman thank you very much for this opportunity to address the distinguished delegates of the Committee on the activities of the United Nations Programme on Space Applications. Together with my colleagues in the Space Applications Section, we would like to celebrate the commemoration of the fiftieth anniversary of human space flight and the Committee on the Peaceful Uses of Outer Space, we are very happy to have been part of this exciting human endeavour.

The United Nations Programme on Space Applications was established in 1971 so this year is also the fortieth anniversary of the Programme. For the last 40 years the Programme has conducted 271 workshops, international meetings, training courses and expert meetings, 67 different countries have hosted them. We really appreciate all the member States for their support of the Programme.

Mr. Chairman and distinguished delegates. The United Nations Space Applications Programme is successfully conducting a diverse range of activities set forth for 2011 and is laying foundations for activities planned for 2012. The Programme is aimed at building capacity in developing countries and our efforts focus on the priority thematic areas with specific topics addressing sustainable development.

The priority themes of the Programme on Space Applications are: training in space science and technology; natural resources management and environmental monitoring; enabling space technologies and space science.

The Programme continues to support the regional centres for space science and technology education affiliated with the United Nations. The Programme assists the regional centres in strengthening their governing _____(?) with the aim of increasing financial and technical support to the centres from the regions. To implement the recommendations of UNISPACE III related to the use of global navigation and positioning systems, the International Committee on Global Navigation Satellite Systems (ICG) was established as an informal voluntary forum where governmental and interested non-governmental entities can discuss all matters regarding Global Navigation Satellite Systems (GNSS) on a worldwide basis. To support the work of ICG, the Office for Outer Space Affairs (UNOOSA) was designated as the executive secretariat of ICG. In that capacity OOSA, through the Programme on GNSS applications, organizes regional workshops, training courses and international meetings focusing on capacity building in the use of GNSS rated technologies in various rapidly growing fields of applications.

Since UNISPACE III, many developing countries have gained knowledge and experience in utilizing various forms of space technology and are ready to play a proactive role in advancing space science and technology to benefit the world. To take advantage of this new space era, the Programme has been conducting one initiative and launched two initiatives.

The first one is called, the United Nations Basic Space Science Initiative (UNBSSI). The two new initiatives are, the Basic Space Technology Initiative (BSTI) and the Human Space Technology Initiative (HSTI). Started in 1990, the United Nations Basic Space Science Initiative has contributed to the international and regional development of astronomy and space science through annual workshops on basic space science, the International Heliophysical Year (IHY) 2007 and the International Space Weather Initiative (ISWI). This had led to the establishment of _____(?), astronomical telescopes and IHY ISWI instrument arrays, particularly in developing countries.

The Basic Space Technology Initiative (BSTI) was initiated to support capacity building activities in basic space technology development with the particular focus on small satellites and their applications. In 2010, the second United Nations/Austria/ESA symposium on small satellite programmes for sustainable

development was successfully held in Graz, Austria, with the aim of providing information on the new initiative and of establishing relevant partnerships. In cooperation with Kyushu Institute of Technology, a United Nations/Japan long-term fellowship programme on nano-satellite technology was launched. The summary of activities of the BSTI can be found in A/AC.105/2011/CRP.14.

The Human Space Technology Initiative (HSTI) was started by the Programme to promote international cooperation in human space flight and space exploration rated activities. The initiative builds on the relevant recommendations related to human space flight and the exploration contained in the report of UNISPACE III.

The Programme organized the outreach seminar on the International Space Station in Vienna in February this year with the close cooperation from the International Space Station (ISS) partners. The detailed report on the seminar can be found in A/AC.105/2011/CRP.13.

We hope that these new UN initiatives will play more important roles in the coming years to benefit the world with the utilization of space science and technology.

Mr. Chairman and distinguished delegates. The status of the year 2010 activities under the Programme on Space Applications and those planned for 2011 can be found in my report to the forty-eighth session of the Scientific and Technical Subcommittee A/AC.105/980.

My statement today deals with more recent work of the Programme on Space Applications and makes proposals for 2012. In 2011, the Programme has successfully completed two activities.

The United Nations/United Arab Emirates workshop on the applications of Global Navigation Satellite Systems was held in Dubai, United Arab Emirates, from 16-20 January.

The United Nations/Argentina International Conference on the Use of Space Technology for Water Management was held in Buenos Aires, Argentina, from 14-18 March.

There are eight other workshops, symposia and expert meetings to be held during the remainder of 2011. These include the following,

United Nations/Austria symposium on small satellite programmes for sustainable development will be held in Graz, Austria, from 13-16 September.

The United Nations/International Astronautical Federation (IAF) workshop on space for human and environmental security will be held in Cape Town, South Africa, from 30 September to 2 October.

The United Nations/Viet Nam workshop on space technology applications for socio-economic benefits will be held in Hanoi, Viet Nam, from 10-14 October.

The United Nations/Nigeria workshop on the International Space Weather Initiative will be held in Abuja, Nigeria, from 17-21 October.

