

**Committee on the Peaceful  
Uses of Outer Space***Unedited transcript*

608<sup>th</sup> Meeting  
Wednesday, 10 June 2009, 3 p.m.  
Vienna

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*Chairman:* Mr. Ciro Arévalo Yepes (Colombia)

*The meeting was called to order at 3.15 p.m.*

**The CHAIRMAN.** (*interpretation from Spanish*) Good afternoon. I would like to call to order the 608th meeting of the Committee on the Peaceful Uses of Outer Space.

This afternoon, we will be continuing and hopefully concluding agenda item 12, space and climate change and 13, use of space technology in the UN system. Then we will be continuing with agenda item 14, international cooperation in the use of space-derived geospatial data for sustainable development. Then we will be going back to item 10, space and society. We will also begin our consideration of agenda item 11, space and water. Time permitting, we will begin agenda item 15, other matters.

In the afternoon there will also be four technical presentations. The first by a representative of Italy on Cosmo-SkyMed: potentialities for monitoring and managing the natural environment. This will be followed by a US representative speaking about an update on the COSPAS-SARSAT programme activities. To be followed by Turkey on uses of outer space for scientific aims in Turkey. The last technical presentation will be by Saudi Arabia speaking on the contribution of the King Abdulaziz prize for science and technology for the peaceful use of space technology in the Kingdom of Saudi Arabia.

At the end of this afternoon's plenary, a reception will be hosted by the United States of America and the Space Foundation at the VIC Restaurant at 6 p.m. You are all kindly invited to this.

Now I suggest that we should continue and hopefully conclude our consideration of agenda item 12, space and water.

The Chairman states that there are no speakers on the list for the time being. The Chairman says that there is a mistake in his speaking notes, this is not agenda item 12, space and water but rather space and climate change. Nonetheless we have no requests to speak under 12, so I suggest that we go on to 13, that being the use of space technology in the United Nations system. Here, once again, we have no speakers, as far as I am aware of. So we have concluded our consideration of agenda item 13.

Let us now go on to agenda item 14 which is, international cooperation in the use of space-derived geospatial data for sustainable development. Under this agenda item, we have a proposal and this is a proposal submitted by Brazil which has been so kind as to present the text in English, recommendations on ways and means to foster international cooperation with a view to building up national infrastructures to use geospatial data.

Now, I hope, ladies and gentlemen, that you have received a copy of this text. There was a partial presentation of this, this morning already, and I asked you to take a look at this over lunch so that we could usefully focus on this, this afternoon.

Now I would like to open debate on this Brazilian proposal.

Would there be any delegations wishing to speak on this?

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In its resolution 50/27 of 6 December 1995, the General Assembly endorsed the recommendation of the Committee on the Peaceful Uses of Outer Space that, beginning with its thirty-ninth session, the Committee would be provided with unedited transcripts in lieu of verbatim records. This record contains the texts of speeches delivered in English and interpretations of speeches delivered in the other languages as transcribed from taped recordings. The transcripts have not been edited or revised.

Corrections should be submitted to original speeches only. They should be incorporated in a copy of the record and be sent under the signature of a member of the delegation concerned, within one week of the date of publication, to the Chief, Conference Management Service, Room D0771, United Nations Office at Vienna, P.O. Box 500, A-1400, Vienna, Austria. Corrections will be issued in a consolidated corrigendum.



If there are no objections we would be adopting this text. Thank you very much.

Canada did you ask for the floor?

**Ms. P. WILLIAMS** (Canada) I just wanted to make a couple of comments and I thank the Chair for the opportunity to comment on this important initiative. As you are aware, Canada has had a long tradition of sharing geospatial data in situations of disaster relief and disaster management and we will continue to do so.

On this specific issue of open data policy, Canada will need to have some time to study the recommendations proposed in the non-paper prepared by Brazil because the provisions concerning Canadian data policy are actually a matter of national law and must be consulted, within Canada among key stakeholders, before we can arrive at a position. So, we are merely saying that we will need to take this back and study the issue at headquarters. Thank you very much Mr. Chairman.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you very much delegation of Canada. Belgium you have the floor.

**Mr. J. MAYENCE** (Belgium) (*interpretation from French*) Thank you Mr. Chairman. I am sorry for being so slow in responding to your requests to take the floor, it is the beginning of the afternoon, we are notoriously slow. I would like to thank Brazil to start off because it is true that with Brazil there is a certain continuity of thematic and Earth observation is a topic that is always dear to their hearts and they always make very constructive and valuable proposals and contributions on the subject.

We are in the same position as Canada because we see the purpose and the goals which are being pursued by the Brazilian delegation but possibly this is something that could be engaged in bilaterally. We would like to some clarification as to some concept of national infrastructure data structures for example and, we would like know to what extent the system, which this non-paper envisages, actually corresponds or is consistent with the way in which we have structured the Earth observation data distribution system in Europe. We have a system that is based on public general distribution and in parallel also commercial operator distribution, so we have to be attentive to alignment with this approach and the purpose. The Belgian government goals are one thing and that commercial logic may take us elsewhere. So I did not quite understand your conclusion where you hammered

home the adoption of this document and you considered automatically that this was a final document or something to be incorporated into the report. If you could explain that and would like clarification as requested.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you very much distinguished delegate of Belgium. The Chairman's position when the decision was taken was as follows. This is a provisional adoption because it is necessary to allow for the expression of views. I would propose to Brazil, unless he has better ideas, that he could possibly engage in some consultations and clarifications with Canada and Belgium outside the room. All the delegations who are interested in getting extra information or some clarification as to the scope of this project because there is a certain perception of the fact that this is an extremely positive contribution. We would like to thank Brazil for this but it would be useful to have some consultation process. Brazil, what would your feelings be on this?

**Mr. J. FILHO** (Brazil) (*interpretation from Spanish*) Yes, certainly we believe that this is a sound proposal. We are ready to speak with interested delegations, Canada, Belgium, and all the other delegations seeking extra information, complementary information, so as to lay any reservations that they may have.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you, that would be fine indeed. I think that is the way we will proceed. To the extent possible, if you would be so kind as to do this, either this afternoon or tomorrow morning, so that we can keep going.

I have another request to speak, India and China.

**Mr. D. GOWRISANKAR** (India) I would like to make a statement. The Indian delegation is happy to note that the deliberation on this agenda has contributed significantly in consolidating the activities undertaken within the United Nations system that are directly related to use of space-derived geospatial information for sustainable development.

Mr. Chairman, India places considerable importance on bilateral and multilateral relations with space agencies and space-related bodies with the aim to take up new scientific and technological challenges, defining international framework for exploitation and utilization of outer space for peaceful use purposes and building and strengthening existing ties between the

countries. From the memorandum of understanding, all agreements are in place with more than 30 countries and international organizations currently. Many of these understandings pave the way for sharing our expertise in use of space-derived geospatial information for sustainable development. India's joint mission with France, namely the Megha Tropiques and \_\_\_\_ (?) will provide useful data to the global scientific community. India also plays an active role in several international bodies in fostering partnerships with member countries in the use of space technology for the benefit of mankind.

Mr. Chairman, India has also carried out many satellite-based application projects which have direct relevance to sustainable development. Monitoring of snow and glaciers in the Himalayas, including areas in neighbouring countries; collaboration with GEO, Group of Earth Observation, in agricultural crop status monitoring; mapping of coral reef in Sri Lanka, Bangladesh and Maldives; impact of sea-level rise on coastal environment in Sri Lanka and Bangladesh; photographic mapping in Maldives; establishment of remote sensing centres at Malé, Mauritius and Myanmar; disaster management support through international charter and Sentinel Asia initiative; local \_\_\_\_ (?) mapping in Kazakhstan; are some of the projects pursued in this direction.

