
**Committee on the Peaceful
Uses of Outer Space
Fifty-fifth session**

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654th Meeting
Thursday, 13 June 2012, 10.08 a.m.
Vienna

Chairman: Mr. Yasushi Horikawa (Japan)

The meeting was called to order at 10.08 p.m.

The CHAIRMAN Good morning distinguished delegates, I now open the 654th meeting of the Committee on the Peaceful Uses of Outer Space.

Distinguished delegates, I would first like to inform you of our programme of work for this morning. We will re-open our consideration of agenda item 5, “General exchange of views”, to hear a statement by a delegation. We will continue and hopefully conclude our consideration of agenda item 14, “Use of space technology in the United Nations system” and agenda item 15, “Future role of the Committee”. We will continue our consideration of agenda item 16, “Other matters”.

There will be two technical presentations this morning: by a representative of Japan entitled “International Cooperation Among ISS Partners and Japan’s Contribution and Activities”, and by a representative of Indonesia entitled “Space-based data for climate change and Earth observation in Indonesia”.

Expert group D on Regulatory Regimes and Guidance for Actors in the Space Arena of the Working Group on the Long-term Sustainability of Outer Space Activities has already started its meeting from 9.00 a.m. to 1.00 p.m. in the meeting room MOE100.

There will be a briefing today by the Director of the Office for Outer Space Affairs on fundraising opportunities and it will take place here in this conference room M-1 immediately after the plenary.

I would also like inform delegates that during lunch time today, at 2.40 p.m. in this conference room, there will be a screening of a video entitled “KOUNOTORI (HTV3): Third Expedition to Space”, which is 14 minutes in length. Delegations are cordially invited to the screening of this video by Japan.

Are there any questions to this proposed schedule? I see none.

Distinguished delegates, I would now like to re-open our consideration of agenda item 5, “General exchange of views” to hear a statement by distinguished representative of Kazakhstan. Kazakhstan, you have the floor.

Ms. A. MUKHAMEJANOVA (Kazakhstan)
Mr. Chairman, ladies and gentlemen. Let me congratulate you Mr. Horikawa on your election as chairman of the fifty-fifth and fifty-sixth sessions of COPUOS and wish you every success. We are thankful for this opportunity to address the Committee, we are thankful to OOSA and the Secretariat for having so excellently organized the session. Kazakhstan is satisfied with the current level of its interaction with the Committee. Over more than fifty years of its existence, COPUOS has made an important contribution to regulating the peaceful uses of outer space. We fully support the Committee’s efforts to address global issues relating to space research based on international space law exclusively for peaceful purposes. We think it’s necessary to further develop the Committee’s work with a view to improving the regulatory mechanisms ensuring equal access to outer space and the use of the results of space in the interests of all countries regardless of their level of economic or scientific development.

We believe that space research is a global challenge for all our civilization, it requires common efforts by States in all space-related activities. Today, Baikonur in Kazakhstan remains the largest launch facility in the world working for all countries and the entire international community. My country has the necessary potential to further develop cooperation with foreign partners in the peaceful uses of outer space.

Distinguished delegates, let me briefly dwell on Kazakhstan’s activities in outer space in the recent past. Space activities are an important factor for our country, contributing to an innovative economy and the high technology industry. The programme for the

development of space activities in Kazakhstan for 2010-2014 envisages creating a fully fledged space industry in our country. Kazakhstan is actively involved in such priority projects as creating a national satellite broadcasting system "KazSat" and remote-sensing of the Earth, building an assembly facility for space objects in the city of Astana, creating a rocket complex Baiterek based on the Russian launch vehicle Angara, research projects and design work on the basis of the Orbita and Cosmos station facilities near the city of Almaty, as well as completing work on the draft law on space activities.

On July 16th 2011, KazSat-2 was launched from Baikonur to the geostationary orbit. KazSat-2 is a satellite which had been tested using the apparatus of the satellite communications system of Kazakhstan on November 25th 2011, it became fully operational. We also informed COPUOS in 2012 of having set up a national space object register. On June 20th 2011, jointly with the Russian company information satellite system, we started work on KazSat-3, which was embarked upon in July 2011. The reserve ground-based space object operation facility has been built, roadways have been put in place to facilitate access to the facility, aerial systems were manufactured in the United States and are being delivered to Kazakhstan, the complex will be fully commissioned in the first half of 2012.

We have also completed a design for the ground-based segment of the remote-sensing system of Kazakhstan and construction has begun. As part of the programme to set up an assembly complex for space subjects, we started in May 2011, the construction of a special design technological office in the city of Astana. As part of the project to create a high accuracy satellite navigation system, 10 differential stations were set up and a mobile differential station, which eventually will make it possible to provide services to all users in terms of establishing precise GPS coordinates for geodesic construction and tunnel digging operations.

As part of the legal framework for space activities in Kazakhstan we have done a lot to finalize the Republic's law on space activities and on certain adjustments to other legal instruments governing space activities.

On January 6th 2012, a law was enacted on space activities, we considered an important step in the development of our space industry. For the first time in the 20 years of Kazakhstan's independence, all space activities will be based on law. The law on space activities made it possible to carry out all our

improvements in the country's legislation and practice a more systemic approach to space activities. We have officially informed COPUOS of that new law. In 2011, we also continued work on improving the international treaties that govern our international cooperation in outer space, we signed three agreements at different levels on cooperation in space activities. With the Government of the Russian Federation, with the Institute of Science and Technology of the United Arab Emirates and the King Abdulaziz Scientific and Technological Centre in Saudi Arabia.

In September 2011, through the efforts of both sides, a Kazakhstan-German Committee on cooperation in the peaceful uses of outer space was set up. We continue work regarding the preparation for joining the rocket technology control regime.

Ladies and gentlemen, we also attach priority importance to human resources in the space sphere. In 2011, we started work to train experts for the space industry in the space technology area in 5 high-educational establishments in Kazakhstan. This is a first, 58 of our postgraduates, 1 fellowships and are studying in Russia, Ireland, Malaysia, the UK, the US and Canada. At the request of the Moscow Aviation Institute, 205 Kazakhstan students are studying in Baikonur, 24 Kazakh space specialist were trained by EADS, the French company in Toulouse and other countries in France have acquired practical experience in the designing area. Thank you very much.

The CHAIRMAN I thank the distinguished representative of Kazakhstan for her statement. Are there any other delegations wishing to make a statement under this agenda item? I see none. We have therefore concluded our consideration of agenda item 5, "General exchange of views".

Distinguished delegates, I would now like to continue and conclude our consideration of agenda item 14, "Use of Space Technology in the United Nations System". Is there any delegation wishing to speak on this agenda item at this time? I see none.

We have therefore concluded our consideration of agenda item 14, "Use of Space Technology in the United Nations System".

Distinguished delegates, I would now like to continue and hopefully conclude our consideration of agenda item 15, "Future role of the Committee". Is there any delegation wishing to speak under this agenda item at this time? I see none.

Distinguished delegates, we will therefore continue this afternoon and hopefully conclude our consideration of agenda item 15, "Future role of the Committee".

Distinguished delegates, I would not like to continue and hopefully conclude our consideration of agenda item 16, "Other matters", by continuing this morning our consideration of the following sub-items: (1) Proposed Strategic Framework for 2014-2015 of the Office for Outer Space Affairs; (2) Composition of the bureaux of the Committee and its subsidiary bodies for the period 2014-2015; (3) Membership of the Committee; (4) Agenda of the Committee at its fifty-sixth session; and (5) Organizational matters.

