

24.31 Dissuasive cost of water abstraction

Project Name: NAIAD (Grant Agreement no. 730497)

Author/s and affiliations: Guillaume Piton¹, Jean-Marc Tacnet¹, Beatriz Mayor², Laura Vay², Marisol Manzano³, Virginia Robles³, Mar García-Alcaraz³, Javier Calatrava⁴, Raffaele Giordano⁵, Miguel Llorente⁶, Africa de la Hera⁶, Javier Heredida⁶, Laura Basco⁷, Marta Faneca⁷, Tiaravanni Hermawan⁷, Elena Lopez-Gunn²

¹ Univ. Grenoble Alpes, INRAE, ETNA, Grenoble, France

² I-CATALIST S.L., C/ Borni, 20, 28232 Las Rozas, Madrid, Spain

³ UPTC, Department of Mining and Civil Engineering, Technical University of Cartagena, 30202 Cartagena, Spain

⁴ UPTC, Department of Business Economics, Technical University of Cartagena, 30202 Cartagena, Spain

⁵ CNR-IRSA, National Research Council – Water Research Institute, Bari, Italy

⁶ IGME, Instituto Geológico y Minero de España (IGME)/Geological Survey of Spain, Ríos Rosas 23, 28003 Madrid, Spain

⁷ Deltares, Boussinesqweg 1 2629 HV Delft, P.O. Box 177, 2600 MH Delft

Dissuasive cost of water abstraction		New Economic Opportunities and Green Jobs
Description and justification	Provides an indication of the water cost that would avoid the externalities by dissuading from non-renewable extractions from the aquifer for irrigation, with positive impacts on groundwater recovery	
Definition	Cost that avoids externalities because it will prevent non-renewable water use (EUR/m ³)	
Strengths and weaknesses		
Measurement procedure and tool	Calculation using agro-economic model	
Scale of measurement	Aquifer scale	
Data source		
Required data	Data on water abstractions and aquifer recharge, crop area and water needs, economic data on irrigation, etc.	
Data input type	Numerical, data bases	
Data collection frequency	Yearly	
Level of expertise required	Technicians	
Synergies with other indicators		

Connection with SDGs	SDG 2, 6, 12
Opportunities for participatory data collection	
Additional information	
References	NAIAD, Deliverable D6.3, DEMO Insurance Value Assessment Report. SC5-09-2016 Operationalising insurance value of ecosystems. Grant Agreement n° 730497

24.32 Average water productivity

Project Name: NAIAD – Nature insurance value: Assessment and demonstration (Grant Agreement no. 730497)

Author/s and affiliations: Guillaume Piton¹, Jean-Marc Tacnet¹, Beatriz Mayor², Laura Vay², Marisol Manzano³, Virginia Robles³, Mar García-Alcaraz³, Javier Calatrava⁴, Raffaele Giordano⁵, Miguel Llorente⁶, Africa de la Hera⁶, Javier Heredida⁶, Laura Basco⁷, Marta Faneca⁷, Tiaravanni Hermawan⁷, Elena Lopez-Gunn²

¹ Univ. Grenoble Alpes, INRAE, ETNA, Grenoble, France

² I-CATALIST S.L., C/ Borni, 20, 28232 Las Rozas, Madrid, Spain

³ UPTC, Department of Mining and Civil Engineering, Technical University of Cartagena, 30202 Cartagena, Spain

⁴ UPTC, Department of Business Economics, Technical University of Cartagena, 30202 Cartagena, Spain

⁵ CNR-IRSA, National Research Council – Water Research Institute, Bari, Italy

⁶ IGME, Instituto Geológico y Minero de España (IGME)/Geological Survey of Spain, Ríos Rosas 23, 28003 Madrid, Spain

⁷ Deltares, Boussinesqweg 1 2629 HV Delft, P.O. Box 177, 2600 MH Delft

Average water productivity		New Economic Opportunities and Green Jobs
Description and justification	Provides an indication of the economic return provided by each m ³ used in a certain sector or activity. Proxy indicator of water resources economic use efficiency	
Definition	Water productivity indicates how much economic output is produced per cubic meter of fresh water abstracted (in EUR per m ³)	
Strengths and weaknesses		
Measurement procedure and tool	Extrapolation from secondary data sources (literature review and official data)	
Scale of measurement	Aquifer scale (Medina del Campo aquifer)	