

AdriaClim

Climate change information, monitoring and management tools for adaptation strategies in Adriatic coastal areas



Protect the coast, adapt to climate change!

European Regional Development Fund

Project ID: I10252001

AdriaClim

“Climate change information, monitoring and management tools for adaptation strategies in Adriatic coastal areas”

Interreg AdriaClim project: improve knowledge, capacity and cooperation on climate change observing and modelling systems

SciNMeet Launch Meeting

12-13 July 2022 | CNR, Rome

Roberta Guerra, UNIBO-CIRSA

WP3 - Climate change monitoring (observing and modelling) systems

Main Aim

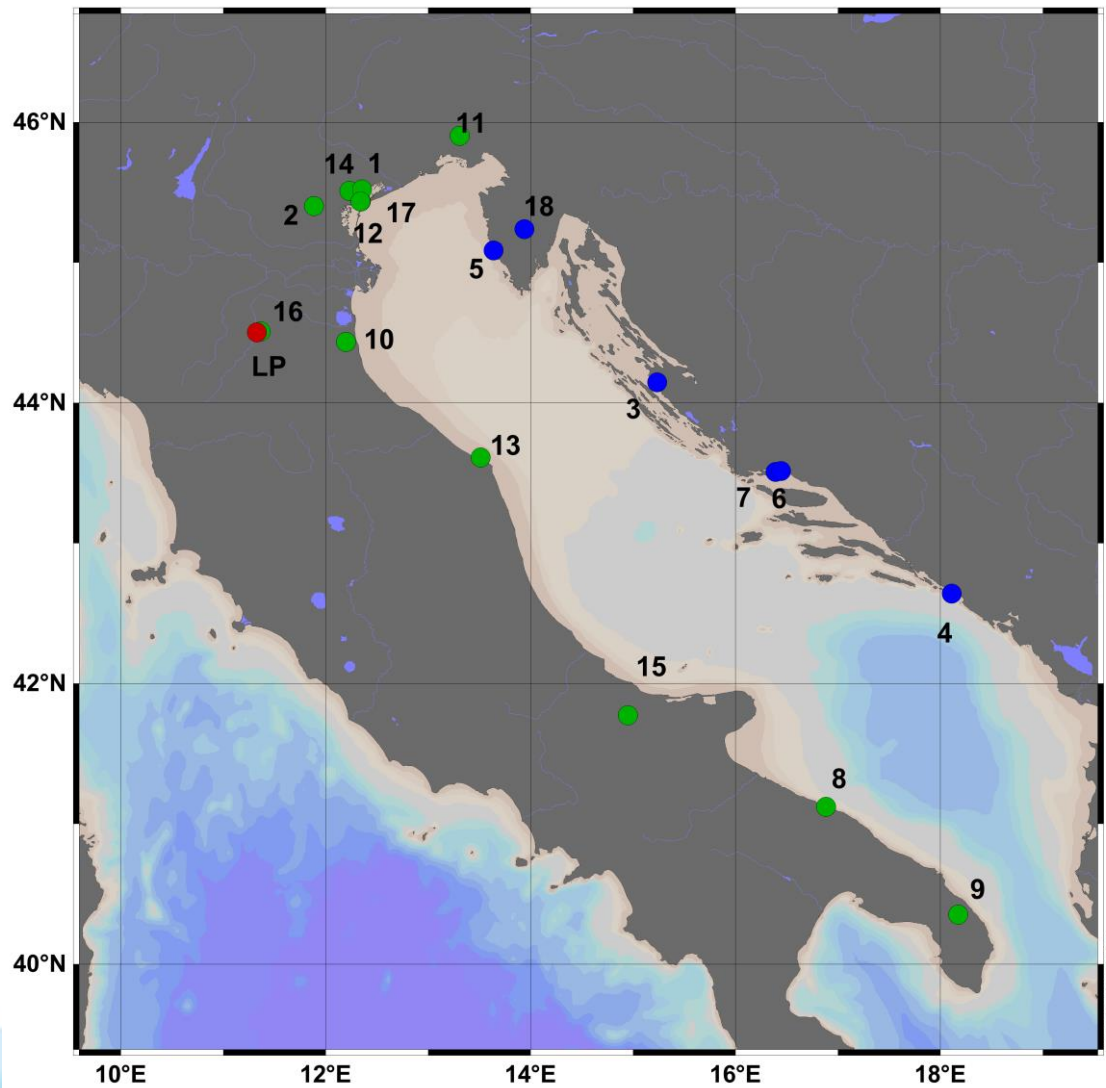
Increase the capacity related to high resolution, more accurate and reliable climate information (observations and integrated modelling) with the innovative focus on the coastal and marine areas and related economic sectors.