The proposed strategic framework for the programme "Peaceful uses of outer space", contained in document A/67/6 (Prog.5), was made available to delegations through Conference Room Paper 15.

At our meeting yesterday, we started our consideration of the document so that the comments from the Committee on the proposed framework could be submitted to the Committee for Programme and Coordination (CPC) prior to concluding its review.

I now open the floor for comments related to the Strategic Framework for the programme "Peaceful uses of outer space" 2014-2015, as contained in document A/67/6 (Prog.5).

We have the request from the Russian Federation to speak on this agenda item but I don't see the Russian delegation in this conference room, if he is here, so if you can make the statement.

Is the Russian Federation wishing to speak at this time? Distinguished representative of Russia, you have the floor.

Mr. G. Y. BARSEGOV (*Russian Federation*)
Mr. Chairman, with your indulgence, we need a few minutes for the head of our delegation to come here and he will address the matter, thank you.

The CHAIRMAN I thank the distinguished representative of Russian Federation, I will come back to the Russian Federation statement this morning. Are there any other delegation wishing to speak on this agenda item? I see none.

Since there are no delegations at this time wishing to take the floor on this matter, we will continue this agenda item later this morning. I would

now like to proceed with the issue of the composition of the bureaux for the period 2014 to 2015.

I would like to inform you that the Secretariat transmitted this morning the communication by the Group of Latin American and the Caribbean States (GRULAC) on nomination of Ecuador for the post of the 1st Vice-Chair of the Committee as a Conference Room Paper 20 in your pigeon holes.

The status of nominations for the bureaux for the period 2014 to 2015 is currently as follows:

The Group of African States has endorsed the candidature of Azzedine Oussedik (Algeria) for the office of Chair of the Committee for the period 2014-2015, the document is contained in A/AC.105/2012/CRP.10).

The Group of Eastern European States has endorsed the candidature of Elod Both (Hungary) for the office of Chair of the Scientific and Technical Subcommittee for the period 2014-2015 (document A/AC.105/2012/CRP.11).

The Group of Western European and Other States has endorsed the candidature of Kai-Uwe Schrogl from Germany, for the office of Chair of the Legal Subcommittee for the period 2014-2015 (the document is A/AC.105/2012/CRP.12).

The Group of Latin American and Caribbean States as I said has decided that Ecuador would nominate its representative for the office of Second Vice-Chair/Rapporteur of the Committee for the period 2014-2015 (the document is A/AC.105/2012/CRP.20).

The Group of Asian States will nominate their candidate for the office of Second Vice-Chair and Rapporteur of the Committee for the period 2014-2015.

If nominations of officers by the Latin American and Caribbean Group and the Asian Group are made in the coming months, the General Assembly will have the possibility to note the nominations of all officers for the bureaux for the period 2014-2015 and will be able to agree that the Committee and its subsidiary bodies at their respective sessions in 2014 should elect their officers nominated for that period. I therefore invite those two regional groups to transmit to the Secretariat the names of their respective officers nominated by no later than 31 July.

Distinguished delegates, I would now like to proceed with our consideration of the membership of the Committee.

Distinguished delegates, we have exchanged extensive views on this yesterday. I would also like to inform delegations that informal consultations were held on the issue of applications for membership in the Committee of Armenia, Costa Rica and Jordan. This is a serious matter for our Committee where the fundamental rule of consensus is at the centre of our deliberations. Many delegations have voices their support in taking action on all three applications together. I would like to remind all delegations of this Committee, the objectives of this Committee is strictly for the peaceful use of outer space so in this regard, all the delegations or Member States, should ratify the space treaty and together with this commitment, we will pursue the peaceful use of outer space for the space technology and scientific research for all humankind, all nations around the world. I would like to ask you other things about the peaceful use of outer space, the issues of concern should be treated in other forums, or places, to be discussed. I would like to proceed, I would like to ask if there is any objection to the Committee being able to reach consensus on all three applications in the interest of the Committee as a whole and for the Committee to be able to recommend all three applications for decision by the General Assembly. So I would like to open the floor to have any comments or interventions from the floor.

I noticed the distinguished representative of Azerbaijan, you have the floor.

Mr. A. HAJIZADA (*Azerbaijan*) Thank you very much Mr. Chairman. Mr. Chairman, indeed the informal consultations have been held to discuss my country's concern on application of the membership of Armenia and I clearly yesterday expressed my concern, my country's concerns and we've also noted that the applications of three countries cannot be considered as a package because those applications has not been endorsed jointly, and not been endorsed by regional groups. That is why the application of three countries should be considered separately and my country is against membership of the Republic of Armenia in the COPUOS. Thank you very much Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Azerbaijan for his statement. I regret to hear that consensus cannot be reached yet. We will therefore come back to this matter for final decision this afternoon.

Distinguished delegates, I would now like to proceed with our consideration of the Agenda of the Committee for its fifty-sixth session.

At the meeting yesterday, I and the Secretariat addressed the Committee to present ideas related to the Agenda of the Committee at its fifty-sixth session so that delegations could reflect upon them. The idea is to possibly merge two items of the agenda in the interest of our overall organization of work and to provide a platform for the Committee to address matters relating to the outcome of Rio+20 and beyond in the context of space for society, socioeconomic development and sustainable development of the environment. Is there any delegation wishing to take the floor at this time?

I noticed distinguished representative of Austria, you have the floor.

Ms. C. STEINKOGLER (*Austria*) Thank you Mr. Chairman. Mr. Chairman, we thank you as well as Niklas Hedman for your valuable ideas and inputs with regard to the enhancement of efficiency of the matters of work of this Committee and the harmonization of agenda items. With regard to the agenda item, Implementation of the recommendations of the third United Nations Conference on the Exploration of Peaceful Uses of Outer Space (UNISPACE III), we would like to express our support for your idea of a broader reformulation of the title along the lines of what has been suggested by you yesterday, for instance, use of space technology for sustainable development, or simply, space and sustainable development, in order to be able to accommodate these discussions on the outcome of the Rio+20 conference as well as on the post 2015 development agenda.

We welcome and support efforts to harmonize agenda items, however, the agenda item, "Space and Water", we see that many delegations have already expressed their interests and support for this agenda item. Since this item is also of particular importance to Austria, we would prefer to keep it on the agenda of the Committee. In order to accommodate discussions on other issues such as food security and global health as mentioned yesterday, we could imagine to enlarge the agenda item on space and society to include these two areas, which we believe are of importance to societies around the world. We are open to identify other agenda items that might be of less interest to Member States in order to merge them with other items. Thank you very much Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Austria for her statement. I have a

request from distinguished representative of Indonesia, you have the floor.

Ms. E. S. ADININGSIH (*Indonesia*) Thank you Chairman. Mr. Chairman and distinguished delegates, we are in principle would support the idea of merging several two or more agendas for more efficient discussions of this Committee, we understand that the climate change issue is a very broad issue to address, however, deliberating some major environmental issues addressed by the Committee in the use of outer space in terms for peaceful uses, such as for humanity, water resources management, climate change, health and ecosystem services. I would like to [...] in terms of merging or combining the agendas as long as the new, or the remaining agenda could accommodate all issues which are combined. But I would like also to raise from this perspective of science and raise the issues or discuss, we propose more generic terms upon the approval of these Member States or the Committee. Space and Earth in environment, I would consider if these are under environmental issues, the Committee could address major environmental issues such as climate change, which is a very broad issue, environmental degradation, health, land degradation, land desertification, sustainable development, ecosystems and maybe others. So under the proposed agenda to the Committee could discuss the issues, we would like to address as we already have in our existing agenda. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Indonesia for her new proposal. Are there any other delegations wishing to speak? Yes I recognize the distinguished representative of United States of America, you have the floor.

