

Japan Item 14– “Space and Global Health”

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Mr. Chair, Distinguished Delegates,

Japan has been developing ways and means for space applications to contribute to global health. In this regard, Japan welcomes the adoption of the General Assembly Resolution on “Space and Global Health” last December and appreciates the efforts of the Working Group on Space and Global Health.

For Japan, the use of remote sensing is an efficient way to tackle global health issues. One example is to monitor air pollution using data from Himawari, the Japanese geostationary meteorological satellite used primarily for weather forecasts. Its observation data also serves to predict yellow dust or aerosols such as PM 2.5, which affect the quality of the atmosphere.

Air pollution is closely linked to global health. According to a recent report by WHO, air pollution is regarded as the single biggest environmental risk on human health, causing 7 million premature deaths. Space observation can greatly contribute to a better understanding of the emissions, trends, and impacts of air pollutants such as PM 2.5 and ozone. This research area needs to be strengthened to reduce this environmental health risk, in particular in developing countries. Japan is planning to launch the “Global Observing Satellite for Greenhouse Gases and Water Cycle (GOSAT-GW)”, which aims to observe nitrogen oxides, a major air pollutant acting as a precursor of ozone. This new satellite is expected to help solve global health issues in collaboration with our international partners.

Mr. Chair,

I would like to share Japan’s research in the field of space and global health. In collaboration with JAXA, the National Center for Global Health and Medicine (NCGM) has been conducting research on the spatial epidemiology of malaria in Lao PDR using earth observation satellite data. Since the expansion of a vector called the *Anopheles* mosquito was reported to be significantly affected by temperature and vegetation, malaria epidemics are expected to be triggered by

unexpected climate changes or development activities. Our research found that ground surface temperature positively correlated with the number of malaria cases. We also found that there was an increase in malaria cases in growing forest plantation areas. Particularly, in regions where afforestation after land readjustment increased significantly such as rubber, sugarcane, and banana plantations, the number of malaria cases also increased. It is important to take cautious measures to understand, prevent, and manage its outbreak by monitoring possible factors that cause the increase of vectorial capacity through remote sensing technology.

Another important activity was launched by the National Institute for Environmental Studies which started the "Climate Change and Air Quality Research Program" as one of its strategic research programs. The program aims to provide a scientific basis for the global stabilization of climate change and air quality, with a scientific focus including evaluations of greenhouse gas emissions and air pollutants from global to local scale, by using satellite observations of atmospheric composition.

Earth observation using remote sensing satellites enables controlled real-time data collection from widespread areas where ground investigation is difficult. Japan will continue to use space technology for the benefit of humankind and to contribute to the advancement of global health.

Thank you for your attention.