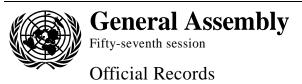
United Nations A/C.4/57/SR.7



Distr.: General 3 February 2003 English

Original: Russian

Special Political and Decolonization Committee (Fourth Committee)

Summary record of the 7th meeting

Held at Headquarters, New York, on Monday, 7 October 2002, at 10 a.m.

Chairman: Mr. Maitland.....(South Africa)

Contents

Agenda item 75: International cooperation in the peaceful uses of outer space

This record is subject to correction. Corrections should be sent under the signature of a member of the delegation concerned *within one week of the date of publication* to the Chief of the Official Records Editing Section, room DC2-750, 2 United Nations Plaza, and incorporated in a copy of the record.

Corrections will be issued after the end of the session, in a separate corrigendum for each Committee.

02-62261 (E)

The meeting was called to order at 10.05 a.m.

Agenda item 75: International cooperation in the peaceful uses of outer space (A/57/20 and A/57/213)

- 1. **The Chairman** drew attention to the report of the Committee on the Peaceful Uses of Outer Space (A/57/20) and the report of the Secretary-General on the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE III) (A/57/213).
- In the current month there were several dates of great significance for outer space matters. 10 October marked the thirty-fifth anniversary of the entry into force of the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (Outer Space Treaty). That Treaty had contributed to the progressive development of international space law. While the environment surrounding outer space activities was rapidly changing, the main principles of the Treaty remained valid and useful. 4 October marked the forty-fifth anniversary of the dawn of the space age — the launch of the first artificial earth satellite. International cooperation in outer space had led to many scientific and technical achievements. Another celebration in October was World Space Week, celebrated since 1999, which, inter alia, provided opportunities for children around the world to learn about space science and to aspire to a brighter future.
- 3. At the same time many people, particularly in developing countries, were not fully aware of the benefits of space science and technology. In that connection, it was gratifying to note the synergy which had been created among the efforts of the Committee on the Peaceful Uses of Outer Space, the Inter-Agency Meeting on Outer Space Activities and the Office for Outer Space Affairs in promoting the use of space applications in the interests of sustainable development at the World Summit on Sustainable Development. He looked forward to their contribution in implementing the outcome of the Summit.
- 4. **Mr. Gonzalez Aninat** (Chile), Chairman of the Committee on the Peaceful Uses of Outer Space, said that over the past four decades of its service to the international community, the Committee on the Peaceful Uses of Outer Space had accomplished a great deal in its work. It had been instrumental in the

- adoption by the General Assembly of the Outer Space Treaty, and had made important contributions to the establishment of the international legal regime governing outer space activities, which now consisted of five treaties and five sets of legal principles and declarations. The Committee had also increased opportunities for developing countries to receive training in space applications through the creation and expansion of the United Nations Programme on Space Applications. Through its preparatory work, the Committee had ensured the successful convening of UNISPACE III, at which the Vienna Declaration had been unanimously adopted, containing a common strategy to expand the benefits of space science and technology in order to enhance human security and development.
- 5. The Committee was well aware that space science and technology could contribute to enriching the lives of many people, particularly in developing countries, but recognized the challenge of establishing a clear link between space benefits and the priority goals pursued by the United Nations in human security and development. The benefits and potential of space science and technology had not been fully taken into account by the global conferences held by the United Nations in recent years. The Committee would strengthen its efforts to promote the peaceful uses of outer space to eradicate poverty and to support the global agenda for development.
- The Committee's work had covered the following main areas: ways and means of maintaining outer space for peaceful purposes; implementation of the recommendations of UNISPACE III; the work of the Scientific and Technical Subcommittee at its thirtyninth session; the work of the Legal Subcommittee at its forty-first session; spin-off benefits of space technology; and space and society. The Committee and its Scientific and Technical Subcommittee had made further progress in turning the recommendations of UNISPACE III into concrete action. Following UNISPACE III, the Committee had adopted a unique mechanism to implement the recommendations, consisting of three main elements: consideration of agenda items that had relevance to the recommendations at the annual sessions of the Committee and its Subcommittees; work conducted throughout the year by the action teams established by the Committee to implement the recommendations; and activities of the Office for Outer Space Affairs that complemented and supported the work of the action teams.