Mr. Chairman, Sharing of Experience in Space, SHARES, it is a scheme India has set up under which training in different applications of space technology are provided to scientists from other developing countries. The UN affiliated Centre for Space and Technology Education in Asia and the Pacific, set up in India, offer training to more than 820 scholars from 31 countries in various application fields of space technology.

Mr. Chairman, in conclusion, the Indian delegation would like to support UNCOUOS in all its activities to increase the awareness of space-based benefits and to encourage developing countries in taking up the space application programmes for sustainable development. Thank you Mr. Chairman.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you very much India. I would now like to give the floor to the delegation of China.

**Mr. Y. XU** (China) Thank you Mr. Chairman. China would also like to join in to congratulate the distinguished delegate of Brazil for their proposal on ways and means to foster international cooperation with a view to building up national infrastructures to use geospatial data. We think this is a very important

proposal. We also agree with your suggestion that informal consultations may be carried out under the leadership of the Brazilian delegation to have an in-depth discussion on this proposal with a view to improve this proposal and to finalize this proposal. China would like to take part in this informal consultation and make our contribution in this regard. Thank you Mr. Chairman.

**The CHAIRMAN.** (*interpretation from Spanish*) Let me thank the Chinese delegation which is cordially invited to participate in those consultations.

No further speakers, sorry Brazil.

**Mr. J. FILHO** (Brazil) (*interpretation from Spanish*) Chairman, please let me clarify what I think is an important point. Our proposal does not close the door to participation by private initiatives or companies that are commercializing space data. At no point did we close the door on this possibility. We just said that the cheaper we can make progress here the better. The better for the infrastructure and countries and particularly the poorest countries. It is an open question that is part of the sovereignty of each State that is dealing with its own infrastructure.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you. Colombia.

**Mr. J. OJEDA BUENO** (Colombia) (*interpretation from Spanish*) Thank you and thank you Brazil for this proposal, congratulations for the work done here.

For Colombia, we have really nothing to add here. Perhaps the name of the national infrastructure, this is the only thing we might strike out here because Colombia now has a space agency that centralizes the data, as is the case with the Amazon project, we share that information with Brazil. The idea of whether to standardize, as proposed by Brazil, I do not think this is cause for concern. Colombia, like other Latin American countries, are users of European systems for example and I think that this shows that we can have interoperability, as was mentioned by Mr. Gómez, this morning. Colombia is not going to participate in the group because we feel that the proposal as it stands now is fine and has our full support.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you. Nigeria.

**Mr. O. AGBOOLA** (Nigeria) Thank you Mr. Chairman. Nigeria also commends Brazil for this proposal and wish to identify with the proposal.

However, we want to ask Brazil also to include Nigeria in the consultation. A lot of work has been done back at home and the issue of international, regional cooperation is more than what is written here. It includes \_\_\_\_ (?) which Nigeria would wish to contribute in any such consultations. Thank you, Mr. Chairman.

**The CHAIRMAN.** (*interpretation from Spanish*) Let me thank Nigeria for that offer of participation. Chile.

**Mr. J. IGLESIAS MORI** (Chile) (*interpretation from Spanish*) We are very pleased with the results of Brazil's work here and, along the same lines as Colombia, we feel that this gives a complete reflection of the position here that we share. Following the clarification made by Brazil that this proposal does not close the door to private initiative, we find no cause for concern and fully support it.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you. Then I think we can say that Brazil will be carrying out these consultations on this topic with the participation of those delegations who have come forward and others who may wish to do so later.

Now, item 10, space and society. I have India. Let me give you the floor now.

**Mr. S. SHIVAKUMAR** (India) Thank you Mr. Chairman. The Indian delegation would like to emphasize the fact that taking the benefits of space technology to mankind and society has been the driving force behind the success of the Indian space programme.

Space technology continuously demonstrates its tremendous potential in addressing issues of societal relevance through varied operational projects. Satellite systems for Earth observations and communications have become the mainstay for providing a wide variety of services in television broadcasting, telecommunications, weather monitoring, management of natural resources and contribute in the areas of agriculture, forestry, water resources management, disaster management, etc.

Several application programmes such as tele-education, telemedicine, disaster warning, search and rescue, Village Resource Centres, etc. have been carried out in India to fulfil the objective of the Indian space programme to bring the benefits of space technology to man and society.

Mr. Chairman, providing quality education and health care facilities to the people find a place in any country's developmental objectives. The Indian delegation is happy to inform that the ongoing satellite-based tele-education and telemedicine application programmes in India have been quite successful in addressing various challenges of the education and health sector that are encountered in any of the developing countries, like India. Tele-education and telemedicine networks that have been set up across the country provide connectivity to the remotest and inaccessible locations in the country. Tele-education networks today connect more than 35,000 classrooms across the country covering about 22 States. These networks are being used for imparting training to teachers and providing curriculum-based teaching to students of primary and secondary schools, arts and science colleges, polytechnics, and management and professional institutes.

The Indian tele-medicine programme was started as a pilot exercise in early 1999 in five locations but has rapidly expanded to cover more than 305 remote hospitals, 57 specialty hospitals and 13 mobile vans and the numbers are growing steadily. Over the years the coverage of tele-education and telemedicine networks has widened bringing benefits to more people with better outreach.

Mr. Chairman, the programme to set up satellite-based Village Resource Centres, VRCs, across India for providing a variety of services relevant to the rural communities is also a unique societal application of space technology. Under the VRC programme a number of Village Resource Centre nodes are being established in various villages which are connected through INSAT satellite-based VSAT network to various expert centre nodes located in the blocks, district headquarters and State capitals. Remote sensing data and imageries, received from IRS satellites, are used to provide useful inputs about other resources required for the development of villages and its population. To date, ISRO has set up more than 471 VRCs in 22 States and union territories, including the islands, in association with the about 45 partner agencies. These VRCs have conducted over 6,000 programmes benefiting over 400,000 people.

Mr. Chairman, satellite remote sensing has become an indispensable tool for providing valuable and timely information on natural resources and the environment, not possible from other sources of monitoring. The diversity of applications concerning natural resources survey and management, especially in the field of agriculture, fisheries, forestry, water resources, infrastructure development, atmospheric

studies, disaster management etc. make this unique among other space-based benefits.

The Indian EO programme is coordinated at national level by the Planning Committee of the National Natural Resources Management System, PC-NNRMS, comprising various user departments with a mandate to integrate the data obtained through remote sensing into the existing system with appropriate technical, managerial and organizational linkages.

Several national missions in the key areas of socio-economic development have been carried out in the country with active involvement of the user agencies. Rajiv Gandhi National Drinking Water Mission of the Ministry of Rural Development to identify potential zones of groundwater, Crop Acreage and Production Estimation, CAPE and Forecasting Agricultural Output using Space, Agro-Meteorology, and Land-Based Observations, FASAL, programmes, of the Ministry of Agriculture to provide timely and reliable information on agricultural output for planning and policy making; Potential Fishing Zone, PFZ, identification project of the Department of Ocean Development to provide a livelihood to the poor fishermen; Wasteland mapping programme of the Ministry of Rural Development to enable reclamation of precious land resources; Biodiversity characterization project of the Department of Biotechnology to protect the rich biodiversity resources; the National Urban Information System, NUIS, of the Ministry of Urban Development to map and manage urban amenities on a large scale; the Coastal Zone Information System project of the Ministry of Environment and Forests to study and map coastal zones; coral reef and mangroves; Sujala watershed development project of the Government of Karnataka for providing livelihood support in rain-fed regions with local participation, are a few of the many application projects that we are undertaking.