Mr. J. HIGGINS (*United States of America*) Thank you Mr. Chairman. Mr. Chairman, my delegation fully supports the proposals made by you and the Committee's Secretary concerning the consolidation of items on our agenda. I would like to note however, that perhaps in our report we should note that the Chair of the working group on long-term sustainability may need some time during the course of next year's COPUOS session to carry on the work from the next session of the S&T Subcommittee. I think that it might be useful to have some reference in here giving the Secretariat and you Mr. Chairman, the flexibility to perhaps set aside one or more meetings of this Committee depending on the workload so that the Chair on the working group on long-term sustainability could take advantage of interpretation services during our next session. Thank you.

The CHAIRMAN I thank the distinguished representative of United States of America for his statement. Are there any other delegations wishing to speak at this time? Yes I noticed distinguished representative of France, you have the floor.

Mr. G. DUFRESNE (*France*) Thank you Chairman. Please allow me to come back to the comment made by our US colleague. Yes, it's true the group's work on long-term sustainability is very important and we should grant it all the resources it needs. I am saying that because the thematic questions on the agenda are inextricably linked to method and others. We have to be able to work under the best possible conditions and COPUOS needs to be able to provide as much added value as possible in the fields of its competence. There are several proposals or ideas that have been mentioned regarding method and organization at the Legal Subcommittee last March, and we believe that we need consensus and to discuss these options and improve the efficiency of our work. Thank you Chairman.

The CHAIRMAN I thank the distinguished representative of France for your statement. The next speaker is the distinguished representative of Mexico, you have the floor.

Mr. S. CAMACHO (*Mexico*) Thank you Chairman. My delegation agrees with the proposal made by the distinguished representative of the US and we would like this paragraph to be extended to include the possibility of flexibility for the working group on near-Earth objects to have time during next year's session, given that the group will be completing its activities as specified in the pluriannual workplan. Thank you Chairman.

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

Distinguished delegates, I am sorry to have your patience, we just discussed, the Secretariat, about the proposal on the next years agenda items. There are wishing to keep Space and water and Space and climate change, this is quite an important agenda, many countries are wanting to keep this agenda, but in order to streamline our discussion in the next year, there is a proposal from Secretariat about to unify the UNISPACE III review and also for the Space and society. These two agenda items could be merged together. Maybe Niklas will explain some additional clarification on this matter.

Mr. N. HEDMAN (*Secretary*) Thank you Mr. Chairman. We heard statements this morning, reactions to the ideas that were expressed yesterday. We have heard today also from some delegations the need to have time for the working group on long-term sustainability and also if necessary the working group on NEO, to be able to use interpretation resources at our Committee sessions. So, as a package, what the Chair has just said could be the following: that the agenda item, "Space and society", and agenda item entitled "Implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III)", that these two items be merged, consolidated into one agenda item and the title could be "Space and sustainable development", and the understanding is that under this item, the Committee can address, if it wishes, the outcome of the Rio+20 Conference, and of course issues that are related to socioeconomic development. Because Rio+20 is also capturing not only the sustainable development of the environment, but also on sustainable economy etc. Anyway, so "Space and sustainable development" with the understanding that there would be a captured in that effect that there will also be time provided for the working group on long-term sustainability of outer space activities and the working group on near-Earth objects to use time and use time when we have interpretation services. So this is the proposal that the Chair is putting forward with the help of the Secretariat. Once again I repeat, to merge, consolidate "Space and society" and the "UNISPACE III" item and rename it as follows: "Space and sustainable development" and at the same time have an understanding that there will be time for working groups to meet with interpretation services. Thank you.

The CHAIRMAN I thank the Secretariat Niklas Hedman for his clarifications. Are there any comments or questions on this proposal? Yes I notice the distinguished representative of Austria, you have the floor.

Ms. C. STEINKOGLER (*Austria*) Austria would fully support the ideas just proposed with regard to merging the agenda items "Space and society" and "UNISPACE III" and to rename it "Space and sustainable development" and we also support the ideas to provide more time with translation for the working group on long-term sustainability and near-Earth objects. Thank you.

The CHAIRMAN I thank the distinguished representative of Austria for her statement. Now I have the request from distinguished representative of Italy, you have the floor.

Ms. A. PASTORELLI (*Italy*) Thank you very much Mr. Chair. Italy is very much in support of this proposal merging these two agenda items, at the same time I have a question for the Secretariat, clarification. If I understood, you would keep "Space and water" and "Space and climate change", my question is "Space and sustainable development" includes also the issues of climate change, so I wonder what would be the difference? "Space and society" is more concentrating on educational aspects and climate change more on the Rio maybe, or other negotiations on climate change, effectively, which is part of sustainable development, so I wonder if it's possible to merge three items, or if it wouldn't be better to merge "Space and climate change" with "UNISPACE III" item. Just a question of clarification, I don't want to create problems, thank you.

The CHAIRMAN I thank the distinguished representative of Italy for her questions. I will give the floor to Niklas Hedman.

Mr. N. HEDMAN (*Secretary*) Thank you Mr. Chairman and thank you to the distinguished delegate of Italy. He reason why we didn't suggest to merge "Space and climate change" in this context and also we understand that "Space and water" by many delegations regarded as a topic that should remain, is that "Space and water" is specifically focusing on that particular area. Climate change, yes we know it is a broad item, but to address the overall issues on sustainable development, where we can bring up the issue of the use of special data for sustainable development which we have also put forward to the Rio Conference and where we can bring up the outcome of the Rio Conference, is broader than climate change, so we thought that not to touch "Space and climate change" in this context, because climate change there might be other matters that state more specifics matters that State's want to address related to climate change the challenges to humanity, but to have also the room for an item where we can bring up a broader perspective of sustainable development. So that was just an idea, not to have everything into one item, because that could also bring some confusion as to how to address the item in question. Thank you.

The CHAIRMAN I thank the Secretariat to clarify this point. Is there any delegation wishing to make questions or comments on this topic? I noticed distinguished representative of Romania, you have the floor.

Mr. D. D. PRUNARIU (*Romania*) Mr. Chairman, I just want to express on behalf of the delegation of Romania our full support for the proposal

made by the Secretariat to merge the two items and we consider it as improving and optimizing our work in the future. Thank you very much.

The CHAIRMAN I thank the distinguished representative of Romania for his statement. Are there any more speakers at this time? We noticed the distinguished representative of Nigeria, you have the floor.

Mr. T. C. BRISIBE (*Nigeria*) Thank you Mr. Chairman for giving us the floor. The delegation of Nigeria expresses its support for the recommendations of the Secretariat and the changes that have been made to the agenda of COPUOS for its fifty-sixth session. Thank you.

The CHAIRMAN I thank the distinguished representative of Nigeria for his statement. Now, distinguished delegates, I would like to ask Secretariat to clarify again what is actually exact next year's agenda, Mr. Niklas Hedman, you have the floor.

Mr. N. HEDMAN (*Secretary*) Thank you Mr. Chairman. Just for delegations reference, I refer to the last years report of the Committee in document A/66/20, paragraph 304, where you have the substantive items of the agenda for this particular session. So with this understanding that is merging now, Mr. Chairman, I would then like to read out how the substantive agenda would look like for 2013, the fifty-sixth session.