- 7. The action teams established in 2001 had taken relating disaster to management, environmental monitoring strategy, management of Earth's resources, weather and climate monitoring, public health, promotion of sustainable development, space-based navigation and positioning systems, capacity-building and increasing public awareness of the importance of space activities. More than 50 countries and 35 organizations were participating in the work of the action teams. All the action teams reported to the Subcommittee on their activities, the results of their work and their work plans. A dynamic and flexible mechanism had thus been created, involving a large number of countries, intergovernmental and nongovernmental entities. He was confident that the Committee would be able to achieve tangible results in carrying out the recommendations of UNISPACE III by 2004, when the General Assembly would review and appraise their implementation. The mechanism could serve as an excellent model for promoting international cooperation with all stakeholders with a view to achieving the objectives of United Nations conferences.
- 8. The Committee had begun its preparations for the review by the General Assembly of the implementation of the recommendations of UNISPACE III. A working group had been established to prepare a report to the General Assembly, and it had made recommendations on the format of the review and the expected outcome. Regarding the organizational aspects of the review, the Committee recommended that a separate item entitled "Review of the implementation of the recommendations of the Third United Nations Conference on the Exploration and Peaceful Uses of Outer Space" should be included in the agenda of the General Assembly at its fifty-ninth session in 2004, in addition to the item entitled "International cooperation in the peaceful uses of outer space".
- 9. In addition to follow-up to UNISPACE III, the Committee had taken up the questions of integrating the benefits of the advancement in space science and technology and their applications in achieving the objectives of global conferences and the global agenda to enhance human security and development. In that regard, the Committee had developed a statement to the World Summit on Sustainable Development on the use of various space applications to promote sustainable development. Furthermore, the Inter-Agency Meeting on Outer Space Activities, which coordinated space-related activities within the United Nations system, had

- prepared a brochure with examples of how the United Nations system was using space technology to support sustainable development. Just before the World Summit, the Office for Outer Space Affairs had organized a symposium on the topic "Space technology provides solutions for sustainable development".
- 10. There was increasing synergy among the efforts made by the Committee, the United Nations system and the Office for Outer Space Affairs in integrating the practical use of space science and technology into the implementation of the global agenda to enhance human security and development. As part of implementation of the recommendations of UNISPACE III, the Committee, through its action team on sustainable development, would review the outcome of the World Summit on Sustainable Development and identify concrete action to promote sustainable development with the use of space science and technology. That activity would be carried out in close coordination and cooperation with the Inter-Agency Meeting on Outer Space Activities. The Office for Outer Space Affairs also planned to organize a series of symposia to study the practical use of space science and technology in addressing specific themes relating to sustainable development.
- 11. With regard to the work of the Scientific and Technical Subcommittee, he said that the Subcommittee had continued its consideration of the item entitled "Implementation of an integrated, space-based global natural disaster management system". In accordance with its three-year work plan, the Subcommittee had reviewed the existing and proposed satellite and data distribution systems that could be used operationally for disaster management. In 2003, the Subcommittee would review possible global operational structures to handle natural disaster management, making maximum use of existing and planned space systems. The outcome of that consideration would provide policy guidelines for the work of the action team on disaster management.
- 12. Under its three-year work plan, the Subcommittee had also considered the item entitled "Means and mechanisms for strengthening inter-agency cooperation and increasing the use of space applications and services within and among entities of the United Nations". At its 2002 session, the Subcommittee had considered barriers to the greater use of space applications and services within the United Nations system as well as specific means and mechanisms to eliminate those barriers. He wished to highlight the

increasing synergy between the work of the Subcommittee and that of the Inter-Agency Meeting on Outer Space Activities to promote the use of space science and technology in the priority activities of the United Nations system.

