

## **JAPAN**

### **National points of contact**

*For the work of the Working Group at the fifty-seventh session of the Subcommittee, which is planned to be held in Vienna from 3 to 14 February 2020, States members of the Committee are invited to provide the details of national points of contact for the Working Group (A/AC.105/1202, Annex III, para. 9) and communicate their names to the Office for Outer Space Affairs.*

Ms. Nanoko Ueda, Outer Space Researcher, Ministry of Foreign Affairs Japan

Mr. Akihiro Iwaki, Second Secretary, Permanent Mission of Japan to the International Organizations in Vienna

### **Questionnaire on the use of space science and technology for global health**

*In accordance with the recommendations of the Working Group, States members of the Committee are invited to respond to the following questions (A/AC.105/1202, Annex III, appendix I and II):*

*1. Please describe existing or planned formal cooperative agreements and other institutional arrangements (memorandums of understanding, letters of agreement, frameworks of collaboration, etc.) between the health sector and other sectors directly involved in space activities at the national level.*

In 2015, Japan Aerospace Exploration Agency (JAXA) and National Center for Global Health and Medicine (NCGM) of Japan have signed a cooperation agreement. Under this agreement, NCGM developed and improved terminals for collecting biological information, shared clinical information such as physiological tests at medical institutions in developing countries and others with National Center for Global Health and Medicine using satellite communication technology of JAXA, established a monitoring system, and examined possibility of providing support for improving technologies of disease diagnosis and giving instructions for improving the life-style of patients with lifestyle disease.

*2. Please provide recommendations regarding the establishment of a dedicated platform for effective coordination among United Nations entities, other international organizations and relevant actors on space and global health issues.*

The UN OOSA could possibly collaborate with the platform “Future Earth Health Knowledge-Action Network (Health KAN).” Health KAN is a global research

program designed to provide the knowledge needed to support transformations towards sustainability. It focuses on a systems-based approaches, which seek to deepen our understanding of complex Earth systems and human dynamics across different disciplines.

*3. Please describe existing or planned policy-enabled environmental and governance mechanisms for removing barriers to the effective use of space-based technologies in support of global health.*

In Japan, “Basic Plan for Space Policy” was created pursuant to Article 24 of the Basic Space Act (Act No. 43, 2008). Basic Space Plan, a comprehensive space policy of Japan, was made four times, in 2009, 2013, 2015 and 2016 respectively. The current Basic Space Plan includes, just like its two predecessors, a section referring to the promotion of international cooperation in Japan’s space activities, which can be construed as Japan’s implementation of a non-legally binding instrument of the 1996 Space Benefit Declaration. The Space Basic Plan in 2015 includes contribution to enhancing space capabilities of developing countries to address their development goals by utilizing Japan’s space technology in cooperation with relevant international organizations such as the World Bank; to take measures to jointly develop satellites, engage in hosted payload programs, joint utilization of space-based data for solving various human security issues including energy shortage, climate change, disaster mitigation, etc.; and to promote cooperation for science and technology as well as nurturing human resources projects.

*4. Please describe existing or planned policies on open data-sharing and participatory approaches to developing and improving access to geospatial information relevant to global health.*

In Japan, there is an open and free platform called "Tellus," which aimed at creating a new business marketplace using governmental satellite data. Tellus contains not only governmental satellite data, but also a great amount of commercial ground and satellite data. By using cloud, GPU, and storage computing resources, the services are made openly and freely available (with some limits).

*5. Please describe existing or planned efforts related to the geotagging of all assets relevant to health systems, including health information systems.*

There is an existing effort of the geotagging the patients and infections by NCGM.

*6. Please describe existing or planned inter sectoral coordination and cooperation for effective international, regional, national and subnational capacity-building activities relevant to the application of space science and technology in the field of global health.*

There is a cooperation in the field of atmosphere and health under “Monsoon Asia and Oceania Networking Group (IGAC-MANGO)”. The main objective of IGAC-MANGO is to form a cohesive network of atmospheric scientists in the Asian monsoon region, facilitate collaboration between Asian and international scientists, and foster the next generation of scientists in this region. IGAC-MANGO plans to use data acquired from Japanese satellites.

*7. Please describe existing or planned mechanisms to engage educational institutions and other capacity-building mechanisms in motivating young health professionals to acquire skills and abilities required to efficiently use advantages provided by space technology, science and applications at an early stage in their careers.*

NA

*8. Please describe existing or planned mechanisms to better integrate space-derived data and information into decision-making processes related to global health, and to harmonize and share such data.*

NA

*9. Please describe how space technology and applications are integrated into health-related emergency planning and management and disaster management plans.*

NA

*10. Please describe key activities, reference documents and plans relevant to the topic “Space for global health.”*

Please refer to Japanese expert’s presentation delivered in the working group in February 2019.

*11. Please provide an overview of existing and planned practices and initiatives*

*in the current uses of space (technology, applications, practices and initiatives) in support of global health and identify gaps, if any, in the following areas:*

*a. Telemedicine and tele-health;*

NA

*b. Tele-epidemiology and environmental health;*

NCGM is engaged in tele-epidemiology in Laos.

Remote sensing is one of the efficient ways of tackling environmental health. One example of Japanese initiative is the air pollution monitoring using Himawari data. Himawari is a Japanese geostationary meteorological satellite used for weather forecast, and it could monitor particles such as desert dust and air pollutants, which affect the quality of the atmosphere. Also, Global Change Observation Mission - Climate (GCOM-C) has the capability of observing atmospheric particles (including desert dust and PM2.5) on a global scale and it will also contribute to air pollution monitoring. One idea is to utilize these data to predict areas where people suffer from health problems due to air pollution.

*c. Space life sciences;*

NA

*d. Disaster and health emergency management;*

NA

*e. Other.*

- We would like to suggest the Secretariat to designate a health expert, not just outer space experts, to the Working Group.

- We would like to point out that current lack of access to the necessary data (e.g. weather data) may hinder the effective research for the space and the global health. The lack of access is often caused by the price and difficulty to understand the way to attain data. The common data platform may possibly solve these difficulties.