

- (i) The advancement and application of new maritime technologies cannot be overlooked. In this decade devoted to ocean knowledge, new maritime technologies are seen as the gateway to better understand the intricate oceanic processes and their fragile ecosystems. New maritime technologies constitute no doubt an important tool in our quest to conserve and safeguard our ocean from detrimental practices. New maritime technologies should espouse the targets of the Sustainable Development Goals and aim at greener applications.
- (ii) Geophysical instruments including echo-sounders, side-scan sonars and magnetometers are traditionally used for hydrographic surveys and identifying geological features on the seafloor. They may however also be used in conjunction with remotely operated vehicles for the location of shipwrecks and they allow for non-intrusive access and minimum site disturbance. While such specialized instruments serve multiple purposes, there are significant costs associated with their purchase and maintenance as well as all relevant training for their operation.
- (iii) Correspondingly, the exploration and sustainable exploitation of deep-sea mineral resources is highly technology driven and the infrastructure and niche knowledge required to assess the potential for such endeavours, while ensuring marine environmental protection, remains a challenge for Small Island Developing States. Regional and international collaboration for supporting ocean science in developing countries, specifically in relation to exploration, monitoring and observation in support of marine protection, ocean weather forecasting, climate change and maritime surveillance should therefore be encouraged.
- (iv) Further to the acquisition of appropriate equipment and software to energize ocean science, an extensive amount of data then needs to be processed. Although Geographical Information System (GIS) have been commonly used for the management and analysis of marine data, focus is now being drawn to geoportals for management, analysis and sharing of information to users via internet. A geoportal, which consists of a web portal (front-end) and database servers (back-end), are designed using standards (e.g Open Geospatial Consortium standards) so that geographic information and associated geographic services are easily searchable and accessible. Currently there are open-source and commercial system available for the setting up of a marine spatial data infrastructure (MSDI). Day-to-day support and maintenance of the system is paramount to allow uninterrupted access to a geoportal and is quite challenging as it requires specialised information technology (IT) professionals.
- (v) In summary, this Office is of the view that access and use of new maritime technologies should be encouraged among coastal States and special attention is to be provided to States with vast maritime zones expanse to foster sustainable development.