The United Nations/Islamic Republic of Iran regional workshop on the use of space technology for human health improvement will be held in Tehran, Islamic Republic of Iran, from 23-26 October.

The United Nations/Syria workshop on integrated space technology applications: support to monitoring climate change and impact on natural resources will be held in Damascus, Syria, in November.

The United Nations/Malaysia expert meeting on the human space technology will be held in Putrajaya, Malaysia, from 14-18 November.

The United Nations International Meeting on Global Navigation Satellite Systems will be held in Vienna, Austria, from 12-16 December.

For 2012 member States have indicated their interest in hosting conferences, workshops and symposia as follows.

Workshop on Global Navigation Satellite Systems in the Republic of Latvia.

Workshop on Natural Resource Management in the Islamic Republic of Pakistan.

Workshop on Basic Space Technology in Japan.

Workshop on the International Space Weather Initiative in the Republic of Ecuador.

UN/IAF workshop in the Italian Republic.

Workshop on space law in the Argentine Republic.

Mr. Chairman and distinguished delegates. I have presented to you a brief review of the major activities carried out under the Programme on Space Applications. We have achieved significant success but many challenges remain. Specifically, it has taken us more time and effort to enter into the exchange of letters with host countries. I would like to ask member States for further collaboration with the Programme on this matter. International cooperation in assembling human resources, technical capabilities and financial resources is essential. Our success in overcoming these challenges depends upon support from many of our partners.

I thank the member States for their contributions on human resources as well as financial and technological resources and once again I appeal to member States and other organizations to contribute to the voluntary trust fund of the Programme on Space Applications.

In conclusion, the Programme on Space Applications continues to identify ways to promote space science and technology to build a capacity in developing countries. We will be exploring further ways to make the programme stronger for the benefit of all humanity. Thank you very much for your attention.

The CHAIRMAN I thank Mr. Takao Doi for his statement.

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

I would now like to proceed with the statements under agenda item 7. The first speaker on my list is the distinguished representative of the Group of 77, Mr. Marco Castillo.

Mr. M. CASTILLO (Venezuela, on behalf of the Group of 77 and China) Thank you Mr. Chairman. I will deliver the statement of the Group of 77 and China on behalf of Ambassador Ali Soltanieh of the Islamic Republic of Iran, due to his engagements in other multilateral meetings.

The Group of 77 and China would like to thank the Secretariat for the preparations of this agenda item and would also like to share its views with the Committee on this item.

The Group of G77 and China is of the view that the outcome of the discussion under the working group on the long term sustainability of outer space activities should avoid any measures that would limit access to space by nations with emerging space capabilities. International legal framework should be further developed to address concerns of all States, to refrain from setting up overly high standards or thresholds for space activities in a way that may hinder the enhancement of capacity building of developing countries.

In this regard, the Group emphasizes the need to devote more efforts for technical, scientific and legal capacity building and make the required expertise available to developing countries.

Remote sensing and other aspects of space science and technology have numerous applications in the areas of water resources, oceanography and the environment. Capacity building in this area can prepare the peoples of our nations to take preventive action for environmental degradation and related hazards; improve agricultural planning and to measure and forecast drought and desertification, just to mention a few examples.

Similarly, satellite-based systems can be used for tele-education, tele-medicine, family welfare, communications and emergencies in remote areas. In this regard, training of scientists and staff in developing countries is crucial as well as the need for a free flow of scientific information and data exchange.

Natural disasters are a matter of great concern to all States. The last few years have proven to be a real challenge to many countries due to earthquakes and floods affecting several regions of the planet and taking the lives of hundreds of thousands of people. Therefore, the Group believes that more efforts should be devoted to strengthen the strategy for the use of space technology in the area of disaster management and support.

In this regard, the Group follows the activities carried out within the framework of UN-SPIDER, including the support provided through the programme to the emergency efforts made in response to major disasters worldwide. The Group welcomes the signing of new cooperation agreements for the establishment of regional support offices in developing countries with the view to provide space based information to support relief effort. The Group notes with appreciation that the UN SPIDER Beijing office has recently started its activities and believes that it will play an important role in the field of disaster management.

Mr. Chairman. Transfer of technology needs to be promoted through capacity building and accessibility to technology. Therefore, the Group of 77 and China calls OOSA and Member States for greater support to enhance cooperation of both North-South and South-South to facilitate the transfer of technology among nations.

The Group of 77 and China also calls upon OOSA and Member States to make available more opportunities for greater academic linkages, long term fellowships and further collaboration with National and Regional Laboratories, UN centres of research and other national and international institutions on space matters with institutions in developing countries.

Events relating to space weather are of common concern. Understanding the impacts of solar activity on the Earth's climate, other planets and interstellar space is of importance for space activities. International cooperation in space weather, particularly through the International Space Weather Initiative, provides member States with the opportunity to coordinate global monitoring of space weather, to promote essential forecast capabilities and further international space research.