With the continuing advances in remote sensing and associated geospatial technologies, India is making continued efforts to promote community-centric remote sensing applications.

Mr. Chairman, the use of space-based systems to address disaster management at both pre- and post-level requires convergence of satellite remote sensing and communication technologies with a strong ground segment backup. Under the Disaster Management Support System, DMS, a programme of ISRO, several activities have been carried out including creation of a digital database for facilitating hazard zonation, damage assessment, monitoring of major natural disasters using satellite and aerial data and

development of appropriate techniques and tools. A decision support centre, as a single window for all aerospace-based products and services, working on a 16x7 basis during normal times and a 24x7 basis during disasters, has been made operational. This facility has been put into use for monitoring flood, agricultural drought and other natural disasters encountered by the country. Also, in order to provide emergency communication for disaster management activities, a satellite-based Virtual Private Network, VPN, has been set up linking the national control room with the decision support centre, important national agencies, key government offices and disaster control rooms in various States. Apart from these, a major national level coordinated project has been taken up to create a national database for emergency management.

Mr. Chairman, in case of drought, we would like to inform this august gathering that space inputs are effectively used for monitoring agricultural drought on a monthly basis in 13 States, almost half of the geographical area. The trend of agricultural vegetation development and the intensity of agricultural drought are regularly monitored and reported to the Ministry of Agriculture, Government of India and concerned State departments of agriculture and relief.

Mr. Chairman, we have been a part of all international cooperation wherein space applications towards disaster management are envisaged. Further, India has also been part of some of the key regional disaster management initiatives and also a member of the international COSPAS-SARSAT programme for providing distress alert and position location services. A total of 1,754 lives have been saved in 65 incidents from 1991 to 2008 by the Indian Search and Rescue System.

Mr. Chairman, India is also envisaging on providing satellite-based positioning, navigation and timely services to communities in the region. Implementation of GPS and Geo Augmented Navigation, GAGAN, a Space-Based Augmentation System, SBAS, over Indian air space, is one such activity carried out by India. The system delivers increased position accuracy required for precision approach and landing of civilian aircraft and is expected to be commissioned by 2011.

We are also initiating implementation of an indigenously-built regional system capable of providing standalone position accuracy. The system, named the Indian Regional Navigation Satellite System, IRNSS, will comprise seven satellites, three in geostationary orbit and four in geosynchronous orbit and is expected to be commissioned by 2012-13.

Mr. Chairman, in conclusion, the Indian delegation would like to proudly convey to this august gathering that India has built the necessary wherewithal to take the benefit of space technology to the grass-roots level and demonstrate the same through various application projects. India is also willing to share its space assets and knowledge base with other countries which are in need of the same. Thank you Mr. Chairman.

**The CHAIRMAN.** (*interpretation from Spanish*) Thank you India. Nigeria has the floor.

**Mr. J. AKINYEDE** (Nigeria) Thank you Mr. Chairman. Distinguished delegates, Nigeria continues to make progress in its programmes under the agenda item, space and society. The nationwide activities on space education are particularly aimed at exposing the primary and secondary schools students and their teachers to the knowledge of space exploration and exploitation as well as the valuable benefits that can be derived from space science and technology.

In the area of awareness propagation through space education outreach workshops, the African Regional Centre for Space Science and Technology Education \_\_\_\_ (?) in Nigeria have been organizing a series of activities under its programme initiative \_\_\_\_ (?) 'catch them young'. Some of the strategies usually adopted during the annual schools space education outreach programme, include: use of movies, videos and Powerpoint presentations on space exploration and exploitation including its direct and spin-off benefits. \_\_\_\_ (?) primary schools are engaged in poetry rhymes, songs, essay competitions, engaging high schools students in quiz and essay competitions, debate, art and science project exhibitions. Educational tours, excursions, as well as establishment of the nurturing of space clubs among young people, preparation and distribution of posters, flyers, stickers, brochures, some of which were donated by OOSA and UNESCO. Over 3,000 of such posters have been distributed to schools.

Some of the objectives of the space education outreach programmes are to expose and inspire the interest of the students, at all levels of education, to consider taking up careers in space science and technology, exploration and applications. Over 5,000 primary and secondary students from over 300 different schools in Nigeria have benefited from these programmes. Students have the opportunity to demonstrate hands-on projects such as launching of water rockets, building of models, mock-ups of satellites, rockets, astronaut suits, solar systems. The

centre has also complemented the outreach programme with the development of a temporary structure where the mock-ups of space science and technology are displayed for further awareness and education of both students and public.

Seminars on curriculum development are also organized for schoolteachers during the annual schools outreach workshop. The original centre has taken advantage of the sources of the space education programme to set up a national committee on curriculum development for space education in primary and secondary schools in Nigeria, in collaboration with the Federal Ministry of Education, the National Education Research and Development Council and Obafemi Awolowo University.

In addition, the regional centre has been organizing a series of programmes to mark the World Space Week in Nigeria. As part of its annual activities Nigeria, through the centre, has been participating in the Zero-0 programme at the Kennedy Space Center in Florida, United States. The programme is usually organized annually in collaboration with the Space Week International Association. In this programme, three Nigerian high school students have participated in the Zero-Gravity flight in the past three years where they experience how astronauts feel in space. The flight has provided a great inspiration for the youth. Similarly, at the invitation of the centre during the 2008 World Space Week, Dr. Jean-Jacques Favier, the former French astronaut, came to speak to the schoolchildren on his real-life experience while on the space mission on the Space Station.

Mr. Chairman, telemedicine is another programme area in which the society has benefited from space technology. The telemedicine revolution has shortened the physical distance separating medical experts, patients and resource persons around the world. The telemedicine project in Nigeria provides a unique opportunity to educate and demonstrate to society the importance of benefits of space science and technology \_\_\_\_ (?) services delivery. The telemedicine project presently has terminal locations in eight federal medical centres across the country while the mobile clinic, with motorized VSAT dish for real-time online tele-diagnosis, health education and tele-consultation, visits the rural communities to provide these services. Over 40 rural communities have benefited from this programme. Nigeria is increasing efforts, through the appropriate institutions, to reach other parts of the country. Thank you.

**The CHAIRMAN.** (*interpretation from Spanish*) Let me thank Nigeria for that presentation. My next speaker is South Africa.

**Mr. E. SIBEKO** (South Africa) Thank you Mr. Chairman and distinguished delegates. In many developing countries space is perceived as an elite sector, much detached from society and daily life. This presents a challenge to all of us to advance space awareness and advocate programmes to ensure public acceptance in appreciation of the very broad range of societal benefits derived from space technology.

South Africa has a number of societal projects that have been space-enabled to link societies of diverse backgrounds, specifically rural and other societies. These are enabled by VSAT, Very Small Aperture Terminal technology. In the area of tele-education, \_\_\_\_ (?) online is a project \_\_\_\_ (?) provincial education department, over 1,000 students have been connected to the Internet. Email has enabled the students and teachers to enhance education given outside of the classroom. Mindset is a public/private partnership project which aims to enhance the quality of high school education in mathematics, science, English, life skills and HIV Aids education. The project also provides health education programmes to help practitioners in public hospitals and clinics. Some of the educational content is directed at patients at these facilities.

