BEYOND FLOODS MONITORING

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ONE step BEYOND Workshop, 15 October 2015
ESA - Frascati, Italy

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Flood events are the world's most frequent natural disasters affecting a large number of people and assets.

Factors affecting floods

* Rainfall intensity and duration;
* Characteristics of the river and the basin (area, shape, slope, soil type and land use), antecedent conditions, extreme temperature;
* Drainage systems and river (or generally water resources) management;
* Human activities, such as agriculture, urban development, industry and tourism, but also climate change, contribute to an increase in the likelihood and adverse impacts of flood events.

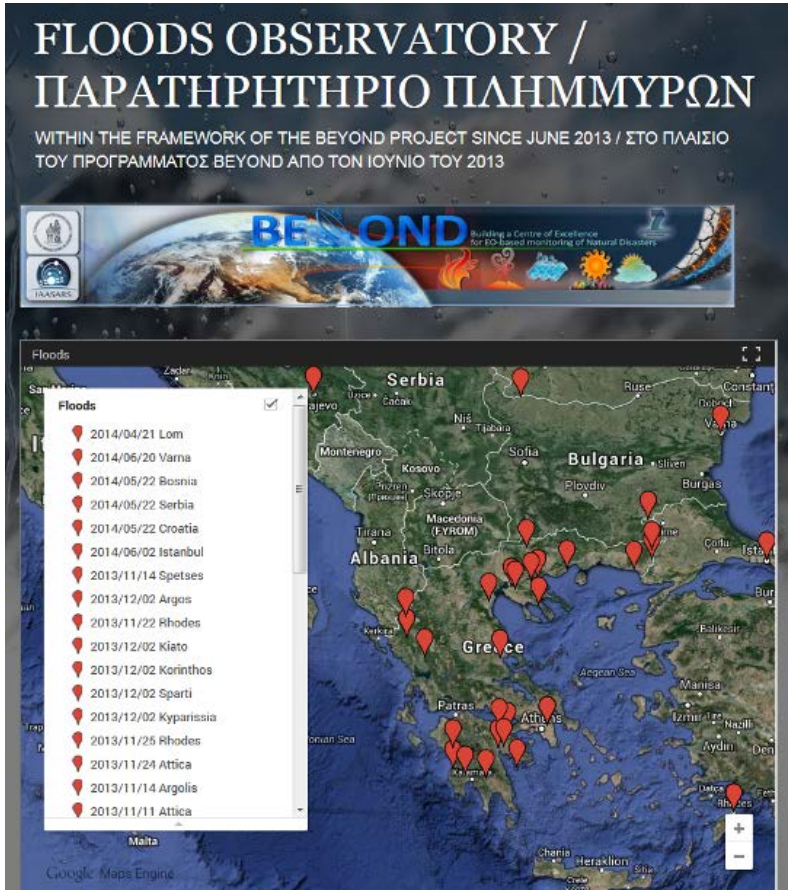
European Union Floods Directive 2007/60/EC

The EU Floods Directive "***on the assessment and management of flood risks***" aims to reduce and manage the risks that floods pose to human health, the environment, cultural heritage, economic activity and infrastructure.

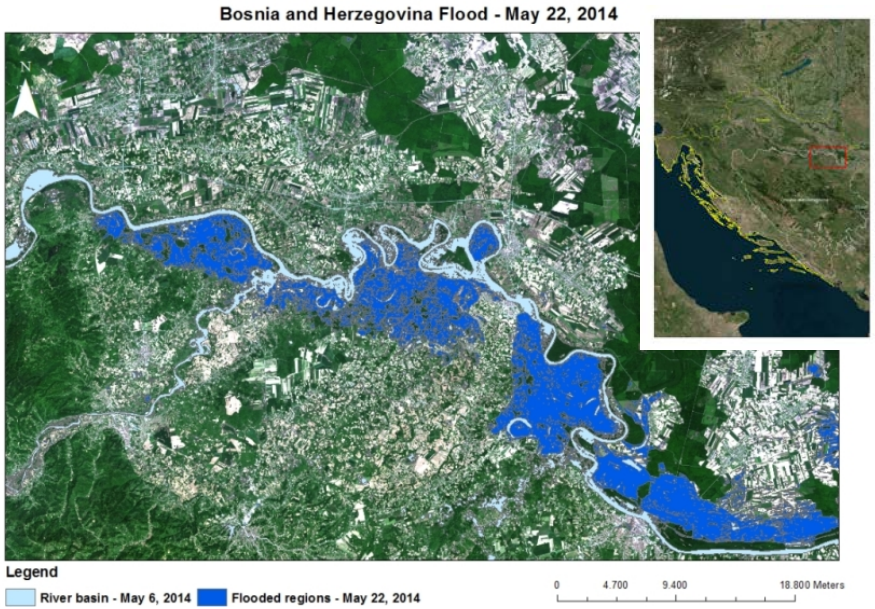
This Directive applies to inland waters as well as all coastal waters across the whole territory of the EU, and defines flood as '***a covering by water of land not normally covered by water***'.

