

The tale of the river Scheldt as told by historic maps – Building an RShiny ‘side-by-side viewer’ to visualize 16th-20th century maps

Rondelez Jelle, Dillen Nick and Tyberghein Lennert

Flanders Marine Institute (VLIZ), InnovOcean site, Wandelaarkaai 7, 8400 Oostende, Belgium
E-mail: jelle.rondelez@vliz.be

The river Scheldt has always been a prominent and ever-shifting feature in the topography of its surrounding landscape, and holds a rich history of gradual changes and forced alterations. Human hand has played their part in these alterations, ever since Roman settlements, as mankind always acknowledged the river’s economic, social and strategic values.

To gain insight into the changes over the last few centuries, the near-modern history of the river, historic maps have proven to be an ideal medium. Especially because the Scheldt passes through Flanders and The Netherlands, where the art of cartography became of a leading standard from the 16th century onwards. Therefore, to fully take advantage of this medium, Flanders Marine Institute has created the ‘Side-by-Side Map Viewer’. This application, made using the Shiny package from R studio, lets users access and visualize 16th to 20th century maps directly alongside modern-day maps. By doing so, the app allows direct comparison of the historic features of the Scheldt and its surrounding regions, with the present-day situation visible on ESRI or OpenStreetMap base maps.

At this time, the application contains 128 historic maps, obtained through collaboration with multiple partners. Additionally, the user can choose from three different modern-day images to compare with. All maps are accompanied by metadata information as well as links to the source, the meta-metadata and an option to download the map as a GeoTIFF. The collection of maps will be updated and expanded in the future, both with material from current partners as well as new sources.

The app is developed for, featured by, and freely accessible via the ScheldeMonitor-website (www.scheldemonitor.org). ScheldeMonitor is a knowledge and information portal, operating since 2004, that was set up for research and monitoring in or concerning the Scheldt. It offers information (e.g. literature, projects), data (e.g. datasets, measurements), and data products (e.g. maps, graphs).

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