In the area of tele-health, Chris Hani Baragwanath Hospital, HIV Aids and Research Unit, uses VSAT technology to transmit and receive large data files in a cost-effective and timely manner. VSAT is also used to \_\_\_\_ (?) radiology by hospitals in Eastern Cape that do not have a radiologist on site. The X-rays are transmitted to a hospital in Johannesburg where they are \_\_\_\_ (?) and the expert reports are sent right to the Eastern Cape. Patients can now receive immediate medical treatment instead of waiting two to three weeks, as they did previously, for a diagnosis before medical intervention could be introduced.

In the area of e-government, the Department of Home Affairs receives VSAT technology to connect over 100 mobile offices with the mail office in Pretoria. People in remote areas of the country can apply for birth certificates, passports, identity documents, State pensions etc. without the expense of travelling to urban areas where Home Office offices are located. The \_\_\_\_ (?) is currently using this technology to improve service \_\_\_\_ (?) to the people in the rural areas. Further, several \_\_\_\_ (?) community centres enable people in remote areas to access

government services, as well as provide training opportunities to the general public for a nominal fee.

In the area of e-banking and financial services, the VSAT is utilized to provide financial services through the automated banking system in most rural areas of South Africa.

Mr. Chairman, in South Africa \_\_\_\_ (?) enhance space awareness in all levels of society as a means to build public understanding of the societal benefits of space technology. Events such as the World Space Week provides and encourages opportunity to sensitize the public to the benefits of space science and technology. Various government departments support the World Space Week activities in South Africa during 2008. A number of events were organized around the country, they included one-day conferences, space camps, star parties and exhibitions. During the Africa Aerospace and Defence show the students \_\_\_\_ (?) special designated areas and activities to explore, exposed them to \_\_\_\_ (?) and provide them with practical experiences. These activities were targeted to reach a large number of our youth and to motivate them to pursue studies in mathematic and science and for some, eventually space-related qualifications. Thank you.

**The CHAIRMAN** (*interpretation from Spanish*) Let me thank the distinguished delegate from South Africa for that statement. I now give the floor to Canada.

**Ms. A-M. Lan PHAN** (Canada) (*interpretation from French*) Mr. Chairman, listening to the upcoming generations, supporting their curiosity, helping young people everywhere throughout Canada acquire the knowledge and skills that they will need to make their contribution to society and have a flourishing career, is a priority for Canada. Only during the last year, more than two million young people in Canada on the primary, secondary or tertiary levels, have studied science, mathematics and technology within a learning context that had recourse to space. With a population of 33 million people, two million young people is a significant portion. Profiting from the two historic flights that took place in 2009, the Canadian Space Agency has produced new educational toolkits that will be put at the disposal of all mathematics classes in Canada. Up to now, 45,000 classes, that is 1.25 million pupils, critical for scientific thought and problem solving using spatial content in the learning curriculum. A spatial project based on very practical surveys developed, along with other ministries and representatives of the private sector, the participation of over 300,000 pupils and has drawn the cooperation

of over 600 teachers, 3,600 pupils attended workshops organized by the Canadian Space Agency, led by some 60-odd scientists and engineers.

Recently, in coordination with the six-month mission of Robert Thirsk, Canadian astronaut aboard the International Space Station, a space education programme began two popularization or dissemination of know-how projects based on nutrition sciences and physical activity. Up to now 14,400 young people and their families are participating in those projects.

Concerning multi-level cooperation, we are very pleased to be a participant in the International Space Education Board, of which five space agencies are currently members, ESA, JAXA, NASA and CNES.

Chairman, the Canadian Space Agency continues to strongly support the educational and popularization activities using the appeal that space has to encourage young people and the general public to learn more about our world of technology and to choose a career in the scientific and technical field. We also support different international programmes aiming at the same goal. We intend to assist the future leaders to help them participate in programmes of the International Space University, provide financial support to students so that they can attend space conferences, such as the International Astronautics Congress and the biennial scientific meetings of COSPAR. We are convinced that the fact that we help students participate, during their training and learning years, in these forums and international educational programmes will help to create long-lasting advantages and to build a solid foundation of professionals who will be able to lead the future development of the peaceful uses of outer space.

Chairman, we want to conclude this statement by recalling that space activities have been and are still a very powerful motor for the creation of all kinds of advantages and spin-offs for society. Consequently, Canada is determined to make a positive and active contribution in pursuing these developments through its space programme. Thank you Mr. Chairman.

**The CHAIRMAN** (*interpretation from Spanish*) I thank Canada. Just one observation, the Canadian Space Agency supports students in participating in these major conferences you said and COPUOS, even though it is not a big conference in terms of numbers, it is in terms of its quality, because we have got the Legal Committee, Scientific and Technical Committee. It would also be very nice if you could help support them to attend.

Thank you.

Two speakers remaining, Belgium and Brazil.

**Mr. J. MAYENCE** (Belgium) (*interpretation from French*) Thank you very much Chairman. I am going to make a statement which is not really similar to the other ones under this agenda item.

I have listened with great interest under this item of space and society. A whole list of educational systems which focus on inspiring young people, in the broader sense of the word, to getting involved in science and technology in outer space. Very impressive indeed because this is something that is said by all sorts of countries in the world but I think that society is not just young people, it is also less young people, possibly people who have nothing to do with space who have heard of space in the papers and the media and, I must admit that, in my field sometimes it is very difficult for me to explain to what extent space is a promising avenue of exploration, in comparison with others. I am not very easy with the flip explanation of space is good for you, just apply it!

In Belgium, we have started working on answers to the question of why space is good for us. Most recently because a Belgian astronaut, who is going to be a captain, for once the job is going to be given to a European. This, of course, is something which raises enthusiasm but also questions get put and necessarily so when one takes a look at the budget of the ISS, it is of course not just up to Belgium to foot it, it is up to the partners and particularly the US but one can quite legitimately put the question. Why is this costing us an arm and a leg? That is a very good question, we have to answer this question. It is one fine thing to talk about education but I think that, under space and society, we should also talk about the best way of engaging in communication with the public at large on these subjects, not just youth or students but the public at large, everyone out there. I think that we have efforts that can usefully be engaged along this line.

For example, recently there was this Air France airliner crash and, in my company, all sorts of questions emerged. What is the point of a satellite if we cannot avoid this sort of crash, this sort of accident? This is a question which is extremely useful. You have to either respond to these questions and then it is useful or, you do not know how to answer. In that case, somehow you convey a very negative take on outer space. You have to explain to people, well you cannot do everything with satellites. Possibly, in the future, new potential will be tapped into and we will be able to

use satellites for that sort of work. I believe that when we are talking about thematic subjects, we should be more exploratory in this way. Let me explain.

If every day there is a press review, for example, that surveys everything that takes place in the world, everything that is dramatic or good news, bad news, disastrous news. If you take a look at the ways in which space technologies are addressing and responding to this news that is hitting the radar I think that you can cobble and craft an information programme to explain to the public at large what mister average taxpayer is doing and what programme activities are going to be developed. I think you have to start thinking in these terms because communication is something important, space is important but you have to put the two together. Education is something that derives from communication.

That is as far as I want to go on that. I did not want to interrupt the evolution of the discussion that was taking shape under this agenda item but I do think that it is important to broaden the scope in this fashion and not just to focus this narrowly as we have been since the beginning of this discussion. Thank you.

**The CHAIRMAN** (*interpretation from Spanish*) Thank you very much on this point. You have stressed a new concept and not just the youth should be focused on and young people and students but also the public at large and you have ventured into the topic of communication and how to best convey a message to the public at large. It is necessary to know how to communicate and it is not something that is easy in any way, especially in the developing countries. The space is not an easy sell to people and one has to possibly situate the whole debate, space science and technology, at another level. Thank you for your contribution.

