



# SAFI: Supporting our Aquaculture & Fisheries Industries

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## SAFI Services

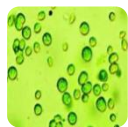
6 April 2016, Users Board 3, Huelva



# Earth Observation data from space ?



## CHLOROPHYLL-A CONCENTRATION (CHL1)



A proxy for the quantity of phytoplankton

- global coverage
- 1km resolution
- Daily 1997-NRT
- GSM & AV algorithm



## PRIMARY PRODUCTION (PP)

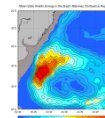


A proxy of primary production of the biomass

- global coverage
- 25km resolution
- Monthly 98-2010
- AM and UITZ



## EDDY KINETIC ENERGY (EKE)

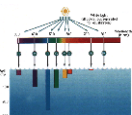


A proxy of energy from horizontal currents (U, V)

- global coverage
- 25km resolution
- Daily 93-NRT
- $EKE = \frac{1}{2} * (U^2 + V^2)$



## ABSORPTION COEFFICIENT (CDM)

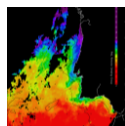


A proxy for salinity (inversely correlated) and marker for estuarine waters

- global coverage
- 1km resolution
- Daily 1997-NRT
- GSM & AV algorithm



## SEA SURFACE TEMPERATURE (SST-PATHFINDER)

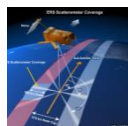


The skin temperature estimate from PATHFINDER

- global coverage
- 4km resolution
- Daily 81-2012
- Casey *et al.*, 2010



## PARTICULATE BACK-SCATTERING COEFFICIENT (BBP)

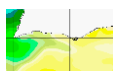


A proxy for the concentration of suspended matter

- global coverage
- 1km resolution
- Daily 1997-NRT
- GSM & AV algorithm

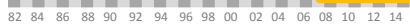


## SEA SURFACE TEMPERATURE FOUNDATION (SST-ODYSSEA)



The temperature at the base of the diurnal thermocline

- Atlantic NW
- Mediterranean
- 2km resolution
- Daily 08-NRT
- Piole *et al.* 2010



## SECCHI DISK DEPTH (ZSD)

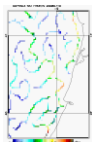


A proxy of water column vertical visibility

- global coverage
- 1km resolution
- Daily 1997-NRT
- GSM & AV algorithm

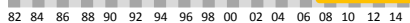


## FRONT DETECTION (SST-ODYSSEA)

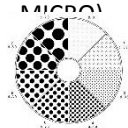


Maximum difference in sea surface temperatures

- Atlantic NW
- Mediterranean
- 2km resolution
- Daily 08-NRT
- Maximal horizontal gradients



