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# A PRELIMINARY EVALUATION OF SENTINEL ASIA IN RESPONSE TO NATURAL DISASTERS IN ASIA PACIFIC REGION

**Abstract**

The Sentinel Asia is an initiative by utilizing space borne remote sensing and information communication technologies among space and disaster management agencies to reduce disaster risks. It is voluntary basis, it has been originally proposed in the Asia-Pacific Regional Space Agency Forum (APRSAF) and operational since 2006. Currently, it has 108 Joint Product Team member organizations, including 92 agencies from 28 countries/regions and 16 international organizations. Japan Aerospace Exploration Agency (JAXA) has been serving as the secretariat and acting the lead of space community, while Asian Disaster Reduction Center (ADRC) the lead of disaster management community. A stepwise approach is adopted for the implementation of Sentinel Asia. In STEP 1, the architecture was established and data dissemination system was demonstrated in association with Data Provider Nodes (DPNs) and Data Analysis Nodes (DANs). In STEP 2, the community success stories greatly expanded and also the communication satellite WINDS joined in system operation. In current STEP 3, it is expected to extend services in emergency response to services covering entire disaster management cycle, including mitigation, preparedness and recovery phases. In this study, a preliminary evaluation is conducted in the effectiveness of the data dissemination system by the response time between Emergency Order Request (EOR) and data/information delivery. Secondly, the mechanism of disaster management cycle will be illustrated by taking National Space Organization-National Applied Research Laboratories (NSPO-NARLabs), one of the DPNs and DANs, as a case study. Finally, the recommendation on the improvement of data dissemination system will be proposed. As a result, NARLabs' evolvement in co-operation with Sentinel Asia DPN and DAN members will be presented as a means of experience sharing with other member organizations.