1. General exchange of views.
2. Ways and means of maintaining outer space for peaceful purposes.
3. Report of the Scientific and Technical Subcommittee on its fiftieth session.
4. Report of the Legal Subcommittee on its fifty-second session.
5. Space and sustainable development.
6. Space and water.
7. Space and climate change.
8. Use of space technology in the United Nations system.
9. Spin-off benefits of space technology: review of current status.

and then, Mr. Chairman, we still need to agree in the afternoon on the future role of the Committee, so that is pending, and the last substantive item is then of course "Other matters". Thank you.

The CHAIRMAN Thank you Secretariat for your clarifications. I think all delegates have captured the next years proposed agenda. I see the distinguished representative of Nigeria, you have the floor.

Mr. T. C. BRISIBE (*Nigeria*) Thank you Mr. Chairman for giving us the floor again. Just for clarification, can we be clear on what agenda items 1 through 4 would be. Thank you.

The CHAIRMAN I thank the distinguished representative of Nigeria for his question.

Mr. N. HEDMAN (*Secretary*) Thank you Mr. Chairman. Yes, and as I said, we are addressing the substantive matters, so opening of the session, the statement by the Chair etc., that is not going to be addressed here, we are addressing now the items of substantive agenda items, but I will repeat:

1. General exchange of views.
2. Ways and means in maintaining outer space for peaceful purposes.
3. Report of the Scientific and Technical Subcommittee on its fiftieth session.
4. Report of the Legal Subcommittee on its fifty-second session.

Thank you.

The CHAIRMAN I thank the Secretariat to make such clarifications. Are there any questions, I see none. So we will proceed accordingly.

In addition to the issue of the substantive agenda of the Committee, I would like to request the Secretariat to present a proposal for an event to be held at the 56th session of the Committee on the occasion of commemorating 50 years of women in space, with your permission, I now give the floor to the Director of the Office, Ms. Mazlan Othman, you have the floor.

Ms. M. OTHMAN (*Director*) Thank you Mr. Chairman. Distinguished delegates, as we have already heard in the statement by the Chair and in some interventions by Member States under the agenda item "General exchange of views", the first space flight by a

woman was made by cosmonaut Valentina Tereshkova on 16th June 1963, this historic 50th anniversary date will fall within the fifty-sixth session of COPUOS that will take place next year from 12-22 June. After consultations with G-15, I put forward for your consideration the holding of a special panel to commemorate the 50th anniversary of women in space during the fifty-sixth session of the Committee. We propose a half-day event where the panel, consisting of prominent women in the space-related fields of science, technology, education, business and policy, will acknowledge the contribution of women to the space enterprise. The theme to be addressed by this panel is "Space: building the future today", consultations on the planning of the event will be held on the margins of the Scientific and Technical Subcommittee meeting next year. Thank you Mr. Chairman.

The CHAIRMAN I thank Ms. Othman. Are there any delegations wishing to take the floor on this proposal at this time? We notice the distinguished representative of Russian Federation wishing to speak at this time, you have the floor.

Mr. G. Y. BARSEGOV (*Russian Federation*) Thank you Mr. Chairman. We wanted to thank the Secretariat for the initiative just proposed and we would like to support and promote it. For our part, we would like to do everything we can to make a meeting possible with Valentina Tereshkova herself. A living legend. Thank you.

The CHAIRMAN I thank the distinguished representative of Russian Federation for his supportive comments. Are there any other delegations wishing to speak? I see none.

We have therefore endorsed this proposal I thank you. I would now like to proceed with our consideration of organizational matters. Are there any other delegation wishing to speak under this agenda item at this time? I notice distinguished representative of Italy, you have the floor.

Ms. A. PASTORELLI (*Italy*) Thank you very much Mr. Chairman. As pointed out at the beginning of this session in general statements from the EU delegation, I would like to continue pointing out the importance for us of this Committee and that the work of this Committee proceeds in a very smart way. That is why we have continued to work in all the sessions of both Subcommittees and the main Committee with other delegations to find constructive measures for more effectiveness and in order to find also possible savings in UN budget. We would therefore continue

during this session proposing new measures which are just addressing the aspects of effectiveness of our work in all our sessions, in particular, we would like to come back to what we have proposed to in the Legal Subcommittee and extend this observation to the work of our Committee. During the Legal Subcommittee, the Secretariat presented some measures which were taken in other forums, in particular UNODC and other commissions in UN bodies, finding ways of introducing more action-oriented and focused reports, which would result in significant savings in the budget of the United Nations. We would like this Committee to analyse again this document, which is A/AC.105/C.2/2012/CRP.14 and take these measures into consideration for this Committee as well. I think we could reduce the paragraphs of our final report, make them more action-oriented and also avoiding duplication of concepts during the report without, of course, affecting the effectiveness of the work of this Committee, as well as the two Subcommittees.

Another point I wanted to make is a proposal that has already been discussed in the past and it is to have less number of agenda items discussed each day of our work. This doesn't want to affect in any way the flexibility that we gave already to the Secretariat in reopening agenda items when needed and when delegations ask later on in the session for the floor. But it could be a measure to focus our work more constructively and to reduce the episodes of closing earlier the sessions, in the sense that the delegations could be more organized and be present in the days of the respective items, and then we are open of course to discuss these proposals with all delegations interested in this session. Thank you very much Mr. Chair.

The CHAIRMAN I thank the distinguished representative of Italy for her statement. Is there any other delegates wishing to speak on this issue? I notice the distinguished representative of France, you have the floor.

Mr. G. DUFRESNE (*France*) Yes Mr. Chairman, I am going to be very brief. With reference to the previous statement, and the Italian colleagues statement. We fully support this type of action and the proposals that have been made and we are fully at the disposal of all States maybe in an informal context, to work together on specific issues both within the Subcommittee and the Plenary Committee and all of this should apply to the sum total of the work of COPUOS, both the big Committee and the two Subcommittees. Thank you.

The CHAIRMAN I thank the distinguished representative of France for his statement. Are there

any other delegates wishing to speak? I see none. I understand that the Committee have more effective process to have the meeting, both subsidiary bodies and the Committee, so yes, I notice the distinguished representative of Hungary, you have the floor.

Mr. G. SALLAI (*Hungary*) Thank you Mr. Chairman. Just also very briefly, my delegation would like to accord with all that has been said by the distinguished delegate of Italy and France and the previous speakers. Thank you very much.

The CHAIRMAN I thank the distinguished representative of Hungary for his support, any other delegation wishing to speak?

Distinguished delegates, so I will take note about the intervention just made here and this afternoon therefore I would like to continue our agenda item 16, "Other matters", yes, I have the request from Ecuador, distinguished representative of Ecuador, you have the floor.

Ms. R. O. VASQUEZ OROZCO (*Ecuador*) Thank you Mr. Chairman. With your permission, the Group of 77 and China would like to make a statement with regard to the statements made by various European delegations. With your permission I could do it immediately.

The CHAIRMAN You wish to make a statement, yes I will give the floor.

