



PAWA – Pilot Arno Water Accounts

System of Environmental-Economic Accounting for Water

SEEA-Water methodology in the Arno River basin

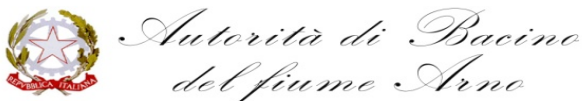
Bernardo Mazzanti
Arno River Basin Authority

Cartagena (E), 24/02/2015

Partners



ISPRA is the technical-scientific branch of the Italian Ministry of Environment. It operates within the Environmental Agencies System, composed of 20 Regional and 2 Provincial Agencies according to a federative system combining direct knowledge and experience of local environmental issues with national and European policies (incl. **EU WFD 2000/60/EC**; **EU Floods Dir. 2007/60/EC**; **WS&D Comm.**) for environmental prevention and protection.

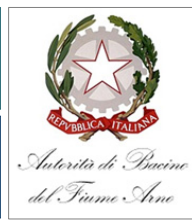


Since 1989 **ARBA** (one of the six River Basin Authorities of National Relevance) has been carrying out programming and planning activities on land protection and water resources management. In recent years, ARBA has been entitled, in accordance with the **EU WFD**, to draft the RBMP for the Northern Apennines River Basin District and to coordinate the implementation activities as regards to the **EU Floods Directive**.

