

APPLICATION OF WATER MANAGEMENT MODELS TO MEDITERRANEAN TEMPORARY RIVERS

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Intermittent streams:

are dry **part of the year**, but contain flow when the groundwater is high enough as well as during and after a storm event.

Ephemeral streams:

contain water during and immediately after a storm event but are dry the **rest of the year**.

temporary waters

forms a major part of the catchments

about 40% of all catchments in Greece
(after Nikolaidis et al. 2004), much higher
with consideration of dry tributaries

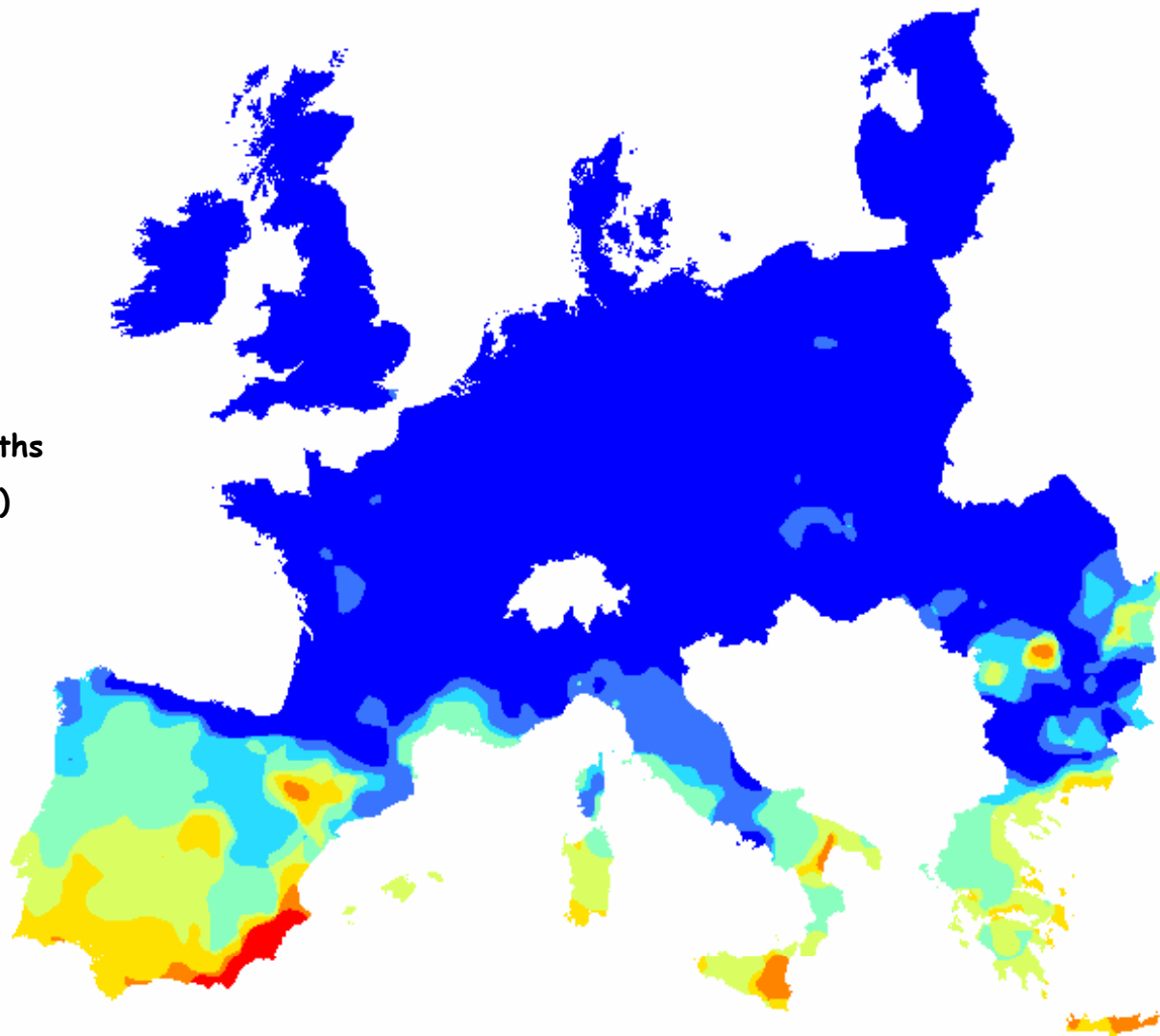
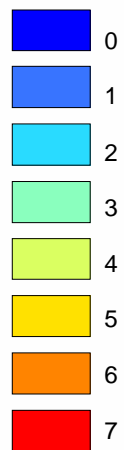
about 100% in the southern part of Sardinia

