MOHID LAND

Implementations to support consultancy and forecast systems

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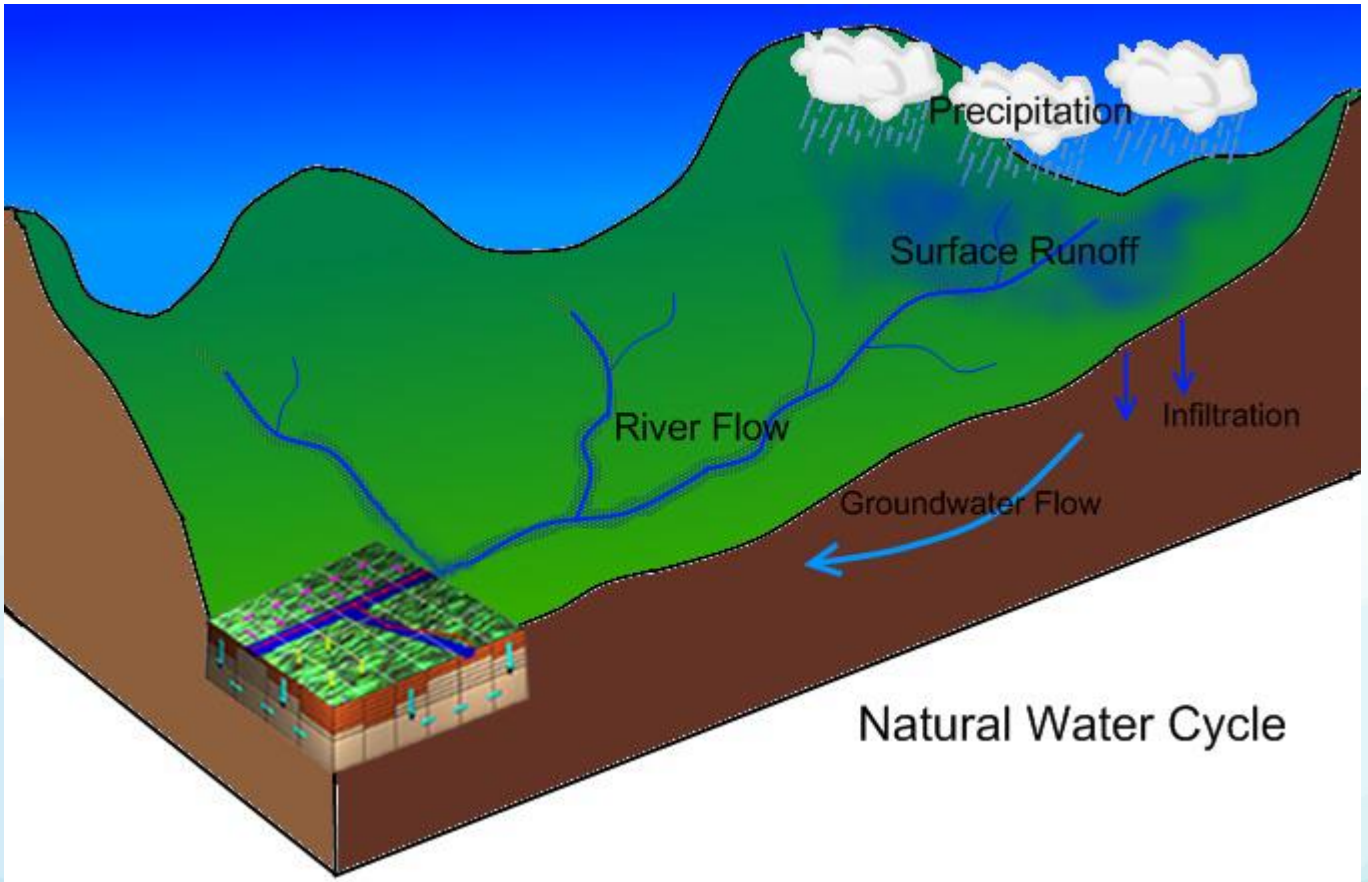
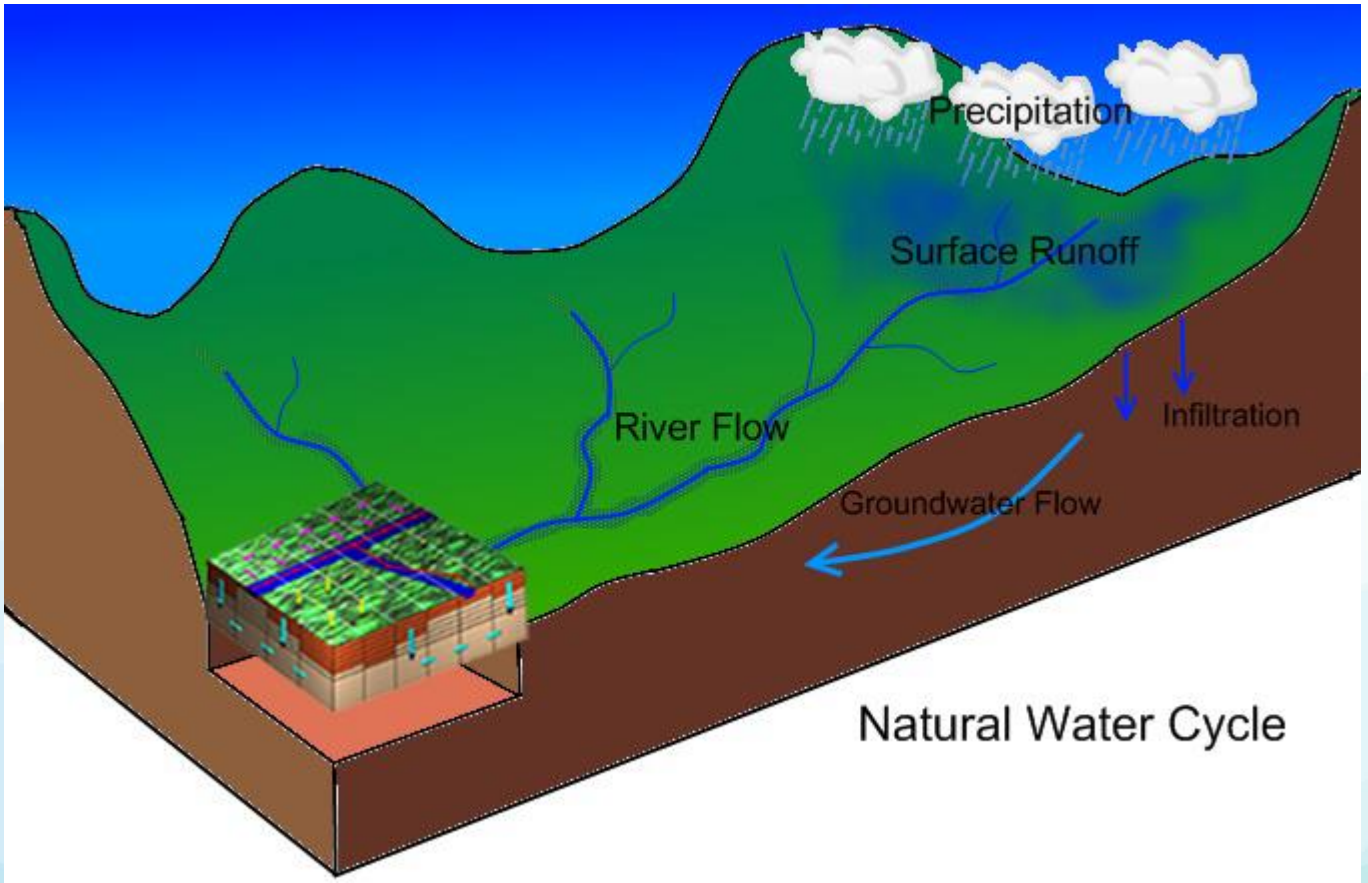

Precipitation
Surface Runoff
River Flow
Infiltration
Groundwater Flow
Natural Water Cycle