- 13. The Subcommittee had made further progress concerning the use of nuclear power sources in outer space. The working group on that issue had finalized its report entitled "A review of international documents and national processes potentially relevant to the peaceful uses of nuclear power sources in outer space". The Subcommittee had agreed to request the working group to develop a set of potential options for its consideration on any additional steps that might be deemed appropriate with regard to space nuclear power sources, including that of drawing up a further multiyear work plan.
- 14. The Committee on Space Research and the International Astronautical Federation had organized a symposium on the theme "Remote sensing for substantive water management in arid and semi-arid countries". At the 2003 session of the Subcommittee, a symposium would be held on applications of satellite navigation and their benefits to developing countries.
- 15. In accordance with a recommendation of UNISPACE III, the Subcommittee had continued its efforts to strengthen its partnership with industry. During the reporting period, a symposium was held on the theme "Expanding operational applications of veryhigh-resolution remote sensing: potential and challenges in civilian applications". At its next session, the Subcommittee planned to consider a new item, entitled "The use of space technology for the medical sciences and public health". That issue was also being taken up by the action team on public health.
- 16. With regard to the work of the Legal Subcommittee, he said that the Subcommittee had continued its intense and in-depth consideration of the agenda item entitled "Consideration of the Convention on International Interests in Mobile Equipment and the preliminary draft Protocol on Matters Specific to Space Assets". Two intersessional meetings had been held within the framework of the ad hoc consultative mechanism, which had allowed the Subcommittee to make good progress in the consideration of the issue. The Subcommittee had agreed to consider in 2003 two sub-items relating to the possibility of the United Nations serving as the supervisory authority under the

- preliminary draft protocol and the relationship between the terms of the preliminary draft protocol and the rights and obligations of States under the legal regime applicable to outer space. The Convention and the draft protocol were of particular interest to the commercial sector. He was confident that the Subcommittee would successfully meet the challenge of reconciling any conflicts between existing space law and international financial practices.
- 17. The Subcommittee had continued to consider the definition and delimitation of outer space and the character and utilization of the geostationary orbit. It had reconvened its working group to consider matters relating to the definition and delimitation of outer space.
- 18. Regarding the concept of the "launching State", he said that the Subcommittee had reviewed measures to increase adherence to and promote the full application of the Convention on International Liability for Damage Caused by Space Objects, 1972, and the Convention on the Registration of Objects Launched into Outer Space, 1975.
- 19. With the agreement of the General Assembly, the Subcommittee had established a working group to consider the "Status and application of the five United Nations treaties on outer space". The working group's terms of reference included the status of the treaties, review of their implementation and obstacles to their universal acceptance, as well as promotion of space law.
- 20. At the Subcommittee's 2002 session, the International Institute of Space Law and the European Centre for Space Law had organized a symposium on "Prospects for Space Traffic Management".
- 21. Turning to other matters considered by the Committee at its 2002 session, he said that the Committee had begun to consider a new item entitled "Space and society". That item had been included in the Committee's agenda in accordance with the recommendation of UNISPACE III, in the Vienna Declaration, to increase awareness among decision makers and the general public of the importance of peaceful space activities in improving the common economic and social welfare of humanity. During its consideration of the item, the Committee had noted that a wide range of space-based services were improving the lives of people and helping to create a global society, that research and exploration in outer space were a source of inspiration for people in all countries, and that outer space was a theme that could attract

children to science and mathematics. The Committee had stressed the importance of education in space science and engineering.

- 22. The Committee had also begun its consideration of a report on the activities of the International Satellite System for Search and Rescue (COSPAS-SARSAT), which had been in operation since 1982 with the goal of assisting aviators and mariners in distress. That cooperative venture had assisted in the rescue of over 13,000 persons over the years. The Committee believed that the extraordinary success of that programme should be reflected in the draft resolution entitled "International cooperation in the peaceful uses of outer space".
- 23. Pursuant to General Assembly resolution 56/51, of 10 December 2001, and the agreement reached on the measures relating to the working methods of the Committee and its subsidiary bodies, informal consultations had been held among the members of the Committee and the regional groups concerning the composition of the bureaux of the Committee and its subsidiary bodies for the third three-year term. In that regard, the Committee had decided to intersessional informal consultations in 2003 with the participation of the chairs of the regional groups. As to the membership of the Committee, the General Assembly, in 2001, had reached agreement on the enlargement of the membership. Algeria and the Libyan Arab Jamahiriya had applied for membership. In addition, the Committee had agreed to grant permanent observer status to the Committee on Earth Observation Satellites and Spaceweek International Association.
- 24. In conclusion, he said that the modern world was characterized by two phenomena globalization and the technology revolution. Those two phenomena were combining to create horizontal networks, within which each organization was focusing on its own niche, in order to take maximum political, economic and financial advantage by making right decisions at the right time. Those countries without the capability, knowledge and resources to take appropriate and timely action were much less likely to survive in a rapidly changing world. They were more vulnerable to sudden changes in the pattern of trade, finance and investment.
- 25. All States needed the capacity to understand and adapt global technologies to local needs. There was a need for new international initiatives and the fair use of global rules to channel new technologies towards the most urgent needs of the world's poor people. Space

