



UNITED NATIONS
Office for Outer Space Affairs



KEMENTERIAN SAINS,
TEKNOLOGI, DAN INOVASI

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

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.

Since 2010, the Ministry of Science, Technology, and Innovation (MOSTI), through the Malaysia Space Agency (MYSA), and the Disease Control Division (DCD) of the Ministry of Health (MOH), has formed a strategic partnership to optimise the benefits of space technology in the environmental health sector. A non-binding Collaboration Note was signed between the two agencies on 15 June 2012.

The main objective of the collaboration is to develop and operate an Online Dengue Outbreak Management System (DOMS) in order to assist the management of MOH in planning, monitoring and decision making of control activities and dengue enforcement throughout the country.

Since 2013, DOMS is not only accessed by the management of MOH and Health Officers at the national level, but also at the State and District Health Departments level. The development of DOMS is through MYSA internal experts using space based remote sensing technology, Geographical Information System (GIS) modelling, ICT and big data analytics. The successful implementation of the system has led to the development of a spin-off product, i.e. iDengue Portal for community. The iDengue Portal is a medium to disseminate accurate and up-to-date dengue information to increase public awareness and encourage them to take part in ensuring their residential area free from dengue outbreak.

Starting 2016, the cooperation between MYSA and DCD has been expanded to other applications to assist the MOH in efforts to address malaria problems by developing the Malaria Geo-Reference Information and Coordination System for Malaria Elimination (MAGICs.ME). In addition, MYSA and the DCD have also developed an integrated management system known as Entomology and Online Pest Information System or myEntoPest to address issues related to entomology and pests throughout Malaysia.

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.

Working Group in Space and Global Health should comprise representatives from the national space agency and health agency of the member countries.

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.

The National Space Policy 2030, which was approved by the Government of Malaysia on 30 December 2017, provides a clear coordination framework at the national level that involves representatives from various ministries including Ministry of Health (MOH). This coordination framework is clearly stated under Thrust One of the policy, “Reinforcing Governance in Optimising the Country’s Access to Space Capability”. The Government has established a centralized coordination through the National Space Committee to strengthen governance in the space sector to support and improve national and global health coordination.

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.

Under the National Open Data initiative, MYSA provides free access to unrestricted remote sensing satellite data through the MYSA Open Data Platform at <http://rsdc.gov.my/rsd>. The unrestricted remote sensing satellite data has a spatial resolution of more than 5 metres. The data source is either received at MYSA Satellite Data Receiving Station or from other external sources.

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

The geotagging of all assets relevant to the health system, including the health information system is provided by the relevant national data custodian.

6. Please describe existing or planned intersectoral 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.

Intersectoral coordination and cooperation at the national level is implemented through the Working Group on Remote Sensing under the National Space Committee. At the regional level, it should be done through ASEAN Sub-Committee on Space Application (SCOSA), while at the international level, it could be done through the Working Group in Space and Global Health.

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.

Engagement with higher educational institutions and other capacity-building is through space-related R&D collaboration project, training and seminars.

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.

In line with MYSA's role to lead national space sector development, MYSA has collaborated with other ministries and government agencies including the Ministry of Health (MOH) to enhance their services through the use of space-derived data and information access through online application system. The National Space Policy 2030 under MYSA also has a coordination framework that also involves MOH and agencies to support the decision-making process related to health, and to harmonize and optimise the use of national resources.

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

The integration of space technology and applications related to health is carried out through various application systems coordinated under the National Disaster Management Agency (NADMA), including the remote sensing application systems developed by MYSA for the Ministry of Health as described under question number 1 above.

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

The development of the National Remote Sensing Satellite to support data services and analysis for various global issues, including global health.

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;

- Not applicable.

b. Tele-epidemiology and environmental health;

- Develop a related system such as iDengue system, Malaria Geo-Reference Information and Coordination System for Malaria Elimination (MAGICs.ME).

c. Space life sciences;

- Provide a platform for research and development (R&D) for space life sciences through international collaboration.

d. Disaster and health emergency management;

- Provide satellite images for planning and controlling the COVID-19 pandemic outbreak area.

e. Other.

- Not applicable.