Ms. R. O. VASQUEZ OROZCO (*Ecuador*) Thank you very much. The Group of 77 and China gives special importance to the key role of the Legal Subcommittee COPUOS and reiterates that its duration should remain unchanged for the following reasons: We are convinced that there are a number of important questions to be discussed to guarantee the rule of law in space activities. The policy development of space law and the peaceful uses of outer space as province of mankind. There are several items which are of global importance, but particularly for developing countries and which must be addressed as soon as possible, such as international cooperation, long-term sustainability of space activities, capacity-building, space debris, use of nuclear power sources, among others. Furthermore, every year there are new agenda items being proposed, which, if approved, will require time for its consideration. In that sense, delegations should also be reminded the cyclical nature of the amount of work of the Legal Subcommittee which differs from year to year. We are absolutely sure that this Subcommittee has an historical mission that should not be underestimated or undermined. Therefore the

Group of 77 plus China reiterates that the duration of the Legal Subcommittee should remain as it is. Thank you Mr. Chairman.

The CHAIRMAN I thank the distinguished representative of Ecuador for her statement on behalf of the G77 plus China. We will take a note of it and now I reiterate that this afternoon we will continue our agenda item 16, "Other matters" on the topics "Strategic framework" and "Membership", these two topics will be discussed this afternoon.

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

The first presentation on my list is by Mr. Shigeki Kamigaichi of Japan entitled "International Cooperation Among ISS Partners and Japan's Contribution and Activities". Mr. Kamigaichi, you have the floor.

Mr. S. KAMIGAICHI (*Japan*) Thank you Mr. Chairman and distinguished delegates. It is my great honour to present about the International Space Station and Japan's contribution as a successful example of international cooperation on a peaceful use of outer space.

The history of the international Space Station programme: in 1984 President Ronald Reagan was committed to the United States in developing a permanently occupied space station and, along with NASA, invited other countries to join the programme.

In 1988, Canada and ESA and United States and Japan signed an agreement and in 1993, the Russians joined. From 1998, the assembly started, and last year the assembly was completed and now we are at phase of the utilization of the ISS.

The profile of the International Space Station programme: this is the largest space station ever built and the largest structure ever assembled in space and one of the most complex international projects and this is the largest international programme in human history, with the participants of 15 countries for about 25 years, and this is an orbital facility for cutting-edge research and development only for peaceful purposes.

The framework of the ISS programme, among the participating countries, we have an intergovernmental agreement and also between the cooperating agencies we have a memorandum of understanding. The discharge of contribution of each

agency on the ISS, you can see in the middle space station identified by colour for the each partners elements, and around the space station there are similar kinds of contributions for the operation and utilization such as transportation vehicles and also the robotic arm for operation and utilization of ISS.

The Space Station is being operated worldwide. Each of the space agencies operates their own ISS elements in spacecraft from their own control centres. The control centres and the launch site for the transfer vehicles are located all over the world.

This is one of Japan's contributions to the ISS programme: Japanese Experimental Module "Kibo". Kibo means "hope" in Japanese and in the middle of that chart there is a pressurized module, this is the largest module on ISS; we can put 10 payload racks in this pressurized module and on the pressurized module there is experimental logistic module for storage and on the right hand side, exposed facility. On this facility we can put experiment equipment outside in space, and we can do Earth observation or astronomy observation or other technical variations. To manipulate those outside equipment, we have a robotic arm and airlock to transport equipment between inside and outside of the module.

Other Japan contribution to the ISS programme is transfer vehicle (HTV), H-II Transfer Vehicle. This is the first Japanese unmanned supplying spaceship to ISS. This provides a very unique capability after the Space Shuttle retirement to transfer large facilities inside the module as well as outside the module. This chart shows HTV launch schedule and JAXA astronaut activities in Japan's ISS programme. Kibo operations has started in 2008 and we have launched two HTV's and a third one will be launched this July. The assembly of the Kibo, several Japanese astronauts were involved including Dr. Takao Doi and we started Japanese long duration stay. This year from July, Japanese astronaut Hoshide start his long duration stay on ISS and next year Japanese astronaut Wakata will start his second long duration stay on ISS as commander of the ISS crew.

This chart shows experimental facilities in Kibo module, upper left hand side "SAIBO" means a cell culture experiment and this is the facility for the biology and the middle "High Definition TV System" we have several kinds of TV systems and we launched a super sensitive high definition TV last year and by using it we can observe the night view of Earth, and the right hand upper side "KOBAIRO Rack", which is a gradient heating furnace for material science, and left hand below "RYUTAI Rack" is for the fluid dynamics

and crystal works experiment, and "Multi-purpose Small Payload Rack", which can accommodate the several kinds of small experiment operators such as "Aquatic Habitat", which we launched this year to do monitoring experiments by using the small fish. This chart shows the status of life science experiments on Kibo. Up, in the first line, we are conducting several kinds of life science experiments and the top line show cell and small life species experiment, and second line; technology for the measurement of the effect of radiation; we have several kinds of radiation measurement devices and also we conducted research on the effect of cell or small insects, such as silkworm eggs, and third line; plants experiments, to analyse the effects of micro-gravity on the plant, and the bottom line we conduct the monitoring of the microorganism in Kibo module.

This chart shows the status of the space medicine research on Kibo. The first phase which is from 2008-2011, we conducted various kinds of space medical researches such as: bone loss or circadian rhythm or effects of space radiation and so on. Now we are on the second phase and the target is to get a high-level research output in space medicine research. We are conducting several kinds of experiment such as muscle atrophy or adjustment of nerve or vestibular and blood pressure and so on. In the future we will conduct space medicine research to prepare for future space exploration.

This chart shows status of materials science experiments. The top line shows fluid dynamics experiments; we conducted a series of fluid dynamics experiments and the second line; combustion experiment. This experiment will start soon, And the third one is to analyse mechanisms of crystal growths microgravity conditions. The other one is soft matters, we are conducting several kinds of experiments to create a new material such as a nano-structure materials or protein crystal growths, by using the microgravity. The data from the protein crystal growths will be used for the drug design. The bottom line; we are conducting fundamental physics with the cooperation of German Space Agencies.

This chart shows the status of observation outside the space module and left hand side we have an X-ray monitoring astronomy observations systems and we found several new X-ray stars by using these facilities and also we found very new phenomena; a star was swallowed by a big black hole. The data was analysed by using this facility and also the satellite from the United States. The right hand side "SMILES", this is a facility for the Earth observation, especially for the chemical component observation of ozone

disruption. So by this facility is contributing to analysis of ozone layer destruction investigation.

We are promoting a cooperation with Asian countries through the APRSAF Asia-Pacific Regional Space Agency Forum, and as for the bilateral cooperation we are conducting protein crystal growth with Malaysian Space Agency ANGKASA, and also this project is implemented through the cooperation between the JAXA and Russia. With Korean Space Agency, we are now conducting a conceptual design study for the new cell culture experiment apparatus.

The target is that the Korean Space Agency will build a new cell culture experiment and JAXA will launch and accommodate it and both of the Korean and Japanese researchers will use it. With Indonesia, LAPAN, we are conducting a feasibility study on biology experiment.

We did a demonstration project on Kibo by using the plant seed. Indonesia and Malaysia, Thailand and Viet Nam joined this project. The plant seeds from those countries were launched by HTV and stayed in the ISS for about half a year and returned to the Earth, and those seeds are returned to each agencies and now being used for the education of partners in each countries.

Also we have been conducting a Parabolic Flight Micro-G Experiment for students. Five Parabolic Flight Micro-G experiments have been conducted since 2006 and students from Malaysia and Thailand have been participating in this programme and this year in December, next one is scheduled as well.

We have conducted the communication with Japanese astronauts last year. The Fijian students had a real-time communications with a Japanese astronaut Furukawa. We have another science demonstration project, this project is to demonstrate scientific experiment proposed from children from the Asian countries for experiments proposed from Australia, Bangladesh and Malaysia were conducted last year and this year, second demonstration is planned.