- technology with its emerging applications would require new avenues of international cooperation. Over the past four decades, space science and technology had freed human beings from the confines of planet Earth. They must now free human beings from want. Outer space could contribute to development that led to freedom by expanding opportunities and choices in the daily lives of people. However, for that to happen, constant efforts must be made towards people-oriented research and development in space science and technology and their applications. He was confident that the Committee on the Peaceful Uses of Outer Space would continue to play a leading role in expanding the practical use of space application in many areas of social, economic and cultural development, so that the basic needs of individuals, particularly in developing countries, could be met.
- 26. **Mr. Sørensen** (Denmark), speaking on behalf of the European Union, and also Bulgaria, Cyprus, the Czech Republic, Hungary, Lithuania, Malta, Norway, Poland, Romania, Slovakia and Slovenia, said that the European Union believed that space science and technology would play an increasing role in achieving the goals and monitoring the implementation of international agreements. Space applications were of fundamental importance for the sustainable development of all countries and regions of the world. In that regard, it was gratifying to see that space applications, notably Earth observation for various purposes including disaster management, were recognized as an important tool in the plan of implementation of the decisions of the World Summit on Sustainable Development.
- 27. The European Union attached great importance to the work of the United Nations Office for Outer Space Affairs, including its organizational and educational work, and its efforts to enhance coordination within the United Nations system and strengthen regional capacities. The European Union strongly supported the efforts to ensure that space science and technology contributed to the broader efforts to achieve the Millennium development goals.
- 28. The European Union welcomed the active role of the Committee on the Peaceful Uses of Outer Space in the implementation of the recommendations of UNISPACE III. The working group of the Legal Subcommittee had successfully concluded its review of the concept of the "launching State". Another working group had prepared a report on the implementation of the outcome of UNISPACE III (A/57/20, annex I). The

European Union fully supported the recommendations of that working group.

- 29. Universally accepted guidelines recommendations to allow effective control of pollution in outer space must be elaborated in the near future. The European Union urged the Inter-Agency Space Debris Coordination Committee to submit its proposal on debris mitigation guidelines to the Committee on the Peaceful Uses of Outer Space as soon as possible. The European Union believed that the question of the international law aspects of the issue should be added to the agenda of the Legal Subcommittee without further delay. Moreover, it was concerned about the risk of private corporations attempting to commercially exploit the Moon or other celestial bodies, without concern about prevention of pollution and in disregard of the principles of international space law. The Committee on the Peaceful Uses of Outer Space must include that issue, and especially its juridical implications, in the agenda of its next session.
- 30. Europe was one of the major players in the space field, and the European Space Agency (ESA), an intergovernmental organization with 15 member States, was responsible for the majority of its space activities. In order to stimulate the use of space applications in the European Union, ESA, together with the European Commission, had developed an overall European space strategy. The cooperation projects between the European Union and ESA included the Galileo project and the Global Monitoring for Environment and Security (GMES) project. The Galileo project was a complete civil radio navigation system with many potential applications, for example in road, rail, air and maritime traffic control. It was expected to be operational from 2008. The GMES programme combined space-borne, land-based and airborne technologies to track environmental pollution, react to emergencies and improve cross-border response to catastrophic events.
- 31. At the World Summit on Sustainable Development, ESA had made a presentation concerning several of its programmes to promote sustainable development and the first data received from the ENVISAT satellite. It was envisaged that the satellite would provide at least five years' worth of data on global warming, depletion of the ozone layer and climate change. In August 2002, MSG-1 had been launched, the first representative of a new generation of meteorological satellites.