I think I have Canada which wishes to speak on this. Then Italy.

**Ms. A-M Lan PHAN** (Canada) (*interpretation from French*) Thank you very much Chairman for giving me the floor on this. I would like to pick up on Belgium's comments if I might. I think that it is a very relevant comment indeed. Following their remarks, I would say that communication is not just a subject of import to the developing countries but also for countries with space capacity. As I have mentioned in one of our statements, space programmes are costly things and it is important to share both the risks as well as the benefits, the downs and well as the ups, and it is important to have our nationals, our citizenry, supporting us because, after all, all of these programmes are up for approval on the part of the

government and behind them the people. So I quite support the point made that we have to broaden the scope of our comments under this agenda item and see how we can best convey our message to the public at large. Thank you.

**The CHAIRMAN** (*interpretation from Spanish*) Thank you, I also quite agree because financing space programmes is no mean feat. One has to go through a budget approval process and here, for example, if we cannot get agreement in the room sometimes we have problems releasing funds for our activities. Thank you very much.

I believe that Italy has asked for the floor.

**Ms. S. DI CIACCIO** (Italy) Excuse me, I did not ask for the floor.

**The CHAIRMAN** (*interpretation from Spanish*) All right but, if you have anything to add please go ahead. No. Thank you.

Brazil is next on the list.

**Mr. J. FILHO** (Brazil) (*interpretation from Spanish*) Thank you Chair. Let me present some information and make a proposal.

International Astronomy Year is of special importance for Brazil because the General Assembly of the International Astronomical Union will be meeting in August, in Rio. The most important event in world astronomy will come in the presence of the President of Brazil, Lula da Silva, in its opening session. The General Assembly of the assembly has the full support of the National Council for Scientific and Technological Development of Brazil as well as FINEP, which funds studies and projects, as well as support from the Ministry of Science and Technology.

This event provides us with an exceptional opportunity to disseminate, among young people, not just the findings of research and discoveries in the field of astronomy but, in particular, Brazil's space activities and those of many other countries as well. For example in Rio de Janeiro, there will be a large pavilion in the centre of town with a very broad exhibition on astronomy and space in general, emphasizing the important breakthroughs achieved by Brazil and other Latin American and other countries. Thousands of primary and secondary schools, as well as many universities and research centres, are working to take this opportunity and intensify their educational efforts beyond their installations, beyond their premises, in other words, in public premises, town squares and so

on, in order to popularize programmes of science especially space science.

For the first time in the history of Brazil, the government has, in its Ministry of Science and Technology, a specific sector with a good predefined budget aimed at educational, scientific and technological activities as well as their popularization among the population of the country, this includes the dissemination of knowledge on the great human adventure of outer space exploration.

The Brazilian Space Agency, for several years, has had a programme, AEB school, which provides secondary and primary schools with information, specially prepared for them, on the indispensable nature of space activities, their impact on daily life and how these are achieved. The programme aims to spark creativity as well as develop a taste for science in fields such as meteorology, atmospheric science, environmental science, remote sensing and satellite launch vehicles and launch centres.

INPE, the National Institute for Space Research has had, since 2006, a programme called space and society which aims at providing didactical products and benefits derived from space programmes especially in areas like public health or urban and rural planning and mitigation of natural catastrophes, to schools. The initiative invest in a constructive dissemination of infrastructure for geospatial data, creation of software for small and medium companies so that they might be able to use these resources as much as possible or to use the data and images coming from satellites for their economic advantage.

INPE has set up two websites for educational purposes. We have a little character called the little planet, who speaks infantile language, invites small children to participate in games and entertainment on themes related to climate change and environmental protection. INPE has also published three books on space for the young child public. One dealing with the Antarctic and the other on the spaceship as Noah's Ark.

Now, my proposal. We believe that COPUOS should participate in the World Science Forum which will be held in Budapest, in November this year, promoted by UNESCO and by the Hungarian Academy of Sciences with the support of the other academies of science in numerous countries, as well as the Academy of Sciences for the Developing World, TWAS, based in Trieste. As we saw in many of the presentations, the role of space in development is growing exponentially. Space science is one of the

most extraordinary chapters of contemporary science and this will probably become even more true in the twenty-first century which could be called, the century of space.

This is why, Mr. Chairman, it seems to me compatible and necessary that COPOUS has an active presence in this supreme forum of science which will be discussing new ideas, principles and action, as adopted in the Conference on Science and use of Scientific Knowledge, held in the same Hungarian capital in 1999. This is why the World Science Forum, scheduled for November, is called Budapest plus ten. So the participation of COPUOS in Budapest plus ten can also be justified by what we see in the document entitled: For a United Nations space policy, presented by the Chair of this Committee, where we read, there is a need to strengthen interdisciplinary cooperation between different institutions and agencies of the public sector for optimal synergy and to be a part of the main world conferences on different matters. Thank you very much, Chair.

**The CHAIRMAN** (*interpretation from Spanish*) Let me thank the representative of Brazil for that presentation. The Chair, along with the Secretariat, will look at the possibility of having some kind of presence at that meeting. This depends, of course, on the availabilities we will have but we thank you for that proposal.

I have no other member delegations requesting the floor but I do have one observer, the representative of UNIDIR, Theresa Hitchens, you have the floor Madam.

**Ms. T. HITCHENS** (UNIDIR) Mr. Chairman and distinguished delegates. It is with great pleasure that I address the Committee today. This is the first time that I, and UNIDIR, have had the opportunity to do so. Therefore I would like to provide the Committee with some background information on my organization and its work.

The United Nations Institute for Disarmament Research, UNIDIR, is an autonomous institute within the United Nations family. The organization's primary mission is to conduct research on disarmament and security with the aim of assisting the international community in their thinking, decisions and efforts. Through its research projects, publications, small meetings and expert networks, UNIDIR promotes creative thinking and dialogue on key international relations challenges of today and of tomorrow.

UNIDIR works with researchers, diplomats, government officials, NGOs, and other institutions and endeavours to act as a bridge between the research community and United Nations member States. It is in this role that UNIDIR is presenting to COPUOS today.

Over the last 20 years or more, we have seen a significant diversification in actors entering the space environment. We are now living in a world that relies on space in a huge variety of its key activities. From Caracas to Cairo, New York to New Delhi, space is now a fundamental part of the lives of people in both the developed and the developing world. As we increase our reliance on space, concerns as to how to best protect space resources grow. UNIDIR has put space security and the sustainability of space at the forefront of the work we have carried out over the last few years.

Our annual Space Security Conference has been a key information source on space security issues to the international community, in Geneva. This year our conference, Space Security 2009: moving towards a safer space environment, will take place next Monday and Tuesday, 15 and 16 June, thanks to the generous support of the governments of China, Russia, Canada and the Secure World Foundation and the Simons Foundation. We are honoured that Chairman Arevalo will be giving the keynote address entitled: the importance of space security for emerging space States. We hope to continue and expand our role as a central research and information source on space security issues.