The geostationary orbit is a limited resource which has great potential for the implementation of a wide array of programmes to benefit our countries. The Group of 77 and China is concerned by the risk of saturation that threatens the sustainability of space activities in this environment. The utilization of this orbit spectrum must be rationalized and extended to all States in conditions of equality, taking into account the needs and interests of developing countries and the geographical location of certain countries in compliance with the established principles in the normative framework and the decisions made by both ITU and other relevant bodies of the UN system; giving priority to the contributions of space activities to sustainable development and the achievement of the Millennium Development Goals.

The Group of 77 and China would like to refer to the use of nuclear power sources in outer space, specifically in the geostationary orbit and low-Earth atmosphere. More consideration should be given to this issue in order to address the problem of potential collisions of nuclear powered space objects in orbit and the incidents or emergencies that may be caused by an accidental re-entry in the Earth’s atmosphere and impact on its surface by these objects, and their consequences on health and life of people and the ecosystem.

The Group considers that increased attention should be given to these issues through adequate strategies, long term planning and regulations, including the Safety Framework for Nuclear Power Sources Applications in Outer Space.

Regarding space debris, the Group is of the view that the future of space activities largely depends on its mitigation. This topic should continue to be treated as a priority with the view to further increase research in the areas of technology for space debris observation, space debris environmental modelling and technologies to protect space systems from space debris and to limit the creation of additional space debris.

The Group is of the view that the Space Debris Mitigation Guidelines is of the utmost importance. Further studies and research should be carried out in order to improve them and also to keep the Guidelines up to date with new techniques and capabilities of detection and reduction of space debris, in accordance to the resolution 62/217 of the General Assembly. Thank you very much Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of the Group of 77 and China for his statement.

The next speaker on my list is the distinguished Ambassador Freddy Padilla de León, on behalf of GRULAC.

Mr. F. PADILLA DE LEÓN (Colombia, on behalf of GRULAC) (*interpretation from Spanish*) Mr. Chairman, GRULAC is grateful to the Secretariat for its presentation of the report of the Scientific and Technical Subcommittee and, on this item, GRULAC wishes to highlight the importance of scientific progress made in the field of outer space and the applications of space technology to various fields of human development including environmental protection, natural resource management and the management of natural disasters as well. This progress points to growing space activity which in turn gives rise to new challenges as concerns the use of outer space and in the way in which such activities are carried out.

Issues such as the management of space debris, the saturation of the geostationary orbit and the use of nuclear power sources are all aspects which must continue to be addressed by this Committee along with its subcommittees.

Turning to the issue of space debris, GRULAC deems it important that the States Parties to the Space Debris Mitigation Guidelines implement these guidelines bearing in mind that the future of space activities depends to a large extent on the mitigation of these space debris. The Scientific and Technical Subcommittee should delve into this issue in particular by paying greater attention to debris coming from platforms with nuclear power sources in outer space as well as collisions between space objects and space debris and other aspects deriving therefrom in order as well to improve technology and collaborative networks to monitor these phenomena.

The relationship to the use of nuclear power sources in outer space, in particular in the geostationary orbit and low-Earth orbits, is something which GRULAC considers to be important and regulatory action associated with the use of nuclear sources in space is the exclusive duty of States irrespective of their level of social, economic, scientific and technical development and it belongs to all mankind.

GRULAC wishes once again to reaffirm the international responsibility of States in the national activities of these States involving the use of nuclear power sources in outer space, be they conducted by governmental or non-governmental entities and it underscores the importance of such activities being carried out for the benefit of peoples and not to their detriment.

Mr. Chairman. The saturation of the geostationary orbit is another topic which concerns us and therefore GRULAC ascribes particular attention to equitable access by States to the orbit spectrum resource in the geostationary orbit given its potential through space technology for implementing high impact social programmes which will benefit populations through educational projects and technical assistance in tele-medicine. We wish to reaffirm once again our position that this natural resource is in danger of saturation and therefore we consider that its use should be rationalized and available to all States taking into account the needs and interests of the developing countries and the geographical location of certain countries consistent with the established principles set forth in the normative framework of the International Telecommunication Union (ITU) as well as the United Nations. Thank you very much.

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

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

Space and society (agenda item 10)

Distinguished delegates, I would now like to continue our consideration of agenda item 10, space and society.

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

Mr. D. GOWRISANKAR (India) Thank you Mr. Chairman. The Indian space programme _____(?) of taking the benefits of space technology to mankind and society and is actively pursuing a lot of programmes in this direction. Application programmes such as tele-medicine, tele-education, disaster management support, search and rescue, village resource centre, natural resources management, are in line with the _____(?).

In line with the focus of the deliberation of this agenda item in this session, the Indian delegation would like to brief this Committee on the specific activities taken by India in promoting greater participation of young people in space science and technology.

Mr. Chairman. India places considerable importance to encourage the student community to pursue studies in space science, technology and applications. Towards this ,the Indian Space Research Organization is encouraging the student community to develop nano and pico-satellites by providing active technological consultancy and loan support. Under this, one mission has already been accomplished last year and a few more satellites are being developed with active participation of the student community from prominent academic institutions including the Indian Institute of Technology. It is worth mentioning here that a satellite named YouthSat, built with the participation of the student community from India and Russia, was successfully launched on 20 April 2011 along with ResourceSat-2 satellite by the Polar Satellite Launch Vehicle. YouthSat carries two scientific payloads from ISRO and one payload from the Moscow State University of Russia to study atmospheric constituents, space weather and solar flare activity.