## PARTICLE SIZE DISTRIBUTION (PSD-PICO, -NANO, -MICRO)

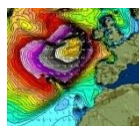


A proxy of particle (plankton) distribution/size

- global coverage
- 25km resolution
- Monthly 1997-NRT
- Doron & AV algorithm



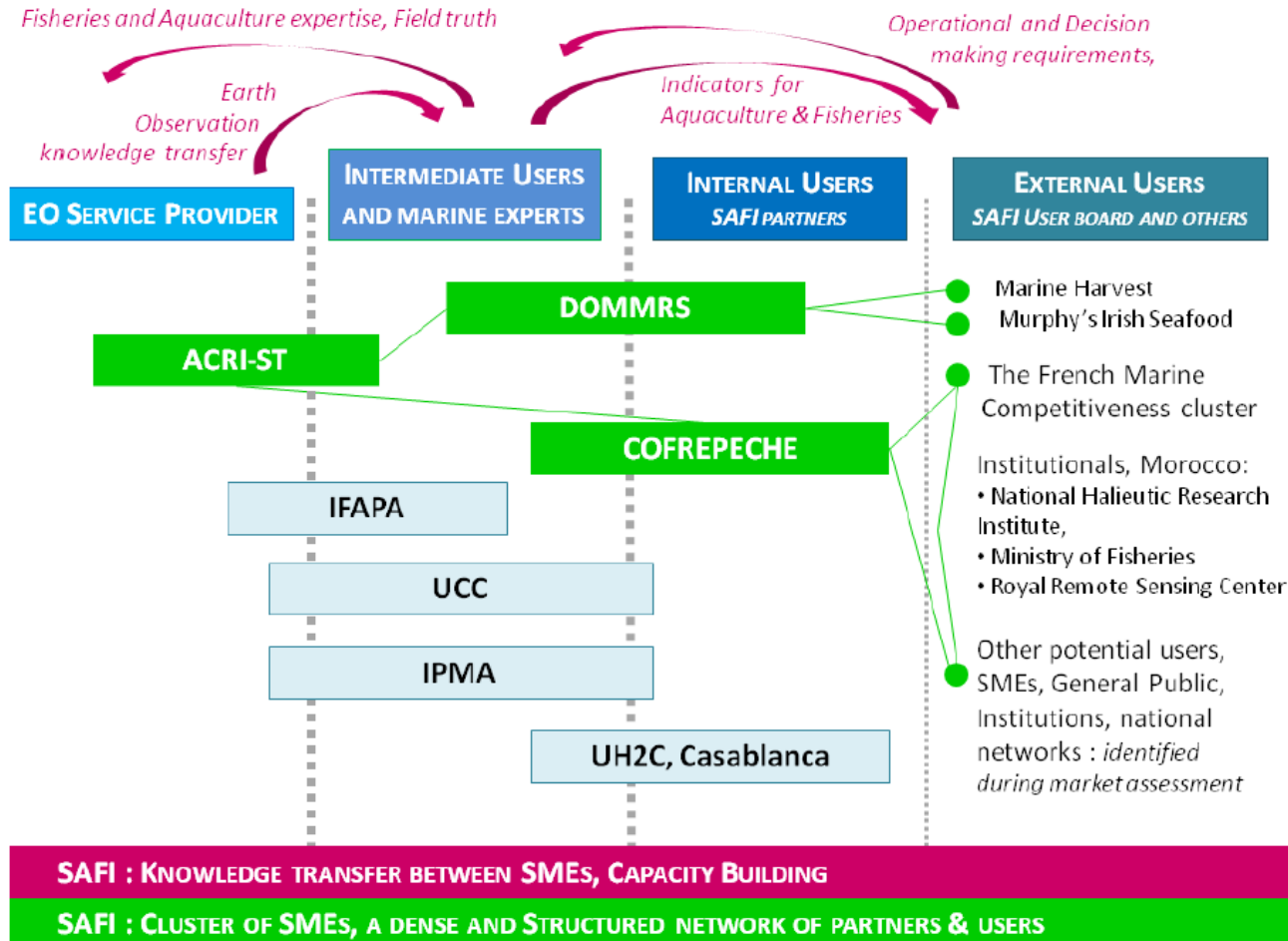
## SIGNIFICANT WAVE HEIGHT (HSMOY, HSMAX, HS12)



