

# The end of reporting deadlines? Optimising dataflow by harvesting – a case study using open source REST-server technology from SMHI in corporation with ICES

**Patrik Strömberg**, SMHI (Sweden), patrik.stromberg@smhi.se  
**Arnold Andreasson**, SMHI (Sweden), arnold.andreasson@smhi.se  
**Nils Nexelius**, SMHI (Sweden), nils.nexelius@smhi.se

The scientist will always need access to the highest quality, largest collection of, and most recent version of the data. Advances in technology can meet this increasing demand via technical solutions. In order to ensure these demands are met, one way forward is to grant open access, and using machine to machine interfaces. **SMHI have developed methods and systems to handle complex marine biogeochemical and abundance types of datasets.** The systems are **sharkweb.smhi.se** (human interface) and **SHARKdata.se** (machine interface). The data on SHARKdata.se are currently being harvested by portals such as EMODNet Biology (and henceforth to EUROBIS/OBIS), and Swedish Lifewatch systems. There is also an ongoing pilot study in cooperation with the ICES data centre. The aim of the pilot is to investigate the possibility for the national submissions of data to be automated. This will: I. reduce the amount of manual labour, II. ensure the most recent version in the ICES DOME (Marine Environment) database, III) allow the quality checks performed by ICES to be called by the SHARKdata.se system directly, which collectively leads to IV. higher quality of the data. All technology used is open source (the MIT license) and hence for anyone to download and build their own (“SHARKdata”) system. For the scientist it is possible to use for example R or Python to set up any type of analysis using the most up to date data from the Swedish Oceanographic data center. Examples are published on the server SHARKdata.se