Member States are ultimately required to establish **flood risk management plans focused on prevention, protection and preparedness**.

BEYOND's Floods Observatory for Greece & South-Eastern Europe



We register major flood events and we publish the flood mapping results produced following the processing and photo-interpretation of satellite Optical and SAR images.



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MoU with the Public Power Corporation S.A. Hellas (PPC S.A.)

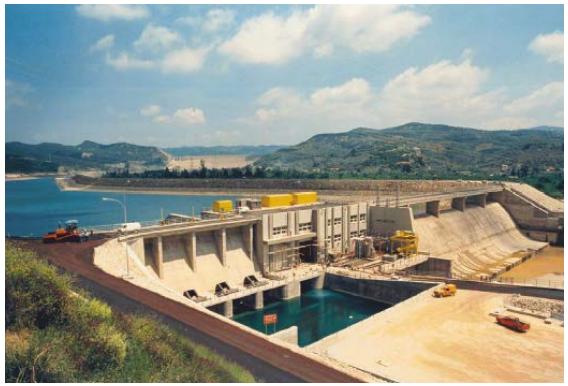
We have established cooperation with the Public Power Corporation S.A. Hellas (PPC S.A.), as there is a mutual interest in the field of studying floods and developing a methodology for monitoring and management of flood risks.

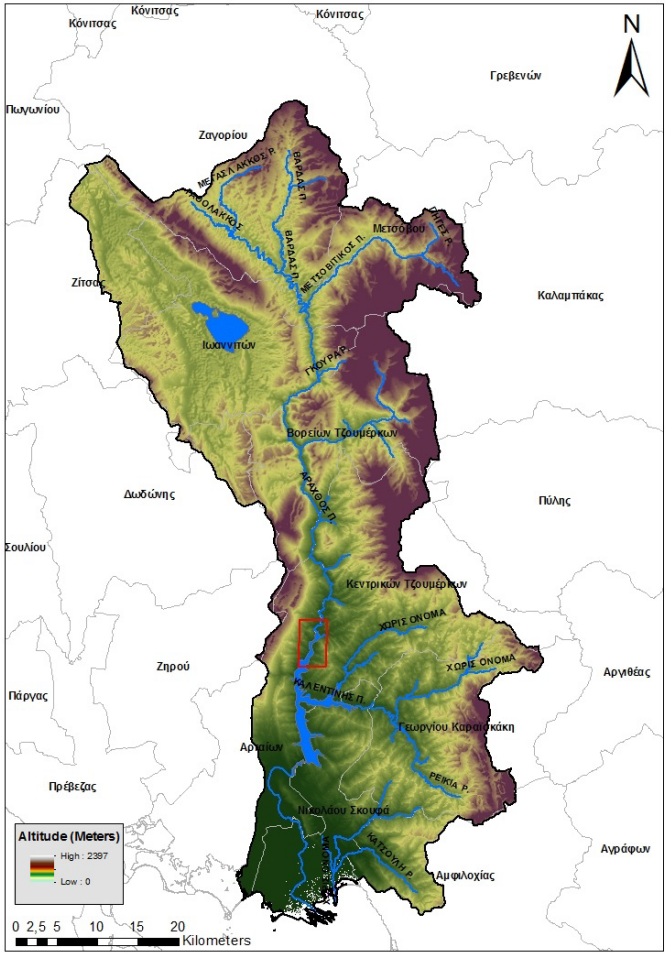
The contribution of PPC S.A. covers the provision of relevant expertise and information derived from the processing of the in-situ collected data of the hydrometeorological network operated by PPC S.A., and data relating to the management of the hydrological basins under study.