Precipitation
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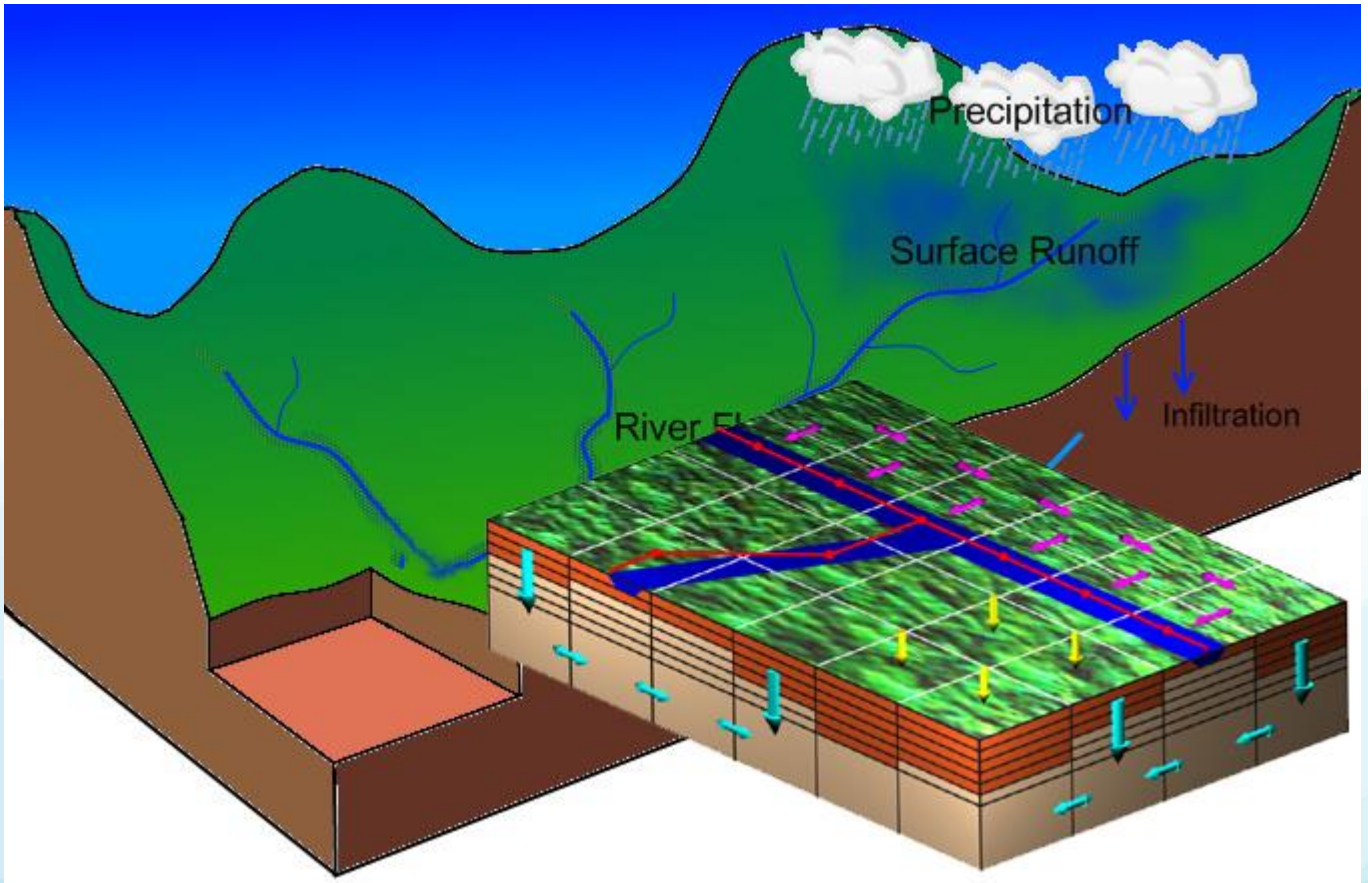
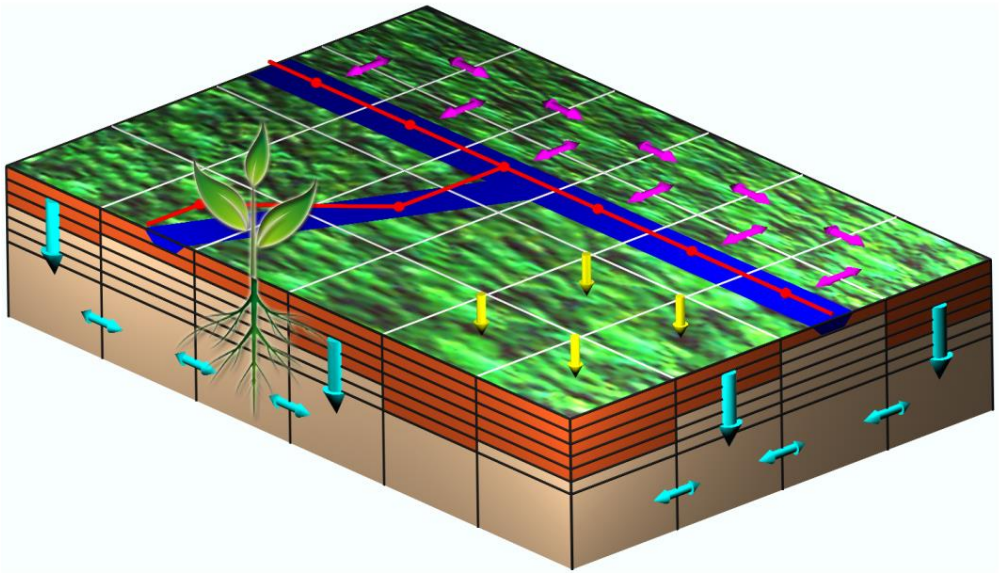
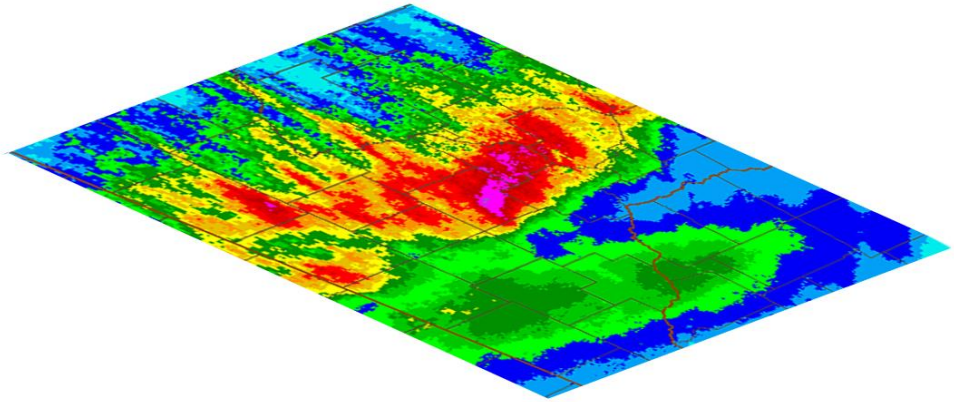
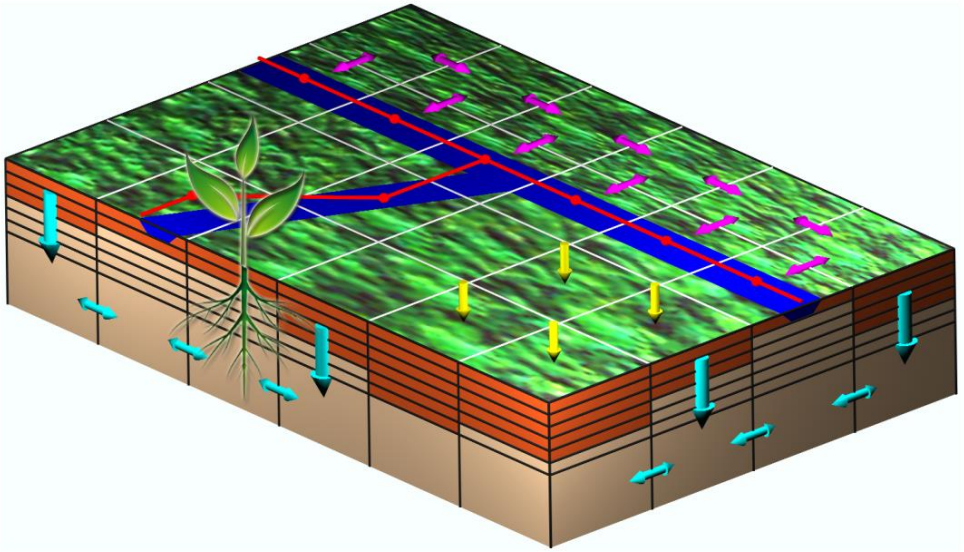
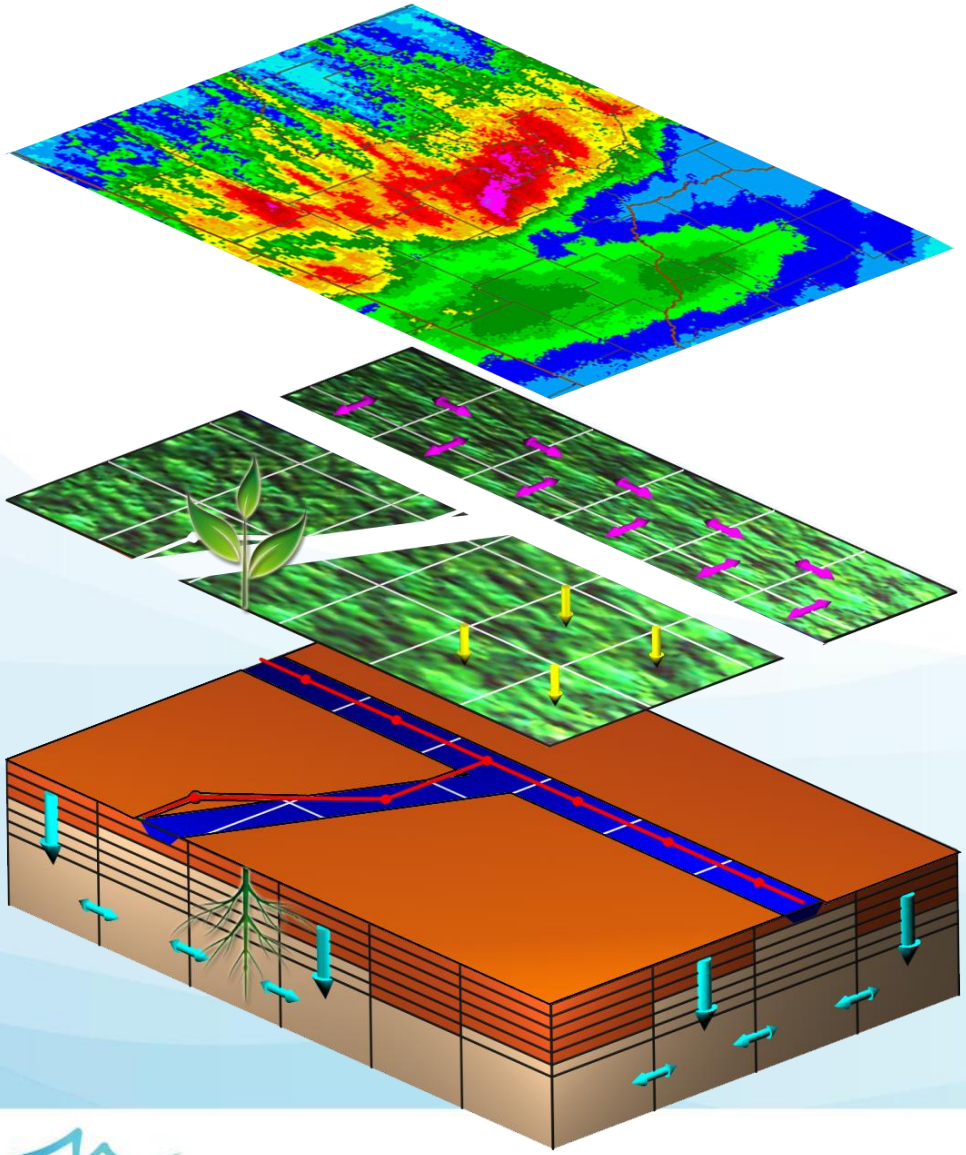

