



## **POTENTIAL VALUE OF MARINE CLIMATOLOGICAL DATA FROM CATALAN SHIPS' LOG-BOOKS (18TH - 20TH CENTURIES)**

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In order to obtain more information about past climatic variability, new palaeoclimatic techniques and data sources are needed. Marine meteorological data from documentary sources, i.e. ships' log-books, is a recognized proxy tool for climatic reconstructions for different reasons: (1) they provide information about remote areas of our planet, the oceans and (2) they have a good temporal resolution, daily (or even hourly). Here we analyse the potential utility of the information provided by this source during the golden period of Catalan trade with America (eighteenth to twentieth centuries). In contrast with English or Spanish sources, as a consequence of the historical context, most of the Catalan log-books are in private collections. They are scattered throughout several local archives and museums. Nevertheless, about twenty archives containing many ships' log-books (so-called diarios de navegación or cuadernos de bitácora) have been detected and analysed.

In most cases, the itineraries follow a similar structure, in close relationship with the Atlantic commercial routes. The most frequent routes departed from Catalan ports in the direction of South America, in transit to Caribbean or North American ports before returning to the Iberian Peninsula. Less frequent routes were those covering the Pacific coast of America (Chile and Mexico) and the Philippines. The temporal coverage of these type of sources mainly encompasses the period 1780 to the beginning of the 20th century, the 1830-1860 period being the most fruitful and with the most log-books recovered. The climatological contents of this proxy source are well-known: non-instrumental records for wind force and direction, sky appearance, state of the weather and sea conditions. However, some ships carried instruments, generating interesting data series of pressure, air temperature and others.

The combination of the information provided by these new sources with other recent studies using naval log-books, such as those of the CLIWOC project, may improve our knowledge of the climatic variability over the Atlantic during the last 250 years.