CASE STUDY:

The first case study is the river basin of Arachthos (1.850 km^2), a river with several flood events, just upstream of the city of Arta, where PPC S.A. is operating two hydroelectric plants:

1) a large one known as Pournari I (effective capacity of reservoir 303 million m^3)
2) a smaller one known as Pournari II (effective capacity of reservoir 4 million m^3).





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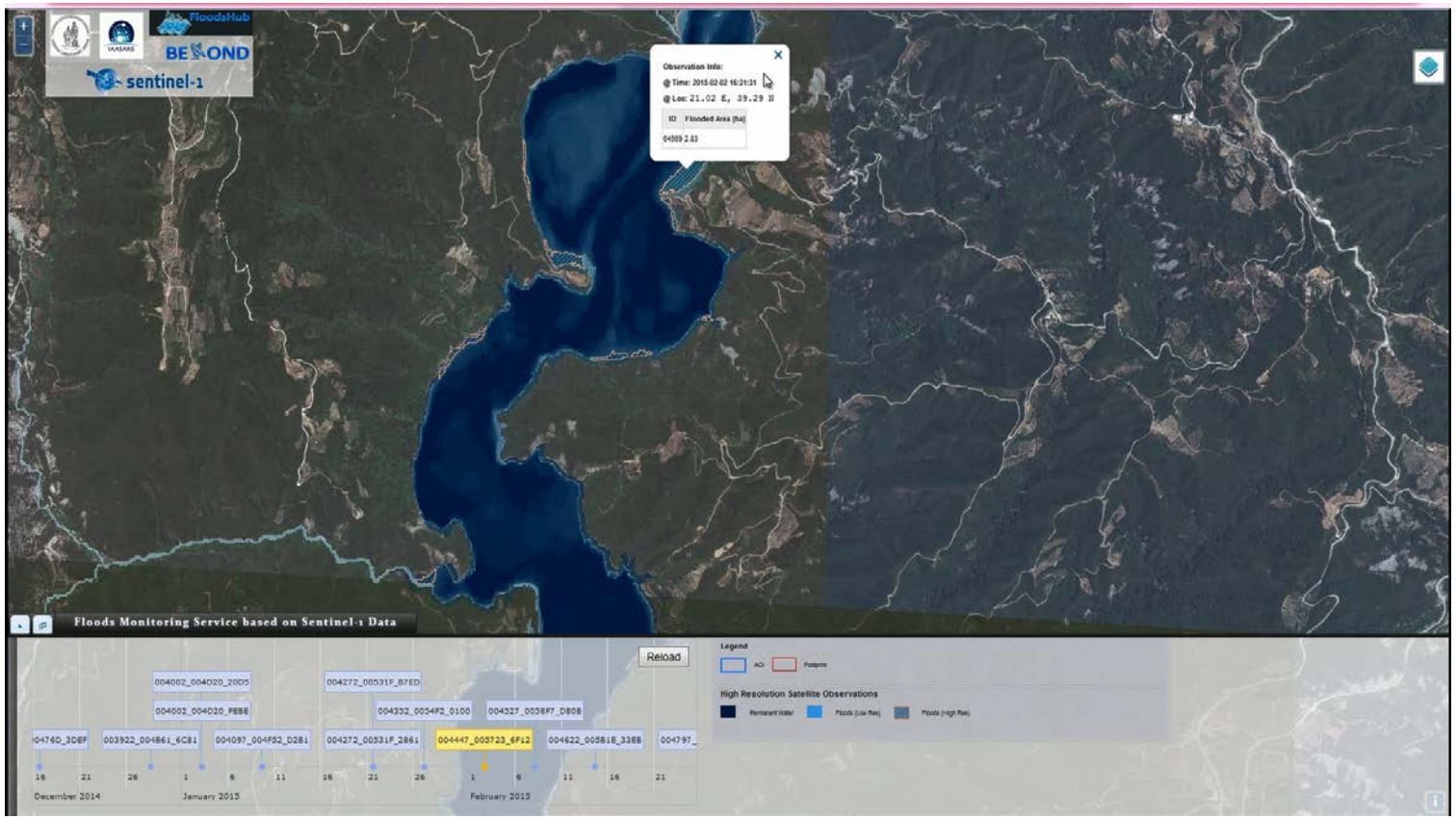
BEYOND's Floods Monitoring Service for Arachthos river basin