Expected Outputs

Enhanced collaboration among Croatian and Italian partners for improving and setting up cross-border methodologies/protocols on coastal/marine monitoring with a focus on harmonizing and improving accessibility of observing and modeling tools and products

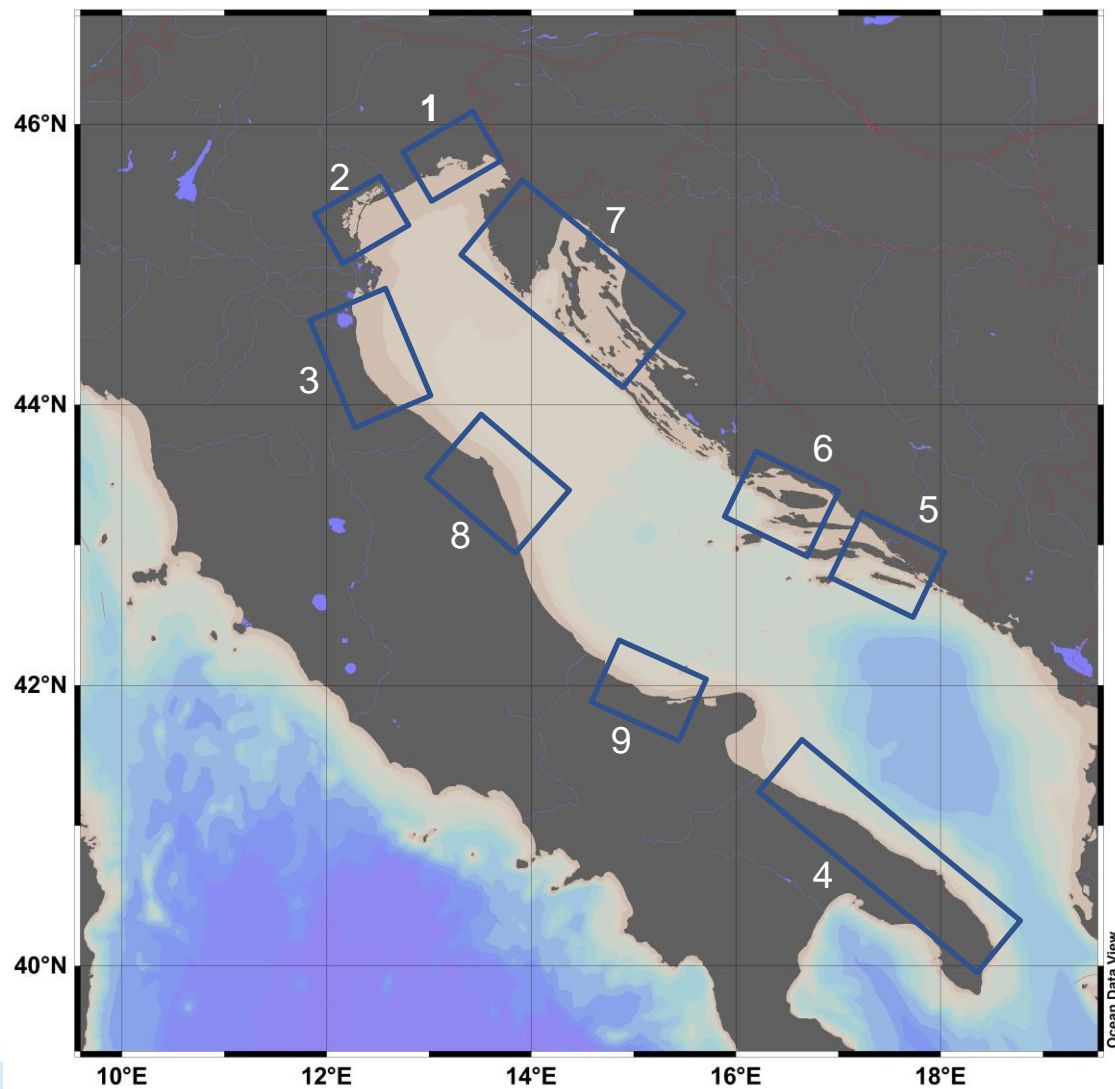
- Contribution to further develop the Adriatic Sea regional integrated Monitoring Systems focus on hydro-meteorological climatological dimension.
- Implementation of integrated modelling systems
- Preparation of climate change risks and vulnerability maps that will be developed for each targeted pilot case studies

