

# Water Exploitation Index plus (WEI+) at the river basin scale (summer 2015), Apr. 2019

This vector dataset presents the Water Exploitation Index plus (WEI+) for European river basin districts for Q3 2015 (Jul, Aug, Sep).

The Water Exploitation Index plus (WEI+) aims to illustrate pressure on renewable water resources of a defined territory (river basin, sub-basin etc.) in a given period (e.g. seasonal, annual) as a consequence of water use for human activities. Values above 20 % indicate that water resources are under stress, and above 40 % indicate severe stress and a clearly unsustainable use of freshwater resources (Raskin et al., 1997). The WEI+ has been estimated as the quarterly average per river basin district, for the years 1990-2015, as defined in the European catchments and rivers network system (ECRINS).

The dataset is underpinning an earlier version of the EEA indicator assessment: <a href="https://www.eea.europa.eu/data-and-maps/indicators/use-of-freshwater-resources-2/assessment-3">https://www.eea.europa.eu/data-and-maps/indicators/use-of-freshwater-resources-2/assessment-3</a>

### **Simple**

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### Point of contact

No information provided.

to information provided.				
Maintenance and update frequency	Not planned			
GEMET - INSPIRE themes, version 1.0	Area management/restriction/regulation zones and reporting units			
Keywords				
Keywords				
GEMET	<ul> <li>water resource</li> <li>drought</li> <li>climate change adaptation</li> <li>climate change impact</li> <li>water use</li> <li>freshwater</li> <li>water scarcity</li> <li>climate</li> </ul>			
Continents, countries, sea regions of the world.	Kosovo (UNSCR 1244/99)     Switzerland     Bosnia and Herzegovina     Norway     Albania     North Macedonia			
	Serbia			

	Iceland
	• EU28 (2013-2020)
	Montenegro
Spatial scope	European
EEA topics	• Water
	Climate adaptation

### Resource constraints

No information provided.

Access constraints	Other restrictions
Other constraints	no limitations to public access
Use constraints	Other restrictions
Other constraints	EEA standard re-use policy: unless otherwise indicated, re-use of content on the EEA website for commercial or non-commercial purposes is permitted free of charge, provided that the source is acknowledged ( <a href="http://www.eea.europa.eu/legal/copyright">http://www.eea.europa.eu/legal/copyright</a> ).  Copyright holder: European Environment Agency (EEA), Royal Netherlands Meteorological Institute (KNMI), Eurostat, JRC.
Aggregate Datasetindentifier	013670b2-fc08-4b38-a994-f1a97c87d87d
Association Type	Cross reference
Initiative Type	Collection
Spatial representation type	Vector
Denominator	250000
Language of dataset	English
Topic category	Environment     Climatology, meteorology, atmosphere
Begin date	2015-07-01
End date	2015-09-30





Coordinate reference system identifier	EPSG:3035		
Distribution format	• SHP()		
OnLine resource	Protocol	Linkage	Name
	EEA:FOLDERPATH	https://sdi.eea.europa.eu/webdav/datastore/public /eea_v_3035_250_k_wei-river-basin_p_2015_v01_r00/	
	WWW:LINK-1.0-httplink	https://climate-adapt.eea.europa.eu/knowledge/tools/urban-adaptation	
	WWW:URL	https://sdi.eea.europa.eu/data/013670b2-fc08-4b38-a994- f1a97c87d87d	Direct download
	OGC:WMS	https://climate.discomap.eea.europa.eu/arcgis/services/UAMV/ /WaterExploitationIndexPlus 2015 Q3/MapServer /WMSServer?request=GetCapabilities&service=WMS	
	ESRI:REST	https://climate.discomap.eea.europa.eu/arcgis/rest/services/ /UAMV/WaterExploitationIndexPlus_2015_Q3/MapServer	
Hierarchy level	Dataset		
Conformance result			
Date (Publication)			
Explanation	See the referenced specification		

#### Statement

The Water Exploitation Index plus (WEI+) has been estimated as the quarterly average per river basin district, for the years 1990-2015, as defined in the European catchments and rivers network system (ECRINS). This dataset only represents the values for Q3 2015 (july, august and september).