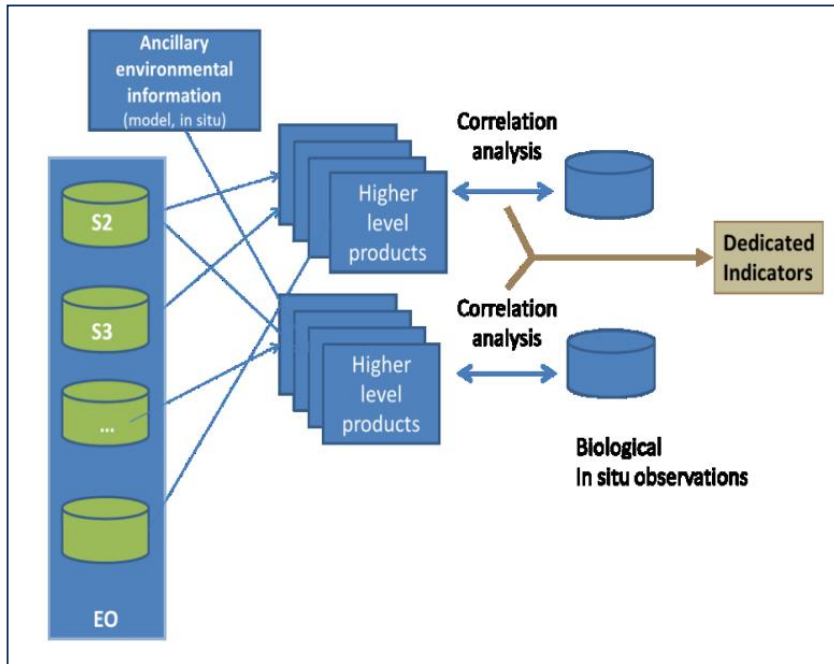
Wave data from wavemodel WaveWatch-III. Mean, max, value @ noon.