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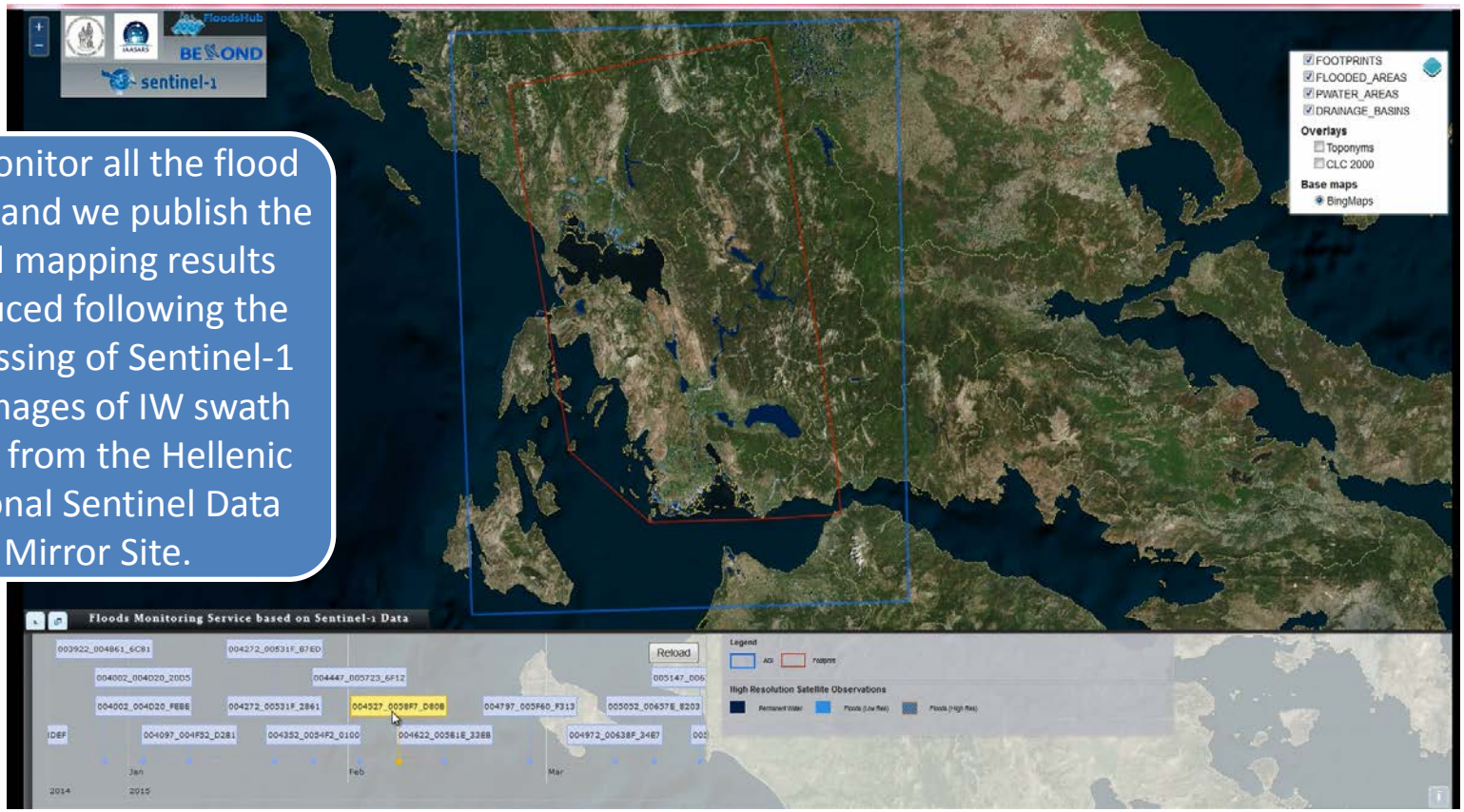
BEYOND's Floods Monitoring Service for Arachthos & Acheloos river basins

We monitor all the flood events and we publish the flood mapping results produced following the processing of Sentinel-1 SLC images of IW swath mode from the Hellenic National Sentinel Data Mirror Site.