- 32. Along with the United States of America, the Russian Federation, Japan and Canada, ESA and its member States were cooperating in the International Space Station programme, which was also a noteworthy example of peaceful cooperation in outer space. Europe had developed and was developing space tools, systems and services not only in support of European policies on environment and climate but also to play its role in the global effort to monitor the health of the planet.
- 33. **Mr. Valdez** (Chile), speaking on behalf of the members of the Common Market of the Southern Cone (MERCOSUR), and also Bolivia and Chile, said that questions of the peaceful uses of outer space were of particular significance on the threshold of the new millennium, since space technology had become an instrument of indisputable value in the daily lives of most of the inhabitants of the planet. In that connection, it was more urgent than ever to make progress on the legal and ethical questions of the peaceful uses of outer space.
- 34. The MERCOSUR countries had always supported the work of the Committee on the Peaceful Uses of Outer Space, one of the basic goals of which was to ensure that the exploration and exploitation of outer space was carried out for the benefit and in the interests of all States, regardless of their level of economic and scientific development.
- 35. One of the basic documents in that field was the Outer Space Treaty, and the Committee on the Peaceful Uses of Outer Space had a very important role to play in ensuring respect for the principles laid down in that Treaty and in the four other basic treaties on outer space matters, thereby strengthening the international foundations for the exploration and exploitation of outer space for peaceful purposes.
- 36. The MERCOSUR countries supported the work of the Legal Subcommittee, which should continue to accord special attention to the development of international space law, in particular the issues of the definition and delimitation of outer space and the character and utilization of the geostationary orbit. It should also continue its consideration of the problem of space debris and the adverse consequences for the environment of incomplete destruction of space debris when entering the dense layers of the atmosphere.
- 37. The MERCOSUR countries particularly stressed that the peaceful uses of outer space should be carried out for the benefit of all mankind and ensure special consideration for the interests of developing countries.

Space technology could yield tangible benefits to all inhabitants of the planet in terms of optimizing the use of natural resources and protecting the environment, improving the communications infrastructure, early warning and disaster management and other areas of vital significance for the development of human resources and eradication of poverty.

- 38. In order to ensure that those benefits were accessible to all countries regardless of their level of economic and technological development, international cooperation must be intensified in the relevant fields. The development of that cooperation must be based on the successful experience gained in the regions. In that regard, particular attention should be paid to the experience of holding outer space conferences in the Western hemisphere for all the Americas. The MERCOSUR countries particularly stressed significance of the Declaration and Plan of Action of the fourth such conference, held in Cartagena de Indias documents Those reaffirmed (Colombia). commitment of the countries of the region to promoting the development of space activities, the application and peaceful use of technologies derived therefrom, and cooperation as a vital mechanism for achieving those objectives on an equitable basis. In order to promote the achievement of those goals, support must be increased for national institutions engaged implementing projects in the area of space science and technology, and the MERCOSUR countries had done much in that respect, particularly in terms of capacitybuilding in the area of telecommunications, disaster management, natural resources exploration, telemedicine and so forth.
- 39. Bearing in mind the steadily increasing role of civil society in the peaceful uses of outer space, the MERCOSUR countries noted with satisfaction that, in resolution 56/51, the General Assembly had provided for the inclusion in the agenda of the Committee on the Peaceful Uses of Outer Space of an item entitled "Space and society". States must cooperate with the private sector in the development of education in space science and technology and encourage the implementation of various projects.
- 40. The MERCOSUR countries supported the admission of Algeria to the Committee on the Peaceful Uses of Outer Space. The increase in the number of countries expressing a desire to participate in the Committee's work was further evidence of the importance and continued urgency of its work.

- 41. In conclusion, the MERCOSUR countries called upon the international community to continue its efforts to formulate a more equitable and stable legal and ethical framework for the peaceful uses of outer space and to further develop international cooperation in the interests of ensuring that the benefits of space technology were accessible to all mankind.
- 42. **Ms. Baaziz** (Algeria) commended the efforts of the Committee on the Peaceful Uses of Outer Space to implement the recommendations of UNISPACE III.
- 43. Ever since mankind had taken the first steps in the exploration of outer space, the question of international cooperation in outer space had been a vital issue, and in the future, the exploration and exploitation of outer space might serve the interests of development and the well-being of all peoples. Outer space had to be regarded as the common heritage of all mankind, and that meant that a firm commitment should be made to ensure that its exploration was conducted in a rational manner for the benefit of current and future generations. To that end, it was necessary to intensify international cooperation in the area of space research, so that developing countries could take part on an equal footing with developed countries. It was also necessary to thwart any attempts to militarize outer space by preventing an arms race and the emplacement of arms in outer space.
- 44. Throughout its existence as an independent State Algeria had paid a great deal of attention to space research and had made investments in the development of methods of remote sensing of the Earth and cartography. Satellite data in Algeria were applied in such areas as agriculture, hydrology, disaster prevention and management, environmental protection, territorial planning and the exploration and development of natural resources. In Algeria a number of technologies for remote sensing of the Earth were used, mainly for meteorological observations. The data obtained were also used for locust control.
- 45. By virtue of its geostationary position, Algeria participated in activities to ensure the operation of the international satellite navigation system, the international system for meteorological observations and the marine pollution emergency response system.
- 46. Desiring to make the maximum contribution to the work of the Committee on the Peaceful Uses of Outer Space, Algeria hoped that the members would