This is my last chart, we have been conducting the cooperation with Asian through the APRSAF and Space Environment Utilization Working Group at APRSAF agreed to launch a new Initiative last year, and the object of this Initiative is to share the significance and value which Kibo/ISS will bring to the human beings and to promote the establishment of Kibo utilization cooperation in Asia-Pacific region.

So we are continue to international cooperation through the International Space Station programme. Thank you distinguished delegates for your kind attention.

The CHAIRMAN Thank you Mr. Kamigaichi for your presentation. Is there any delegate who has questions for the presenter? There seems to be very good progress on the International Space Station utilizations. Are there any delegates wishing to make a comment or questions? I see none, so thank you very much Mr. Kamigaichi for your presentation.

The final presentation we will hear this morning is by Ms. Erna Sri Adiningsih of India entitled "Space-based data for climate change and Earth observation in Indonesia", you have the floor.

Ms. E. S. ADININGSIH (Indonesia) Thank you Mr. Chairman and distinguished delegates. Maybe I would like to correct that I am from Indonesia, not from India. So it is an honour for me to present to this Committee on our current activities, needs and also international cooperation in the utilization of space-based data for climate change and Earth observation in Indonesia.

My presentation will consist of our concern of the climate change and Earth observation in Indonesia, and our current activities in the utilization of satellite for Earth observations and the most important aspect in climate change mitigations in this presentation I would like to present about our current activities in the space-based data utilization for Indonesian Carbon Accounting System, or we call it INCAS project, which is in collaboration with other Member States.

And also be upgrading the ground segment facilities to enhance our capacity in the downloading the existing satellite data also in the future, and also we have an important project in the development of satellite technology for Earth observations and before I finish with some concluding remarks I would like also to just a brief description on our existing international cooperation's.

Regarding climate change and Earth observation; the climate change impacts in Indonesian areas on various sectors such as agriculture, forestry, water resources, human health, sea level rise, marine and coastal ecosystem as well as biodiversity, so this impacts us in some areas is very severe, and we have to convert these impacts to mitigate or reduce the impacts as well as to mitigate the impacts.

Furthermore, we also have a concern on the sustainable development in these activities, there is a need for natural resource mapping and monitoring in regional basis. To do those activities, so we need comprehensive Earth observation system and for doing this thing that we need of course space technology to provide reliable and continuous geospatial data as my colleagues already presented on the issue of geospatial data in Indonesia using the space technology. We also have to enhance our ground receiving station to maintain the data receiving and also data archiving since 1980s.

We utilize the satellite data for Earth observation in Indonesia and before describing further I need to just explain in brief about the existing ground station locations and coverages. There are two major ground stations in Indonesia, namely Parepare, the central part of Java in the Sulawesi island and the second one, the oldest one is in Jakarta, near the capital city, and those two ground stations are still in operation to cover all Indonesian areas for receiving the satellite data. The architecture of the ground station now is with these two ground stations is for the data processing and archiving in Parepare ground station and still in operation we also need to upgrade the system in order to be able to receive the next generation of the Landsat satellite. And also on the right hand side is the ground station in Jakarta but also there is remote-sensing data bank, it's a data bank for remote sensing data to be one of our geospatial data network, and in this ground station data bank we do data process pre-processing for orthorectification, terrain corrections, cloud masking as well as mosaicking.

We also have international connection to enhance our capability and also to share the data information with other countries in the Asia-Pacific region as well as for international collaboration or cooperations with 7 MBps connections.

Currently we archive the Landsat data from 1980s, which is the Landsat 1-5, more than 5,000 films are archived now until the period of 1993. Following with the period of 1994 up to 2002, with Landsat 4 and Landsat 5 was in operation. We have more than 1,300 scenes of this kind of data and currently we also archive from the period of 2002 until 2008 more than 5,000 scenes of the Landsat 7 data.

The utilization of space-based data for Earth observation includes for the use, for land use and cover change mapping, for agriculture, for plantations, forestry, coastal and marine ecosystems, water resources and many other utilizations or applications.

This is an example of the land use cover in Bali Province using a Landsat data and also we used SPOT data for coral reef mapping as one of the major climate change impacts is on marine and coastal ecosystems so coral reef bleaching is one of the major impacts in tropical countries like in Indonesia, so there is a need to map coral reefs for all more than 70,000 islands in Indonesia. There is also a need to do a regular basis of land use and cover mapping for many purposes. For the agriculture, we also have applied in paddy field mapping because rice is our staple food, our main staple food, so there is many paddy field areas in Indonesia and in Java island and also in Sumatra and many other islands in Sulawesi and Bali as the main rice production area. There is a need to this mapping activities is not just only to map the area but also to monitor the rice growth as well, as we see in this picture, the paddy growth monitoring using many various kinds of data. The base map was developed using Landsat data and for monitoring we used terra modis data and also the other existing data that we receive.

As I mentioned before, the coral reef has become, coral reef bleaching is very very important in the perspective of climate change impact, so there are several areas that we need to map using the satellite data, and this is also many map that we produce of the scales of 1:50.000 scale of the map and of course to do these activities we need not only the existing data but also the archive data, or the new data as well as the archive data.

The next is an example of the analysis of deforestation as one of the important aspects in the climate change issues. This is an example of Central Kalimantan in which there are deforestation since 1997 until 2008 and we map this deforestation and also the regrowth using the satellite data as the spatial or geospatial data for further applications as climate change mitigations.

The most important activities currently that we still ongoing is climate change mitigation. Indonesia Carbon Accounting System, or we call it INCAS, the progress of this system is that we have international cooperation that this cooperation also plays important role in acquiring Landsat data that we have to collect so many Landsat data to map the carbon stock of the whole area of Indonesia. Also we use the other medium resource and satellite data interpreted with other data files should be used to solve the cloud cover problems. This cloud cover is the typical problem for the tropics as well as in Indonesia.

This activity supports the REDD+ programme; Reduce Emission from Deforestation and Forest Degradation programme as we also have a national plans regarding the mitigation of the climate change, and these activities are also in line with the Measurable, Reportable or Verifiable, or MRV provision under the UN Framework Convention on Climate Change, or UNFCCC.

For the INCAS project, we have acquired Landsat data as we totally LAPAN, almost 8,000 scenes of the year, Landsat data with the assistance from the Government of Australia, also from the USGS and GA of Australia and GISTDA of Thailand. From this, around 8,000 scenes of Landsat data, then we have to select for the process for the analysis for INCAS, it's about more than 4,000 Landsat data from the USGS, from the GA and GISTDA.

This is the result of the terrain-corrected and cloud masked mosaic images of Kalimantan, 2008. As I mentioned before, there is a difficulty in collecting the data to cover all Indonesian areas due to the cloud cover problems. After the terrain-corrected, then we get the orthorectifications mosaic image, this is an example of the result of orthorectification for Kalimantan and this is another example of Sumatera island, also we have the same problem in cloud cover data of the satellite data, and after orthorectification corrected mosaic image we also comparison with the condition of 2006.

To support the existing activities in the issues of climate change and to further the forest cover change and forest degradation, we also have upgraded our Landsat ground station as LAPAN is now preparing facilities in Parepare ground station to establish a downlink system for Landsat 8 or LDCM ground stations. The left is existing system and the right side after the upgrading for near real time data distribution system.