At UNIDIR we believe that the security and safety in the space sector are intrinsically linked and that there is no true safety or security without the other. In the space environment with which we are currently faced, there is a series of cross-cutting issues that affect the foundations of all space activities. One of these issues is the mitigation of space debris, a topic to which this Committee has contributed significantly. There are, however, many others. The topics of space security, space traffic management and the management of space resources all have a possible impact on human security, one of UNIDIR's key areas of work. Our approach brings together security, disarmament and development, so that all forms of security, national, regional, global, are recognized as true manifestations of human security. Putting people first in our debates on space security is the fundamental approach of UNIDIR and one that we hope will make a significant contribution to lasting peace and the maximization of space resources for the global community as a whole. Our approach to space security issues is an interdisciplinary one as these concerns

clearly affect so many sectors of human activity. In order that this cross-cutting nature is reflected in our response as an international community, a cross-institutional, a cross-sectoral approach is essential. The loss of the utility of space resources, as well as the risk of conflict in space, are major concerns for all space actors and for the global community and these are outcomes that we must collectively strive to prevent.

In conclusion, UNIDIR hopes that it can support the work of the Committee by acting as a research body and a facilitator across the UN system and in the international community at large on space security issues. We hope to engage further with the Committee in the future. As such please do not hesitate to contact me or my staff if there is any information or assistance that we may be able to provide. Thanks again for this opportunity to address the Committee.

**The CHAIRMAN** (*interpretation from Spanish*) Let me thank the Director of the United Nations Institute for Disarmament Research for that description of its work, the work carried out by UNIDIR and we, of course, would be very pleased to attend the remark to its audience of the work carried out by COPUOS. Thank you.

I now have no other speakers on this topic. So we have concluded item 10 or rather we will tomorrow morning, space and society.

Let us move to item 11, space and water. Several delegations have asked for the floor. First, You Zhou from China.

**Ms. Y. ZHOU** (China) (*interpretation from Chinese*) Thank you Mr. Chairman. The Chinese delegation is strongly in favour of a discussion on this item and it believes that, with the development of space technology, the scope of its application in water resources sector is becoming ever wider. The international community should attach importance to the role of space technology in water research monitoring and management and COPUOS can serve as an important platform for this purpose.

Mr. Chairman, in as early as the 1970s, China already introduced space technology to the water-related applications and has since gone through four stages of learning, testing, application and development. At the moment, satellite remote sensing technology is extensively used in the monitoring of inland waters and has become an effective means of fighting inundation and drought, preventing and mitigating disasters, protecting ecology and the

environment and promoting the sustainable development of water resources.

More than anything else, space technology played a crucial role in overcoming the flooding of Huai river in 2007 and neutralizing the threat of quake lakes in the aftermath of the devastating earthquake in Wenchuan of Sichuan province in 2008.

Over recent years, in GEF sponsored Hai River Basin Integrated Water and Environment Management project, remote sensing technology has been employed to measure the rates of ground evaporation thus showing a new way of monitoring and managing local water resources. Space technology has also been widely used in provinces like Guangdong and Anhui to monitor and evaluate damages of drought.

Experiences so far attest to the advantages of space technology in assessing the location, the extent and its severity of inundation and drought, among others. The information generated is more holistic with a shorter updating cycle and less prone to anthropogenic interferences. As the next step, China will focus on using space technology to evaluate water resources, assess land use and monitor the development and exploitation of water resources. In addition, we will also step up research on applications of satellite remote sensing techniques and data in early warning of floods and extensive droughts, high precision forecasting of precipitation and disaster assessment.

Mr. Chairman, to optimize the application of space technology in water resources research and management, China is dedicated to further improving the timeliness and accuracy of space technology and upgrading the integration and interface of geographic information, hydrological information and crop information, with a view to building up a multi-dimensional integrated system featuring all-weather capacity, omni-directions, multiple platforms, multiple altitudes, multiple angles and multi-temporal coverage.

Mr. Chairman, the Chinese Government is ready to strengthen its exchanges and cooperation with other countries so as to jointly put forward the application of space technology in the water resources sector. Thank you Mr. Chairman.

**The CHAIRMAN** (*interpretation from Spanish*) Thank you very much for that presentation from China. I give the floor to the distinguished representative of Germany.

**Mr. J. MARSCHALL VON BIEBERSTEIN** (Germany) Thank you Mr. Chairman. Mr. Chairman,

water management is one of the most important and sensitive issues facing central Asia. In the framework of the Central Asia strategy of the European Union, the Berlin Water Process was initiated by the German Foreign Minister, Dr. Steinmeier, in April 2008. This initiative is an offer by the German Federal Government to the countries of central Asia to support them in water management and to make water a subject of intensified trans-boundary cooperation. As part of this initiative, the German Technical Cooperation Organization has elaborated a basis for implementing a programme for each of the five central Asian States and has developed a programme strategy, together with local partner organizations.

In addition, the German Research Centre for Geosciences, along with DLR, has developed a project which aims at establishing a regional research network for the water sector. This project intends to contribute to reliable scientific databases, applying innovative remote sensing techniques for the development of sustainable water management strategies in central Asia.

Water quality is also one of the focal areas of the GMES Land Core Service where Germany has the lead in Europe. The European water framework directive from the European Commission obliges member States to report regularly about the quality of both surface and groundwater. Reporting has to be coordinated across national borders in case a river basin encompasses more than one country, which is the case most of the time. Main pollution sources are agricultural areas. Depending on the different loads like fertilizers, pesticides, etc. different models are employed and their outputs calibrated with point gauge measurements. More accurate and cross-boundary compatible quantities of relevant agricultural acreages from the GMES Land Core Service could significantly improve modelling and consequently reporting, first of all in the test area of the international Mosel-Saar catchment, involving four countries. The international commission for the protection of these river basins expressed satisfaction with achievements in the context of the GMES conference in September 2008, in Lille, France. Extension towards all European river catchments is planned. Likewise, reporting under the new \_\_\_\_ (?) directive from the European Commission, will be supported. Thank you Mr. Chairman.

**The CHAIRMAN** (*interpretation from Spanish*) Let me thank the representative of Germany. I give the floor this time to the representative of India.

**Ms. R. RAMACHANDRAN** (India) Thank you Mr. Chairman. Mr. Chairman, distinguished

delegates, the Indian delegation is happy to note the deliberations on this agenda on space and water since the forty-seventh session, has contributed in creating awareness on the potentials of space technology in water resource management among the member countries.

Mr. Chairman, conserving and proper utilization of the water resources is of paramount importance to sustain life on planet Earth. Earth observation satellites are capable of capturing the variability, vulnerability and dynamism of the diverse eco-systems and can provide operational inputs for decision-making bodies leading to more effective natural resource management. The strength of Earth observation and geo-information systems lies in unfolding the various linkages and the underlying factors that exist between the state of natural resources and the livelihood opportunities of the stakeholders.

Mr. Chairman, in India, the Indian remote sensing satellite system has been effectively used to demonstrate the capability of space technology, the water resources management, through various application studies at national and local level, both in surface and groundwater management. The Rajiv Gandhi National Drinking Water Mission is one of the successful application projects enabling the communities to identify the groundwater prospects as well as recharged sites. As of today, groundwater prospect maps have been prepared for more than 50 per cent of the country's geographical area providing valuable inputs, not only to the local community but also to the decision-makers at various levels.

In addition to this, India has made considerable progress in its endeavours to make a repository of natural resources using satellite data. \_\_\_\_ (?) of natural resources is being done at two levels. One is to 250,000 and one is to 50,000 scale, under the Natural Resources Census project.

Mr. Chairman, apart from many watershed management projects to develop land and water resources development and plans, India has taken up comprehensive assessment of water resources in the country, through India WARIS, Water Resources Information System project, on behalf of the Ministry of Water Resources. High resolution satellite data, including CARTOSAT data, is effectively used in Accelerated Irrigation Benefit Programme, AIBP, to assess the irrigation infrastructure in the country. Assessment of water logging and salinity in major irrigation projects was also taken up to address the second generation issues in water resources management.

