

Vietnam

There are two National strategies have been approved in 2019 and 2021.

The Strategy for development and application of space science and technology to 2030 has been approved at February 4th, 2021. Related to the Earth Observation in Vietnam, there is one objective of the strategy point out that: "Using space technology and its application to natural resource and environmental management, monitoring and support to reduce damage caused by natural disasters"

The Strategy of National remote sensing development to 2030, vision to 2040, which has been approved at February 1st, 2019 clarifies that in next decade, Vietnam will "Widely applying remote sensing technology, using remote sensing products and data in all sectors, focusing on investigation, observation, monitoring of resources and environment, search and rescue, natural disaster prevention, response to climate change; enhancing international cooperation activities on remote sensing."

That two strategies will help Vietnam focus its resources in applying the earth observations to environmental management, natural disaster prevention towards sustainable development and response to climate change. However, it does not means that everything will sudden happen this year. Since 2018, Vietnam has built a Vietnam Data Cube system, based on the foundation of the Open Data Cube. The Vietnam Data Cube system was built with the help of many international partners such as CSIRO, CNES, JAXA, USGS, IMSSG. So far, Vietnam Data

Cube system has had applications on a national scale :

Forest monitoring: In cooperation with FIPI, CNES, CSIRO

Rice monitoring: In cooperation with University of Maryland; CESBIO/CNES

Water surface monitoring: In cooperation with CSIRO...

From the September 2018 up to now, monthly maps of rice age have been provided to the Department of Crop Production (DCP) & Center for Informatic and Statistics (CIS) – Ministry of Agriculture and Rural Development of Vietnam (MARD).

Main natural disasters in Vietnam are flooding, typhoon, landslide, erosion, etc. The use of the EO data in this situation has given Vietnam many valuable lessons, in which, the most important is the assurance of availability of data and suitable technology to provide timely information to the disaster affected area.

Vietnam's EO data is currently provided by the VNREDSat-1 satellite, an optical remote sensing satellite. The VNREDSat-1 was on-orbit from 2013, providing multi-spectral image at resolution of 10 m and 2.5 m with panchromatic image. Vietnam is expecting for 2nd small satellite, LOTUSat-1, will be on-orbit from the beginning of 2025. LOTUSat-1 is an X-band SAR satellite. The resolution of LOTUSat-1 image is designed at 1 m, 2 m and 16 m, depends on the image acquisition modes, Spotlight, Stripmap or ScanSAR. In the case of emergency, the EO data of Vietnam does not meet the requirements.

The lessons from Vietnam point out that any

