

CITIZEN SCIENCE

SDG

CONFERENCE

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Knowledge for Change: A decade  
of Citizen Science (2020–2030)  
in support of the Sustainable  
Development Goals

# A Citizen Observatory for Flood Risk Management in the Brenta-Bacchiglione Catchment

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# A Citizen Observatory for Flood Risk Management in the Brenta-Bacchiglione

*Training  
Education  
campaigns*

Students  
Civil volunteers  
Technicians

**Citizens**



communication

*Emergency/danger alerts, Floods and road practicability reports*



Social Sensors

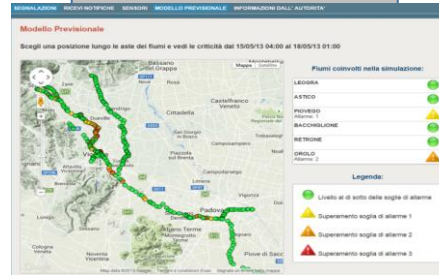
Data Assimilation

**Flood Forecasting and Decision Support System**

**Authorities**



*Data collection of real-time information on weather conditions, river levels and floodings*



Existing Monitoring network (Physical sensors)



# The Brenta-Bacchiglione CO as flood risk mitigation measure



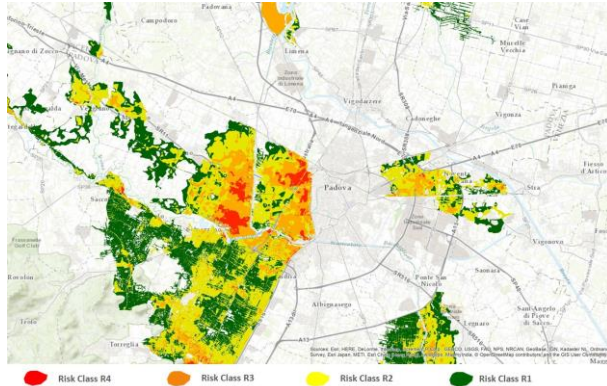
WSI pilot was adopted by the European Commission as a "good practice" example of the application of Directive 2007/60/EC



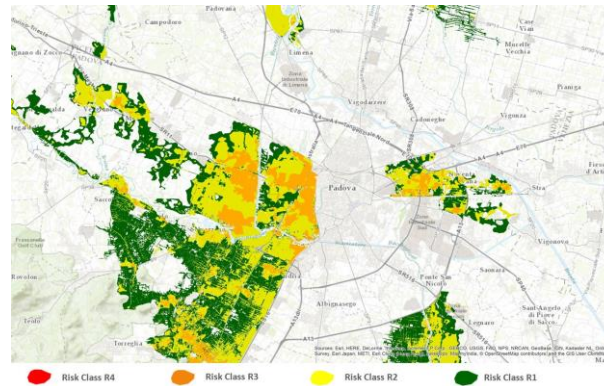
The citizen observatory was adopted as a not structural **mitigation measure** for flood risk in the **FRMP** (in accordance with the European Flood Directive 2007/60/EC)

A **cost benefit analysis** was undertaken to demonstrate the value of the Brenta-Bacchiglione CO in monetary terms: the citizen observatory is assumed to **decrease the social vulnerability of the flood risk**

Risk Map of Padua territory (RT 100 years)



Risk Map of Padua territory applying CO



Cost of the Citizen Observatory measure **5 million €** (annual benefit in terms of avoided damage: approximately **135 million €**)



# The Citizen Observatory for flood risk management mobilises action towards achieving .....



**capacity for early warning, risk reduction and risk management for national health**



**the participation of local communities in improving water management**



- ✓ **protection of the world's cultural and natural heritage**
- ✓ **reduction in the number of deaths and the number of people affected and economic losses caused by disasters, including water-related disasters**
- ✓ **increase in the number of cities with the adoption and implementation of policies aimed at mitigation and adaptation to climate change, integrated resilience to disasters**



**resilience and adaptability to climate-related risks and natural disasters**

Improvement of **education, awareness and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning**



**effective and transparent institutions at all levels**

**a responsive, inclusive, participatory decision-making process at all levels**

