Distr.: Limited
27 July 1999

Original: English

THIRD UNITED NATIONS CONFERENCE ON THE EXPLORATION AND PEACEFUL USES OF OUTER SPACE

Vienna
19-30 July 1999
Committee II
Agenda item 11
Economic and societal benefits

Technical Forum

Conclusions and proposals of the Workshop on Small Satellites at the Service of Developing Countries

1. The Workshop on Small Satellites at the Service of Developing Countries concluded that small satellites were valuable tools in the development of a space infrastructure and scientific and application programmes. They could also have an important role to play in every country's space plan. Small satellites had offered and would continue to offer opportunities for international cooperation.

2. Scientific missions using small satellites could provide very valuable results and make important contributions to advances in knowledge of the Earth's environment and of the universe. Any country that developed or participated in a scientific space mission made it possible for its scientists to contribute to the advancement of science. Small, more focused space missions could yield greater benefits for the national scientific community.

3. In the field of Earth observation, small satellites could carry instrumentation devoted to the particular needs of a country. The data could then be used independently or in conjunction with data from other, larger spacecraft in order to provide information for such applications as mapping, fisheries, agriculture, land use and environmental monitoring. The characteristics of the spacecraft, such as wavelength, resolution, time and frequency of observation, could be tailored to those particular needs.

4. The applications of data collection and message store-and-forward communications had already been used on several spacecraft. Novel types of constellations of small satellites were currently being designed that could serve the development needs of a number of developing countries. Such examples showed that it was important to take into account the particular situation of the country (geography, remote settlements and so on) in order to develop a more appropriate communication system.

5. The Workshop recommended that each country prepare a space plan that identified how space assets could best be used to support its development. In such a plan, small satellites should be considered one of the most valuable tools to initiate and develop an indigenous space capability.

6. Although limited in size and mass, small satellites could still benefit from advances in technology. The development of complex software could be used to enhance satellite missions further. Each country planning to develop a space infrastructure should identify those hardware and software technologies which were most relevant to its current and planned status of development.

7. Small satellites offered an ideal opportunity for training. On-the-job training in cooperative programmes had proved to be a valuable method of learning all the techniques associated with the design, development, manufacturing, testing and operation of a spacecraft. Developing countries were encouraged to include such training programmes in their space plans.

8. Small satellites offered opportunities to developing and developed countries to establish cooperative programmes not only for the purpose of training, but also with a view to preparing scientific or application missions. They also made it possible for developing countries to pool their efforts in building their individual space capabilities. It was therefore recommended that, in preparing its space plan, each country consider incorporating into it an element of international cooperation.