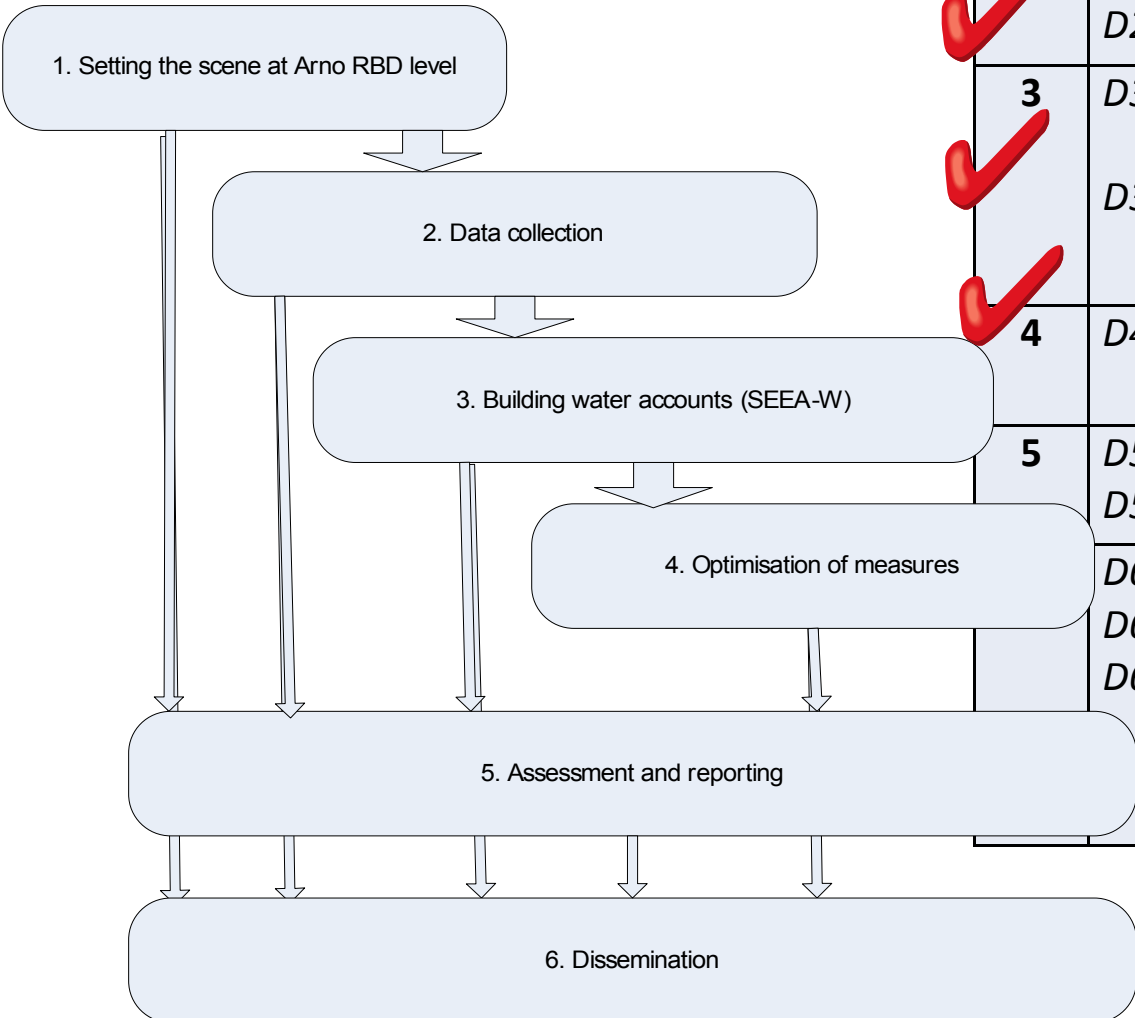


SEMIDE/EMWIS is an initiative of the Euro-Mediterranean Partnership (EUROMED) that provides a strategic tool – the only one operational nowadays – for exchanging information and knowledge in the water sector between and within the EUROMED countries. In the framework of the WGs of the Mediterranean Joint Process between the **EU Water Initiative** and the **EU WFD**, EMWIS is also working on know-how exchange for specific themes selected by the EUROMED water directors.

Workplan

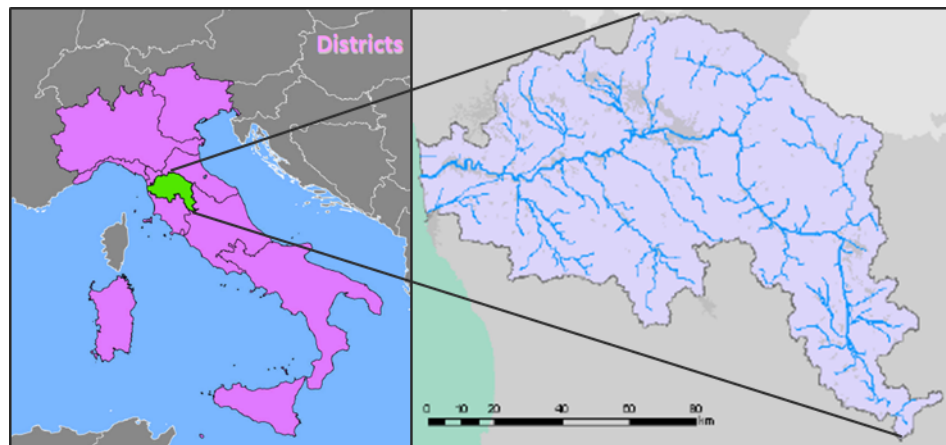


Six interconnected activities



Act.	Deliverables	When
✓ 1	D1.1 Catalogue of data sources and tools D1.2 Priorisation list of sub-basins	T0+3 T0+3
✓ 2	D2.1 Repository of data sets D2.2 Assessment of data availability	T0+6 T0+6
3	D3.1 1st draft water flow diagrams and associated SEEA-W tables D3.2 Geo-referenced database for water accounts	T0+8 T0+9
4	D4.1 Water efficient targets for future revisions Arno RBMP	T0+12
5	D5.1 Water account tables ✓ D5.2 Final report	T0+15 T0+15
	D6.1 Project leaflet D6.2 Compendium of lessons learnt D6.3 Detailed list of dissemination activities, including project presentations during events	T0+3 T0+15 T0+15

Case study



Arno River Basin:
Area: 8228 Km²
River length: 241 Km
Altitude: 0 m-1385 m
Climate: Mediterranean

Chiana: Pollution, high irrigation use
Area: 1373 km²
Precipitation: 775 mm/year
Annual avg. Temperature: 13.8 °C

Bisenzio: Pollution, high industrial use
Area: 348 km²
Precipitation: 570.7 mm/year
Annual avg. Temperature: 13.9 °C

Pisa: Salinity intrusion, aquifer exploitation
Area: 407 km²
Precipitation: 891.2 mm/year
Annual avg. Temperature: 15.9 °C

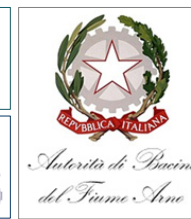


Project's goal



What	How	Main Actions
<ul style="list-style-type: none">• Improve the knowledge on water availability and its use• Support for decision making.	<ul style="list-style-type: none">• Creating a tool:<ul style="list-style-type: none">• Set of SEEA-Water tables• Water-related indicators.	<ul style="list-style-type: none">• Create data inventory table• Match data sets with SEEA-Water structure• Build water accounts from 1999 to 2013• Compute water efficiency indicators• Pre-define water saving measures• Create future scenarios

Themes



1

Data collection
& management

How to identify and select the most relevant data for water availability and demands?

2

SEEA-W tables
preparation tool

Innovative methodologies to close and verify the water balance and increase accuracy

3

SEEA-W tables
preparation tool

How to integrate water accounting in the river basin management planning

4

List of measures
& optimisation process

The usefulness for the evaluation of measures to reduce water shortage in the basin and its vulnerability to drought

5

Analysis of future
Scenarios (CC)

Water accounting to assess the vulnerability of the basin to future changes (climate, economic and demographic change)