PREVISION DES CRUES SOUDAINES ET DE LEURS IMPACTS : LE PROJET EUROPEEN NEPTUNE SUR LE BASSIN FRANCO-ITALIEN DE LA ROYA

Nowcasting and impact-based predictions of flash floods: the NEPTUNE European project on the French Italian basin of La Roya

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Objective

The general objective of the NEPTUNE (Nowcasting and impact-basEd PredicTions of inUndations in mediterraNean catchmEnts) project is to develop tools and methods improving preparedness and prevention in transborder areas affected by Mediterranean flash flood events.

Objectif

L'objectif général du projet NEPTUNE (Nowcasting and impact-basEd PredicTions of inUndations in mediterraNean catchmEnts) est de développer des outils et des méthodes améliorant la prévision dans les zones transfrontalières touchées par des inondations soudaines en Méditerranée.

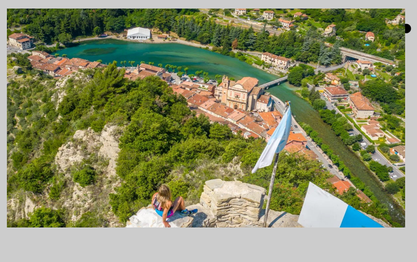
The Roya catchment / *Le bassin de la Roya*

600 km² 60 km²

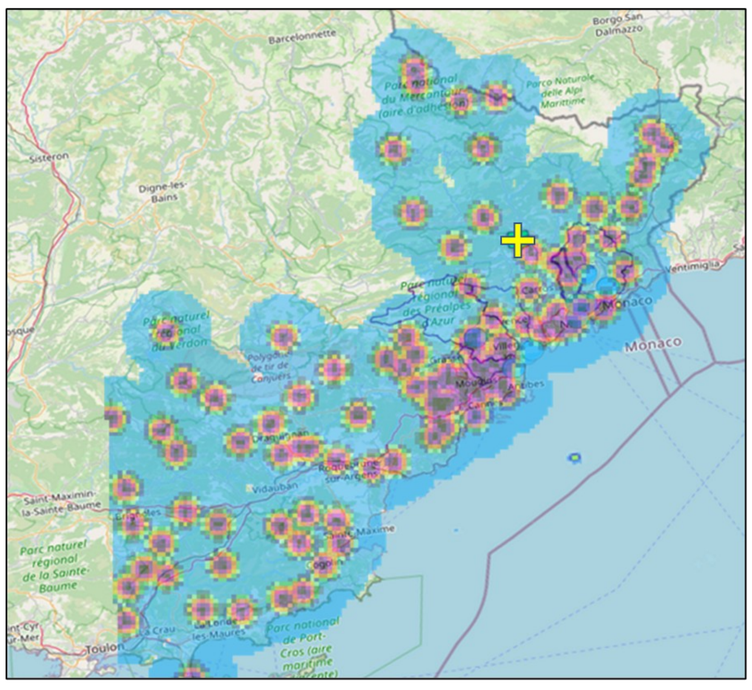
Breil-Sur-Roya, 04/02/2020 © NICOLAS TUCAT / AFP

