

Information Paper

PORT OPERATION COMMITTEE

**Decommissioning of the Hong Kong
Differential Global Positioning System (DGPS) Correction Service**

Purpose

The purpose of this paper is to invite members to note the decommissioning of the Differential Global Positioning System (DGPS) Correction Service provided by the Hydrographic Office, Marine Department, from 1 January 2027.

Background

2. The Hydrographic Office established its DGPS correction infrastructure in the 1990s to improve the accuracy and integrity of global positioning system (GPS) information for carrying out its survey operations in Hong Kong waters. Users equipped with a standard DGPS receiver can also utilise the service to enhance their position for various purposes.

3. Since 2000, with the improvement in satellite positioning technology and constellations, observed positional accuracy for Global Navigation Satellite Systems (GNSS) now consistently fulfils the requirement for nautical navigation purposes. Additionally, the availability of new satellite navigation systems and the provision of correction services via the internet, as well as satellite, provide alternatives for public users to fulfil their precise positioning requirements. During the two lengthy service shutdowns of the DGPS system, caused by severe weather damage to outdoor equipment in 2024 and 2025, no calls for assistance were received from the maritime community due to the service interruptions. This suggests that other GNSS positioning technologies can effectively meet the marine community's daily needs.

Decommissioning of the Hong Kong DGPS Correction Service

4. By 2025, the infrastructure of the DGPS correction service will be nearing the end of its design life. Given the high maintenance costs and the increased accuracy and integrity of other GNSS positioning technologies, it is the global trend of the major ports of the world towards decommissioning ground-based DGPS correction broadcasting services. In light of this, the Hydrographic Office is considering decommissioning its DGPS correction service from 1 January 2027. Users in need of position-enhanced service for improved positioning accuracy are encouraged to refer to the Appendix of this paper for alternative and complementary technologies.

Advice Sought

5. Members are invited to note the forthcoming decommission of the DGPS correction service on 1 January 2027, and provide comments to the abovementioned arrangement. In case of any enquiry on the matters, please contact Mr. KW LAM of the Hydrographic Office by phone at 2504 0733, or by email: kwlam2@mardep.gov.hk.

Hydrographic Office
Marine Department
12 September 2025

Appendix

Alternative Satellite Positioning System Correction Services

Correction Type	Service Provider	Data Transmission	Horizontal Accuracy	Cost
Differential Global Positioning System (DGPS)	Nearby DGPS Stations (e.g. Sanzaodao, China)	Medium Radio Frequency (MF)	2 ~ 3 Meters	Free of Charge
Differential Global Navigation Satellite System (D+GNSS)	Lands Department Survey and Mapping Office	NTRIP Server via Mobile Network	Meter (m) Level	Free of Charge
Network Real Time Kinematic (RTK)	Lands Department Survey and Mapping Office	NTRIP Server via Mobile Network	Centimeter (cm) Level	Free of Charge
Precise Point Positioning (PPP)	Various Commercial Service Providers	L-band via GEO Satellites	Decimeter (dm) Level	By Subscription
Satellite Based Augmentation System (SBAS)	MTSAT Satellite Augmentation System (MSAS)	L-band via GEO Satellites	2 ~ 3 Meters	Free of Charge