

The history and archaeology of shipping in a shifting coastal environment, told through the Lloyds Register Foundation's online Heritage and Education Centre archives.

The Lloyds Register Foundation (LRF) archives provide an invaluable resource for the work of CITIZAN. This poster summarises an online exhibition launched alongside COP26 in November 2021, which explored the ways LRF's online Heritage and Education Centre can aid CITIZAN's understandings of coastal environmental change. For the full exhibition please scan the QR code.



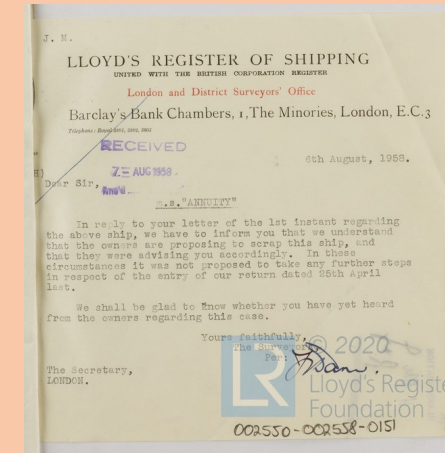
The Global



Peri, a Salcombe Fruit Schooner entering the Mersey in 1836 (Salcombe Maritime Museum)

Climate change as we're experiencing it today is the result of human actions. A steady increase in the release of gases harmful to the earth's atmosphere can be traced to the industrial revolution, when innovation in technology led to the intensification of production and trade in Western economies. It's possible to track this transition through the technological developments in shipping, as shown in the LRF Heritage and Education Centre archives. As well as providing details of the shift from sail to steam in ship construction, we can also track the history of an increasingly globalised economy, for example through the story of Salcombe's fruit schooners, which were built to transport exotic goods between 1825-1835.

The Local



Records showing the fate of Annuity, which was built in Wivenhoe on the river Colne, before it silted up in the late 20th century (LRF HEC)

The LRF Heritage and Education Centre can enrich our understanding of environmental changes in specific coastal localities. In CITIZAN's Mersea Island Discovery Programme sedimentation of the Colne Estuary can be linked to the activity of shipping, which rapidly declined in the late 20th century. By revealing the history of ship building yards in settlements like Brightlingsea and Wivenhoe, as well as through the life of specific vessels, we can evidence this decline and show the relationship between industry and the navigability of the river Colne.

Storms



The vulnerable remains of Bradda, wrecked in bad weather off Liverpool Bay in 1936 (Martin Griffiths)

As weather systems are affected by the warming of the earth's climate, they are becoming more frequent and more extreme. As well as concerning sea safety, a raised instance in severe storms is revealing and damaging historic wrecks on foreshores and seabeds. This is clearly evident through the intertidal archaeology of CITIZAN's Liverpool Bay Discovery Programme. Here the LRF Heritage and Education Centre records have been able to substantiate the fate of a number of wrecked vessels, as well as providing details of their conditions of sinking, through the Casualty Returns Index.

Biodiversity

Vittorio Z collided and sank in 1955, it was later studied for its role in creating an artificial benthic reef and supporting aquatic life (Lengkeek 2013) (LRF HEC)

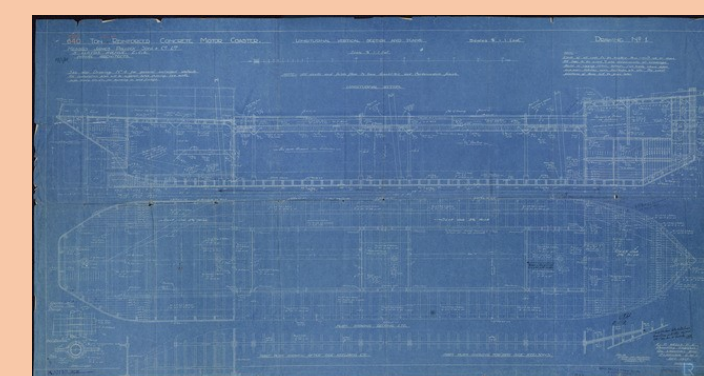
While wrecks continue to be affected by coastal change in various ways, they also make their own contribution to shaping change. This ranges from their place as biodiversity hubs, providing shelters for ecological habitat, to the negative impact they can have in encouraging certain invasive species or occasionally releasing pollutants. The LRF Heritage and Education Centre records have the potential to enhance studies into the impact of wrecks on the environment, particularly given this impact is dependent on the nature of their cargo, material of construction, age and circumstance of sinking.

Communities

Casualty returns listings showing Myra and Gilead, two Ice Barques lost in the great storm of 1901 (LRF HEC)

Coastal change is not confined to the foreshore. As resources and accessibility in coastal areas change, so do the human activities that go with them. Similarly the economic viability of certain coastal industries alter according to external influences, shaping the lives of communities that have built up around them. Decline in local maritime industries is often visible through records of the ships that facilitated them. An example can be found in CITIZAN's Humberside Discovery Programme, where Ice Barques operating out of Grimsby and Hull went rapidly out of use in the early 20th Century, due to a decline in the importation of ice from Norway.

Indicators



Plans of Molliette, a hulked barge off Mersea Island. Until the 1970's it was exposed on very low tides and provided a visual sea level indicator for locals (LRF HEC)

As sea levels rise and the foreshore erodes, archaeological features in the intertidal zone can help CITIZAN to map changes by providing sea level indicators. *Sea level indicators* are pieces of information that help us gauge where previous tidelines were situated at specific historical moments, as well as helping us understand what the foreshore looked like and how it was used. Maritime archaeology can provide useful indicators for such change, as old quays lie far into the intertidal zone or wrecks that were once revealed at low tide are no longer visible. Here the LRF Heritage and Education Centre provides a tool of understanding, enhancing our interpretations of archaeological sea level indicators.

Lengkeek, W, Coolen, JWP, Gittenberger, A, Schrieken, N 2013 'Ecological Relevance of Shipwrecks in the North Sea', *Nederlandse Faunistische Mededelingen*, 41, pp. 49-57.