Precipitation
Surface Runoff
Infiltration









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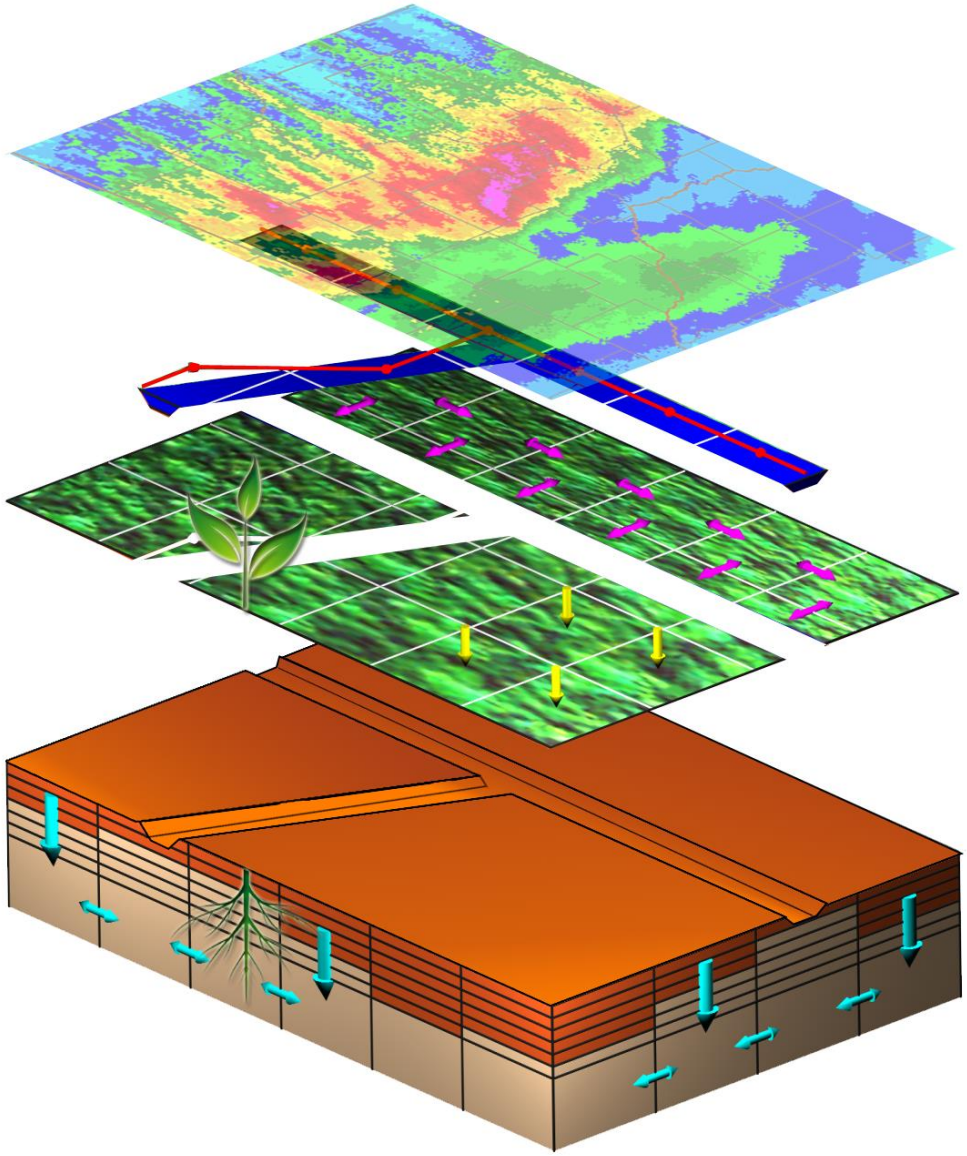
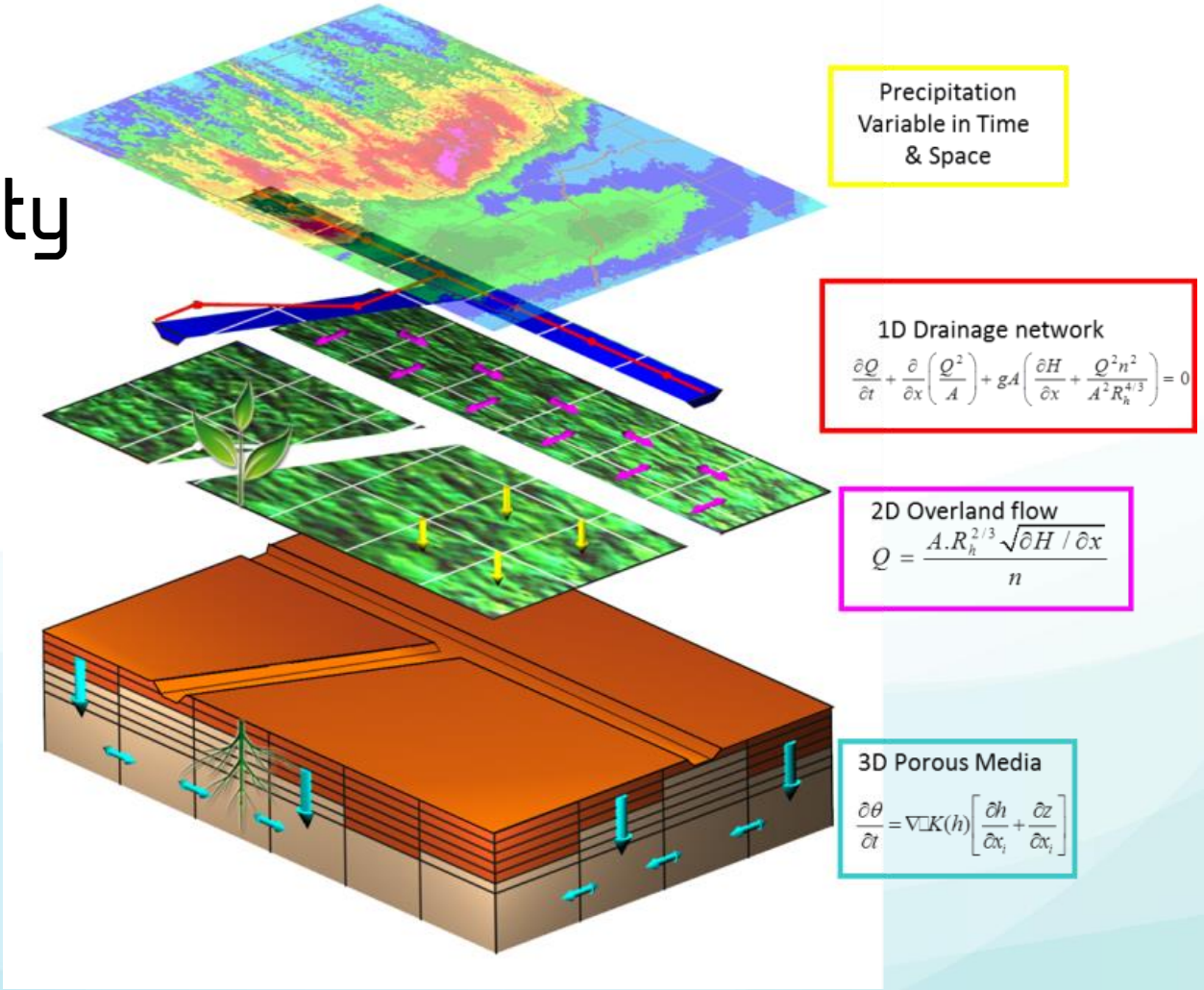


Areas of aplication

Agriculture

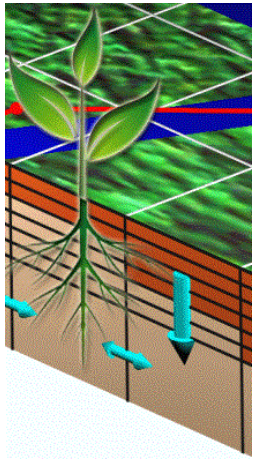
Hydroelectricity

Floods



Agriculture

Aquafarm



Clients

Aquafarm users

Objective

Operational system to predict soil moisture

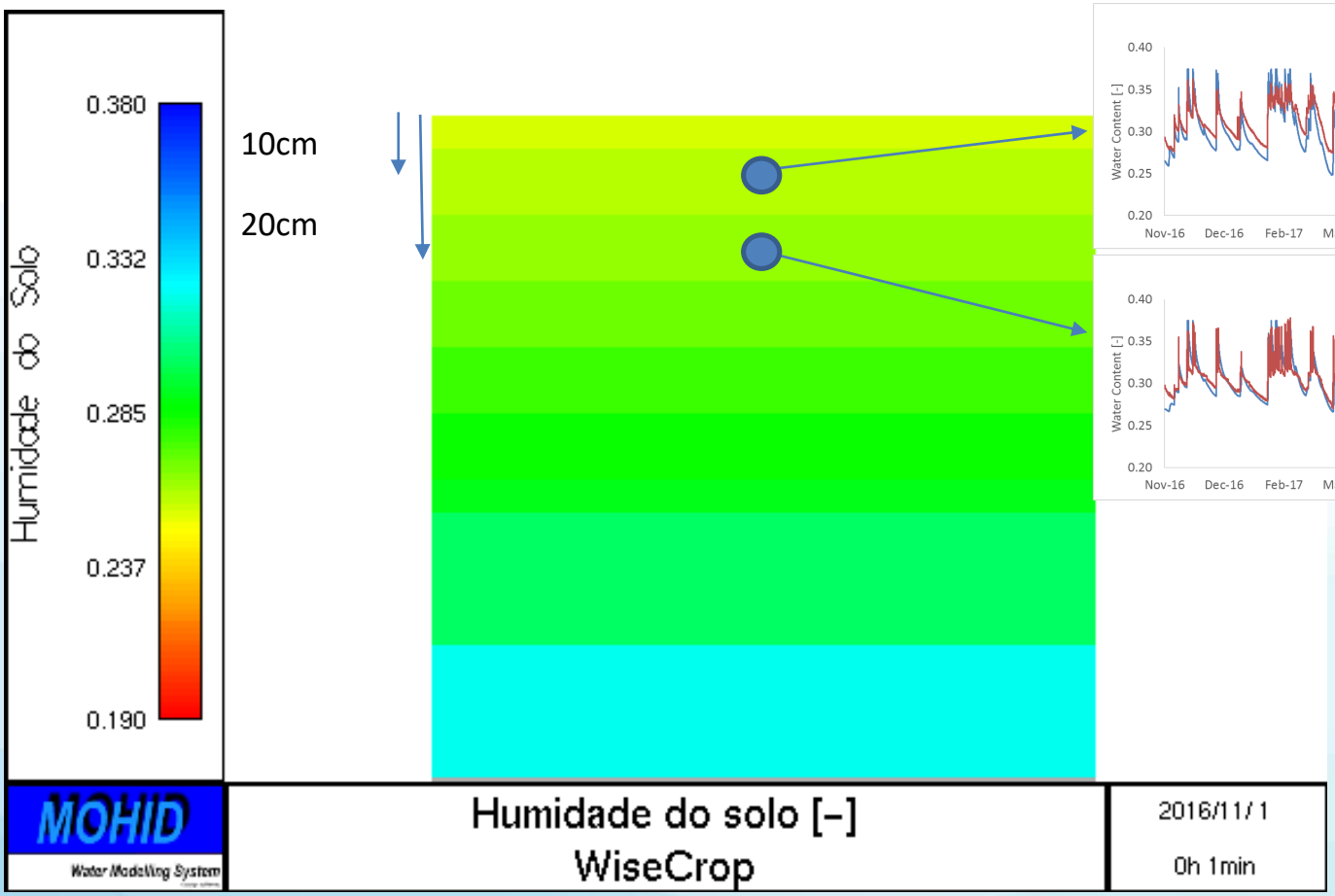
Innovation

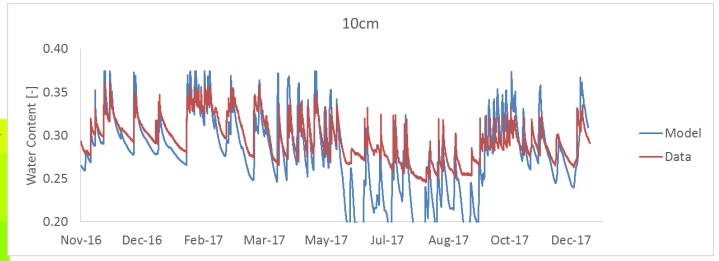
Integration of satellite images (on vegetation) with modelling.

