CGMS-48-JMA-WP-02
v1, 13 May 2020

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Agenda Item: 5.2
Discussed in WG I

HIMAWARI-DCS'S INTERNATIONAL CONTRIBUTION TO DISASTER RISK REDUCTION

The Japan Meteorological Agency (JMA) has operated the Data Collection System (DCS) since its first Geostationary Meteorological Satellite (GMS) went into operation in 1978. The system plays important roles in collecting meteorological information as well as seismic intensity and tidal/tsunami data collaborating with the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS). In Japan, more than 400 DCPs collect seismic intensity data. Himawari-8's DCS has been operational since July 2015, and it is planned that Himawari-9 will take over the DCS service in 2022 and continue in this role until 2029.

JMA has no plans to change the specifications of the Himawari-8/9 DCS. The Agency is considering the Himawari-8/9 follow-on program that will replace Himawari-8/9, including the DCS.

Action/Recommendation proposed: none

1 Introduction

JMA has operated the Data Collection System (DCS) since its first Geostationary Meteorological Satellite (GMS) went into operation in 1978. The system plays important roles in collecting meteorological information as well as seismic intensity and tidal/tsunami data. In July 2015, Himawari-8 entered operation and took over the DCS service from MTSAT. In March 2017, Himawari-9 entered a period of in-orbit standby as back-up to Himawari-8. It is expected to take over the DCS service in 2022 and continue in this role until 2029.

Himawari-8 and -9 use the Ka band (18 GHz) as the downlink frequency for relaying DCP data. To take into account rainfall attenuation in this band, the main and sub antenna sites, which are more than 800 km apart, both receive the downlink for redundancy.

2 Current status of Himawari-DCS

The figure below shows the distribution of tidal/tsunami and seismic intensity DCPs allocated to regional channels in Himawari-DCS, including tidal/tsunami DCP stations collaborating with the Intergovernmental Coordination Group for the Pacific Tsunami Warning and Mitigation System (ICG/PTWS). In Japan, more than 400 DCPs collect seismic intensity data. In 2017, a new tidal DCP began operation in the western Pacific.

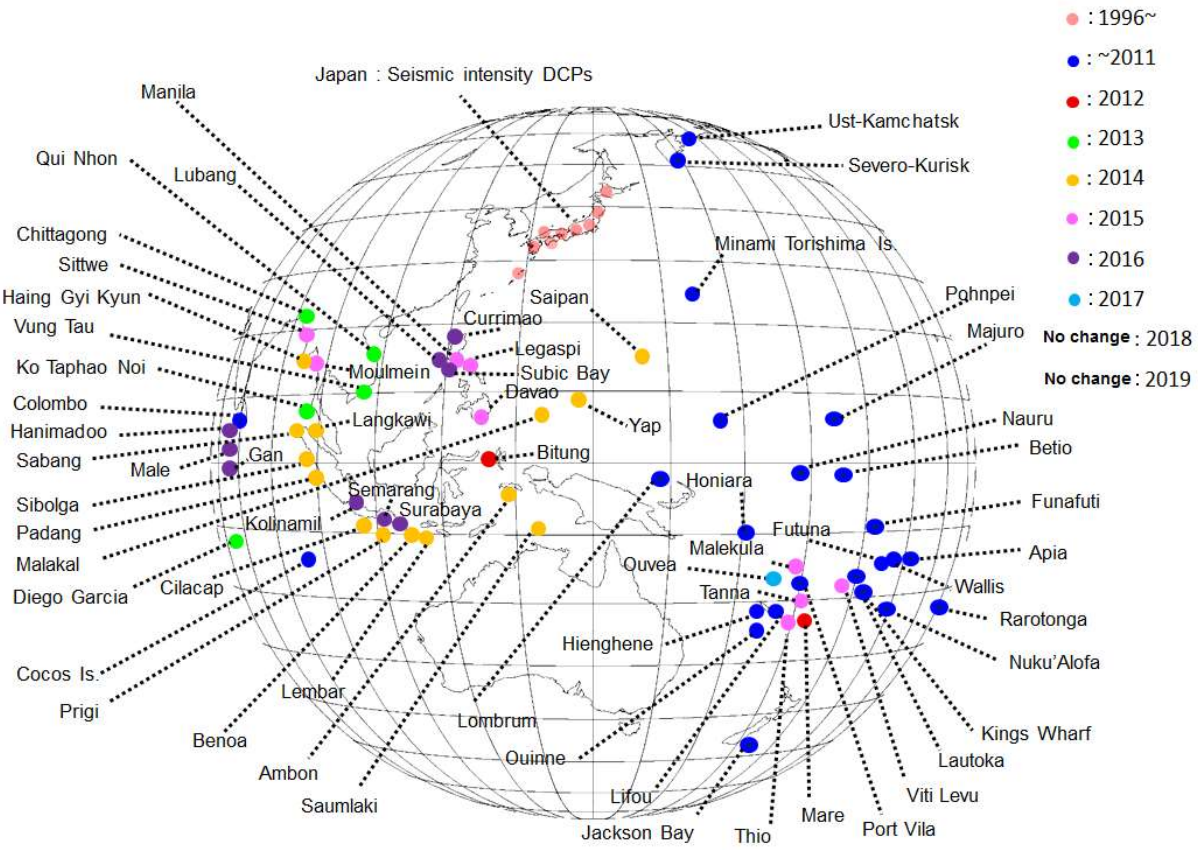

Figure: Distribution of tidal/tsunami and seismic intensity DCPs in Himawari-DCS

3 Future of the Himawari-DCS

JMA has no plans to change the specifications of the Himawari-8/9 DCS. The Agency is considering the specifications of the Himawari-8/9 follow-on program that will replace Himawari-8/9, including the DCS, and IDCS discussions conducted at the CGMS WGI are expected to contribute to this.