- global coverage
- 18.5km resolution
- Daily 90-NRT
- Arduin *et al.* 2010

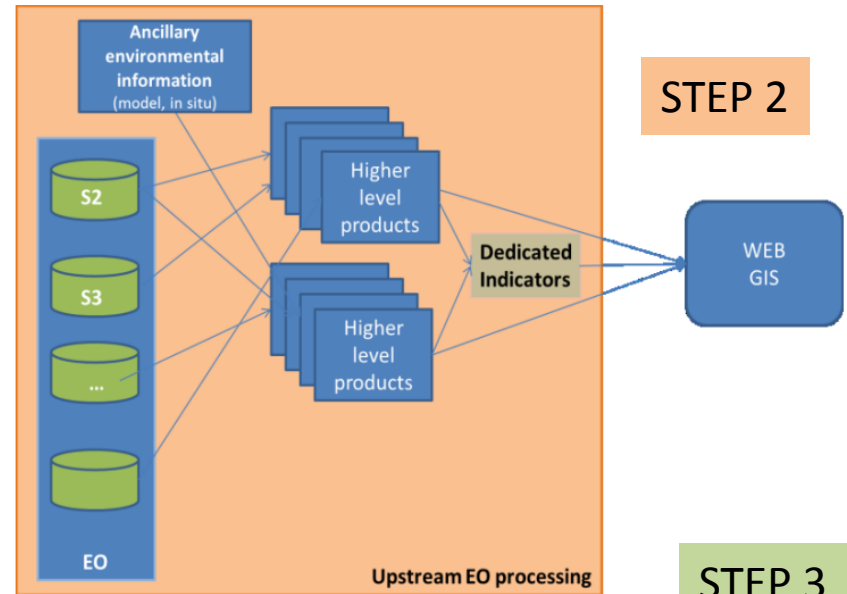




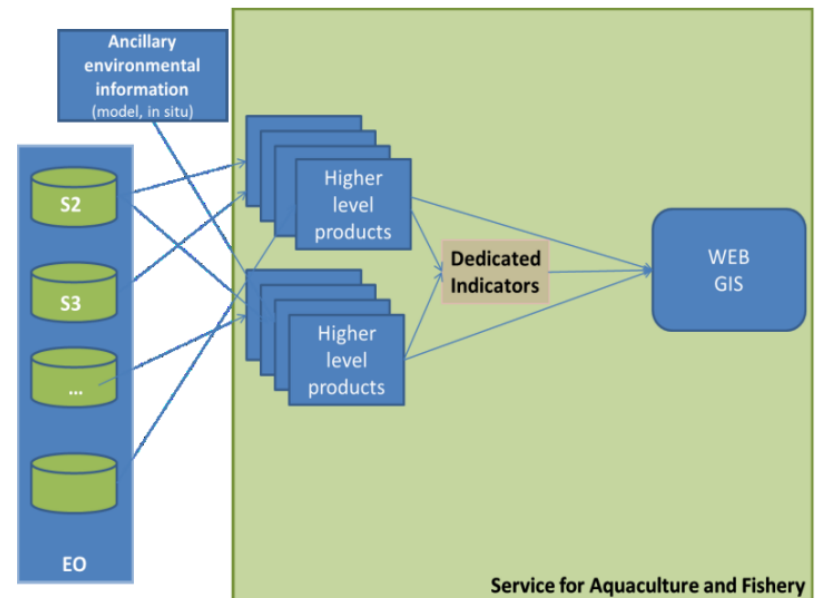
## STEP 1



## STEP 2



## STEP 3



## Rationale

First set of “Use cases” are defined to support the demonstration of SAFI services for the UB3  
They have been designed to fit the “users profiles” of the UB3 attendees

These use cases will serve for demonstration and training for WP12

Two level of users (**intermediate**- (consultants, experts) & **final**- (fish farmers...))

Two tools



Tool developed in WP11

- Low level data handling
- Building data at higher level (e.g. statistics...)
- Support data investigation



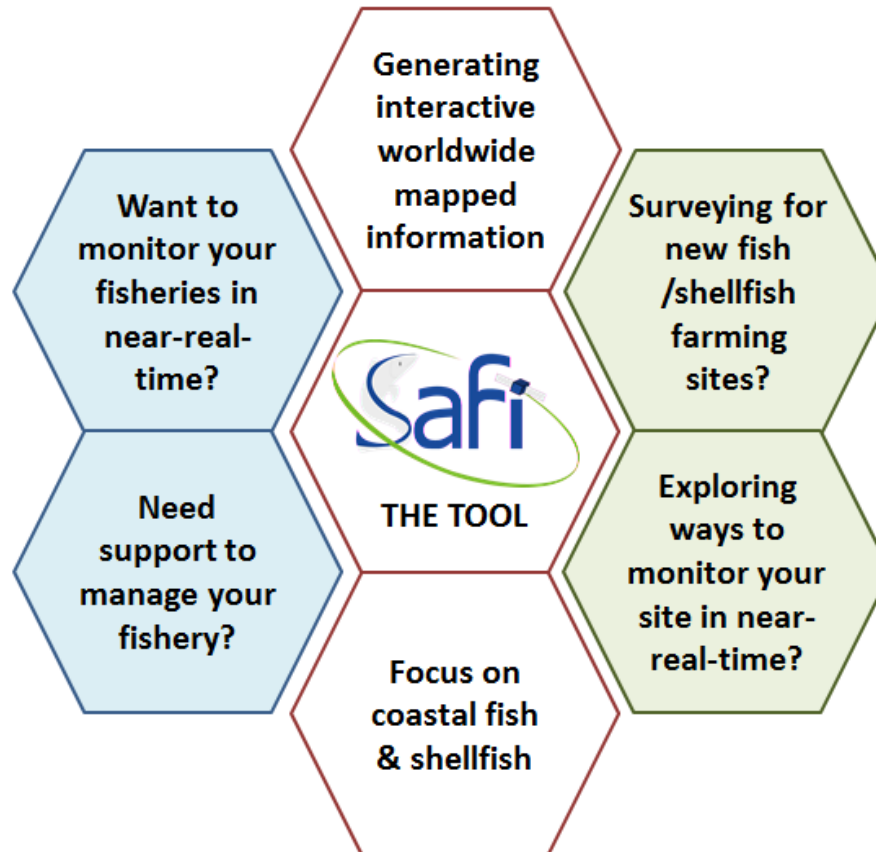
Web-based consultation too  
focused on specific user needs

7 **use cases** have been prepared



Engaged in fisheries?

Engaged in aquaculture?



The  « honeycomb »