Small and glacier mapping, including snow melt run-off modelling, using satellite data has also provided encouraging results. All these initiatives have paid rich dividends and have made possible optimum utilization of the country's natural resources.

Mr. Chairman, with this rich experience in water resources information management in the country, India is willing to share its experience and consider providing the necessary assistance for developing countries, particularly the African region.

Mr. Chairman, in India we have plans to adopt a two-pronged approach for meeting the future challenges of water requirements. One is the short-term approach, which would involve conserving water through rainwater harvesting and groundwater recharge by putting to use the space-based systems. The other considers long-term plans that could be used for transfer of water from water surplus regions to deficit regions. Like many other developing countries, India also has a problem of plenty in many regions, especially during the rainy seasons, due to its very topography. The recent cyclonic storm in West Bengal State has taken away many lives. India has, on several occasions, demonstrated its ability to handle water-related emergencies by harnessing the capabilities of both Earth observation and communication satellites.

India also shares its products and expertise through many international mechanisms including, the International Charter on Space and Major Disaster and the Sentinel Asia programme. The space application programme in India will continue to contribute towards meeting all the national initiatives taken up for water resource management for the benefit of mankind.

Mr. Chairman, in conclusion, the Indian delegation would like to reiterate that it is willing to share its knowledge in this important area of space technology application to the needy countries. Thank you Mr. Chairman for this opportunity.

**The CHAIRMAN** (*interpretation from Spanish*) Let me thank the distinguished representative of India for that presentation. Under agenda item 11, I have Argentina, Saudi Arabia and the distinguished ambassador for Bolivia has asked me for the floor under 13.

Let me give the floor first to Argentina.

**Mr. F. MENICOCCI** (Argentina) (*interpretation from Spanish*) Thank you Chair. Since this is the first time my delegation has taken the floor, please accept our congratulations on your accession

again to the Chair of this meeting and let us express our recognition of your efficient work. We would also like to commend the Directress of OOSA, Mazlan Othman, and her team, thanking them for the excellent work that they have carried out and for all of the support they have given us when we have carried out our activities in the field of space technology.

Chairman, the national space plan of Argentina, carried out by CONAE has, as its main objective, to provide information from space in order to optimize different socio-economic activities of the country. One of the areas that is most highly developed is the cycle of information linked to climate hydrology and oceanography. This cycle includes the quantification and follow-up of critical parameters dealing with the water resources and soil moisture and its use in agriculture.

Taking into account the importance of the management of water resources and the huge contribution that the space community can make for a better management of that resource, we have been working on two events that we feel will bring together different experts in this field. On a regional level, faced with serious problems in the south of the continent with its prolonged periods of drought and all of the painful consequences, CONAE is organizing, in October 2009, with the help of CRECTEALC, UN-SPIDER and GEOSS, the second springtime school on space solutions for natural catastrophe management and emergency response dealing, in particular, with drought and desertification. This will be held in La Rioja province. Likewise, Argentina is aware of the need to join efforts to produce a global response to the problem of water, obviously is going to count space as one of the tools to achieve this, and we are pleased to announce, along with OOSA and the NGO, Prince Sultan Bin Abdulaziz International Prize for Water, the organization, in April 2010, of the second international conference on the use of space technology for water management. We would like to thank OOSA and the Kingdom of Saudi Arabia for this opportunity to continue with this very successful encounter which met in Riyadh in April 2008, bringing together 120 experts from different countries in the world. Thank you.

**The CHAIRMAN** (*interpretation from Spanish*) Thank you Mr. Menicocci from the Argentine delegation. Once again, through this project which is going to be reviewed following that first meeting in Saudi Arabia and now in Argentina, we see how important interregional efforts can be, again with the support of OOSA. This is really giving good results this effort.

Let me give the floor to Saudi Arabia.

**Mr. M. TARABZOUNI** (Saudi Arabia) Mr. Chairman, since water is very important for life, the Government of Saudi Arabia, which does not have any rivers or lakes, is paying too much attention to provide water to its people so it is using the method of desalination of sea-water and it is taking too much effort to research the management of water resources. During April 2008, the United Nations, the Kingdom of Saudi Arabia, represented by King Abdulaziz City for Science and Technology, and Prince Sultan Bin Abdulaziz International Prize for Water, participated in the organization, the first international conference on the use of space technology for water resources management. This international conference included presentation of space technology to address issues such as, ground and surface water bodies, desertification, drought and sandstorms. The participants also viewed the strengthening cooperation between countries which suffer from similar problems. As a result of their remarkable success of the first conference, the Prince Sultan Bin Abdulaziz International Prize for Water will donate \$30,000 to hold this international conference every two years with UNOOSA and the hosting country to make this conference an ongoing event in different countries around the world. Thank you.

**The CHAIRMAN** (*interpretation from Spanish*) Thank you very much to the distinguished representative of Saudi Arabia for that statement.

Let me give the floor at this time to the delegate from Indonesia on space and climate change.

**Ms. E. ADININGSHI** (Indonesia) Thank you Mr. Chairman. Mr. Chairman, distinguished delegates, considering the importance and growing impact of climate change on human security and life, the Indonesian delegation is pleased by the inclusion of climate change issues on the current agenda of the Committee.

Indonesia is of the view that the climate change issues and climate variability as well are of high importance taking into consideration the geographical position of Indonesia as a maritime nation, which makes Indonesia highly vulnerable to the impact of climate change. As a follow-up to the thirteenth conference of the parties of UNFCCC held, in 2007, in Bali, Indonesia, the Indonesian Government has begun implementing the programme on reduction of emissions from deforestation and forest degradation which includes the use of satellite imagery and satellite data to monitor deforestation and land degradation. In addition, the Ministry of Environment of the Republic

of Indonesia has also conducted the greening Indonesia programme since 2006, which includes using satellite data to monitor vegetation in Indonesia.

Currently, space technology has been enhanced and developed rapidly and can be used for measuring and \_\_\_\_ (?) and observing the parameters of climate change phenomena. Taking into consideration the uniqueness of the climate system in Indonesia, the availability and accessibility of climate data is very crucial. In that connection, my delegation considers the access to the space-based data and information for climate change mitigation and adaptation purposes to be highly important.

In addition, because it is of great necessity that satellites should be highly accurate in monitoring greenhouse gases as well as other climate change parameters, the Indonesian delegation supports the further development of space technology, especially in addressing climate change issues. Nevertheless, Indonesia also emphasizes the need to increase capacity and expertise of human resources in order to improve the capability to access and process the satellite data to achieve the goal of mitigation and adaptation to climate change. Thank you.

**The CHAIRMAN** (*interpretation from Spanish*) Thank you very much to the distinguished representative of Indonesia.

I would now like to turn to item 15.

First, a few announcements which are very important for this Committee. First, with respect to the membership of the bureaux and subsidiary bodies for 2010-2011, let me remind delegations that in paragraph 523, the General Assembly adopted the agreement reached by the Committee on the future composition of the bureaux and subsidiary bodies, basing itself on the working methods of the Committee and its subsidiary bodies. On the basis of this, the Asian group of States, Latin America and the Caribbean and Western Europe and others, have presented their candidates for the offices of Chairman, first Vice-Chairman, second Vice-Chairman, Rapporteur, Chairman of the Scientific and Technical Subcommittee and Chairman of the Legal Subcommittee for 2010-2011. Hence, it is my pleasure to announce that the candidates proposed for the bureau of the Committee and its subsidiary bodies 2010-2011 are the following.