The Indian Space Research Organization also carries out many promotional events to attract _____(?) people into the field of space by making them appreciate the importance and significance of space technology. In this direction, space exhibitions are conducted regularly in many parts of the country. More than 20 such exhibitions were organized during the last year.

Mr. Chairman. Students from higher primary to university level are regularly encouraged to visit various ISRO centres to have first hand experience of the existing activities and their significance. Many ISRO centres have established permanent exhibitions for this purpose. In addition, ISRO centres regularly celebrate important events like National Science Day, World Space Week and encourage students to participate in a wide spectrum of activities related to science in general and space programmes in particular. Scientists of ISRO regularly visit various schools and colleges and conduct interactive sessions along with presentations on the beneficial aspects of space.

Mr. Chairman. India felt the need to build a mechanism for developing high quality manpower in the field of space and established a dedicated institute for education in space science and technology with customized curricula. Each year about 150 talented _____(?) meritorious students of 10+2 years of schooling are attracted to pursue the undergraduate courses and further, on successful completion of their academic requirements with _____(?) level of performance, are absolved into ISRO system. Around 150 students are passing out this academic year in three disciplines, software, engineering and science. The Institute also offers post-graduate and doctoral programmes.

In the field of space law, ISRO provides financial and technical support to premier academic institutions in India for legal research activities on contemporary issues in outer space. ISRO encourages and supports the participation of Indian student teams in the Manfred Lachs Space Law Moot Court Competition since 2004. The winning team, selected through the national selection process, is financially supported by ISRO for participation in regional rounds. The Indian delegation is happy to inform you that the national rounds of this competition to select the Indian team to participate in the regional round have been successfully conducted in March 2011 at the National Law School of the India University at Bangalore. During this year, ISRO co-sponsored the third International Moot Court Competition of Gujarat National Law University. ISRO regularly encourages and sponsors participation of students from India who have accepted papers to the International Astronautical Congress since 2006.

Mr. Chairman. In conclusion, the Indian delegation greatly acknowledges the importance of the younger generation taking an active role in space science and technology and is making all efforts in this direction. Thank you Mr. Chairman.

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

Is there any other delegation wishing to speak under agenda item 10, space and society, at this afternoon's meeting? I see none.

We will therefore continue and hopefully conclude our consideration of agenda item 10, space and society, tomorrow morning.

Ways and means of maintaining outer space for peaceful purposes (agenda item 5)

As long as we have some additional time this afternoon, we will re-open agenda item 5, ways and means of maintaining outer space for peaceful purposes, by the demand of two delegations.

The first speaker on my list on this agenda item is the distinguished representative of Brazil.

Mr. J. MONTSERRAT FILHO (Brazil) Thank you Mr. President and thank you especially for the kind decision to re-open this item for our presentation.

Mr. Chairman, distinguished delegates. Brazil is deeply convinced that Earth without weapons of mass destruction and outer space free of any kind of weapons, open both exclusively to peaceful and constructive activities create a real and solid guarantee for the future of all States, all peoples, all humankind.

We all live the last 54 years since the first man-made satellite and the first human space flight without weapons and armed conflicts in outer space. Brazil wishes that the same situation continues over the next 50 years. Hardly we will have a most remarkable conquest for celebrating the centenary of our COPUOS in 2061.

As the eminent Hungarian thinker Ervin Laszlo writes, we live today in the historical context of a decision window. It is the first time that a species on this Earth has ever been aware that it could render itself

extinct by its own actions or evolve itself towards an immeasurable future also by its own actions. In such a special period an input, however small, can blow up to change existing trends and bring new trends and processes into existence. From here we can go, either to breakdown or to breakthrough, to a new structure and a new mode of operation. Practically it means that if we succeed in maintaining outer space free of weapons and warfare it opens to us an entirely new geopolitical situation in this environment. Thanks to that, more than ever we will be able to indeed assure exclusively peaceful activities and cooperation in outer space. That is why the question of ways and means of maintaining outer space for peaceful purposes is for us a high priority item of the COPUOS agenda.

Si vis pacem, para bellum - if you wish for peace, prepare for war. This Latin expression from the fourth or fifth century is still the paradigm of human life in the beginning of the twenty-first century. Are we condemned to lead this culture of the use of force to outer space as well? Is it a healthy heritage for the new frontier and for the new generations? How to prevent and change such an old custom, which can be catastrophic in our time? What can we do patiently, constructively, step by step, to guarantee an exclusively peaceful destination for outer space? That is our historic task.

Mr. President. A quite timely and practical question in this context is to try to know the cost-benefit of the radical militarization of outer space, that is, the conversion of outer space in the new theatre of warfare and its maintenance as such, taking into account the demands and needs for security of all States.