AdriaClim Partners



| Partner n. | Name | Country |
|------------------------|---|---------|
| Lead Partner | ARPAE | IT |
| PP1 | CNR ISMAR | IT |
| PP2 | ARPA Veneto | IT |
| PP3 | Zadra Nova | HR |
| PP4 | Dubrovnik Neretva County | HR |
| PP5 | Ruder Boskovic Institute | HR |
| PP6 | RERA SD for Coordination and Development of Split-dalmatia County | HR |
| PP7 | Institute of Oceanography and Fisheries | HR |
| PP8 | Regione Puglia | IT |
| PP9 | Fondazione CMCC | IT |
| PP10 | UniBo | IT |
| PP11 | ARPA FVG | IT |
| PP12 | ISPRA | IT |
| PP13 | Regione Marche | IT |
| PP14 | Azienda ULSS N.3 Serenissima | IT |
| PP15 | Regione Molise | IT |
| PP16 | Regione Emilia Romagna | IT |
| PP17 | Comune di Venezia | IT |
| PP18 Associated | Region of Istria | HR |

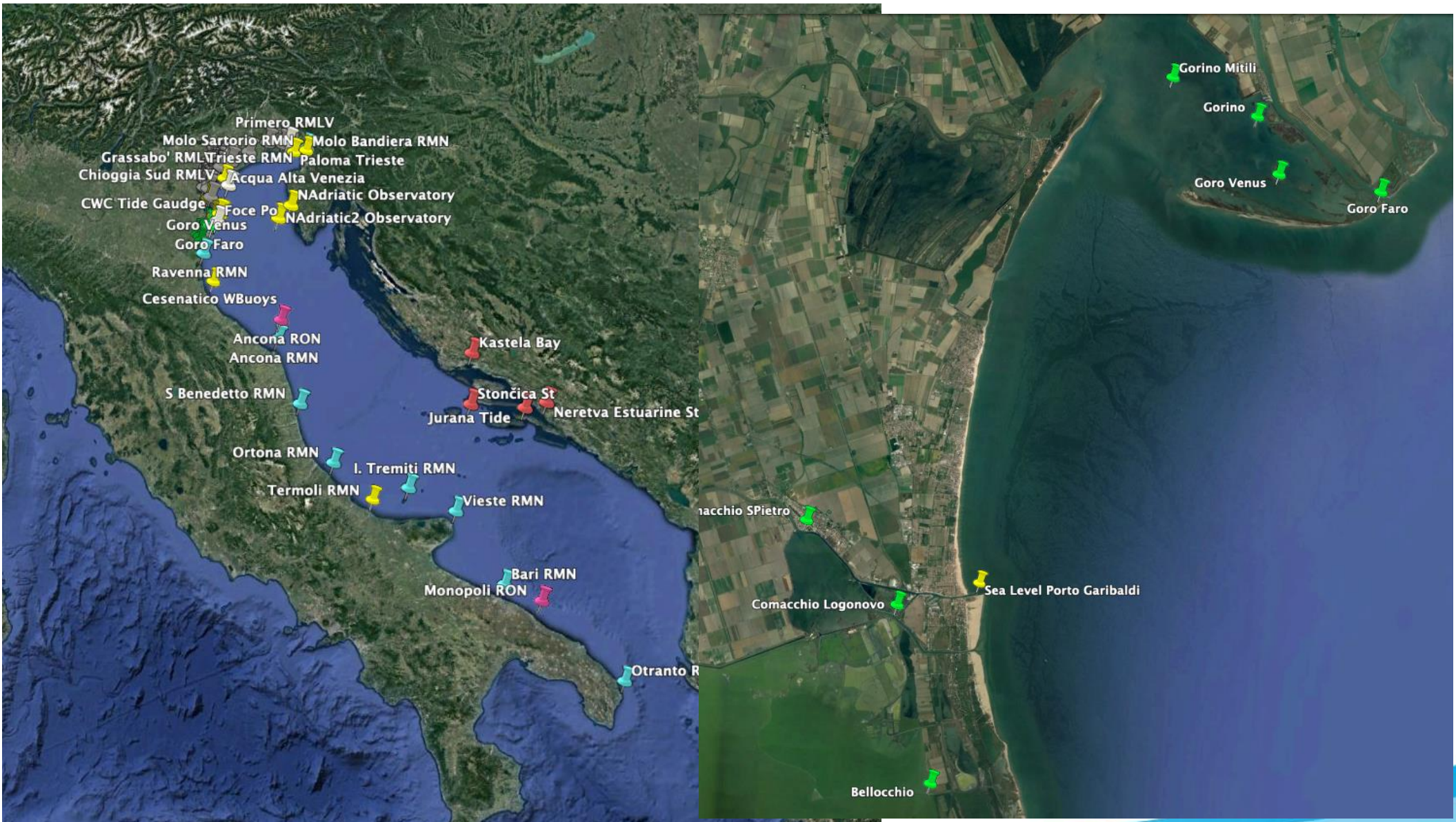
AdriaClim Pilot Areas



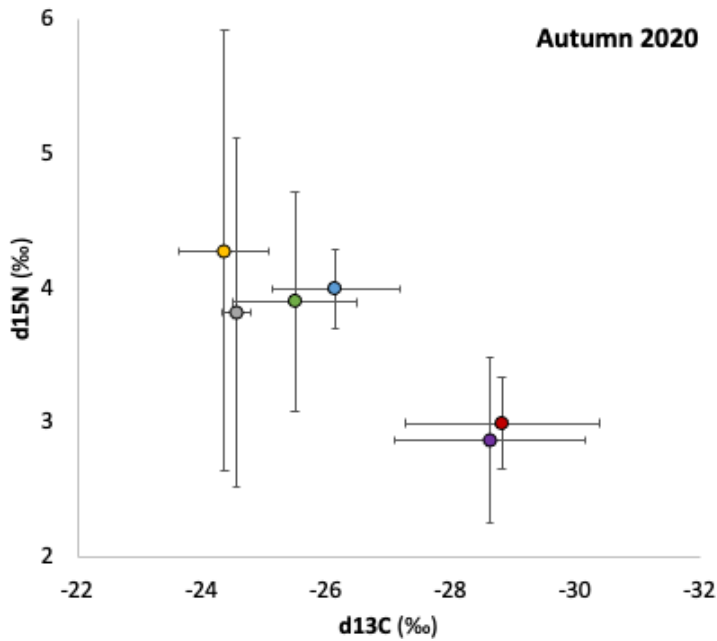
| Pilot Area n. | Name | Partners | |
|---------------|--|---|--|
| P1 | Grado and Marano Lagoon and Gulf of Trieste | <ul style="list-style-type: none"> • PP1 • PP10 • PP11 | |
| P2 | Venice lagoon / City of Venice / Veneto coastal area | <ul style="list-style-type: none"> • PP1 • PP2 • PP12 | <ul style="list-style-type: none"> • PP14 • PP17 |
| P3 | Emilia-Romagna area | <ul style="list-style-type: none"> • LP • PP1 • PP9 | <ul style="list-style-type: none"> • PP10 • PP12 • PP16 |
