Policy makers are increasingly in need of accurate and timely information in order to meet reporting requirements linked to environmental legislation. This paper explores the extent to which Earth Observation (EO) based services, addressed by the joint ESA and EC initiative “Global Monitoring for Environment and Security (GMES)”, can contribute to meeting the special reporting requirements of the major European Union water policy, namely the Water Framework Directive (WFD).

The implementation of the WFD managed through river basin management plans will closely rely on monitoring programmes. Therefore the WFD introduces a new approach to data and information collection and reporting. The WFD presents an ideal opportunity for the development of an integrated data management system for water as well as requiring new monitoring techniques like Earth Observation (EO) to generate the requested data.

Knowing the possibilities of EO for the implementation of the WFD, a project was established within the ESA GMES Services Elements
(GSE) focusing on water quality, water shortage and indicators of the water condition. This paper will introduce the SAGE (Service for the Provision of Advanced Geo-Information on Environmental Pressure and State) project that provides information products based on data collected by Earth Observation satellites.

The paper is available for download at sciencedirect at the price of $30.00.

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