Also we have planning to establish technical or architectural changes as a result of a community trend towards a web-enabling data so that all the data process will be uploaded in the website of LAPAN.

Next is that we also have activities in the development of satellite technology although we are still in preliminary and we have experience in the previous small satellite, namely LAPAN-TUBSAT for Earth observation in the tropical regions. Based on our experience with the LAPAN-TUBSAT in phase 1, is a 50 kg class satellite, then we continue the development of the satellite technology with the LAPAN-ORARI

and LAPAN-IPB, this is the design and integration with help in Indonesia, and also we consider the use and define missions based on the experience with the LAPAN-TUBSAT satellite.

In the next we will focus on the knowledge on satellite-base applications and stakeholder management, as known and proven missions and educated in new missions. In continuing activities in national as well as international collaborations to develop space technology in particularly satellite technology to fulfil the need Indonesian area in producing the space-based geospatial data and this is an example of a LAPAN-TUBSAT imagery taken on May 2010, and this is what we are developing, has just finished with the design and interpretation and that in Indonesia and this separate will be placed in a near equatorial low Earth orbit as we need more frequent satellite to make and observation over Indonesia, so more frequent overpass over Indonesia areas. The satellites mass is around 70 kg and the design is based on the space proven LAPAN-TUBSAT satellite and we plan to launch it in early 2013. The mission is for Earth observation, maritime traffic monitoring and amateur radio communications.

This is what we are planning in the orbit for the LAPAN-ORARI, we will have 14 pass per 24 hour, or orbit time 100 minutes and stay above horizons at about 10 minutes.

The next is future mission of LAPAN-IPB satellite in collaboration with Bogor Agricultural University with the mission for Earth observation or remote sensing and amateur radio communication. This is the application will be done for the crop monitoring. The payload is consisting of ORARI amateur radio automatic position and also analogue voice relay communication system. We will launch at the end of 2013.

Last but not least, we considered the importance of international cooperation and Indonesia has participated in various international cooperation in space-related activities. We are very active in APRSAF and Sentinel Asia activities, is also presented by our colleague from Japan and also in the activities conducted by ASEAN SCOSA, UNESCAP, World Food Programme (WFP) we had activities in the utilization of space-based data for security and it was in a bulletin, and the next we are also active in the GEO-GEOSS as the goal of the Earth observation in the use of the space technology. And also as we mentioned in the general statement by Indonesian delegates that we are in readiness for the operation of the generous support of the office UNSPIDER. We

also have participated in the APSCO activities as well as in bilateral cooperation with South-East Asian countries; Australia, China, Germany, India, Japan, US and many other countries.

I will finish my presentation with some concluding remarks that climate change is a strategic issue, in which space technology could play important roles in enhancing the capacity in climate change mitigation and adaptations as well. Space technology is a beneficial tool for Earth observation, but reliability and sustainability of space-based data provision is essential, particularly for Indonesian areas which are facing the cloud cover problems in using the satellite data. And international cooperation is necessary to enhance the capacity and promote the use of space technology and its applications. Thank you for your attention.

The CHAIRMAN Thank you Ms. Erna Sri Adiningsih for your presentation. Is there any delegate who has questions for the presenter? We see the space-derived geospatial data is very beneficial and well-used in your country and your experience and lessons learned will be a good example for other countries. Thank you for your presentation.

Distinguished delegates, I will shortly adjourn this meeting. Before doing so, I would like to inform delegates of our schedule of work for this afternoon.

We will meet promptly at 3.00 p.m.. We will reopen the agenda item 13, "Space and climate change" to hear a statement. We will continue and hopefully conclude our consideration of agenda item 16, "Other matters". We will also continue and hopefully conclude our consideration of agenda item 9, "Report of the Legal Subcommittee on its fifty-first session". We will begin our consideration of agenda item 7, "Implementation of the recommendations of UNISPACE III", agenda item 10, "Spin-off benefits of space technology: review of current status" and agenda item 11, "Space and society". There are no technical presentations scheduled for this afternoon.

Expert Group D on Regulatory Regimes and Guidance for Actors in the Space Arena of the Working Group on the Long-term Sustainability of Outer Space Activities will meet from 1.00 p.m. to 6.00 p.m. in the meeting room MOE100.

I would also like invite delegates to the screening of a video by Japan during lunch time today, at 2.40 p.m. in this conference room, entitled "KOUNOTORI (HTV3): Third Expedition to Space", which is 14 minutes in length. Delegations are

cordially invited to the screening of this video by Japan.

This evening, delegations are cordially invited to the traditional Austrian Heurigen evening.

Are there any questions to this proposed schedule? I see none. Before I adjourn, and to take advantage of interpretation services, I would like to propose that we invite Ms. Mazlan Othman, Director of the Office of Outer Space Affairs, to address the Committee on fundraising opportunities to be followed thereafter by informal consultations on national registration, read by Ms. Irmgard Marboe. If I see no objections, we shall proceed accordingly. I see none. So this meeting is adjourned until 3.00 p.m. Thank you all delegates.

Break

Ms. M. OTHMAN (*Director*) [*First part of Ms. Othman's statement is missing*] ... and the environment, for you to consider and you may, like the others, you may like to sponsor for 1 year or for the entire 4 years. Next up with the global health. Global health we have also had a very healthy programme, we've had activities in Burkina Faso, in India and we will have some more programmes this year. Now we also, for this year at least, having an international expert group meeting, we will continue to have regional workshops in the period 2013-2015, we are also having training programmes and we are going to provide technical advisory service. The cost for this as you can see over 4 years will include advisory services, 8 regional workshops over the 4 years and fellowships. Again, I will say that you don't have to fund all the advisory services or all the regional workshops or the fellowships, you can chose to fund whichever these activities.

Let me now go to the Basic Space Technology Initiative. This is a new initiative only established in 2009 but even so we've had quite a few achievements where we have created the education directory, a handbook and with the help of Japan, established an annual fellowship programme. We plan to develop curriculum for basic space technology, and as you know this programme, the Basic Space Technology Initiative focuses quite a bit on the legal and regulatory aspects of small satellites and therefore it is an important programme of the Office. This is just to show you that we've had fellowship programmes, in this case provided to us by Japan but we also have projects and one very good example is the humanitarian satellite HUMSAT programme sponsored by Spain but we hope to be able to grow this

HUMSAT into a constellation in the future. And so in terms of basic space technology, we are requesting for an associate expert over a period of 3 years, we will be carrying out technical advisory missions and we will be developing curriculum and guidebooks.

Under the Human Space Technology Initiative, which is also very newly launched in 2010, we aimed for us to create awareness of the benefits of activities in outer space in particular at the International Space Station and we are also hoping to bring some of this micro-gravity research on the ground. The workplan includes a form of exchange and we have done that in various activities. We will inform Member States about the utilization of opportunities that ISS and we would very much hope to support Member States in [...] their competencies in micro-gravity research, and we are looking for HSTI only a one-year timeframe. We are looking at creating a project post, or getting a project post for 1 year and the procurement or distribution of cleanostats, which is a zero gravity equipment. We will distribute the Member States that will allow them to do zero gravity experiments on Earth. So that's a one-year and can be repeated every year.

The next, I will focus on the international committee on GNSS-ICG, again this is a very successful programme, we've had meetings on GNSS in Africa, in Asia Pacific, in GRULAC and also with other countries in western Asia. We have featured a large number of applications of GNSS and we would like to continue doing this, as everyone in this room knows, the applications of GNSS are expected to explode in the next few years and therefore the role of the UN is very important here.