| P4 | Apulia region | <ul style="list-style-type: none"> • PP8 • PP9 | |
| P5 | Dubrovnik Neretva area | <ul style="list-style-type: none"> • PP1 • PP4 • PP7 | <ul style="list-style-type: none"> • PP9 |
| P6 | Split – Dalmatia area | <ul style="list-style-type: none"> • PP1 • PP5 • PP6 | <ul style="list-style-type: none"> • PP7 • PP9 |
| P7 | Northern-Eastern Adriatic Sea | <ul style="list-style-type: none"> • PP5 | |
| P8 | Marche area | <ul style="list-style-type: none"> • PP13 | |
| P9 | Molise area | <ul style="list-style-type: none"> • PP15 | |



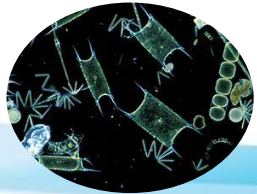
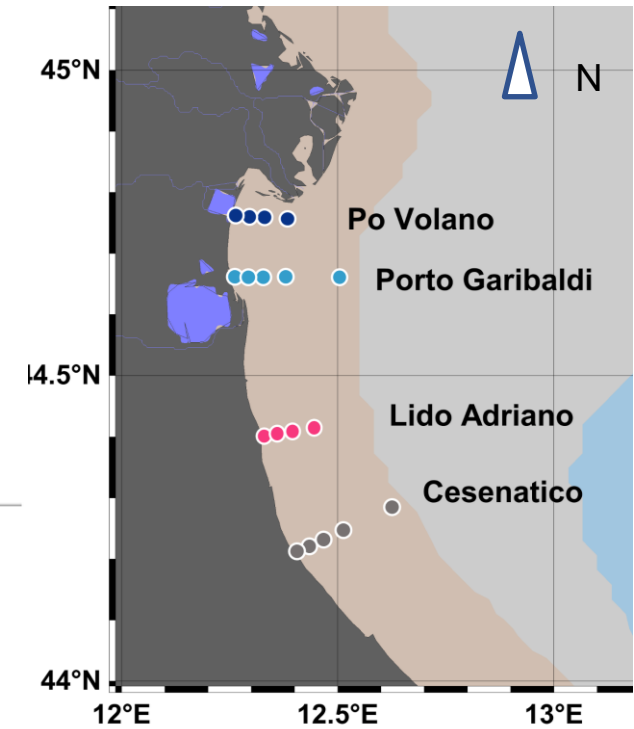
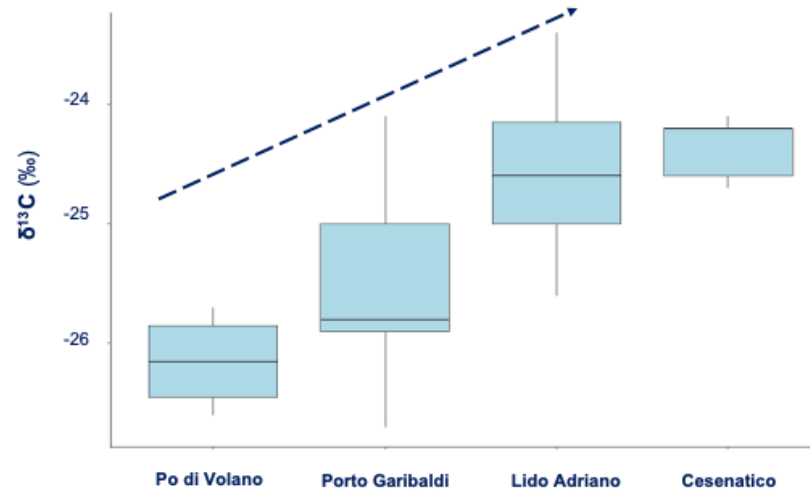