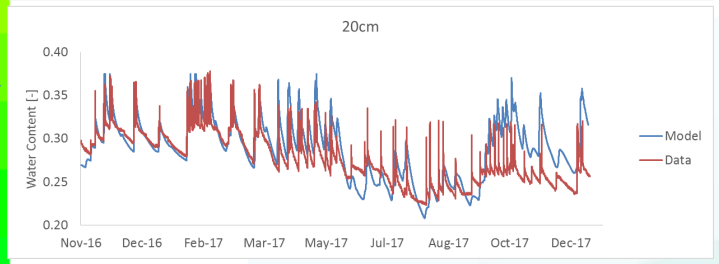
Impact

Soil moisture prediction is valued by users

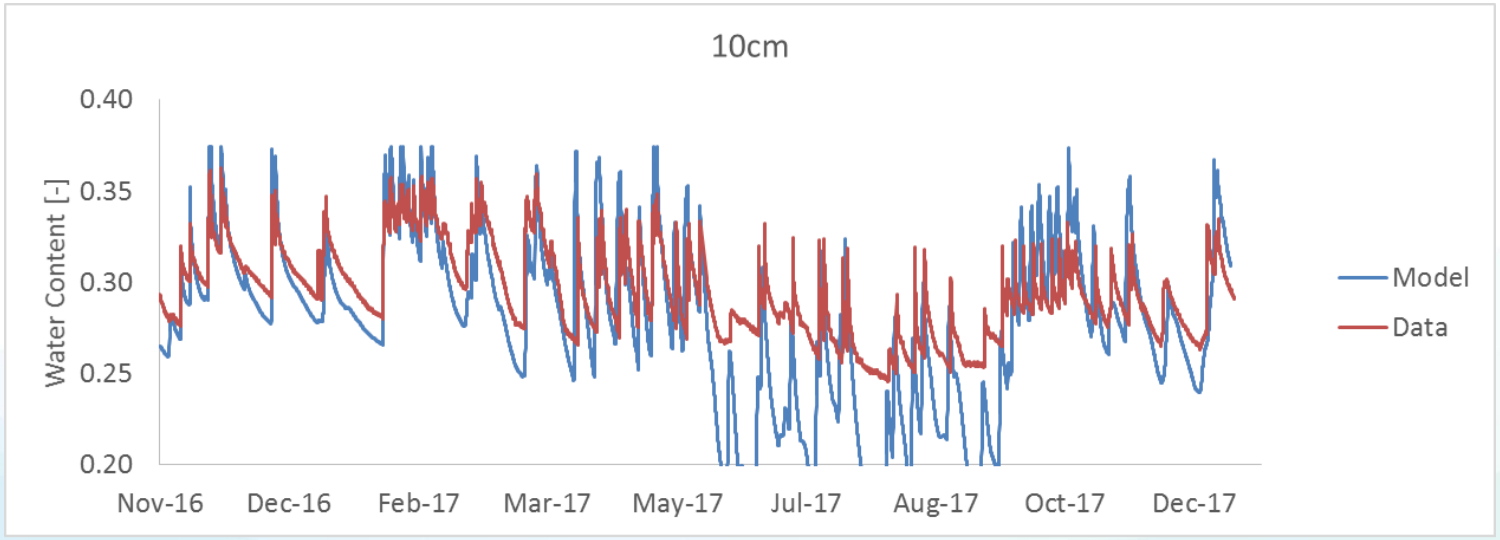
Soil moisture profile

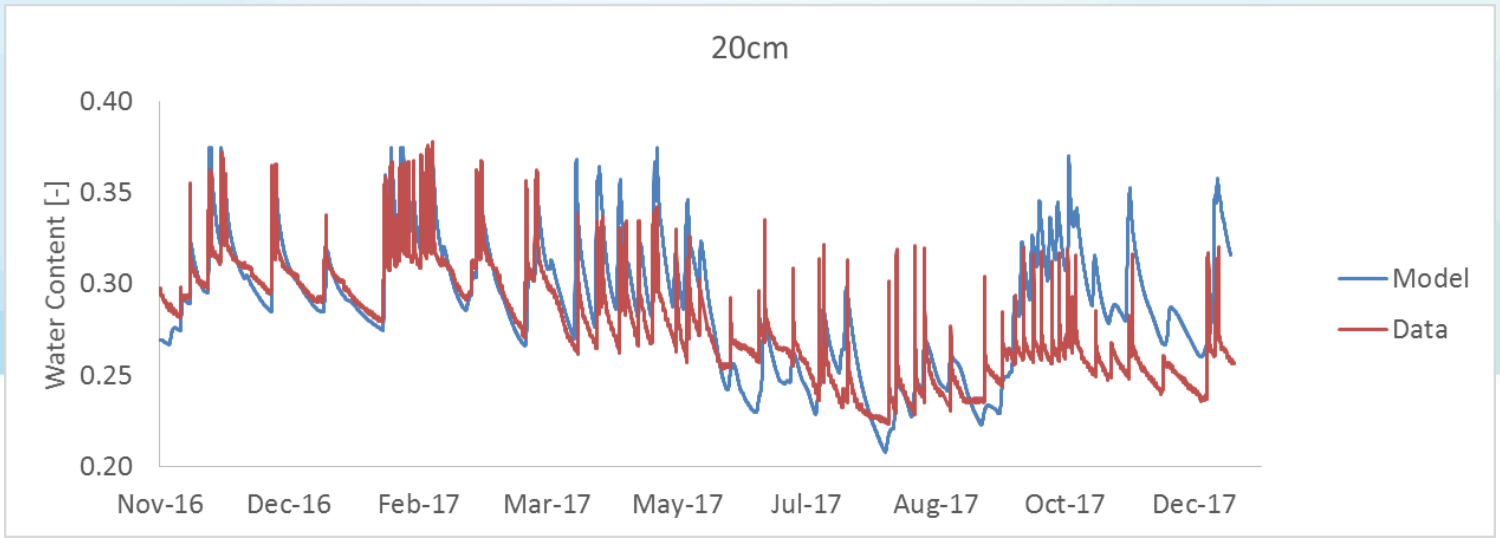






Model Calibration





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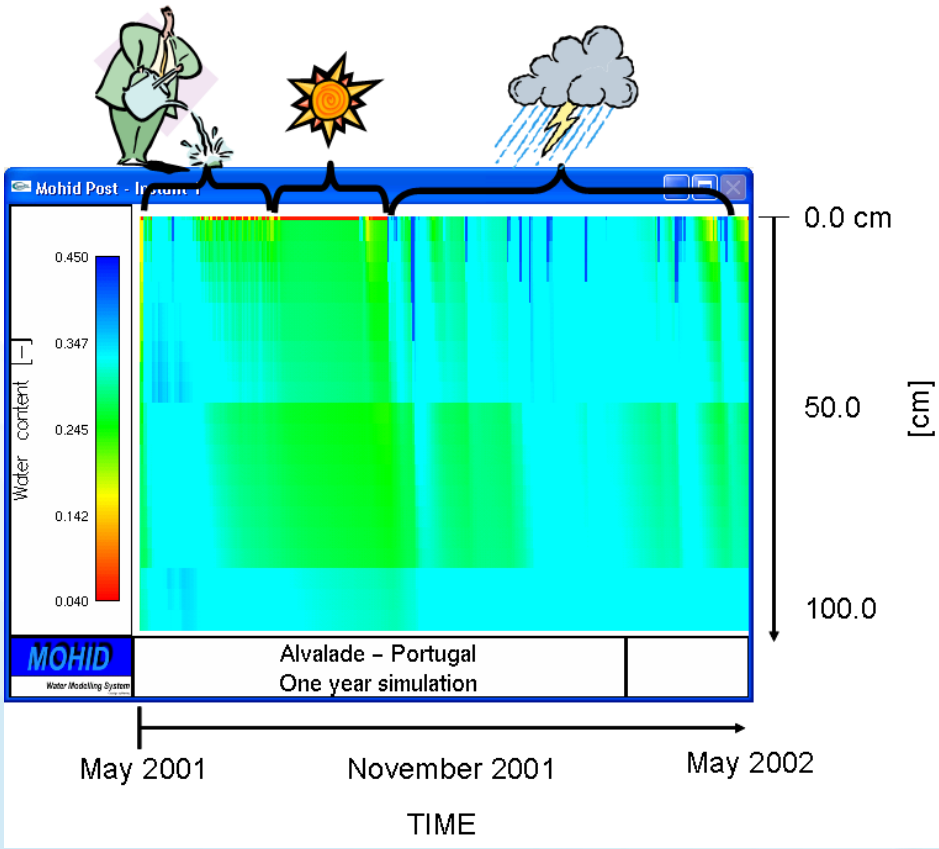
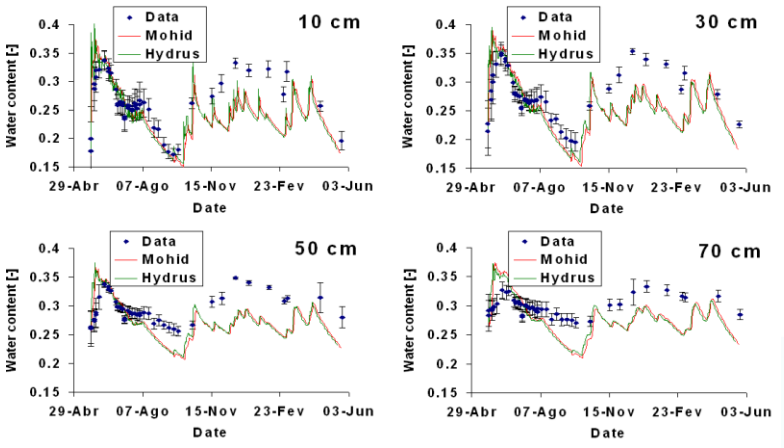
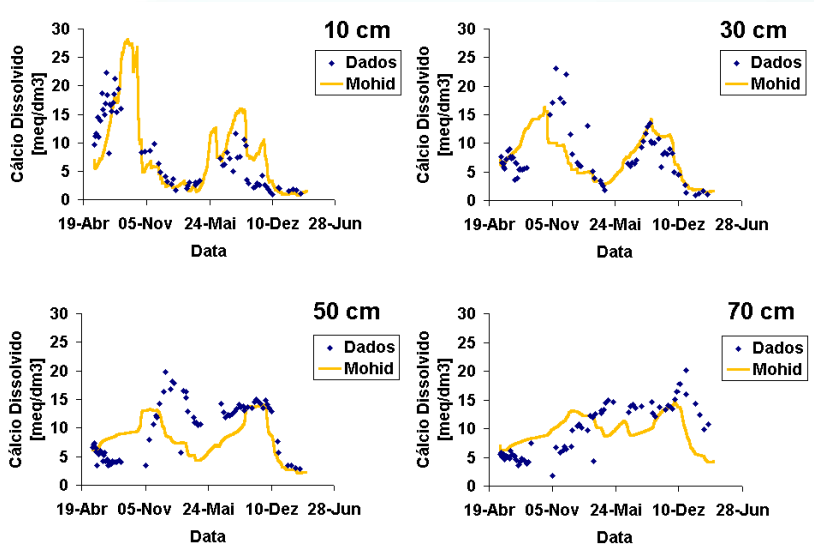
Mohid Soil