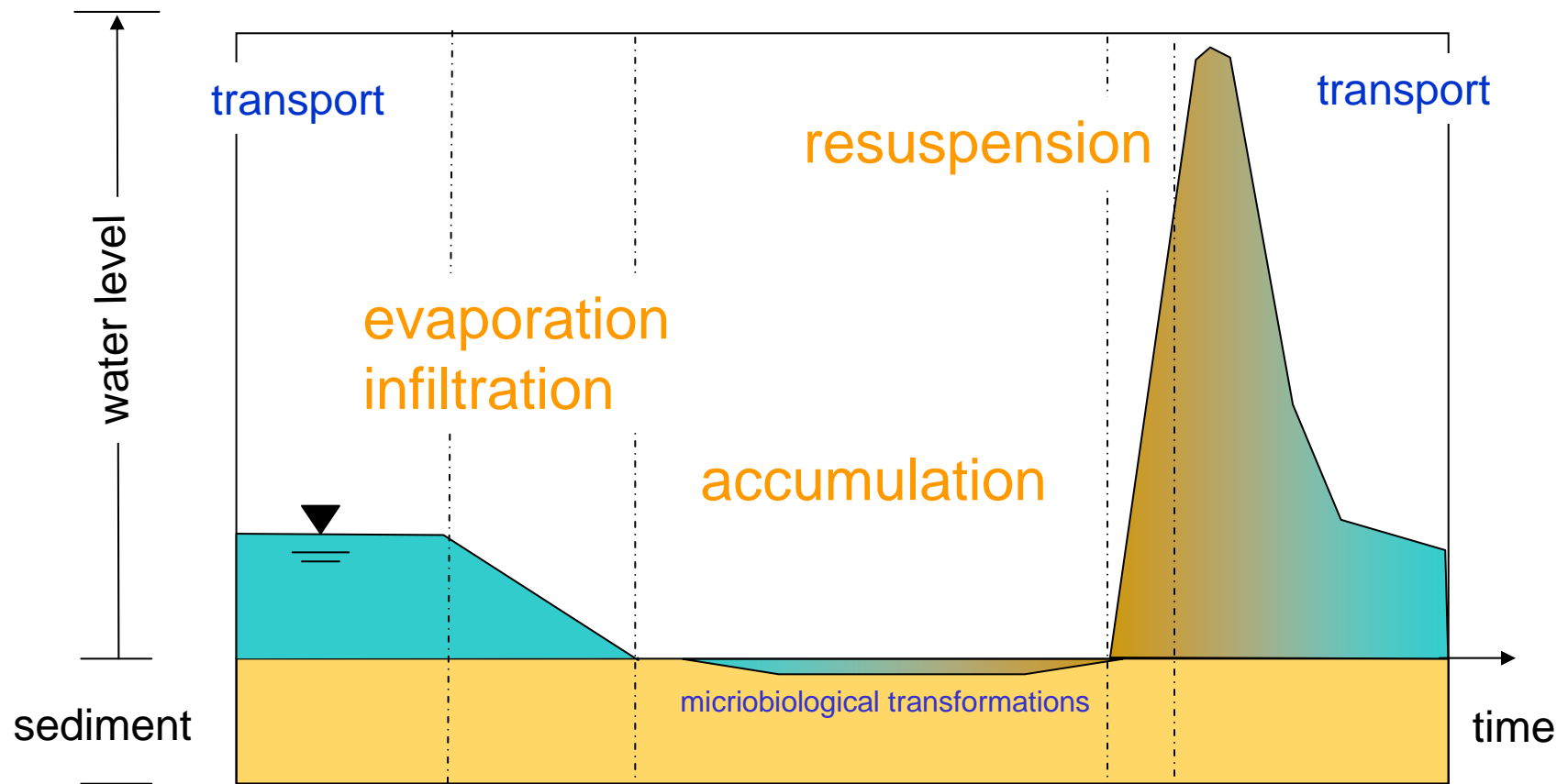
large number of ramblas in Spain

despite this fact, very few knowledge on
water quality dynamics, ecosystem functioning
and available modelling tools

Number of dry months
($rf/pet < 0.3$)

Legend





General relevance of flood loadings

Parameter	Floods	Baseflow
Water	56%	44%
N - NO3-	28%	72%
N - NO2-	28%	72%
N - NH4+	42%	58%
P - PO4---	15%	85%
P - Total	22%	78%
TOC	65%	35%
TDS	83%	17%

Loading proportions

**improved
modelling tools**

tempQsim

localisation of highest
pollution sources,
prioritise of actions

identification of
**controlable flow
intervals** for diverting
higher polluted flows

**technical soil
conservation
measures**

**rural development
policy**
and land use
management

operation of diversion
structures weirs

flooding of
sedimentation areas

**Improved
river water quality**

tempQsim

- to test a number of catchment models in study sites with temporary waters
- to develop detailed conceptual models for each study sites (sediment and water phase)
- to improve modelling tools for its applicability in semi-arid basins