We also, as you know, at the Executive Secretariat of the ICG and we participate in the ICG meetings as well as the providers forum. Here it gives you an idea of what other publications we have had under the ICG programme and so in terms of the opportunities that you have for sponsoring this programme per year we are looking for an associate expert and workshops to be held, as I said every year. Again you can chose whichever of this aspect you could fund.

Now, let's get to the SPIDER programme and I will be looking at several programmes under SPIDER. Just to remind you, UNSPIDER was established under the United Nations General Assembly in 2006 and since then we've had a very successful cycle of activities and I will remind you that we have offices also in Beijing and in Bonn, so let me show you that. We have three offices in Beijing and Bonn. The Beijing office is sponsored by China and the Bonn

office sponsored by Germany, but we also have a list of regional support offices. Currently 12 are in operation and we have 5 in the pipeline. Another highlight of the UNSPIDER programme is the knowledge portal; this is currently being implemented through the Bonn office, but it has become a very very important aspect of the work of UNSPIDER. Also I would like you to recall that we have several technical advisory support missions and this shows you the list of countries that we've gone to in the period 2011-2012, so we have covered a very large part of the world. And so what is it that we need for UNSPIDER? The first proposal here is to use archived satellite imagery for Member States, and that is why we are putting here amount per year, that would include technical advisory missions, training and mobilization of experts. Once again you could choose what aspect of this you would sponsor.

The second programme is on cloud sourcing — cloud mapping — through cloud sourcing, here we are asking for funding to fund project post and technical advisory and travel support for experts from developing countries within this cloud source mapping activity.

The third is we are talking about strengthening institutions for their disaster management and emergency response, here we are talking about a programme going for 5 years, we are talking about technical advisory missions in 6 countries, hardware and software including the acquisition of images and of course training over a period of 5 years. You could choose to support it over a period of 1 year, or you could support one aspect for a period of 5 years. Again that would be up to you to decide.

And the last one under SPIDER is the issue of droughts and this is a big problem in many countries and over a period of 2 years we are hoping to, once again I say that this is in reference to drought, and we are looking for funding for technical advisory support missions and training activities, so that's the UNSPIDER requirements under the space applications programme. But under the space applications programme I just like to highlight that there is also the International Space Weather Initiative and here I would like to highlight the number of teams that we have throughout the world. We haven't got a proposal of activities but please keep in mind that we will be the agenda item is on its last leg and therefore we will have some proposals coming out of the agenda item and we will be proposing activities for funding to you in the future. And also I would again like to remind you that we have regional centres that are affiliated to the United Nations, there are 6 centres right now, I repeat

in Brazil, Mexico, Morocco, Nigeria, India and of course most recently Jordan. You see we are very very active in developing curricula for various thematic areas and we would very very much welcome the support of Member States for the activities at these regional centres.

Now I would like to turn to the Committee's Services and Research section, and refer you to our activity on capacity-building in space law. Now you know that we have had 8 capacity-building workshops already and we would like to continue having those workshops. The amount that we are asking over a period of 3 years would cover an associate expert for 3 years and workshops in that tie as well.

So, distinguished delegates, the concept notes as I said are at the back of the room, please get them as you see which ones you are interested in. My colleagues and I are available at the back of the room and here for discussions, either now if you'd like to raise any questions or for the rest of the week. So I thank you for your patience and I do hope for your generosity in supporting, or in funding those activities that I have just proposed. Thank you very much for your attention. Of course, are there any questions to ask, or are there any hands going up to say how much money you are going to put on the table, we would be very happy to hear that. Yes of course you will need time to digest the information and of course to go back to the capital to ask for the money. Ok, again I thank you very much for your attention. And just so I can see what is happening next, I think Irmgard you will come and have your informal consultations.

Ms. I. MARBOE (*Austria*) Actually, I am sorry, there is still consultations going on, the one delegation is not yet ready and so we cannot have directly now the informal final presentation of the text and I would really appreciate if we could have, let's say a quarter of an hour of this afternoon session for informal finalization of the text as soon as the delegation is ready. We are still working downstairs. They have the problem I ask for your understanding, there is a problem with the Russian translation, So some terms are not easy to translate or duplicated in a way, so what they try now to streamline the English version and the Russian version so that the text remains understandable and clear and unfortunately this takes more time than expected. We hoped that it would be ready by now but it seems it needs some other 20 minutes or so and I've asked if it's possible perhaps to have a quarter of an hour in the afternoon for the presentation of the final text version. As I understand now I have already final understanding of what the proposals are, they are very, let's say particular mostly

language problems, so how to translate "public" and "governmental" for example, can you distinguish a public as space activities from a governmental space activity, perhaps not, perhaps in the Russian language you cannot clearly make this distinction, so we might change a word and leave let's say only governmental activities, it does not change the meaning of the text, but it makes it clearer and easier to translate into the other languages, in particular into the Russian language, obviously they have come up with some concerns about the Russian translation of some of the terms. So I would appreciate if I can get let's say a quarter of an hour of the afternoon for informal consultations, presentation of the agreed text, I've also had slight, very small suggestions by other delegations, which have come up to me, informal consultations, but I am confident, I am satisfied that these changes do not change the substance of the text, or the contents but perhaps even help to clarify the text, and make the text even better, I must say. So I you can have your patience and postpone these consultations until the afternoon. Thank you very much.

The CHAIRMAN Thank you Madame Marboe for your explanation, I am sorry I wasn't here for the first part of your intervention but Niklas will respond to your questions.

Mr. N. HEDMAN (*Secretary*) Thank you Mr. Chairman. What could be done for the afternoon is of course that when we have exhausted the formal plenary, whatever time is available, we will devote it then to informal consultations with interpretation services for your informal consultations that you have requested for now, at the same time, we will not take up item 9 on the Legal Subcommittee report as has been suspended just to deal with this particular matter this afternoon, that will be then brought up tomorrow morning. So you will have informal consultations if we have time this afternoon and then item 9 will be brought up tomorrow.

Ms. I. MARBOE (*Austria*) Is there another alternative? Perhaps we can have the informal consultations then before 3 p.m., because it would be very useful to have that consultations on the final re-opening of agenda item 9 this afternoon?

Mr. N. HEDMAN (*Secretary*) Yes, indeed, informal consultations can be held, and it can be held in this meeting room, but without interpretation during lunch time, so perfectly ok. Can you indicate a time when you would want to start?

Ms. I. MARBOE (*Austria*) I would say a quarter to three? No? Half past two?

Mr. N. HEDMAN (*Secretary*) One suggestion would be to start at 1.30 p.m., because the plenary is over so we will leave now at now at this time, which means that delegations can have lunch still, so you could have your consultations then in this room at 1.30 p.m., but at 2.30 p.m. you have to stop because there is a screening movie then, so you have 1 hour.

Ms. I. MARBOE (*Austria*) So between 1.30 and 2.30 p.m., but we meet at 1.30 p.m. hopefully be not longer than half an hour but ok, 1.30 p.m. in this room without translation, but we will have the opportunity to present to the final text, with slight amendments and to give the opportunity to other delegations to have their comments and then I really hope that the delegations will be here and not present their opinions then when the agenda item 9 is re-opened again in the afternoon. This should be avoided but I will of course will need the opportunity to present the text once again.

The CHAIRMAN Thank you for your clarifications, so distinguished delegates, as you just heard, the informal consultation will be held from 1.30 p.m. to 2.30 p.m. in this room. We are finished then, the meeting is already adjourned.