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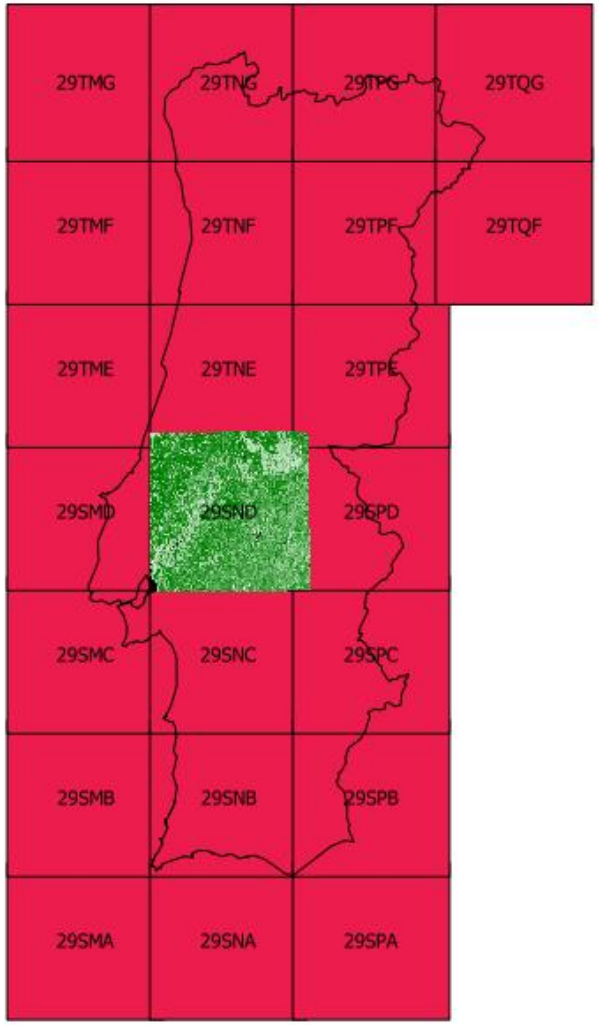
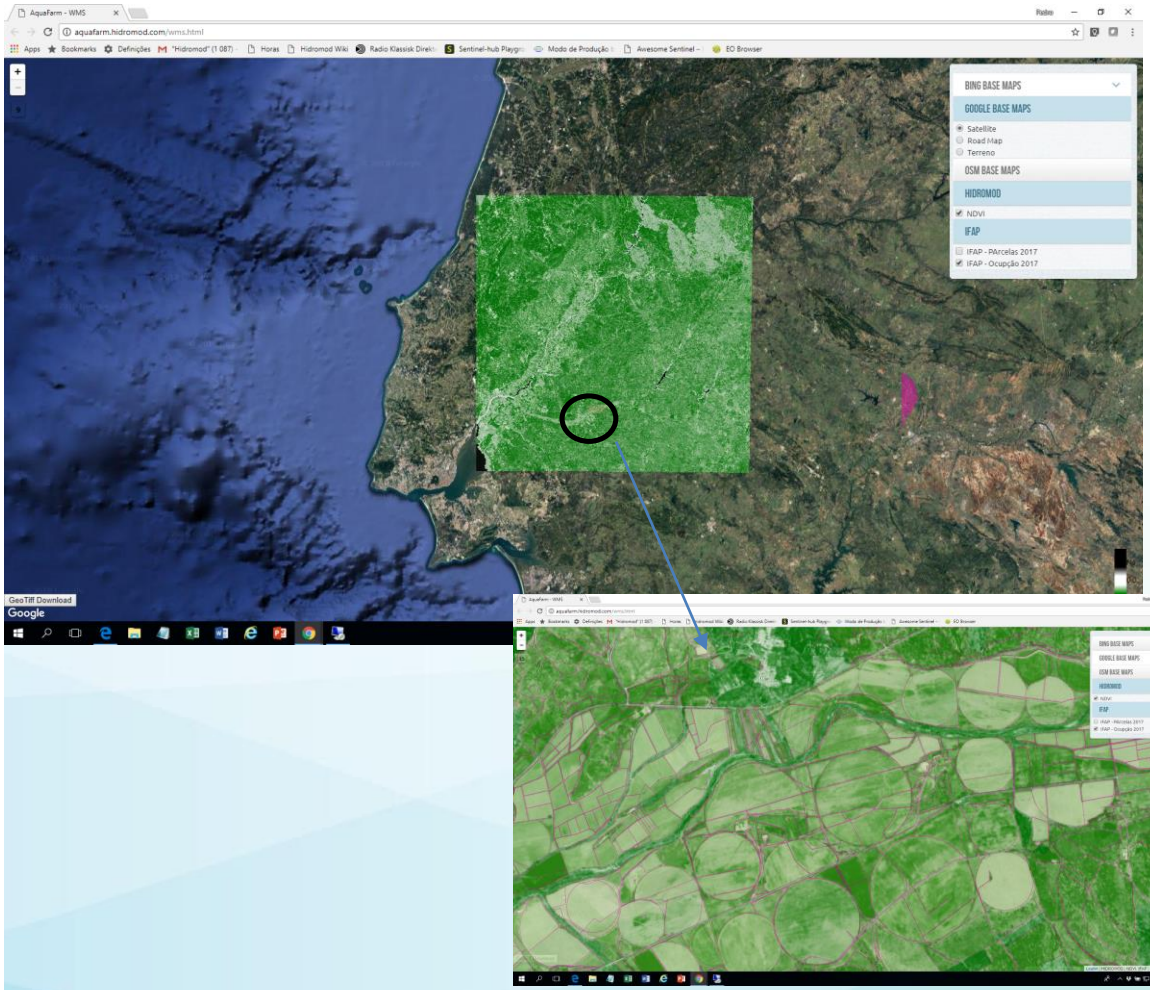
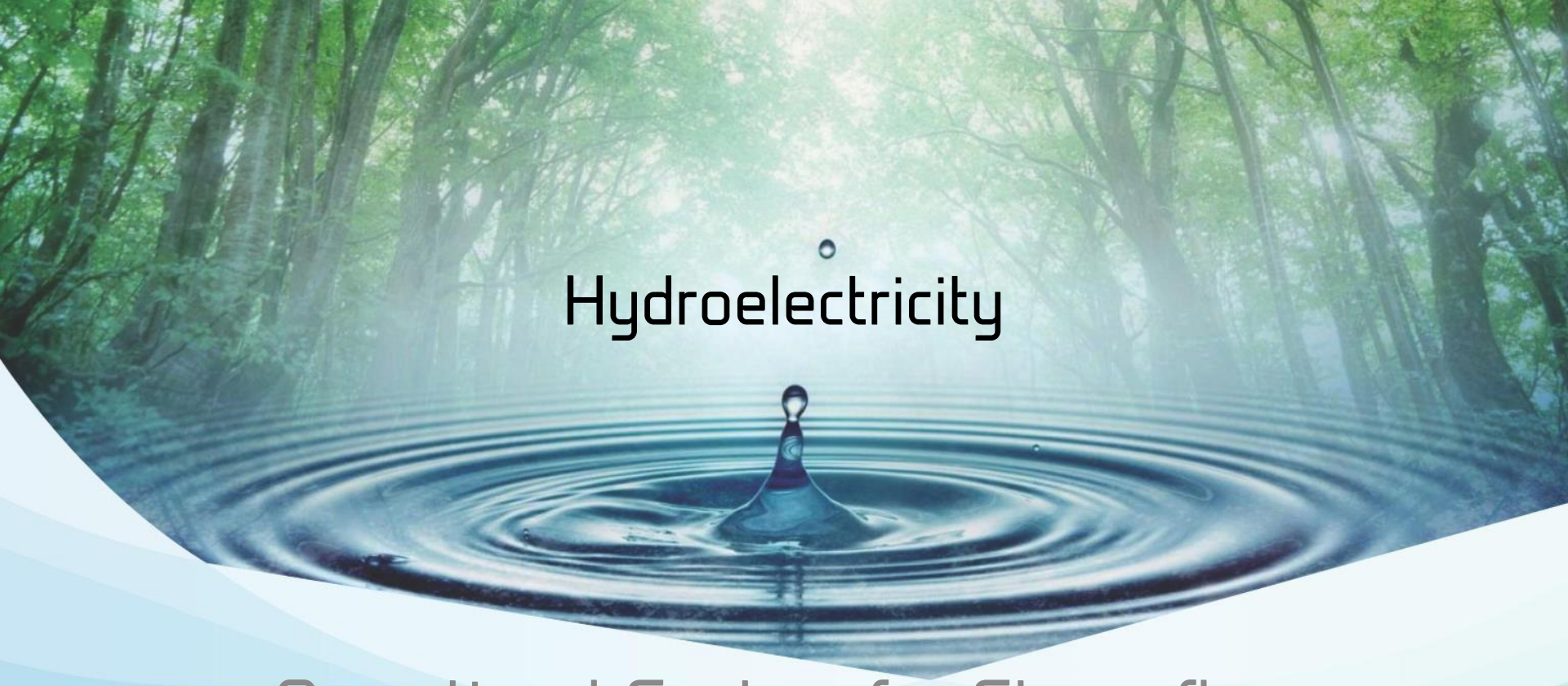
Operational processing of satellite images







Hydroelectricity

Operational System for Streamflow Forecasting to Support Hydroelectric Production Management

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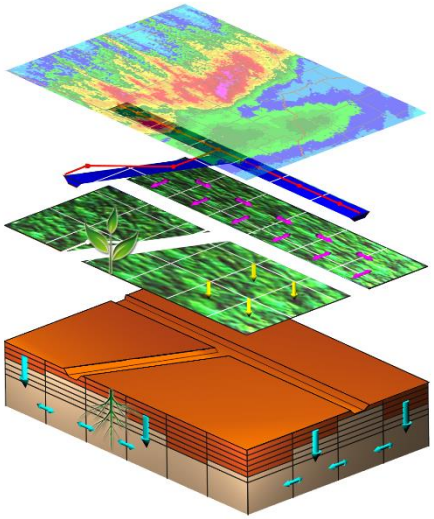
Aquafarm



