

Towards the adaptation and consolidation of an Operational Oceanographic and Atmospheric System to improve the observation and forecasting of coastal physical processes in Andalusia

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OBJECTIVES

Adaptation and consolidation of an **operational data platform**
(hydrodynamic and atmospheric models + observations in the Andalusian coast)

Oceanographic hydrodynamical models:

Homogeneous numerical output protocol
(already established models → UCA2D, UCA3D,...)

High resolution
models!

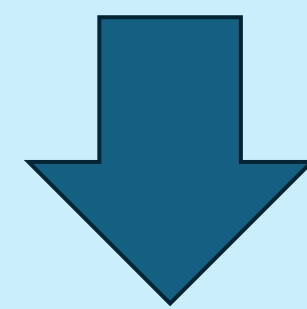
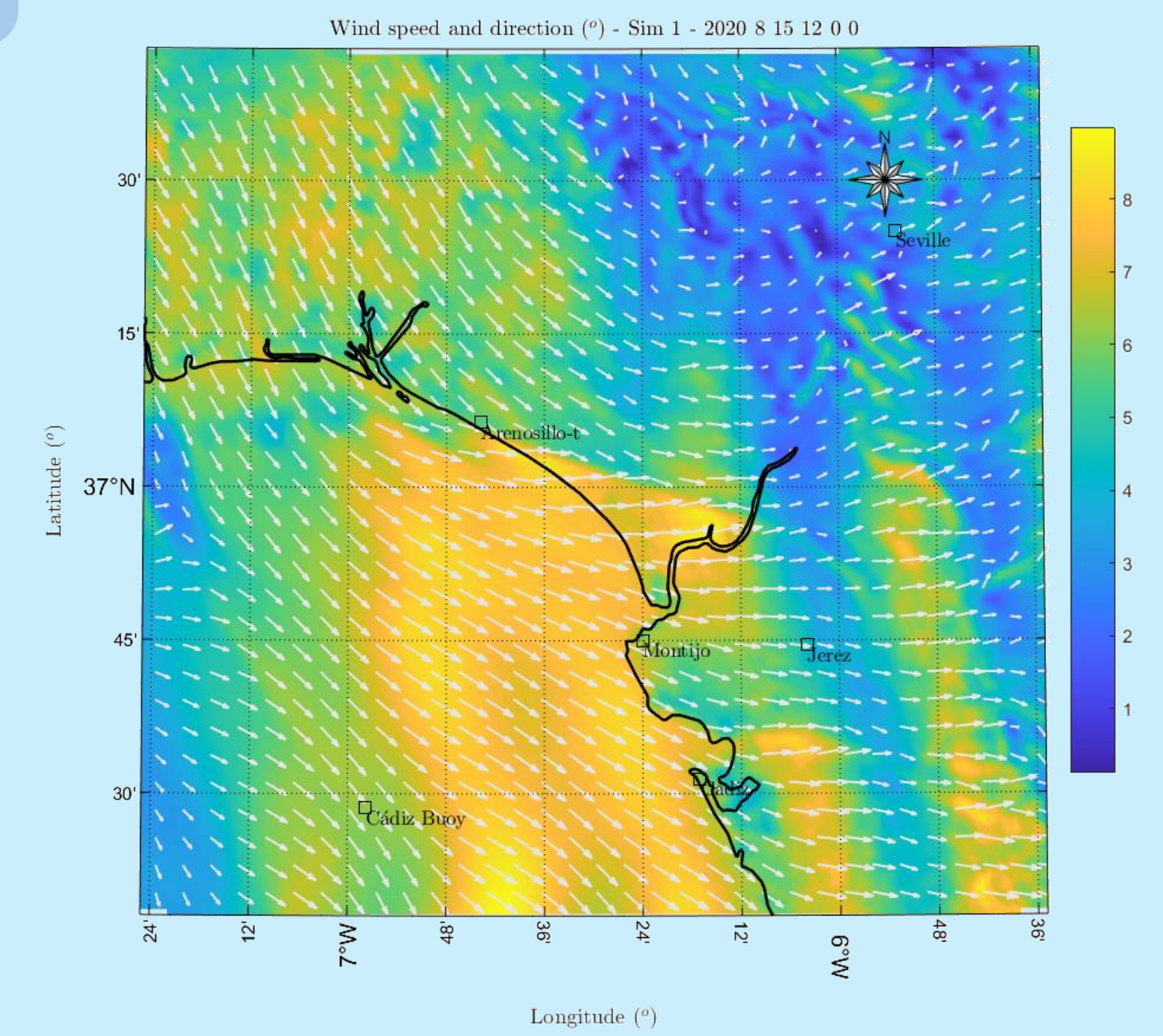
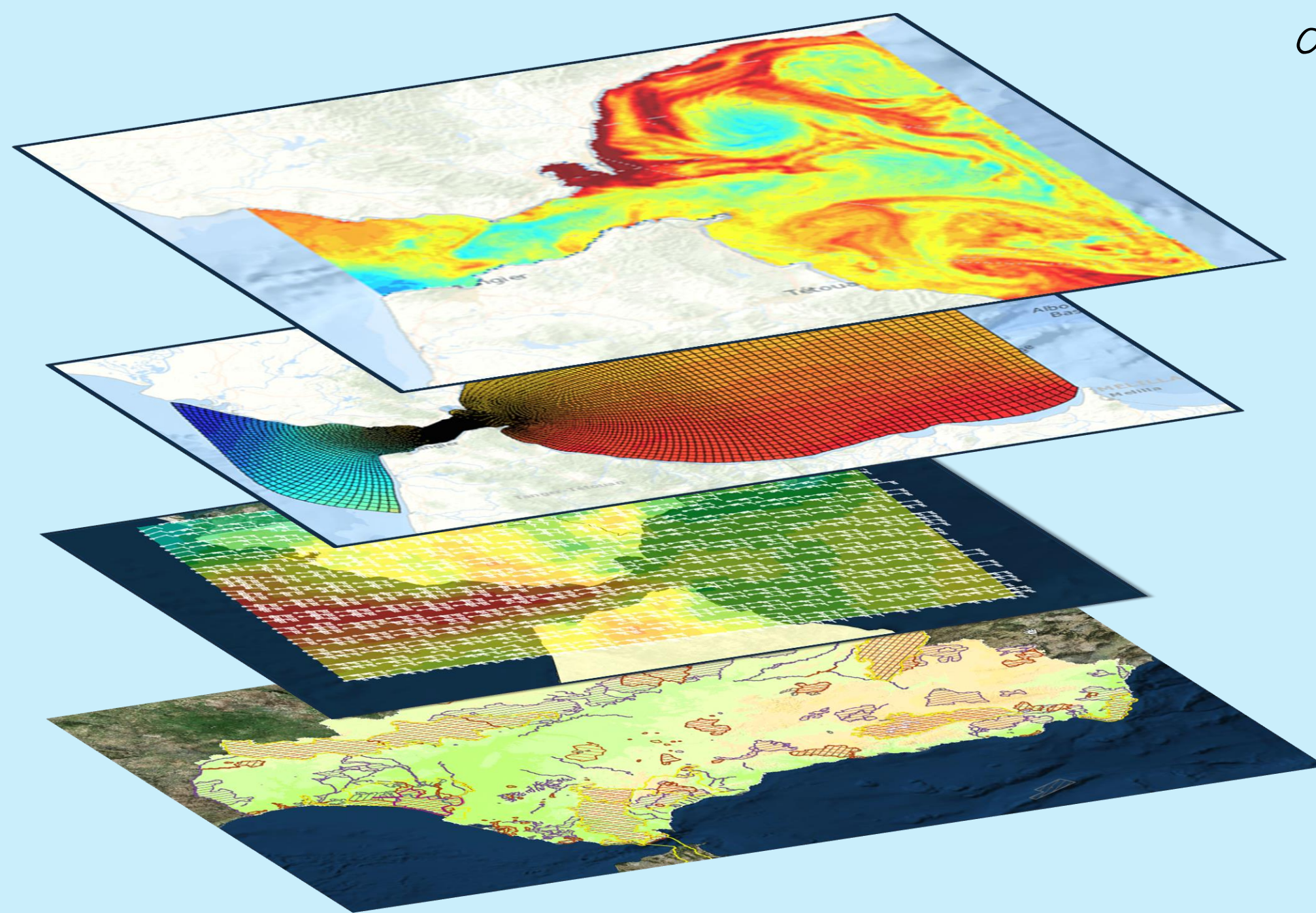
Atmospheric models:

Real time weather forecasting + input for the oceanographic models
(Weather Research and Forecasting (WRF) model)

Observational data

Permanent and field campaign (oceanographic + atmospheric) data
Time series for model validation/evaluation

Oceanographic measurements (currents, tides, CTD...) + coastal measurements
(HF radars, meteo stations, surface fluxes, beaches images...)



New web interface

Final format in user-friendly interface for the users: society, third parties, stakeholders, governmental agencies, authorities, research groups...



WORKING PLAN

Increasing the observations in the region

(especially in the Gulf of Cádiz and its coast)

Validation and intercomparison of hydrodynamic models

Operational WRF model

Daily atmospheric forecasts + continuous validation*

Hardware and software update

Adaptation to new formats and data homogenization (netcdf)
FAIR data principles

Link with organizations and institutions

Both at the national and international level

OceanUCA web interface development

Data management and visualization tools

EXPECTED IMPACTS and USEFULNESS

Observation and monitoring of oceanic and atmospheric physical coastal processes

Forecasting (long/medium term) and nowcasting

Early warning systems

Natural resources surveillance and environmental protection

Detection of Climate Change effects (long-term)

Help decision making