The radical militarization of outer space, with the probable creation of a new battlefield is not just a national question or, a question exclusive to space-faring nations as it is presented frequently, it is aboveall an international problem, extremely grave that affects all countries, nations and people. We are stating the obvious. The consequences of placing weapons in space can be globally disastrous. Space weapons have a global reach and therefore a global impact.

They can produce a blackout in any region of the world, destroying useful satellites and affecting systems of telecommunication, Earth observation, global positioning, climate forecasting and alert services, mitigation of natural disasters, and so on. Public and private companies may suffer unexpected and incalculable losses. Large investment and good businesses can disappear into the vastness of outer space. What do we gain? We gain by accepting these huge risks.

Mr. Chairman. The radical militarization of outer space, with the placing of modern weapons in their orbits, can strengthen the tendency to resolve international controversies through the threat or use of force which is contrary to the principles of the United Nations Charter. This new strategic situation can reproduce old rivalries and confrontations as well as create new ones and the outcome of this new kind of cold war can be comparably worse than the previous one.

As said by the distinguished Russian delegate in this plenary session, we know how hard it is to monitor the compliance with disarmament agreements on Earth. In the space environment this control will be even more difficult.

The Brazilian delegation is concerned with another remark, also pointed out by the distinguished Russian delegate. I quote: ‘Russia believes that the actions of States which would result in the appearance of weapons in outer space and the adoption of concepts involving the use of force in this environment would undermine the moral foundations and political logic of strengthening non-proliferation mechanisms as well as the fundamental principles and norms of international space law’.

In view of such serious observations, the Brazilian delegation increases its belief that the extremely relevant heightening of the COPUOS agenda relating to the ways and means of maintain outer space for peaceful purposes must also be discussed by its Legal Subcommittee. This is an appropriate instance to analyse and appreciate the supposed drastic effects of weaponization of outer space over the international space law and over the concept of the rule of law in space activities.

Mr. Chairman. Finally the Brazilian delegation considers very opportune and beneficial to examine the possibility of establishing a coordinated action between the working group on the long-term sustainability of space activities of COPUOS and the Group of Governmental Experts, to be created in 2011 by a decision of the United Nations General Assembly last year, with the mission to propose voluntary measures to promote security and sustainability of space activities as well as situational awareness in outer space.

Both groups can work in a coordinated manner in order to create comprehensive measures of

transparency and confidence building in space activities which could be a very strong input and a very important step towards ensuring an outer space free of weapons and conflicts. Thank you very much Mr. Chairman.

The CHAIRMAN I thank you Ambassador Filho for your statement on behalf of Brazil.

The next speaker on my list, on the same agenda item 5, is the distinguished representative of Venezuela.

Mr. M. CASTILLO (Venezuela) (*interpretation from Spanish*) Thank you very much Mr. Chairman for giving us this opportunity to re-open this most important item. Once again, I am pleased indeed to have had the professor from Brazil precede me because I think what he said enhances what I will have to say and I am very grateful for that.

I shall be very brief, I will only take seven minutes and if I should go beyond the seven minutes you can interrupt me, you have my permission.

Mr. Chairman. COPUOS, from its inception, on an annual basis has reviewed the scope of international cooperation for the peaceful use of outer space. COPUOS devises programmes, sponsored by the United Nations, it fosters research, dissemination of information in the field and it promotes space law.

COPUOS, its Legal and Scientific and Technical Subcommittees, address many issues that we are all familiar with. On this basis the Committee, as a standing body of the General Assembly, has clear scientific, technical, legal and political mandates. I would like to repeat, and political mandates, because this tends to be forgotten but it is a fundamental mandate of the Committee and this has direct implications for processes designed to preserve outer space for peaceful purposes.

COPUOS plays a notable role in fostering cooperation in outer space and has become a unique forum for the exchange of information among States while affording opportunities to strengthen interState collaboration. Nonetheless, this is not the only and sole method to guarantee the peaceful nature of outer space activities. In this connection, it is necessary to generate a political framework for debate and coordination with other agencies and mechanisms within the UN system in addition to promoting international legal frameworks for space in order to respond effectively to problems arising from current space activities such as the lack of definition and delimitation of outer space, the use of nuclear power sources in Earth orbits and the threat of space debris, inter alia. From this standpoint my delegation deems it necessary to update international legislation to provide an absolute and clear ban on the use of any type of arms or weaponry in outer space.

As is well known, the legal regime applicable to outer space does not, in and of itself, prevent an arms race in outer space and that is why it is imperative to adopt adequate and effective measures which will make it possible to eradicate its use in outer space. The existing lack of definition and the absence of regulations in the spheres referred to do not allow us to maintain the peaceful status of outer space. While there do exist other international arenas to address this topic such as the First Committee of the UN General Assembly and the Disarmament Conference, it is incumbent upon COPUOS to enhance its coordination and cooperation with other bodies and mechanisms within the UN system to achieve the goals which challenge us, without such coordination success will be unlikely. Thank you very much Mr. Chairman.

