



2016-IPR-D-000-7707

**Developing Hydrological Products from
the Global Surface Water Dataset**

Position for:

Trainee

Short description of activity:

As the science and knowledge service of the Commission, the mission of DG Joint Research Centre is to support EU policies with independent evidence throughout the whole policy cycle.

The JRC is located in 5 Member States (Belgium, Germany, Italy, the Netherlands and Spain). Further information is available at: <http://www.jrc.ec.europa.eu>

The objective is to contribute to the development and testing of additional products from the Global Surface Water dataset that has been created at JRC using Google Earth Engine, and test and apply these products in water resources models used in JRC.

From the 30-year Global Surface Water Dataset, products can be developed that could be very beneficial to improve global water resources modelling, such as flood frequency maps and maps of water volume fluctuations. Reservoir and lake water volumes and their fluctuations are not available from publically available (global) datasets. Using elevation data (SRTM or better) and the Global Surface Water dataset, it will be attempted to create a volumetric Global Water database. Validation using a small subset of known reservoirs and lakes is envisaged. Envisaged products of the traineeship are a report, a volumetric dataset, a toolbox, and a scientific paper submitted to a peer reviewed journal.

Qualifications:

Essential:

The ideal candidate should have a University degree in a field related to Earth and/or environmental sciences, including but not limited to one or more of the following areas: hydrology, meteorology, physical and/or socio-economic geography, environmental

	<p>engineering, and natural hazards.</p> <p>Good oral and written communication skills in English (B2 level)</p> <p><u>Advantage:</u> A good knowledge with large spatial datasets (Google Earth Engine), remote sensing, hydrological modelling, as well as scripting and programming skills (Python, R), are an advantage.</p> <p>The successful applicant is expected to be creative and motivated, and be able to work independently.</p> <p><u>For general eligibility requirements, please read the rules governing the traineeship scheme of the JRC:</u></p> <p>https://ec.europa.eu/jrc/en/working-with-us/jobs/temporary-positions/jrc-trainees</p>
Directorate Unit Action	<p>Sustainable Resources Water & Marine Resources Unit</p> <p>Further information: http://water.jrc.ec.europa.eu/waterportal</p>
Indicative duration	5 months
Preferred starting date	As soon as possible
JRC Site	Ispra
Country	Italy
<u>JRC contact details</u>	<p>For any technical problems with your application, please contact: JRC-ESRA@ec.europa.eu</p>