take a favourable view of its application to become a member of that Committee.

- 47. Mr. Takahashi (Japan) said that over the past year there had been significant developments in Japan's space-related activities. Following two successful launchings (in August 2001 and February 2002), in September 2002 a third vehicle had been successfully launched, delivering two satellites into orbit. Japan was planning to launch the advanced Earth observing satellite II (ADEOS-II), together with other satellites such as the Australian "Fedsat" satellite, by a fourth launch vehicle in 2002. The ADEOS-II satellite, an international cooperation project, was loaded with sensors developed by the United States of America, France and Japan; it would gather data on, inter alia, water vapour, precipitation and sea surface temperature for the purpose of promoting activities to alleviate the Earth's environmental problems.
- 48. Japan believed that the highly reliable H-IIA launch vehicle and the ADEOS-II satellite would make a major contribution to the peaceful development of outer space for the benefit of mankind.
- 49. Japan strongly believed that the benefits of space activities should be made available to people everywhere, not only those living in countries that conducted such activities. For that reason, Japan was engaged in efforts to promote the use of outer space, particularly in the Asia and Pacific region. For example, it was successfully pursuing a joint experimental project in the region to demonstrate the potential of satellite communications in such areas as education, medicine and scientific research. At the World Summit on Sustainable Development Japan had advocated the use of satellite technologies for developing countries to address environmental issues and promote sustainable development. That view was reflected in the Plan of Implementation of the World Summit.
- 50. Japan was determined to participate actively in the implementation of the recommendations of the Vienna Declaration adopted at UNISPACE III. As noted in the report of the Secretary-General, achieving the goals of UNISPACE III would also make important contributions to achieving some of the goals identified in the United Nations Millennium Declaration (A/57/213, para. 42). Japan was now serving as chair of the action team for item 17, on enhancing capacity-building through the development of human and budgetary resources. Furthermore, Japan would

- actively participate in the work of other action teams which would provide useful input to the working group established to prepare the report to be submitted to the General Assembly at its fifty-ninth session.
- 51. In that connection, his delegation expressed the hope that the discussion on the composition of the bureau of the Committee on the Peaceful Uses of Outer Space would be concluded in the near future and that the principles of regional rotation and consensus, which were necessary for the smooth conduct of the work of the United Nations, including the implementation of the recommendations of UNISPACE III, would be respected.
- 52. Mr. Wimmer (Austria) recalled that at its past session the Committee on the Peaceful Uses of Outer Space had agreed that intersessional informal consultations on the composition of the bureaux of the Committee and its subsidiary bodies for the third term would be held with a view to reaching consensus before the forty-sixth session of the Committee, and that Austria would report on the results of the consultations at the fifty-seventh session of the General Assembly. Accordingly, Austria had convened and facilitated a number of informal consultations, including meetings of the members of that Committee and the chairs of the regional groups, as well as individual meetings with the chairpersons of the regional groups and members of the Committee who had expressed an interest in sharing their views.
- 53. The consultations had been guided by a spirit of responsibility and flexibility. He wished to mention, in particular, the efforts made by the African and Latin American groups. There had also been an emerging consensus that the solution to the current question regarding the officers of the Committee on the Peaceful Uses of Outer Space should lead to a strengthened common understanding of the interpretation of the rules regarding the composition of the bureaux of the Committee and its subsidiary bodies. Austria was committed to lead the consultation process to a successful conclusion and to make a positive contribution with regard to the future of the Committee.

The meeting rose at 11.15 a.m.