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

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

Ms. C. YATINI (Indonesia) Thank you Mr. Chairman. Mr. Chairman, in line with the principles of space treaties, Indonesia is of the view that exploration and exploitation of outer space are solely aimed for peaceful purposes and should bring the significant life improvement of humankind. Indonesia is aware that member countries have different capacities in maintaining outer space. Consequently, Indonesia encourages more technical assistance, transfer of technology from developed to developing countries under the umbrella of the Committee. The opportunity of developing countries to enhance their capacity should be expanded and assisted.

Mr. Chairman, the challenge of implementing ways and the maintaining of outer space for peaceful purposes are not solely the challenge of the Scientific and Technical Subcommittee or the challenge of the Legal Subcommittee. This has been the challenge in all levels under the UN since it imposed the security of all, therefore Indonesia would like reiterate the comprehensive discussion under the UN. The Committee should encourage the establishment of practical mechanisms to coordinate its activities with other UN bodies based on comprehensive perspectives towards the peaceful uses of outer space, ways and

means and its impact for other countries and the outer space environment. Thank you Mr. Chairman.

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

Is there any other delegation wishing to speak on this agenda item? I see none. We will therefore conclude our consideration of agenda item 5, ways and means of maintaining outer space for peaceful purposes.

Are there any other delegations wishing to speak on any agenda item that was already concluded because we still have some time now? I see none.

Distinguished delegates, I would now like to proceed with the technical presentations. Presenters are kindly reminded that technical presentations should be limited to 20 minutes in length. The first presentation on my list is by Mr. Scott Pace of the United States entitled 'Human space flight'.

[Technical presentation]

The CHAIRMAN Thank you very much Mr. Pace for your presentation. Is there any delegate who has questions for the presenter?

The distinguished representative of China.

Mr. Y. ZHAO (China) First I would like to thank the presenter for his presentation. I have a small question concerning the role of the UN as well as UNOOSA and UN COPUOS. From this presentation we get a clear idea that international cooperation is very important for manned space flight in the future and the presenter also mentioned the G20 can play a role in that. So, I would like to hear some elaboration on the role for the UN as a body in charge of space affairs, whether there is any thinking about that?

The CHAIRMAN I thank you distinguished representative of China.

Mr. S. PACE (United States of America) We looked at that and, as a group of engineers and technical people, our first thought was to the existing technical coordination mechanisms such as the Global Exploration Strategy Group and groups such as the Consultative Committee on Space Data Standards and there are groups within ITU. We look to the UN organization, particularly the Scientific and Technical Subcommittee, to develop things such as _____(?) Debris Mitigation Guidelines and further work as discussed in the proposed terms of reference for long-term sustainability. We did not consider the UN to be an appropriate vehicle for programmatic coordination, that is, to manage and oversee specific technical aspects of projects. We thought that it was really best as a coordinative mechanism and that, when it came time to specific programmatic aspects, those were best negotiated directly between our partner States who were participating and this is one of the lessons learned that I think came out of the International Space Station programme.

The CHAIRMAN Thank you very much. Are there any other questions to the presenter? I see none. Thank you Mr. Pace once again for your presentation.

The second presentation on my list is by Ms. Clara Yono Yatini of Indonesia entitled 'Space Weather and Space Debris Awareness in Indonesia'.

[Technical presentation]

The CHAIRMAN I thank you Ms. Yatini for your presentation. Is there any delegate who has questions for the presenter? I see none.

The third presentation on my list is by Mr. Iván Darío Gómez Guzmán of Colombia entitled 'Colombian Space Commission: A strategy for the sustainable development of Colombia'.

[Technical presentation]

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

Mr. J. MONTSERRAT FILHO (Brazil) (*interpretation from Spanish*) Thank you Mr. Chairman At the outset let me compliment those who have made presentations here and, in particular, I would like to express my appreciation of the case that we have just seen regarding Colombia. I think this crystallizes very clearly the need for cooperation in South America, or Latin America, amongst our different agencies. I have already referred to this myself when I took the floor but this presentation from Colombia has convinced me that such cooperation is not only possible but absolutely necessary and I would like to put a question to the distinguished delegate of Colombia.

You have told us, at some point in your presentation, that the Colombian government intends to compensate the farmers who have been victims of the flooding. I wonder whether this will take the form of

aid and assistance or does the Colombian government take responsibility for this disaster? In other words, what is the legal underpinning and the legal interpretation which has led the Colombian government to provide this compensation?

Mr. I. GÓMEZ GUZMÁN (Colombia) (*interpretation from Spanish*) I am grateful to the Brazilian delegation for the question that has just been put. The Colombian government does not feel responsible or take responsibility for the damage caused by a natural phenomenon such as La Niña which has led to an increase in rainfall on our national territory. When dealing with natural phenomena you do not have much control, there can be prevention of the impact on the population but you cannot prevent the phenomenon itself. We had nearly 2.3 million hectares that were flooded and these were farmland areas producing food, there were also pasture lands, there was some permanent cropping and some temporary cropping. The farmers and pastoralists had to leave the areas and find other areas which were not flooded to settle.

