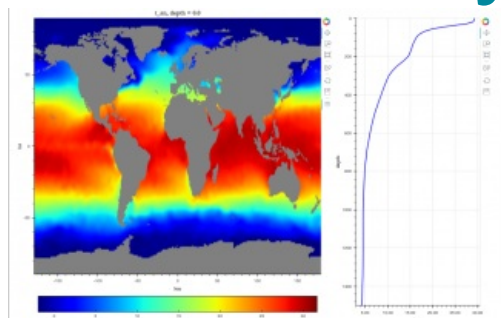# Open-source Software for the Environmental Data Science Community

Cohort company SEA has developed innovative data visualisation software and made it available as open-source for the environmental data science community. The software, developed by SEA's Research and Technical Support (RTS) division, enables users to access environmental data from servers over the internet and view it in different ways. The interactive data viewing enables rapid analysis and understanding of the features of complex, high-dimensionality data.

RTS has used it for analysing oceanographic data variability in order to better understand military sonar performance in complex underwater environments. RTS has engaged with the Defence Science and Technology Laboratory (Dstl) and Royal Navy staff to present the software capabilities and discuss uses.

Software as a Service (SAAS)

The web application software architecture separates data access and manipulation from data visualisation, allowing devices running only a web browser to rapidly interact with data handled on a server or desktop PC over a network. Benefits of this approach include the potential for powerful data visualisation and interaction on low-powered mobile devices.

The UK-based company, which provides a wide range of sonar services to the defence sector, has self-funded the development and believes that the innovative software will be of benefit to environmental data scientists who need simple tools for interacting with complex data.

Multiple Use

Marcus Donnelly, a principal consultant within SEA's RTS division, explained they originally developed the software to support their work in oceanography and sonar performance modelling and realised that it could be useful for other domains. SEA is using a lot of open-source software and data in its research, ready to give something back to the wider community. They thus facilitate people to find new uses for the software and contribute their own modifications and enhancements.

Python 3 users can install the software directly from the Python Package Index (pip install bokodapviewer), and the source code is available from [SEA's public repository](#).