Clients

EDP

Objective

Operational system to predict flows

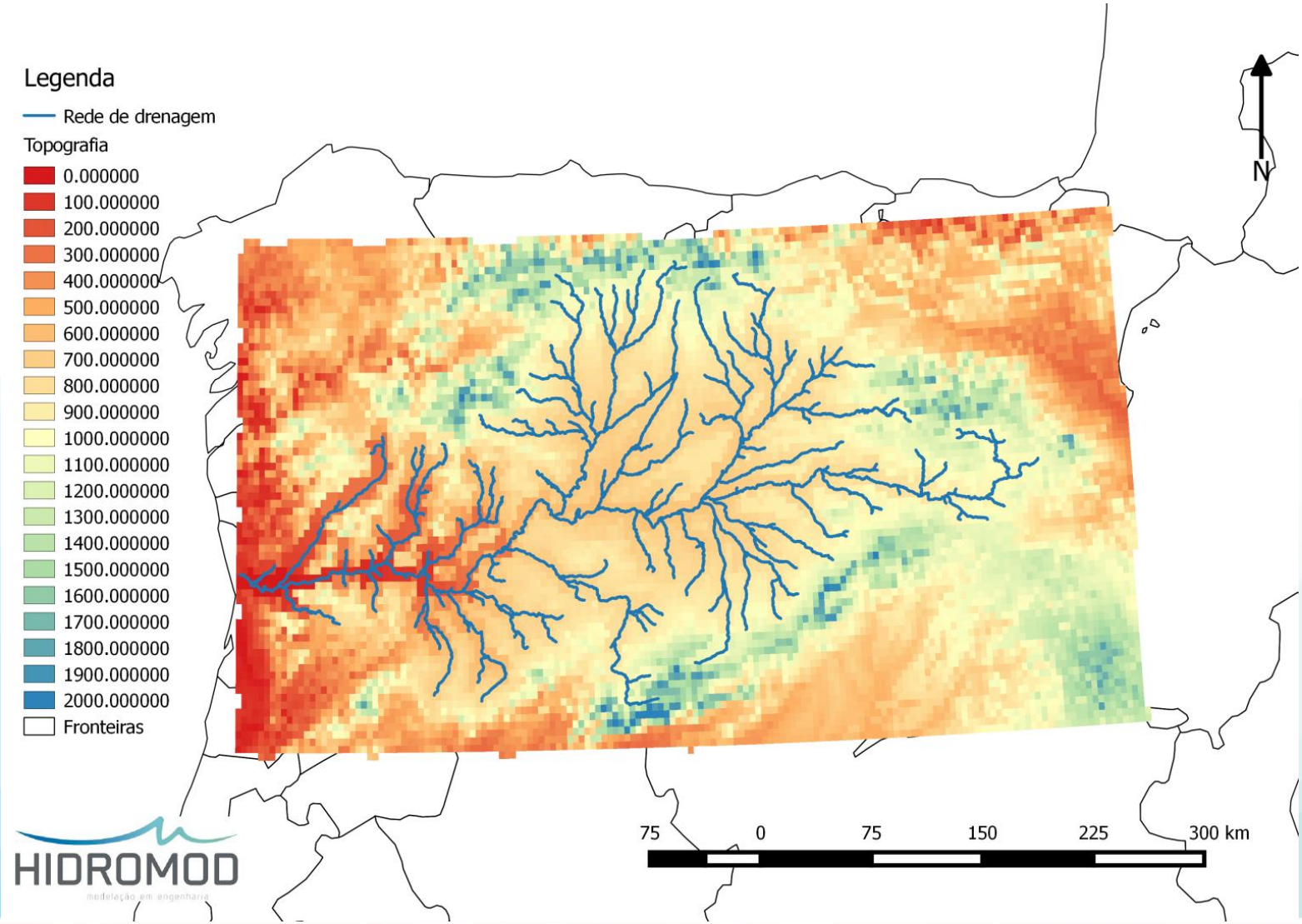
Innovation

Ensemble of flow forecast

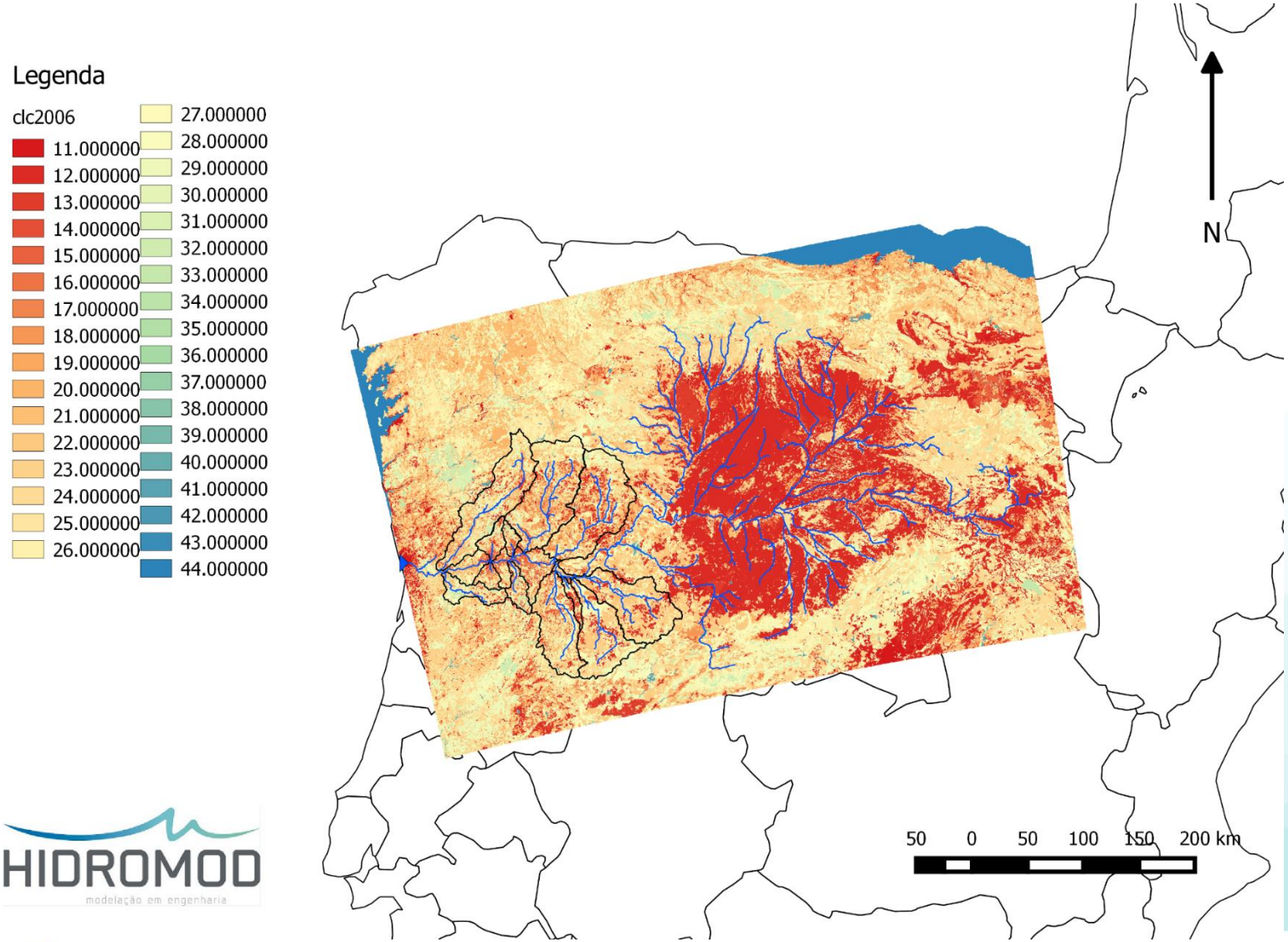
Impact

Optimizing the use of water for hydroelectricity, production

Douro - Topography



Douro - Land Use



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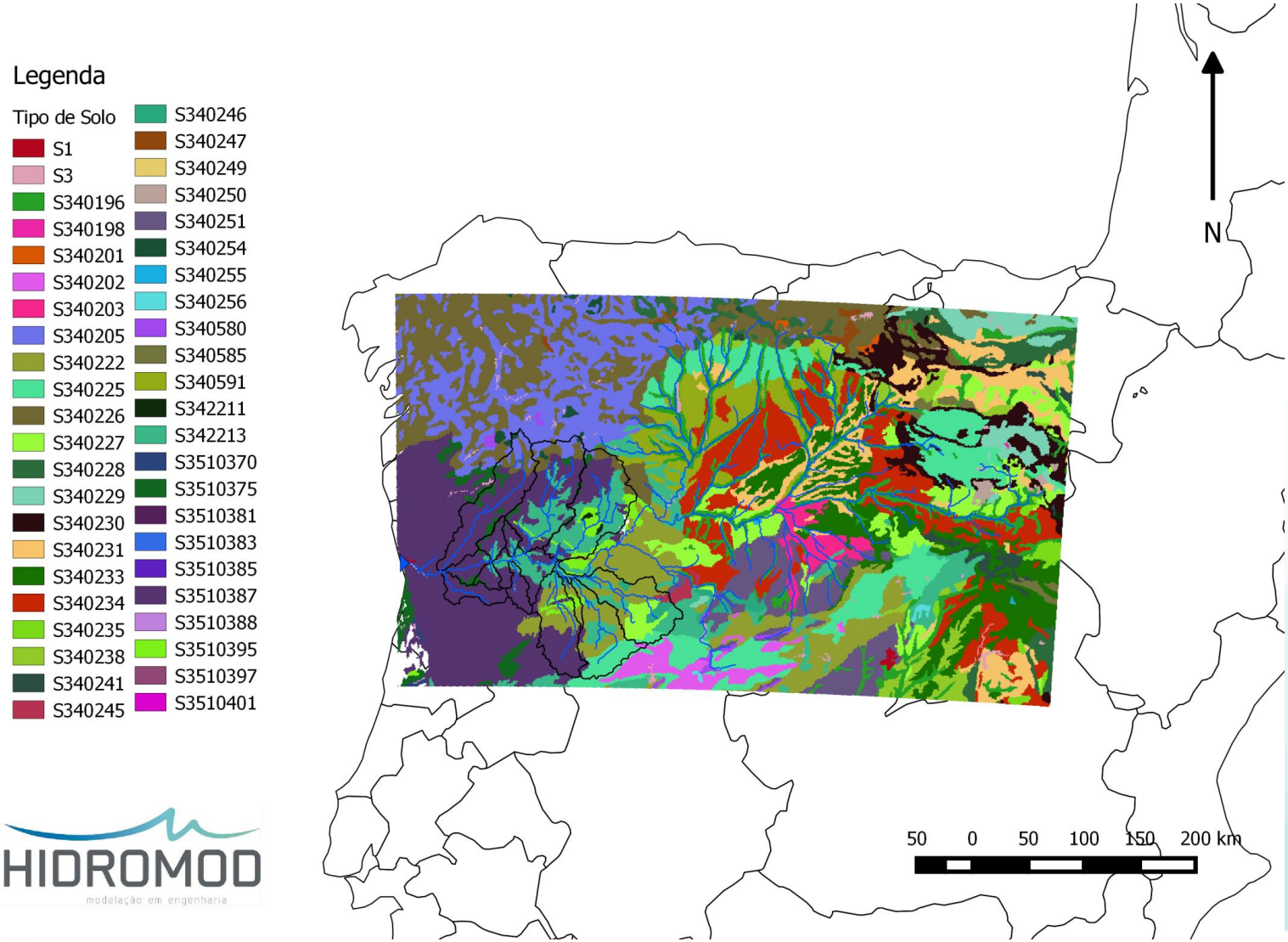
Douro - Soil type