AdriaClim Isoscapes- ERM Pilot Area



- Lido di Volano ● Porto Garibaldi ● Lido Adriano
- Cesenatico ● Po river ● App Rivers



Marine plankton
($-20.7 \pm 0.2\text{‰}$)



Marine phyto-benthos
($-21.83 \pm 1.59\text{‰}$)



Po prodelta POM
($-29.48 \pm 0.63\text{‰}$)

AdriaClim regional to sub-regional scale and climate Downscaling

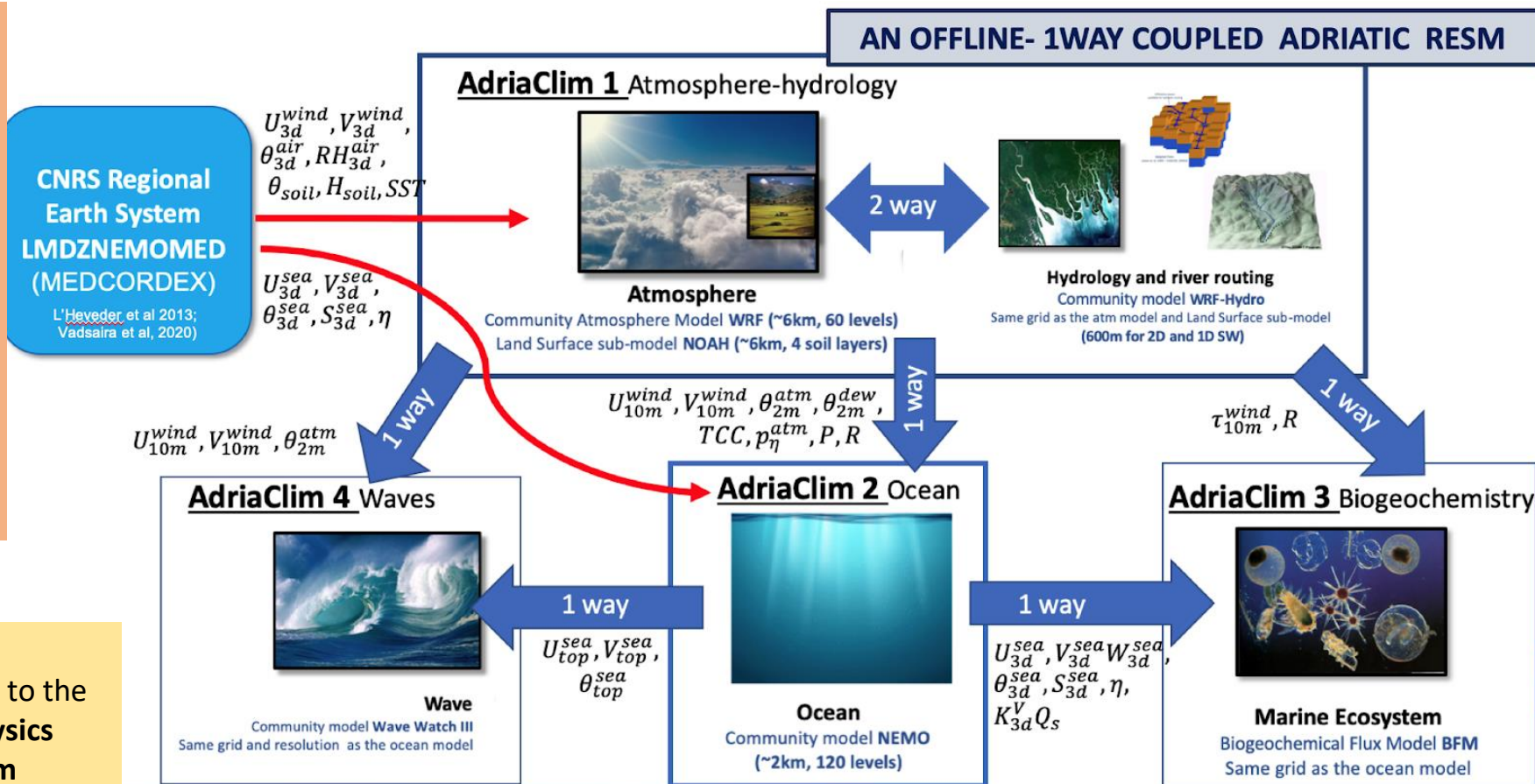
PROJECT GOAL:

