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Draft report

Chapter II

Addendum

E. Spin-off benefits of space technology: review of current status

1. In accordance with paragraph 37 of General Assembly resolution 59/116 of 10 December 2004, the Committee resumed its consideration of the item entitled "Spin-off benefits of space technology: review of current status".

2. The Committee heard a presentation entitled "Spin-off of JAXA's intellectual properties", by Hitoshi Yoshino (Japan).

3. The publication *Spinoff 2004*, submitted by the National Aeronautics and Space Administration (NASA) of the United States of America, was made available to the Committee.

4. The representatives of Canada, Greece, Japan and the United States made statements under this item.

5. The Committee agreed that spin-offs of space technology should be promoted because they energized industries and made significant contributions to improving the quality of life of human populations.

6. The Committee noted that spin-offs of space technology were being used to reduce organic waste and to facilitate nursing care for the elderly.

7. In the field of medical research, the Committee took note of a new contact lens that was capable of non-surgically reshaping the cornea during sleep. Upon removal of the contact lens, users experienced clear, natural vision without the need for daytime contact lenses or glasses.

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8. In the field of consumer health, the Committee noted that tagatose, a natural alternative to table sugar and artificial sweeteners, was providing a safe sweetener for diabetics without causing dental cavities or tooth decay. The sweetener was being evaluated for incorporation into non-food items, such as toothpaste, mouthwash, throat lozenges and cough medicine.

9. In the field of health and medicine, the Committee noted that a filter made of nanoaluminium oxide fibres could be used to remove impurities from drinking water in areas on Earth where water was scarce and potentially contaminated.

10. Also in the field of health, the Committee noted that high-speed, interactive, satellite-based telecommunications were providing patients living in rural areas and in communities located far from urban centres with access to first-class health services.

11. In the field of environmental protection, the Committee noted that a fibre-optic sensor system was being used to evaluate fatigue on marine pipelines and risers, and on offshore drilling and oil production rigs. Working in conjunction with risk management software, the sensor system was reducing the risk of potential environmental contamination from hydrocarbon spillage.

12. The Committee noted that remote sensing technology was being used, among other things, to create improved models for the prediction of future ozone levels, to improve understanding of pollution in industrial centres, to contribute to precision farming and to identify ships engaged in illegally dumping oil in the sea.

13. The view was expressed that a small group of experts should be established to prepare a document containing proposals on means of assisting the United Nations Programme on Space Applications in disseminating information on the spin-off benefits of space technology, in particular with a view to making such information available to developing countries.

14. The Committee recommended that it continue its consideration of the item at its forty-ninth session, in 2006.

F. Space and society

15. In accordance with paragraph 38 of General Assembly resolution 59/116, the Committee continued to consider the agenda item entitled “Space and society”. The Committee recalled that, in accordance with the workplan adopted by the Committee and approved by the Assembly, the special theme for the focus of discussions for the period 2004-2006 should be “Space and education”.[1] In accordance with the workplan, the Committee held discussions and presentations on the topic of “Space tools for education”.

16. The Committee heard the following presentations:

(a) “GAREF Aérospatial”, by Alexandre Khun (France);

[1] *Official Records of the General Assembly, Fifty-eighth Session, Supplement No. 20* (A/58/20), para. 239.

(b) “DLR ‘school labs’: how to enhance interest in space sciences”, by Richard Bräucker (Germany);

(c) “Ten years of the Centre for Space Science and Technology Education in Asia and the Pacific”, by V. Sundararamaiah (India);

(d) “Activities of the Japan Aerospace Exploration Agency (JAXA) Space Education Center”, by Takemi Chiku Center (Japan);

(e) “Space and the United Nations Decade of Education for Sustainable Development (2005-2014)”, by Yolanda Berenguer (United Nations Educational, Scientific and Cultural Organization (UNESCO));

(f) “Keo space time capsule: project of the twenty-first century”, by Jean-Marc Philippe (Keo project).

17. The delegations of Belgium, Canada, Chile, China, Colombia, Cuba, France, India, Japan, Nigeria, Ukraine and the United States made statements under this agenda item.

18. The Committee noted that the Space Education Programme of UNESCO aimed at enhancing space subjects and disciplines in schools and universities, in particular in developing countries, and raising awareness among the general public of the benefits of space technology for social, economic and cultural development. The Committee noted that UNESCO was the lead United Nations agency for the United Nations Decade of Education for Sustainable Development (2005-2014).

19. The Committee noted that a number of national tele-education initiatives were providing educators and students at all levels, including those in remote areas, with high-quality education consisting of the latest teaching resources, vocational and teacher-training and adult education in fields such as women’s empowerment, family planning and skills for local artisans.

20. The Committee noted the efforts of China, Cuba and India in utilizing communications satellites to bring education programmes to rural areas.

21. The Committee noted with satisfaction that, at the global level, a large number of educational and outreach activities and programmes for children, young people and the general public were being established by space agencies and international organizations to promote awareness of the benefits of space science and technology and to encourage children to consider careers in the fields of mathematics and science.

22. The Committee noted that there were a number of national educational initiatives and activities aimed at using content, materials and applications unique to space activities for training students and teachers and for educating the general public on matters relating to outer space, including the NASA Educator Astronaut Programme, Explorer Schools Programme, Explorer Institutes and the Science and Technology Scholarship Programme; the JAXA Space Education Center; the German Aerospace Center “School Lab”; the Ukrainian National Youth Aerospace Education Centre; and the Argentinian Instituto de Altos Estudios Espaciales Mario Gulich.

23. The Committee noted that World Space Week, observed each year from 4 to 10 October pursuant to General Assembly resolution 54/68 of 6 December 1999,

contributed to the development of education and raised awareness about outer space, in particular among young people and the general public. The Committee noted that over 40 countries had participated in World Space Week in 2004 and that the theme and focus of the activities for 2005 was “Discovery and imagination”.

24. The Committee was of the view that sharing scientific and technical knowledge and achievements in the field of space activities would have a positive impact on future generations.

25. The Committee noted several national initiatives that had established and were operating telemedicine networks in rural areas offering services relating to dermatology, emergency medical care, tropical diseases and remote diagnostics. The Committee further noted that remote sensing technology was used for tracking Rift Valley fever, dengue fever and other infectious diseases.

26. The view was expressed that, if the discussions under the agenda item resulted in a consensus to develop further activities in the area of space and education, such activities should be undertaken within the broader context of the World Summit on the Information Society, in which importance had been accorded to communication networks and services, including satellite-based communications.

27. The view was expressed that illiteracy and a lack of adequate education continued to constitute major problems for developing countries.

28. The view was expressed that the varying levels of development of developing countries in the Asian and Pacific region was a factor limiting the use of tele-education.

29. The view was expressed that States should be encouraged to improve the dissemination of space-related educational materials in order to increase general awareness of the importance of the use of space technology for attaining sustainable development. That delegation noted that education was one of the priority areas identified by the Fourth Space Conference of the Americas, held in Cartagena de Indias, Colombia, from 14 to 17 May 2002.