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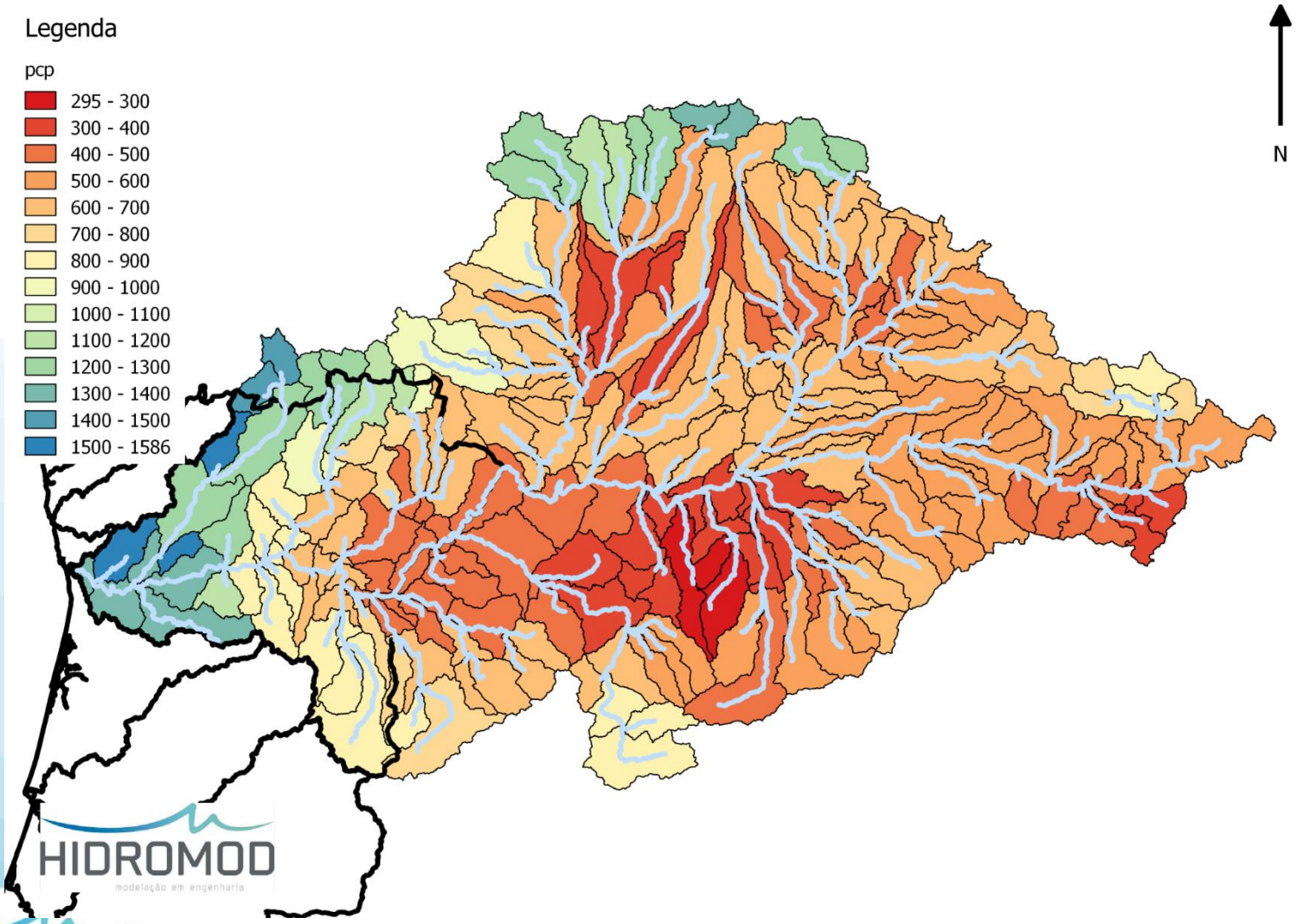
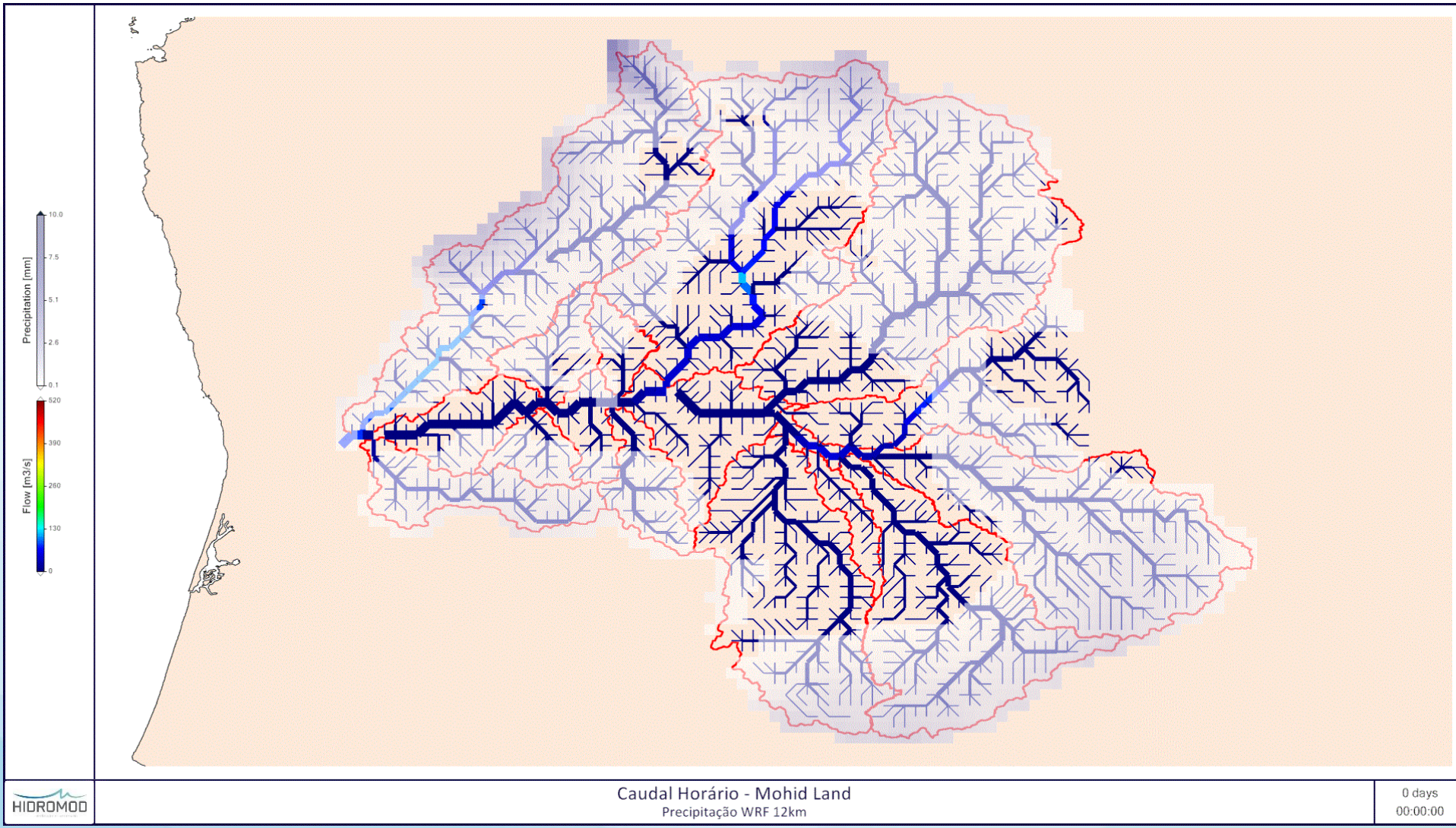
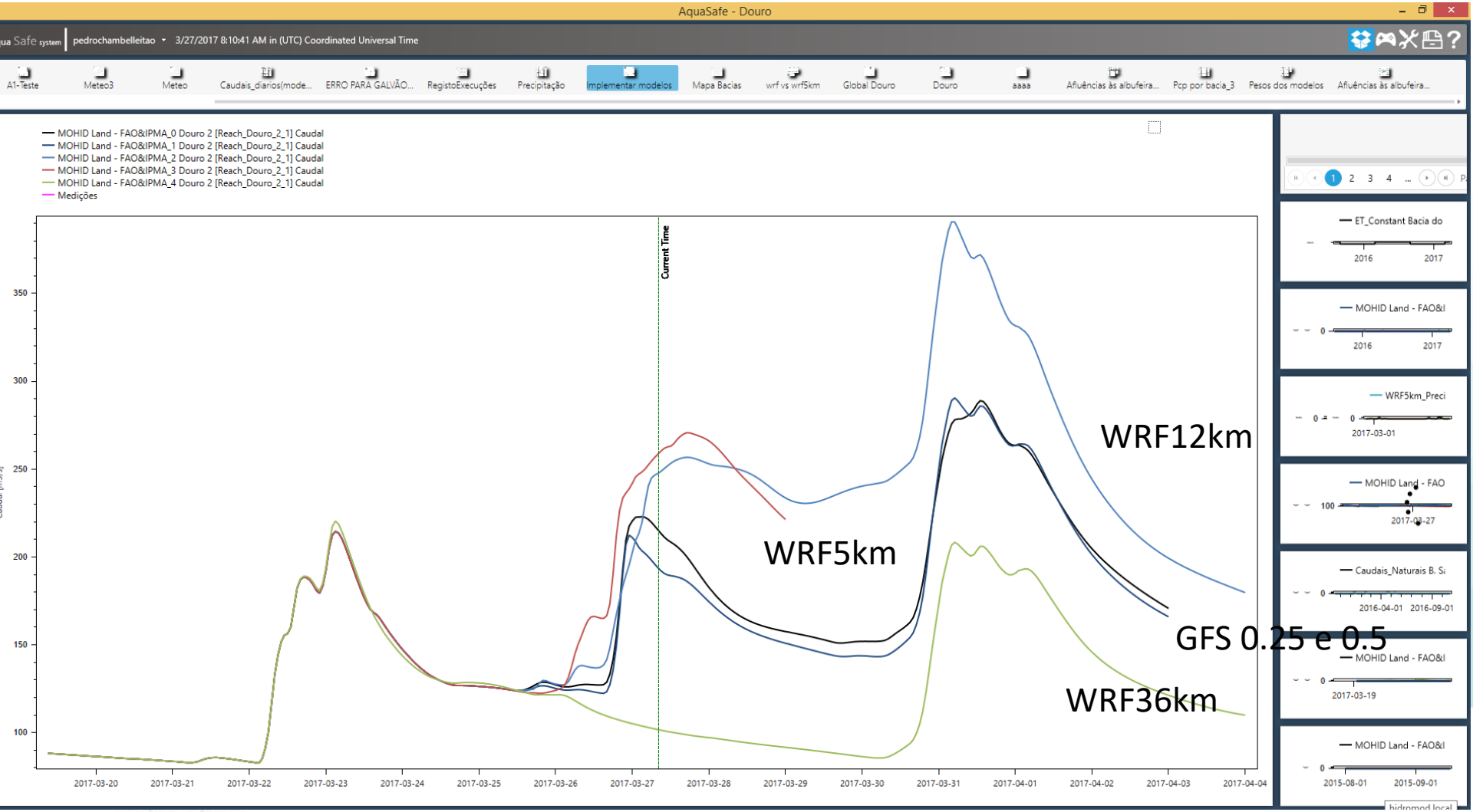
Douro - Precipitation



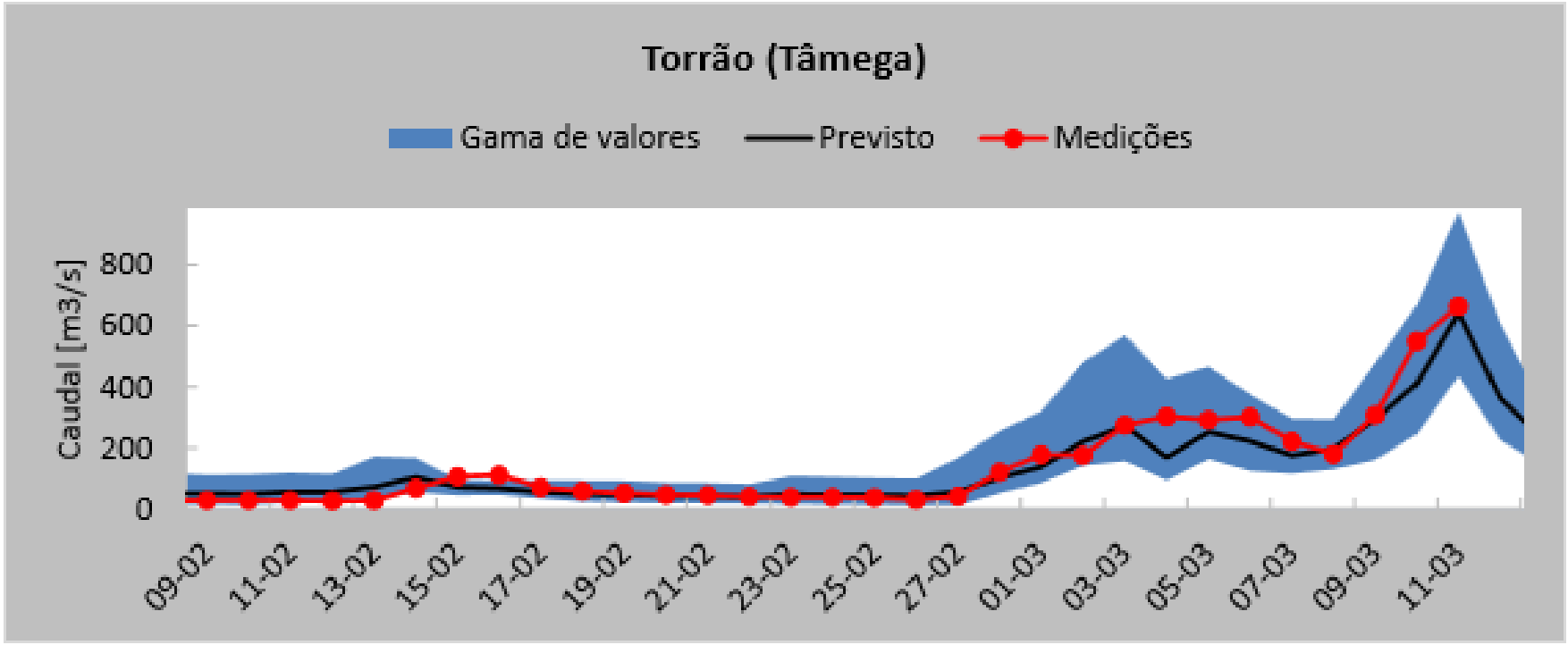
Results


Precipitation [mm]
10.0
7.5
5.1
2.6
0.1
Flow [m3/s]
520
390
260
130
0
HIDROMOD
Caudal Horário - Mohid Land
Precipitação WRF 12km
0 days
00:00:00

Ensemble - Forecast



Model validation



Floods

Vouga and Timor

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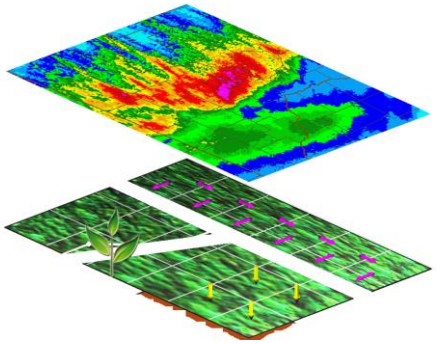
Aquafarm