The Ministry of Housing, the Ministry of the Environment and the Colombian government took joint coordinated decisions with the Office of the President of the Republic and they decided to allocate resources to compensate for the damage wrought by these natural phenomenon. The compensation has to do with the possible recovery that these farmers and herders will hopefully be able to achieve through their livestock and food and farm produce and it is hoped that they will be able to rebuild their homes as well. Many of the homes of the nearly 450,000 families, 3 million inhabitants, came under the flooded areas and the government of Colombia has decided to provide them with financial compensation so that they can rebuild their lives and go back to normal living conditions. We cannot prevent natural disasters but we do believe that we can make sure that permanent productive activities will not, in future, be built in areas prone to natural phenomena which may be ascribed to climate change throughout the world as we have been witnessing over hundreds of years.

The CHAIRMAN Thank you Mr. Gómez Guzmán for your answer. We have one more question from the second vice-chairman, Ambassador Raimundo González Aninat.

Mr. R GONZÁLEZ ANINAT (Second vice-chairman) (*interpretation from Spanish*) Thank you very much Mr. Chairman. I would like to express gratitude for this very impressive presentation. I heard reference to a legal issue and the interpretation to be made of the decision of the Colombian government.

In the first part of the presentation, we learnt that there were 43 members of the Colombian Commission for Space and I see that there are five universities that are members of the Commission, I am wondering whether these universities are public, private or State universities?

I see that there is a list of 27 entities that are also members, which from the internal standpoint it would be useful to compare this to other kinds of legal status that might exist. Are they, for example non-governmental organizations, what are these 27 entities? Is that the kind of entity that is referred to? The non-governmental organizations or, are there other kinds of entities? Or maybe there are still public entities? Could you give us some clarity as to the legal framework within which the Colombian Space Commission operates?

Mr. I. GÓMEZ GUZMÁN (Colombia) (*interpretation from Spanish*) Thank you very much Raimundo for your question. At the present time the Colombian Space Commission has 43 active members, 11 ministries, that you understand. Universities these are both public and private universities, five of them, and they have special interest in geospatial activities. For example, one of them was involved with the first launching of a satellite, others have mini satellites, other universities are working in the area of space law, other universities have a specific interest in developing university curricula which takes advantage of data obtained from satellite imagery etc.

Then you have those 27 entities. In reply to your question, they are public entities from different sectors from the mineral, the energy sector, the environmental and agricultural sectors. There are also regional entities, you also have the Agustín Codazzi Geographical Institute which does the national soil studies and mapping and other users of space technologies.

With the Colombian Space Commission, what has been achieved by setting it up has been to make it possible to coordinate all these different entities in such a way that we can make best use of the scant resources that we have for technological development. Amongst these entities we do not have any NGOs as members of the Colombian Space Commission but we do have observers who are NGOs and they accompany us on a regular basis. At some point in time, we will probably have to invite in the private sector in the overall Colombian space ambit. We are in thinking in terms of

having a Colombian Space Agency which would have a much clearer legal strength in respect of use of resources. The Colombian Space Commission does work with NGOs in particular those associated with the United Nations or the OAS or other bodies with which we work very closely in this overall development process.

The CHAIRMAN Thank you Mr. Gómez Guzmán for your answers.

Are there any other delegates that want to address questions to Mr. Gómez Guzmán? I see none.

In order to use our time efficiently this afternoon, I now intend to open the floor for comments to CRP.9 on Rio+20 which was introduced on Friday. Delegations were asked to provide the Secretariat with comments by today. The document will be considered tomorrow morning under agenda item 6 with a view to endorsing the document. The floor is now open for comments.

I just remind you that Mr. Niklas Hedman made a presentation on the paper about Rio+20 and asked for your comments. I give the floor to the Secretariat.

Mr. N. HEDMAN (Secretariat) Just to recall that the document that we are considering is CRP.9, draft contribution of the Committee on the Peaceful Uses of Outer Space to the United Nations Conference on Sustainable Development: harnessing space-derived geospatial data for sustainable development.

As I said last week, the first version was prepared for consideration during the Scientific and Technical Subcommittee earlier this year and there were several comments provided to the Secretariat through the Working Group of the Whole which is reflected in the report of the working group and in the report of the Scientific and Technical Subcommittee. On the basis of those comments, the Secretariat made an updated version for consideration during the Legal Subcommittee, no further comments were provided by delegations to the Legal Subcommittee and delegations therefore have a slightly revised document before them for this COPUOS session. The document, if endorsed by this COPUOS session, will be edited and translated into all languages and will be submitted to the secretariat of the United Nations Conference on Sustainable Development which is held by the Division of Sustainable Development in New York.

The CHAIRMAN I thank you Mr. Hedman. Are there comments on this paper? I see none.

I give the floor again to the Secretariat for an announcement.

Sorry China has the floor.

Mr. Y. ZHAO (China) Thank you Chairman. Just a further clarification on the status of this document. From the explanation provided by the Secretariat, after this document was adopted it will be translated into all official languages of the UN but, when we look at CRP.9 we only have the English version. I am not sure whether, before the adoption, there will be translation into all official language of this document or this only happens after its adoption?

