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General Assembly

Official Records

Committee on the Peaceful Uses of Outer Space

416th Meeting
Wednesday, 21 June 1995, 10 a.m.
Vienna

Chairman: Mr. Hohenfellner . . . . (Austria)

The meeting was called to order at 10.15 a.m.

Organization of work

The Chairman: This morning we shall continue our consideration of agenda item 9, "Other matters". When the list of speakers on this item is exhausted, we will immediately have a technical presentation on spin-off benefits of space technology.

We will then move immediately into informal consultations between interested delegations on matters related to a third United Nations Conference on the Exploration and Peaceful Uses of Outer Space (UNISPACE), to be coordinated by Mr. Tremayne-Smith of the United Kingdom.

At an appropriate time the Rapporteur will also conduct informal consultations between interested delegations on the draft report concerning the working methods and agenda of the Committee and its subsidiary bodies.

This afternoon we will conclude our consideration of agenda item 9, "Other matters", and begin consideration, if possible, of the first parts of the draft report. Once we conclude consideration of those parts of the report that are available, we will conduct, as necessary, as is our usual practice, informal consultations on any outstanding matters.

For the information of representatives, it is my hope that we will conclude this session of the Committee tomorrow.

Other matters (*continued*)

Mr. Senkevitch (Russian Federation) (*interpretation from Russian*): If I may, I shall speak on agenda items 8 and 9 in one intervention.

The delegation of the Russian Federation would like to refer to General Assembly resolution 48/39, and in particular to its paragraph 38, concerning the spin-off benefits of space technology and types of activity for systematic inclusion on the agenda, and also to draw the Committee's attention to an item related to this point which the General Assembly recommended for special attention: "Space applications for disaster prevention, warning, mitigation and relief".

Last year, the Russian delegation proposed that each year there should be not only a review of the current status of achievements in space technology and the wholesale transfer of its technologies to other areas of practical application, but also complex long-range forecasts of space activity. This would make it possible promptly to identify potential new ways of developing space activities, expand the range of direct and spin-off benefits and plan farther ahead the chain of events in the whole cycle of planning, construction, experimentation and implementation of new generations of space technology. Such a systematic and scientific approach to the whole problem and the initial technical level of equipment, elemental base, materials and technology, represents the current trend in developments and the forecasting of the growth of defining features; the design of systems and complex new generations for new tasks; the evaluation of the expected effects of and expenditures

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on programmes; and, lastly, the organization of international activities. All this would, in our view, be very useful in the consideration of this subject.

It would also be useful to interpret this broadly so as to reflect the major contributions of all States which, in one way or another, participate in space activities — of which there are already more than 130, including 20 that build their own spacecraft — in direct and spin-off applications of space science and techniques, including technology used in their creation. In this respect, the agenda item on spin-off benefits could have been called “Direct and spin-off benefits of space science and techniques and their technologies: a systematic analysis of current status and forecasts for development”.

Allow me, using Russia as an example, to offer a brief overview on this matter, beginning with the transfer and use of scientific and technological achievements and space technology in other fields. This is already a fairly reliable way for a country to economize, allowing it to achieve tangible, practical results while ensuring that the costs of various types of work are covered and that efforts are commercially profitable.

It is true, of course, that here as in other countries the work does not necessarily pay for itself, but in the future it may, depending on the scale of future space activity and the acceleration of scientific and technological development. The main catalysts, as we know, are space exploration and nuclear energy, because they have an impact on the development of machine construction, radio-electronics, land, water and air transport, robotics, computer systems, energy production, water purification, cooling technology, special materials, chemicals, communications and management systems, information media and many other areas.

The use of space-related scientific, technical and technological achievements is developing in Russia in the following ways. The first is the direct application of space facilities to the economic benefit of the country and to defence purposes in order to solve economic, scientific and commercial problems. Specialized space facilities are also applied or modified to become dual-use facilities. We have already engaged in more than a hundred conversion projects, of which a third require only a partial reassignment of functions or partial modifications to machinery.

The second area is the transfer of the latest technologies to other branches and fields of manufacturing and application. Eighty per cent of space technology is of a general nature and can be applied to the creation of non-space products. For example, chemical energy sources with yields ranging from 40 to 120 watt-hours per kilogram could be applied to transport and many aspects of non-industrial economic activity as soon as the next five to 10 years. It will also be possible to use solar batteries, yielding 250 to 300 watts per square metre, for lighting and heating purposes.

With the construction of observation equipment with diameters of 1.5 to 3 metres, using real-time images and signals, space locators, spaceborne antennas with high-resolution capabilities; and highly sensitive photographic apparatus in both the visible and the infrared spectra it will become possible to improve agriculture, by monitoring maturing crops and forecasting harvest yields, and to solve problems relating to forest-fire prevention. This is important in a country as large as Russia, where there can be as many as 200,000 forest fires a year. It should also help to perfect weather forecasting, implement environmental monitoring, identify areas prone to natural disasters and many other activities.

New materials and substances under development for space-rocket technology — including highly durable ceramics, corrosion-resistant steels and other alloys, non-flammable fabrics, sealants, self-lubricating anti-friction materials and so forth — are being used effectively in transport, metallurgy, chemical applications, aviation, textiles and other areas. The list of new applied space technologies is a long one, arising from conversion projects and work being done on new technologies at the Ministry of Defence Industries, the Ministry of Atomic Energy, the Russian Space Agency, the Ministry of Defence and other agencies. Thus, the space corporation Energiya and the Russian Space Agency alone have access to some 400 different technologies based on work carried out on the Mir space station and in the Energiya-Buran system.

For the sake of brevity, I will go into greater detail on current activities, but I should note that a third potential area for the effective application of space technology is the international market in space services. Space technology is a tradable commodity, and our country is formulating the necessary scientific and technological policies in that area.

In order properly to implement an up-to-date scientific and technical strategy regarding direct and related benefits of space activities we need a comprehensive evaluation to forecast prospects on the basis of which we can determine the ultimate goals of current activities. We need to evaluate in advance the possible limits of the development of space science and to understand the positive and negative interaction of its components. We must devise promising space systems and define areas within them that can help to foster international cooperation and the fulfilment of international programmes under United Nations auspices.

A year ago we told the Committee of some of Russia's projected activities in space for the next 20 to 30 years. A number of delegations expressed interest in this subject. We hope the work will be carried out in a systematic way. It is our intention to continue systematic discussion of this subject in this Committee. I want to report that we have set up a system of contacts for the prevention of environmental disasters; in conjunction with COSPAR-SARSAT, we hope to be able to provide timely assistance making use of our spacecraft.

The benefits of space technology will undoubtedly continue to grow. We need further work to advance this subject. We hope that the benefits will be made available to developing countries. Much remains to be done to manage the transfer of data to developing countries, particular with respect to data bases, the settlement of legal problems and a number of other issues. We continue to hope that the Committee will make major progress in its work on this matter.

Technical presentation

A technical presentation was given by the delegation of India.

The meeting rose at 10.40 a.m.