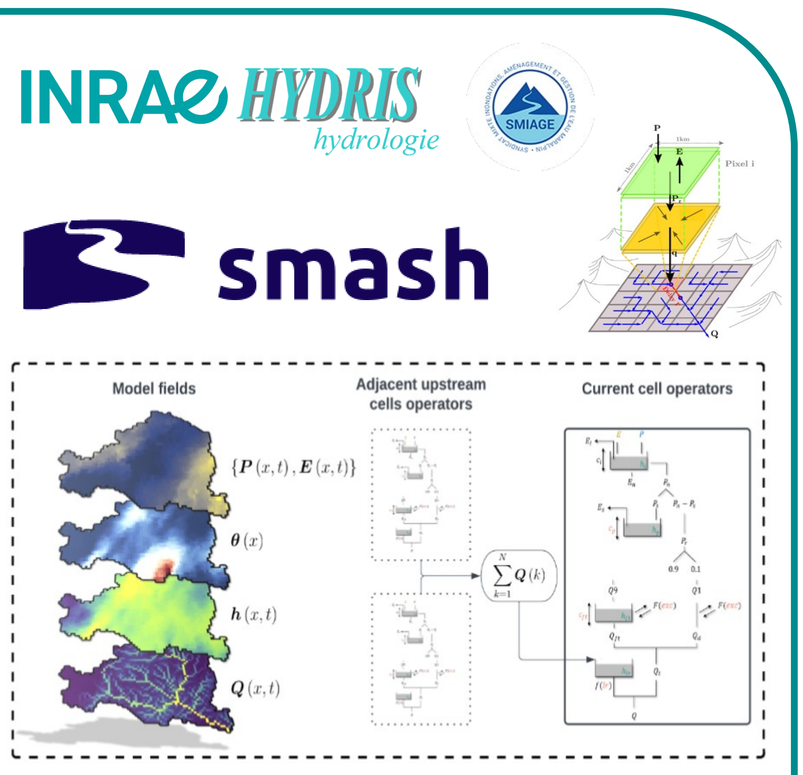
Project organization / *Organisation du projet*

- **WP1** : Project Management
- **WP2** : Precipitation predictions
- **WP3** : Hydrological modelling and forecasting
- **WP4** : Impact-based predictions
- **WP5** :
- End-users evaluation and implementation



- Improving the rainfall radar estimates using a dense satellite-based sensors (from HDRAIN) network
- *Amélioration de la lame d'eau radar grâce à un réseau dense d'antennes satellite (HDRAIN)*

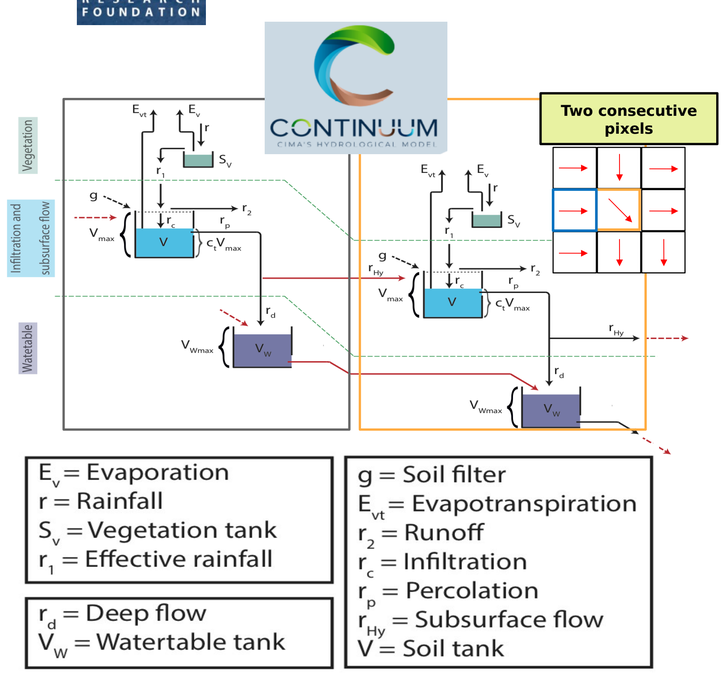




https://smash.recover.inrae.fr/index.html

(Jay-Allemand et al, 2019 ; Colleoni et al., in prep, ; Huynh et al, 2023 and submitted)

- Rainfall transborder reanalysis, nowcasting with STEPS, hydro. modelling with SMASH
- *Réanalyse transfrontalière des pluies, prévision immédiate avec STEPS, modélisation avec SMASH*



(Silvestro et al., 2013, 2015; Laiolo et al. 2016; Corral et al.2019)

- Rainfall nowcasting with Phast, hydrological modelling with CONTINUUM, impact modelling
- *Prévision immédiate avec Phast, modélisation hydrologique CONTINUUM, modélisation des impacts*