The CHAIRMAN Thank you distinguished delegate of China. Niklas Hedman has the floor

Mr. N. HEDMAN (Secretariat) Yes, I can confirm that this is the same process as we used for the previous contributions by the Committee to the multiyear work of the Commission on Sustainable Development and also used last year under the agenda item on use of space-derived geospatial data for sustainable development.

The CHAIRMAN Are there any other comments? I see none.

Distinguished delegates. I would now like to inform delegates of our schedule of work for tomorrow morning.

Sorry, I give the floor again to the Secretariat for another problem.

Mr. N. HEDMAN (Secretariat) Distinguished delegates we are now circulating in the room an updated version of the non-paper on the draft terms of reference of the working group on the long-term sustainability. This document, that we are now distributing for the attention of delegations, contains inputs and comments provided by the Russian Federation.

I should also announce that, tomorrow morning at 9 a.m., there will be continued informal consultations on the basis of this document that is now being distributed, in M7 as we did this morning. I repeat, 9 a.m. tomorrow morning, consultations on long-term sustainability in room M7 in this building. The basis for those consultations will be on the document that is now being distributed which contains Russian inputs and it is marked on the document, Russian inputs May 2011 and _____(?) 2011.

Mr. Chairman, having said that, I also have another announcement which is not related to the long term sustainability, it is related to the agenda for consideration tomorrow morning. As delegations will see from the indicative schedule of work of this session, tomorrow morning we will continue and hopefully conclude items 6, 7 and 10 and we will also begin item 15, other matters. Under this item, there are several documents that I will very soon relate to.

I call your attention to the annotated provisional agenda on pages 7 and 8 under item 15, other matters. During the course of this session there has been distributed documents related to what we have to take action under this particular agenda item 15 and I relate to the documents as follows.

CRP.7 which contains the note verbale and the application for membership of the Committee on the Peaceful Uses of Outer Space by Azerbaijan.

CRP.3 which contains the nomination of the Eastern European Group of Mr. Piotr Wolanski for the office of second vice-chair of the Committee on the Peaceful Uses of Outer Space for the period 2012-2013.

CRP.5 which contains the nomination of the African group for the office of chair of the Legal Subcommittee for the period 2012-2013 and that is Mr. Tare Brisibe of Nigeria.

CRP.4 which contains the nomination of the Group of Eastern European States for the position of the chair of the Scientific and Technical Subcommittee for the period 2014-2015 and the nomination is Mr. Elöd Both of Hungary.

Delegations will also be provided with CRP.6 which contains documentation provided at COPUOS last year, at the Scientific and Technical Subcommittee this year and the Legal Subcommittee this year, in support of the application of the Association of Remote Sensing Centres of the Arab World for permanent observer status with the Committee. This document is being prepared and will be circulated to all delegations in pigeon holes.

Delegations will also be provided with CRP.8 which relates to consultative status of ECOSOC and this document is also being prepared and printed and will be distributed to all delegations in pigeon holes and relates to the application process for consultative status with ECOSOC.

Finally, I would like to take this opportunity to relate to a formal document, in all languages, that has been duly presented to all delegations, it is A/AC.105/C.2/L.282. The name of the document is as follows: Review of the use of transcripts of the Committee on the Peaceful Uses of Outer Space and its Legal Subcommittee, working paper submitted by the Secretariat. This paper was submitted for action by the Legal Subcommittee this year and I read paragraph 198 of the report of the Legal Subcommittee on its fiftieth session in document 990.

Paragraph 198. In accordance with the request made by the Committee at its fifty-third session in 2010, the Subcommittee considered a proposal made by the Secretariat to discontinue the use of unedited transcripts and recommended that the use of unedited transcripts should be discontinued starting from its fifty-first session in 2012 in accordance with that proposal.

The proposal that was before the Legal Subcommittee is exactly the same as is now before action by the Committee. We are arranging to have the head of the Conference Management Service here with us tomorrow to provide any more information that delegations might wish to have in this regard.

This was just a way for the Secretariat to relate to some important documents that will be before the Committee for action when we come to item 15, other matters.

The CHAIRMAN Thank you Mr. Hedman. I also want to make an announcement. Tomorrow afternoon the Action Team 14 on near-Earth objects will meet from 2-5 p.m. in Room M7, E-building, to continue its intersessional work in preparation for its report to the Scientific and Technical Subcommittee in 2012.

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

Following the plenary there will be three technical presentations. The first by a representative of Japan, the second by a representative of Ukraine and the third by a representative of Australia. In the evening, there will be a reception and exhibition hosted

by the European Space Policy Institute at their premises.

Are there any questions or comments on this proposed schedule?

Distinguished representative of the United States.

Mr. K. HODGKINS (United States of America) Only to inform delegates that the reception we have scheduled for 6 p.m. tonight we have now moved it up to 5.30 p.m. so at any point you are ready to head down for something to eat and drink you may do so.

The CHAIRMAN Thank you. Are there any other questions or comments on this proposed schedule? I see none.

I now invite delegates to the reception hosted by the United States at the time announced 5.30 p.m. at the VIC Restaurant.

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

The meeting closed at 5.27 p.m.