a deeper knowledge of Adriatic present and future climate:

- a sub-regional ESM for the Adriatic Sea+ hyper resolution marine coastal downscaling +extended monitoring
- CC indicators, CC impacts, site specific adaptations plans for marine coastal areas

MODELING GOAL:

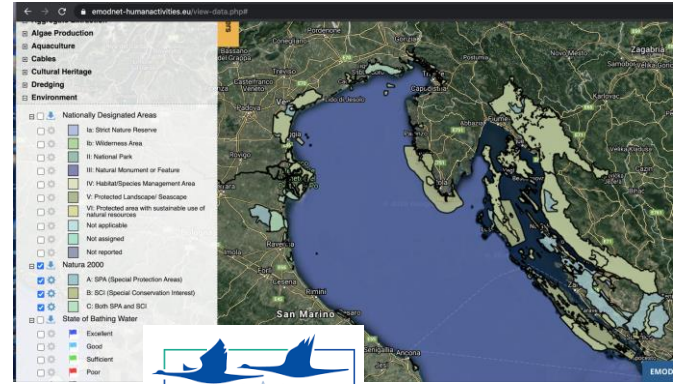
A step forward with respect to the state-of-art of the multi-physics and multi-scale earth system modeling



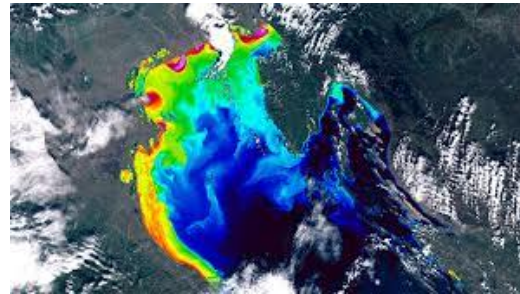
In-situ

Added Value

Data Type

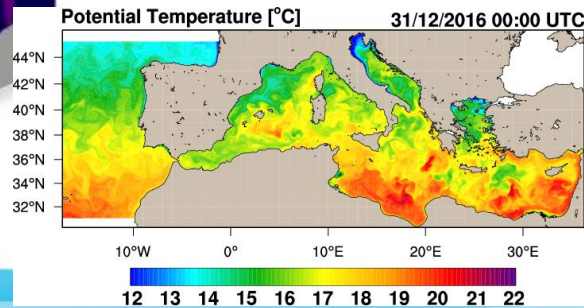
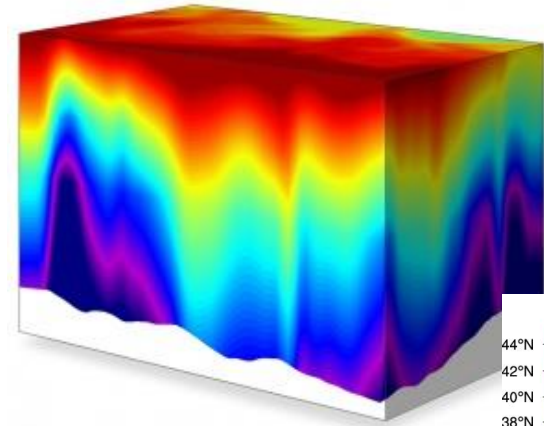


