

MARCDAT-II

Abstract to be considered for the topic 'developing gridded data sets: combining/reconciling observations'

The use of GIS in reconstructing old ship routes

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In 2003 the EU project CLIWOC was successfully completed with the delivery of an impressive final report and an even more impressive data set. CLIWOC contains data from old ship logbooks (1750-1854) that needed a range of corrections and adjustments before they could be used for further research. One of the problems was the so-called 'shifting prime meridian'. The current prime meridian (Greenwich) was only accepted internationally in 1884, during an international conference in Washington. Before that time, a wide range of alternatives were used. In CLIWOC not less than 646 different prime meridians were identified. Another problem was the inaccuracy of the determination of the ships' positions. Although sailing around the globe, the precision of the ships' navigation was not high. Many ships travelled along the coast, to keep in touch with the land, but increasingly more ships went on the high seas without any point of reference along their route at all. Small daily inaccuracies in estimating their positions increased the error towards the end of their voyage. Not knowing exactly where they were, captains continued on their method of dead reckoning, even if they might end over land on their navigational charts. During the CLIWOC project, a methodology was developed to deal with these problems, making use of GIS software (i.e. ArcMap). This methodology will be presented at the workshop.