

17<sup>th</sup> CHRIS MEETING  
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**ENC PRODUCTION AND DISTRIBUTION STATUS**

**PORTUGAL**

The Portuguese Instituto Hidrográfico (IHPT) has during the last year continued the production of ENC, bearing in mind the target date of 2008 to complete the ENC coverage for the Portuguese waters.

The strategic plan of ENC production was established with the purpose of satisfying, in a faster way, the most important needs for the maritime navigation in the whole extension of the Portuguese coast, and they take in account the traffic of cargo and passenger ships that pass near the Portuguese coast and that way they assure the essential maritime transport to the Portuguese and European economy. For that purpose, maximum priority was given to the production of coastal ENC (compilation scale between 90 00 and 349 999) that collect the whole coast of Continental Portugal, in an area that is about 60 nautical miles of the coast line. Concluded the coverage of the coastal waters, it was proceeded with the coverage of the main harbours (Lisboa, Leixões, Setúbal and Sines). Following this and assisting the importance of the maritime transportation for the Madeira and Açores Archipelagos, as well as the extension of the Portuguese Exclusive Economic Zone (EEZ), the production of ENC from those archipelagos was initiate, allowing to any ship that crosses that waters, navigate along the coast or demand any one of these harbours with safety and efficiency. All ENC are updated biweekly.

IHPT has defined that Quality Control/Quality Assurance (QC/QA) of their ENC should be made using the programs included in the tools used for the ENC production, and also with other independent programs. As final phase of this process, someone outside the production area should make an external audit to the ENC. Face to that, the first step in this process is run *CARIS Hydrographic Object Manager* (HOM) from *USL*, and *ENCAnalyzer* from *SevenCs*. In a second phase, the QC/QA should be made by another software, independent of the production process, and in that case, the choice was *dKart Inspector*, from *HydroService AS*. It interests now that ENC is verified in the environment that they will be used, the ECDIS system and although they are verified by an external entity to the production area. Two software of certified ECDIS systems, *Navi Sailor 2400 ECDIS* from *TRANSAS* and *ECPINS* from *Offshore Systems*, are used for that purpose.

For the commercialization and distribution of ENC, IHPT decided to work with the regional coordinating centre headquartered in England and that operates the *International Centre for Electronic Navigational Charts* (IC-ENC). This coordinating centre markets and distributes ENC produced by several hydrographic services.

IHPT continues to test and implementing HPD (Hydrographic Production Database) with the goal to produce both ENC and Paper Charts from source data. The first ENC entirely produced by HPD will be ready until the end of the current year.

The current status of ENC production is shown in the table bellow:

USAGE BAND	ENC PLANNED	ENC PRODUCED	% ENC Coverage
Overview	1	1	100
General	3	3	100
Coastal	11	10	91
Approach	21	10	47
Harbour	62	21	34
			46

The ENC Coverage of Portuguese cells is presented in the following image:

