



Hydrographic Services and Standards Committee

HSSC5-INF7

Australia

Future demand for paper charts

Current distribution arrangements

- ✦ Major agencies outside Australia
 - international shipping
- ✦ Major agencies inside Australia
 - international shipping
 - national commercial shipping (regulated)
 - recreational (unregulated)
- ✦ Local agencies inside Australia –
 - recreational (unregulated)



Assumptions and information – international shipping

- ✦ will adopt ECDIS / ENC as primary / backup
- ✦ Paper charts (in some form) will remain available and endorsed
- ✦ Some may choose to carry a small folio of paper (overview) charts as well



Assumptions and information – national commercial shipping

- ✦ Must use official charts
- ✦ Likely to adopt ECS / ENC as primary
- ✦ Paper charts (in some form) will remain available and endorsed
- ✦ Convenience of electronic updates preferred
- ✦ Operate locally, less need to carry a small folio of paper (overview) charts as well



Assumptions and information – recreational

- ✦ Have been able to use various forms of electronic and paper charts for 15+ years
- ✦ Paper chart demand is therefore largely stable
- ✦ Most navigation relies upon GNSS or “look out the window”



	2011-12 Paper Chart demand	Projected change	Residual demand (highest)	Residual demand (lowest)
International shipping via international agents	98,119 *	Shift to ECDIS / ENC, retain or not retain emergency folio of paper charts	20,860	Nil
International shipping via national agents	11,625	Shift to ECDIS / ENC, retain or not retain emergency folio of paper charts	2,471	Nil
National commercial shipping via national agents	17,437	50% or 80% shift to ECDIS / ENC	8,718	3,487
Navy	24,921 **	Shift to ECDIS / ENC, retain emergency folio of paper charts	6,728	6728
Recreational vessels via national and local agents	32,106	Stable, no change	32,106	32,106
Total	184,208		70,883	42,321
Percentage of current demand	100%		38%	23%



Analysis and discussion

- ✦ **Update regime.** Given that the vast majority of users beyond 2018-2020 will be recreational, what effect could this, or should this have on update regimes for paper charts and the alignment with update services for ENC?



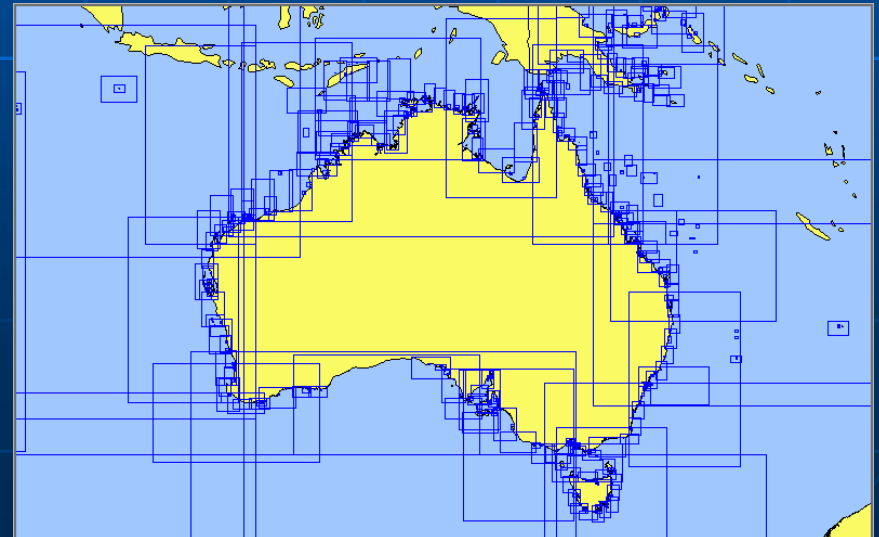
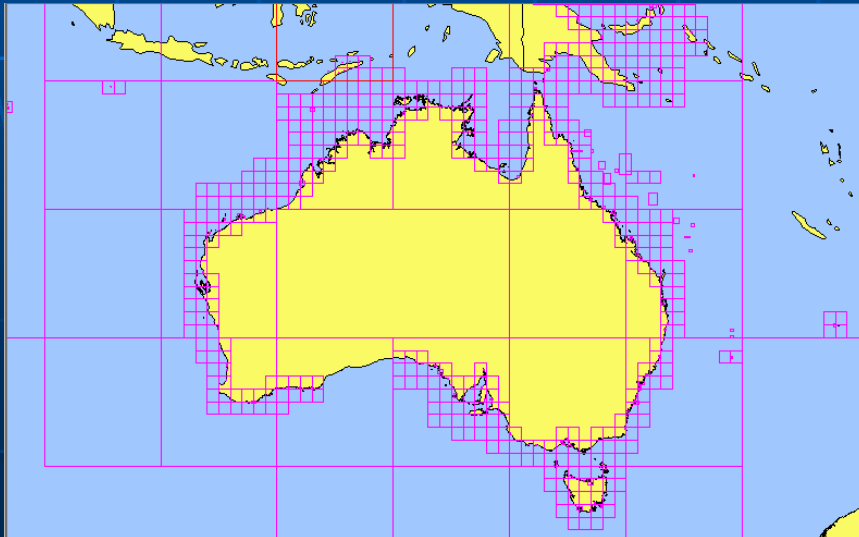
Analysis and discussion

- ✦ **Chart Schemes.** Given that the vast majority of users beyond 2018-2020 will be recreational, or carrying charts for emergency use only, will this be an opportunity for Member States to reduce or refine the number of paper charts in their schema?



Analysis and discussion

- ✦ **Basic concepts.** Does the strong trend to satellite based positioning and away from terrestrial fixing mean overlaps between adjoining charts will no longer be required?



Analysis and discussion

- ✦ **Chart specifications.** Does the projected shift heavily in favour of ENC warrant or present opportunities for revisions to symbology on and specifications for paper charts?



Analysis and discussion

- ✦ **Chart specifications.** Should international guidelines be developed to meet these new circumstances to drive consistency, or should these evolve in isolation?



Action requested of HSSC

- ✦ Consider and discuss this paper.
- ✦ Note that while the specific predictions may not be directly transferable to other Member States, the overall trend is likely to affect most Member States to a generally similar degree.