Dumitru Doria Prunariu from Romania, Chairman of the Committee. Nomfuneko Majaja from South Africa, first Vice-Chairman of the Committee. Raimundo González Aninat from Chile, second Vice-

Chairman and Rapporteur. Ulrich Huth from Germany, Chairman of the Scientific and Technical Subcommittee. Ahmed Talebzadeh from the Islamic Republic of Iran, Chairman of the Legal Subcommittee.

The CVs of those candidates will be seen in session document 7. The other candidates' CVs will be found in documents, 9, 10 for the 2008 session. To facilitate consultation we are again distributing these documents.

Let me say, as current Chairman, that it is noted with great satisfaction that the regional groups have been able to reach decisions on these positions.

The next piece of business has to do with the future functions and activities of the Committee. In para. 52 of its resolution 63/90, the General Assembly agreed that, the Committee continue to examine at its fifty-second session under other matters, the functions and the \_\_\_\_ (?) functions of the Committee for that period. The opinions of the Committee, expressed during the last session, were placed in that report.

Lastly, I would like to draw your attention to the requests made by Asia Pacific Space Cooperation Organization, APSCO, and the International Association for the Advancement of Space Safety, IAASS, as permanent observers to the Committee. The relative documentation for these requests has been put at the disposal of the Committee in documents 11 and 9 respectively.

Let me remind delegations that, in 2008, the Committee agreed to examine its procedure dealing with the granting of observer status as well as the granting of that as well as non-governmental organizations that have been granted permanent observer status \_\_\_\_ (?) should inform the Committee of any progress made by obtaining consultative status with the Economic and Social Council.

In CRP.11, prepared by the Secretariat, and I would like to thank the Secretariat for their work, we have information that I think would be useful for the Committee to this end.

Let me now give the floor to the distinguished ambassador from Bolivia, speaking on item 13. You have the floor.

**Mr. H. BAZOBERRY** (Bolivia) (*interpretation from Spanish*) Thank you very much Chairman. Let me apologize to you and to this gathering for re-opening this agenda item, it is just on

behalf of Bolivia I wanted to highlight a point which we believe is very worthy of future reflection, within the framework of the United Nations family, especially those linked to the topic of benefits obtained through the work carried out by the delegates assembled here.

Let me just speak very briefly on the initiative that you, as Chairman of the United Nations Committee on the Peaceful Uses of Outer Space, have put for the consideration of the experts in this room which we find as A/AC.105/2009/CRP.12, entitled towards a UN space policy.

Chairman, several delegations have already mentioned the milestones that we are commemorating in relation to this topic, among these the tenth anniversary of UNISPACE III that, as you know, strongly supported the proposition that electromagnetic space was a unique natural resource for all of creation and which is part of the common heritage of mankind. This, I think, will help us give an even clearer and global view of the use of space.

Chairman, along with the work that we are carrying out for the optimal use of outer space, we have observed how science and technology, moving at such a rapid pace that many people have ceased to understand the large amount of opportunities that they have before them in trying to find a solution to the needs of the planet. Poverty has become a weapon of proliferation that could annihilate the progress that is necessary in order to achieve sustainable development whereby the inhabitants of this planet would be able to live in a more equitable and fair manner as far as the distribution of the planet's resources are concerned. The technology gap has not been bridged rather is still a challenge for developing countries.

This leads me to point out how timely your proposal is, which has been presented to us as a document for reflection, that has a series of principles that have to be placed within the context and which we see as one of the most important initiatives undertaken in the field of space to date, and this in terms of the work carried out by the different bodies and agencies of the United Nations in this field. This is why we support this initiative and hope that, in the future, we will be able to go into greater depth on the ideas that this document contains towards a UN space policy. Thank you very much Mr. Chairman.

**The CHAIRMAN** (*interpretation from Spanish*) Let me thank the distinguished ambassador from Bolivia for that expression of support for the Chair's initiative.

Mexico has the floor.

**Mr. S. CAMACHO LARA** (Mexico) (*interpretation from Spanish*) Thank you Chair. I did not intend to take the floor but, since you went back to this agenda item and following the statement made by the distinguished ambassador of Bolivia, I just wanted to state that we find that there are many interesting points in the document proposed and we will include this document as a part of the elements to be discussed in the workshop that I referred to in my presentation on the work of CRECTEALC I think that the Latin American region can contribute to this initiative. Thank you.

**The CHAIRMAN** (*interpretation from Spanish*) Let me thank the Mexican delegation and in the person of Dr. Sergio Camacho.

There are no other delegations. Let us begin the technical presentations but first, let me ask my first Vice-Chairman to kindly lead our work during these technical presentations. Thank you very much.

The first is Gemma Manoni from the Italian Space Agency talking about Cosmos-SkyMed: keeping an eye on the world.

Yes, Brazil.

**Mr. J. FILHO** (Brazil) (*interpretation from Spanish*) To remind you that you need to announce the meeting for consultations.

**The CHAIRMAN** (*interpretation from Spanish*) You are quite right. He is talking about the informal consultations that will be held in Room C0727, coordinated by the Brazilian delegation. I repeat C0727, starting now.

Now, Madam Manoni can begin her presentation.

**Mr. G. MANONI** (Italy) [Presentation: COSMO-SkyMed: potentialities for monitoring and management of natural environment]

**VICE-CHAIRMAN** Since we have three more presentations, this would be on the website of the Office, OOSA, so anybody interested can access your presentation later.

**Mr. G. MANONI** (Italy) Thank you for your attention, thank you for the opportunity.

**VICE-CHAIRMAN** The second presentation by Ms. Yana Gevorgyan of the United States who will present an update on COSPAS-SARSAT programme activities.

**Ms. Y. GEVORGYAN** (United States of America) [Presentation: Update on COSPAS-SARSAT Programme Activities]

**VICE-CHAIRMAN** Thank you Ms. Gevorgyan for your presentation. Any questions or comments?

I see none.

The third presentation, which would be the last presentation this afternoon, will be by Mr. Küçük of Turkey who will make a presentation entitled: Uses of outer space for scientific aims in Turkey.

**Mr. I. KÜCÜK** (Turkey) [Presentation: Uses of Outer Space for Scientific Aims in Turkey]

**VICE-CHAIRMAN** Thank you Mr. Küçük for your presentation. Are there any questions or comments?

I see none.

Distinguished delegates, I will shortly adjourn this meeting of the Committee. Before doing so, I would 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 our consideration of agenda item 14, international cooperation in the use of space-derived geospatial data for sustainable development. We will continue and hopefully conclude item 10, space and society and item 11, space and water. We will continue item 15, other matters.

There will be three technical presentations tomorrow morning, by a representative of Japan on introduction of a tool for space education. The second one by a representative of Turkey, on science of advanced materials in space with spin-off applications on Earth. The third one will be a video presentation by the Prince Sultan Bin Abdulaziz International Prize for Water.

After the plenary, tomorrow morning, all delegates are invited to a round-table organized by the delegation of Italy on, astrophysics and cosmology, 400 years after Galileo. A light buffet, offered by the Italian Permanent Representative, Ambassador Gianni

Ghisi, will be served in front of Conference Room III. Immediately after adjourning the plenary, the round-table will begin at 1330 with opening remarks by Antonio Maria Costa, Director-General of UNOV and Executive Director of UNODC. Invitation with programme has been already circulated to all delegates last Friday.

Are there any questions or comments on the proposed schedule?

I do not see anyone.

Delegates are cordially invited now to a reception that will be hosted by the United States of America and the Space Foundation at the VIC Restaurant at 1800.

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

*The meeting closed at 5.55 p.m.*