Satellite

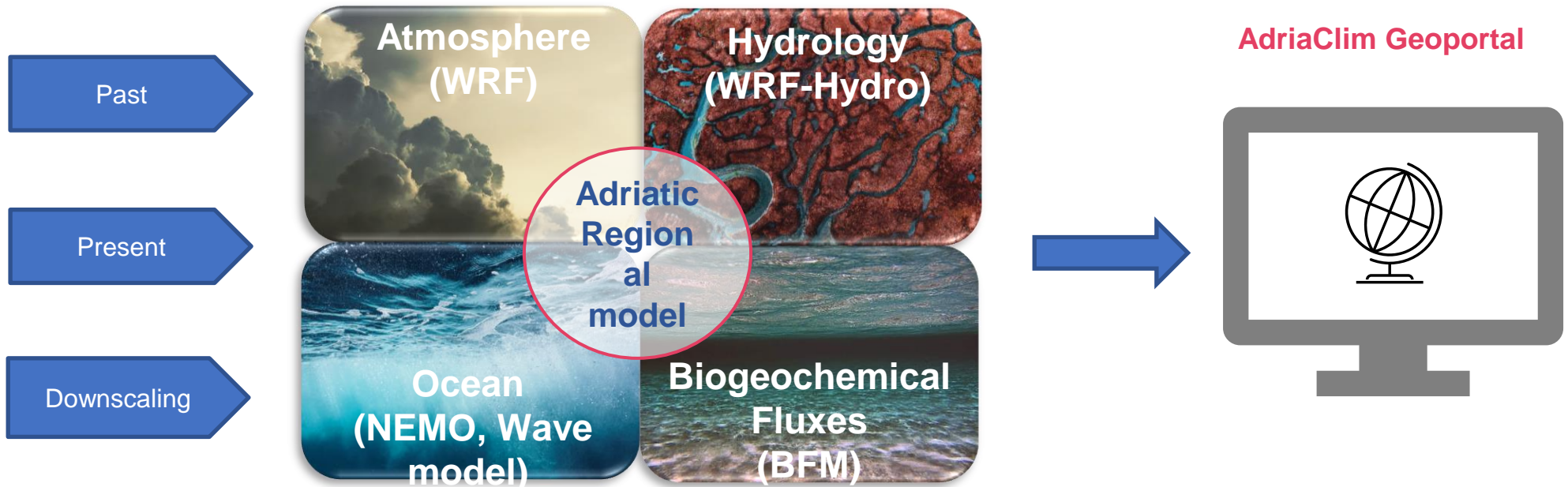


Model

Ancillary



Future Scenarios: Climate Change Indicators



Project coordinator: Andrea Valentini (ARPAE)

Prof. Nadia Pinardi - AdriaClim UNIBO-CIRSA coordinator


Prof. Roberta Guerra - PI Act 3.1 Design and implementation of the observing systems


Dr. Lorenzo Mentaschi: Development of ensemble predictions for the Mediterranean Sea;


Dr. Leonardo Aragao: Validation of the coupled atmosphere-ocean model for the Adriatic area


Dr. Veronica Santinelli: Biogeochemical monitoring in coastal areas of the North Adriatic

Dr. Jacopo Alessandri: Coupled modelling in the Emilia-Romagna pilot area

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