The ECRINS delineation of river basin districts differs slightly from that defined by Member States under the Water Framework Directive (WFD). The Ecrins delineation is used instead of WFD because it contains geo-spatial information on Europe's hydrographical systems with full topological information enabling flow estimation between upstream and downstream basins, as well as integration of economic data collected at NUTS or country level.

This dataset provides a European overview of water stress conditions. The information presented may deviate from that available in the EEA member countries and cooperating countries, particularly for those countries where data availability is insufficient in the WISE SoE - Water quantity database (WISE 3). Data on hydro-climatic variables were aggregated from a daily to a monthly scale. Water abstraction data were taken from WISE 3 (annual resolution at the national scale, <a href="https://www.eea.europa.eu/data-and-maps/data/waterbase-water-quantity-8/">https://www.eea.europa.eu/data-and-maps/data/waterbase-water-quantity-8/</a>), although there are large gaps in the time series. Therefore, intensive gap filling was performed on water abstraction data and proxies were used to disaggregate the data from the national to the sub-basin scale. Information on water use was mainly modelled on the UWWTP capacities (<a href="https://www.eea.europa.eu/data-and-maps/data/waterbase-uwwtd-urban-waste-water-treatment-directive-4/">https://www.eea.europa.eu/data-and-maps/data/waterbase-uwwtd-urban-waste-water-treatment-directive-4/</a>), the E-PRTR database (<a href="https://www.eea.europa.eu/data-and-maps/data/member-states-reporting-art-7-under-the-european-pollutant-release-and-transfer-register-e-prtr-regulation-10/">https://www.eea.europa.eu/data-and-maps/data/member-states-reporting-art-7-under-the-european-pollutant-release-and-transfer-register-e-prtr-regulation-10/</a>) and the Eurostat Population change dataset (online data code [demo\_gind]) among others.

In addition to using WISE SoE – Water quantity database, a comprehensive manual data collection was performed by accessing all open sources (Eurostat <a href="https://ec.europa.eu/eurostat/web/environment/water">https://ec.europa.eu/eurostat/web/environment/water</a>, OECD, FAQ) including national statistical offices of the countries. This was done because of the temporal and spatial gaps in the data on water abstraction. Moreover, a large part of the

stream flow data from LISFLOOD has also been substantially updated by the European Commission, Directorate-General Joint Research Centre ( <a href="http://publications.jrc.ec.europa.eu/repository/bitstream/JRC78917/lisflood\_2013\_online.pdf">http://publications.jrc.ec.europa.eu/repository/bitstream/JRC78917/lisflood\_2013\_online.pdf</a>). Similarly, a comprehensive update with climatic parameters has been performed by the EEA based on the E-OBS gridded dataset provided by the Royal Netherlands Meteorological Institute KNMI ( <a href="http://www.ecad.eu/download/ensembles/download.php">http://www.ecad.eu/download/ensembles/download.php</a>).

More information about the WEI+ for river basin districts (1990-2015) is available on:  $\frac{\text{https://www.eea.europa.eu/data-and-maps}}{\text{/explore-interactive-maps/water-exploitation-index-for-river-2/}}.$ 

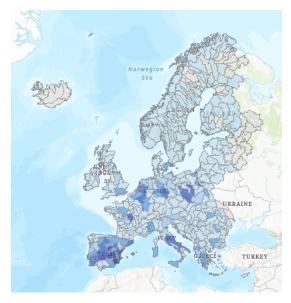
Source

• European catchments and Rivers network system (Ecrins) - version 1, Jun. 2012

### Metadata

File identifier	013670b2-fc08-4b38-a994-f1a97c87d87d XML			
Metadata language	English			
Character set	UTF8			
Hierarchy level	Dataset			
Date stamp	2021-09-30T08:17:46.865Z			
Metadata standard name	ISO 19115/19139			
Metadata standard version	1.0			
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	European Environment Agency		sdi@eea. europa.eu	Point of contact

### **Overviews**



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