Clients

Municipal Community Aveiro

Objective

Predict water levels

Innovation

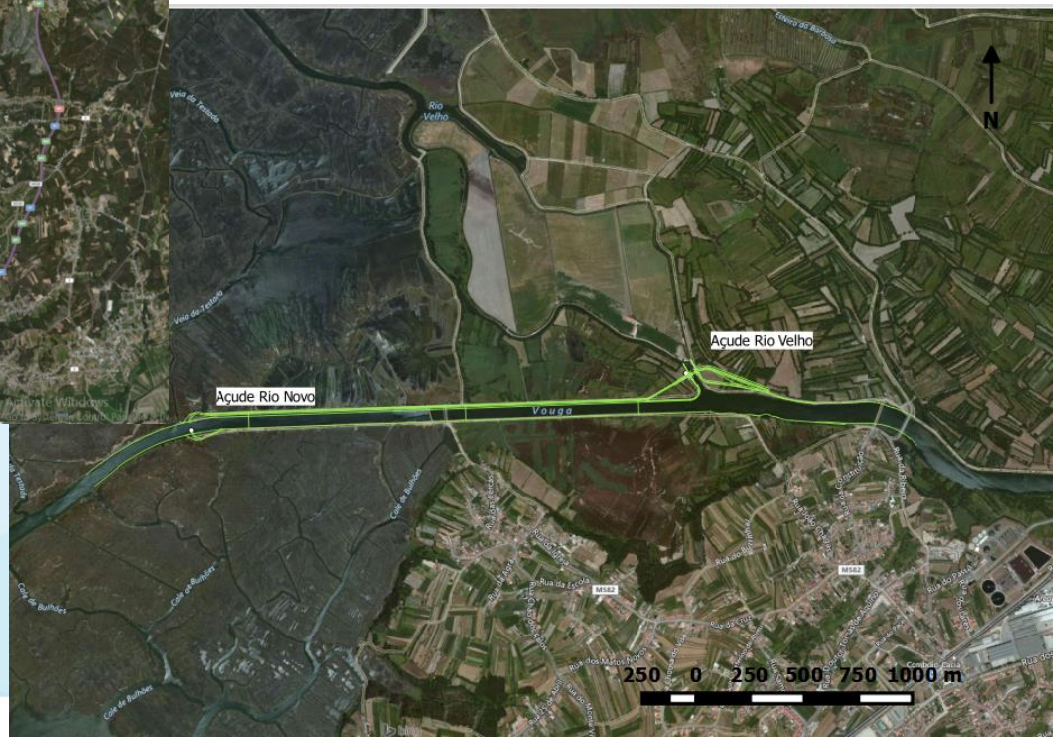
No innovation

Impact

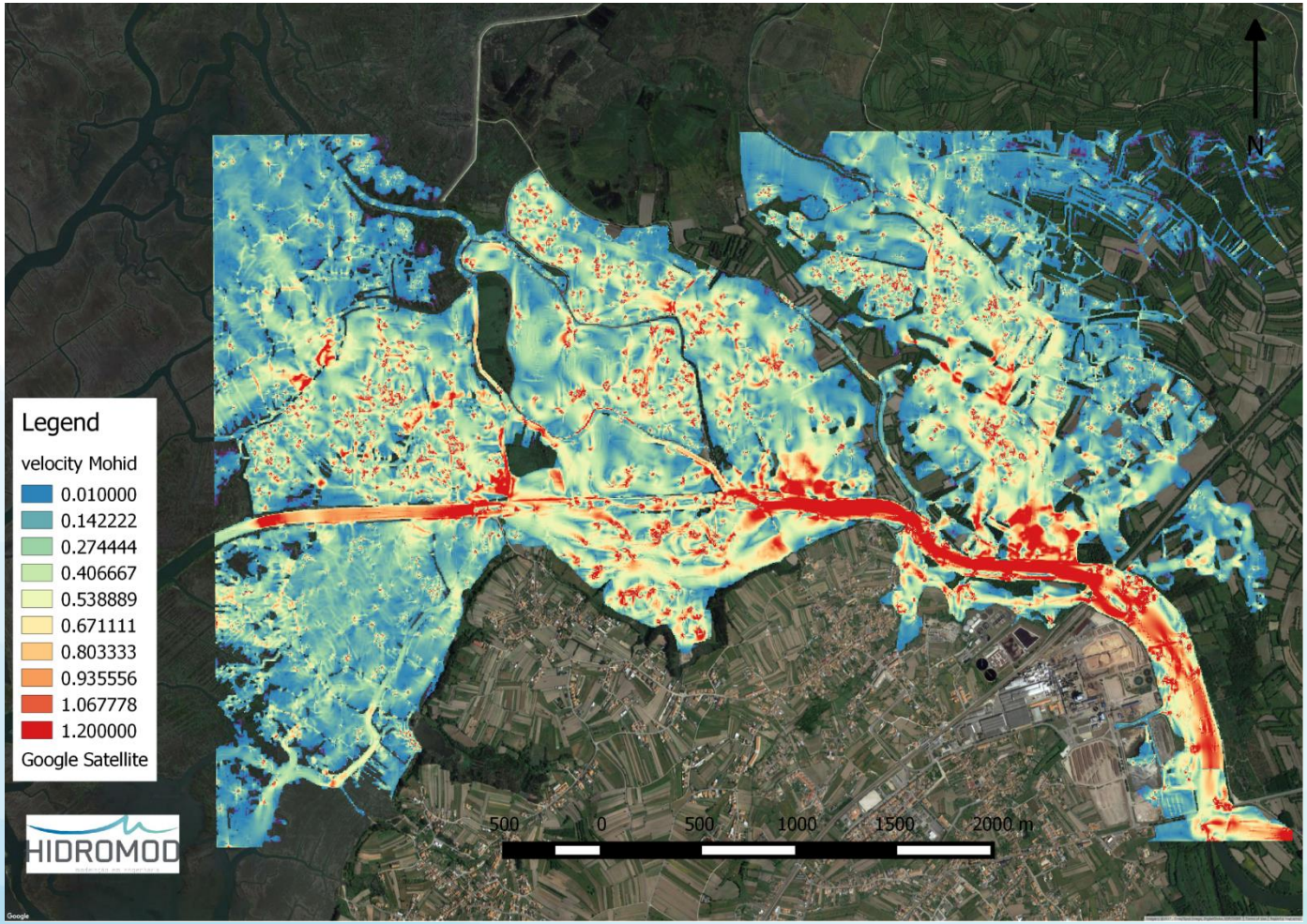
Construction and Management of flood gates

Vouga

Rio Novo and Rio Velho



Vouga


Legend
velocity Mohid
0.010000
0.142222
0.274444
0.406667
0.538889
0.671111
0.803333
0.935556
1.067778
1.200000
Google Satellite
HIDROMOD
N
500
0
500
1000
1500
2000 m

Timor

Clients

CENOR

Objective

Predict water levels

Innovation

Large computational grids.

Culvert in Mohid

Impact

Construction and Management of flood gates

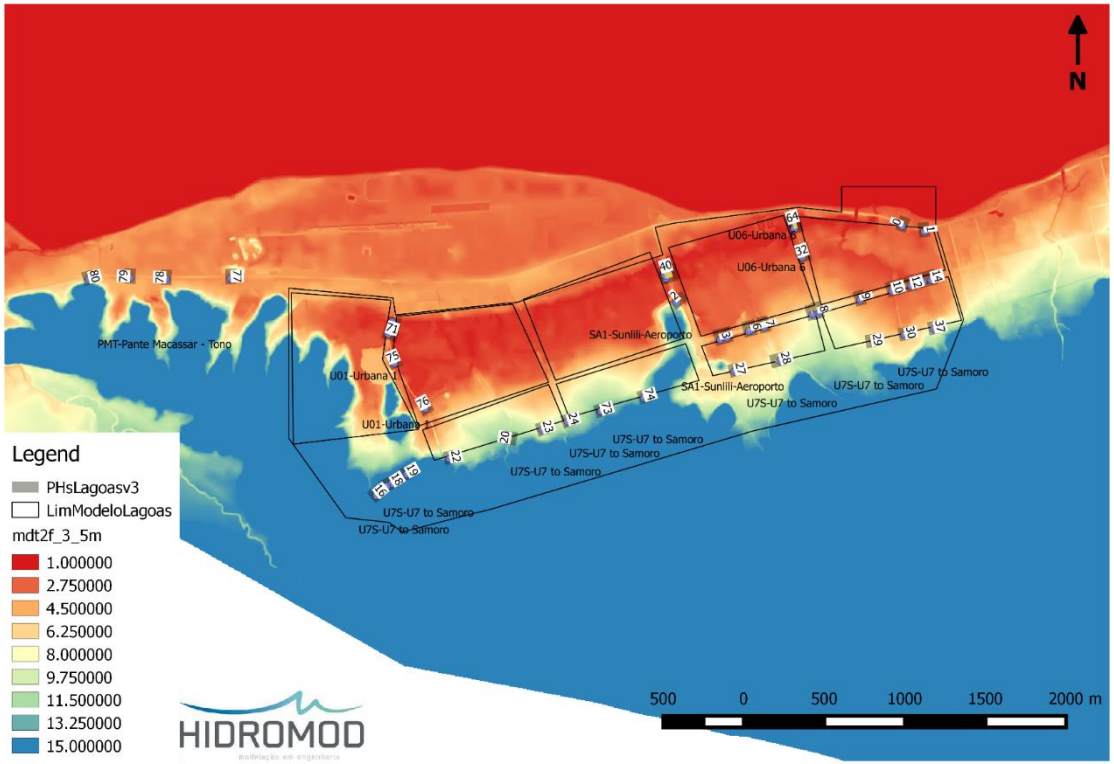
Water Column

Timor

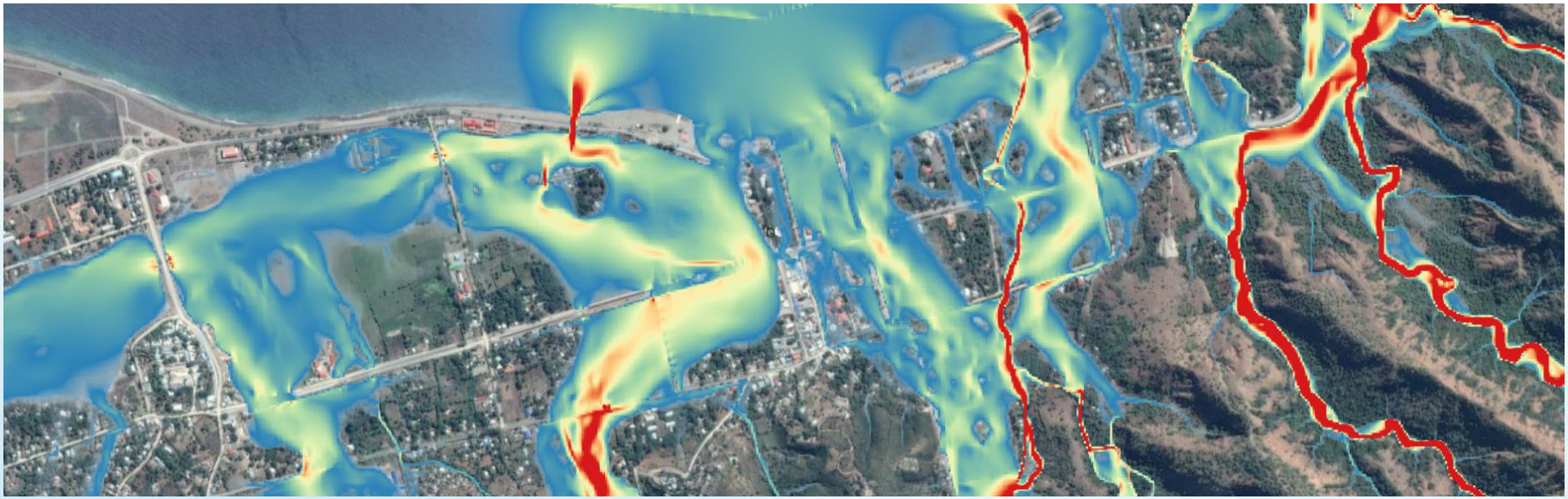
Innovation

Large computational grids

More than 100 Culverts (35 groups)



Water Velocity



Conclusions

Mohid Land has improve a bit every year since 2000

For Hidromod Mohid Land is still valuable to bring innovation to its clients

Mohid Land can have a relevant impact on technicians managing agriculture, floods and hydroelectricity