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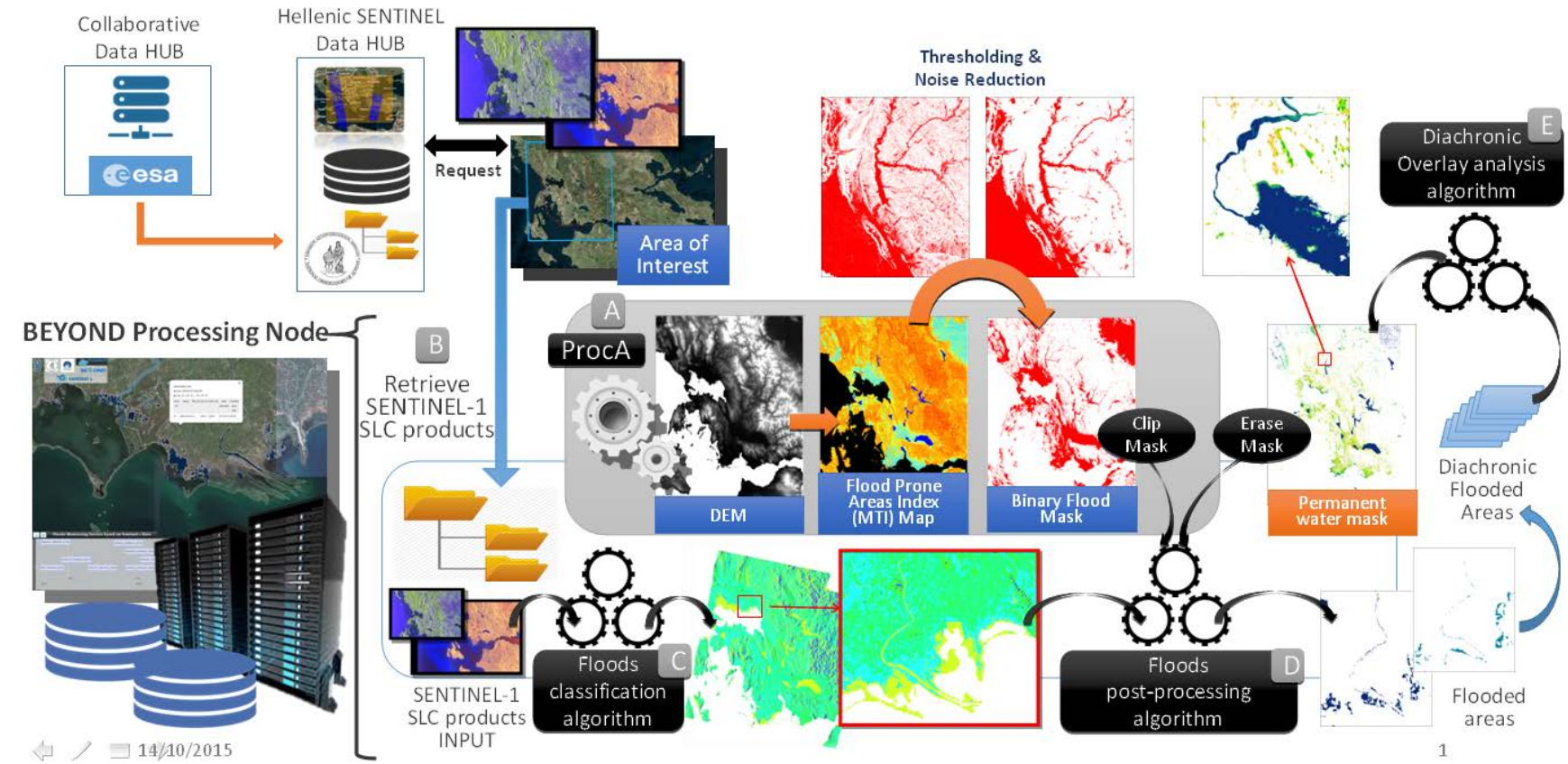
BEYOND's FloodsHUB Architecture



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thank you