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| **Action** | **Description** |
| Product Specification number | S-126 |
| Title | Marine Physical Environment |
| Abstract | The Marine Physical Environment Product Specification provides historical information on the climate of an area, specifically the weather conditions (temperature, pressure, humidity, etc.) or oceanic phenomenon (currents, sea levels, water characteristics, etc.), of a region.  Functionally, it is expected to aid in the identification of landmarks, entrances, hazards, and points of interest along a marked path – enriching the visuals shown on the nautical chart, as well as to help in decision making on how (and when) best to approach the desired port.  The product specification contains the information used to understand both the dynamic environmental conditions that surround the mariner but also descriptions of the environment that cannot be rendered on a 2D chart without cognitive overload from symbols and chart clutter. It is also intended to aid the user in filtering and presenting the data only when necessary.  The primary users would be the ship itself and the shipping company to use historical data for voyage planning (route, navigation safety, etc.) and to familiarize themselves with an area before entry. Secondary users would be academia and other researchers.  The expected functionality would be Route Planning Mode (planning) use. |
| Product Specification Scope | The overall scope of the specification (at the historical level) can be two-fold   1. Wide area—Covers ocean basin or other geographic feature. 2. Small area—Covers individual ports. |
| Justification | The Marine Physical Environment Product Specification provides historical information on the climate of an area, specifically the weather conditions or oceanic phenomenon of a region.  Within the Marine Physical Environment there are the following categories:  1. Water and weather related descriptions and warnings based on historical information  2. Physical descriptions of the coast, approach, seabed, landmarks, natural features and points of interest. |
| Specification Interoperability | Statistic surface current data and S-111 work in conjunction with one another to help expand the situational awareness of the physical dynamics of the water in a modeled area. Textual descriptions support where models are not available. Similarities apply to the S-104 data.  An interoperability with S-124 (attribute Category of Physical condition) is possible.  Weather descriptions could add value to the S-412, S-413 and S-414 data.  Physical descriptions of the land/sub-water/natural features/cultural would interact with S-101 ENC features and areas. |
| S-98 Applicability | Applicable to S-98 (Yes or No ) |
| Cooperation with other HSSC WGs | The following WGs could be useful in modelling historical data  TWCWG  S-101 PT  S-102 PT  WMO  JCOMM |
| Budget | 65,000 – 75,000 € in total.  40,000,-€ are preparation work belonging to NIPWG  25,000 – 35,000 € are sufficient for the pure product specification development. |
| Schedule | Based on state of currents development  2020 NIPWG starts researches, data model, etc.  2024 Product Specification development starts  2026 Product Specification version 1 ready and goes into 2/2007 circle |