AdriaClim

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

Project ID: 10252001

D.2.3.1. Mid-term International Conference

PP6 – PI RERA SD

Version (final)

Public document

30 June, 2022

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Description

As part of the cross-border project AdriaClim, on June 7 & 8, 2022 in Split, Hotel Park, was held a hybrid two-day conference "Save the coast, adapt to climate change!". The conference gathered leading international experts, policy actors and decision makers in the field of the climate change. The main goals of the conference were raising awareness on the impacts of climate change on the Adriatic coast and to enable experts from universities, research and training centres to provide policymakers and the general public with up-to-date value-added information on the impact of climate change on the Adriatic Sea.

Agenda and speakers

As was mentioned before, Conference gathered leading international experts in the field of the climate change. Since conference organization started in the time of the covid restriction it was planned as a hybrid event. Some of the speakers were participated online Conference was promoted through regional medias, news in regional and local newspaper and portals, interviews with speakers about attractive climate change themes which attract a lot of interest and make conference successful.

The conference poster session provided an opportunity to other projects and practices implemented. In the poster sections, participants were represented results of current projects dealing with the conference topics: climate science, environmental science, or earth science. The posters were exhibited on both days in the conference venue, giving the participants opportunity for better networking, experience exchanging, visibility and promotion of their work.

RERA provided Call for posters invitation to all partners and get 9 applications. On the first day 69 people were attended conference in presence, and second day 61.

Facebook stream statistic shows that 313 people joined conference online.

Tuesday 7 June 2022 | Opening Session

09:00 – 10:00

1. Opening session

Time	Speaker	Topic
09:00 - 09:10	**Registration**	
09:10 - 09:20	**Matea Dorčić**, Head of department, Split-Dalmatia County / Marjan Dumanić, PI RERA S.D.	**Welcome / opening remarks from Local authorities and organizers 1**

09:20 - 09:30	**Marin Miletić,** Project Manager, Joint Secretariat Interreg V A Italy - Croatia 2014-2020	**Welcome speech from Interreg ITA-CRO Joint Secretariat**
09:30 - 09:40	**Andrea Valentini,** AdriaClim Project Manager, Regional Agency for Prevention, Environment and Energy of Emilia-Romagna (ARPAE)	**Introduction and welcome speech from AdriaClim project**
09:40 - 10:00	**Lidija Srnec, Head of Division, Croatian Meteorological and Hydrological Service (DHMZ)**	**Climate change projections for the Adriatic as a support for impact assessment**

2. Climate Change and impacts on the coasts session

Time	Speaker	Topic
Chairperson: Tea Blažević		
10:00 - 10:20	**Angel Borja**, AZTI	**Ocean health and human health: links and research agenda**
10:20 - 10:40	**Piero Lionello,** University of Salento	**The Adriatic Sea: what should we expect for the next 20-50 years? The new IPCC WGII report**
10:40 - 11:00 Coffee break &Networking	***Coffee break & networking***	
	Opening of the Posters Area ***Posters short introductions***	
11:00 - 11:20	**Giovanni Coppini,** Foundation Euro Mediterranean Centre on Climate Change (CMCC)	**The United Nations Decade of Ocean Science for Sustainable Development (2021-2030) and perspective for coastal environments**
11:20 – 11:40	**Giancarlo Gusmaroli, Italian Centre for River Restoration - Med Sea Foundation,**	**Climate change impacts on place-based governance models**

11:40 - 12:00	**Veljko Srzić, Faculty of Civil Engineering, Architecture and Geodesy**	**Coastal system vulnerability to seawater intrusion in south eastern Adriatic sea**
12:00 - 12:20	**Carlo Cacciamani,** National Agency for Meteorology and Climatology, ItaliaMeteo Agency	**What Italy is doing to protect its coasts/territory from CC?**
12:20 - 12:40	**Sanda Skejić**, The Institute of Oceanography and Fisheries Split (IZOR)	**Potential impacts of climate change on marine primary producers**
12:40 - 13:00	**Open Discussion (among speakers and with the audience)**	

Tuesday 8 June 2022

3. CC monitoring and observation: tools, models and innovations

Time	Speaker	Topic
Chairperson: Tea Blažević		
10:00 - 10:20	**Angel Borja**, AZTI	**Ocean health and human health: links and research agenda**
10:20 - 10:40	**Piero Lionello,** University of Salento	**The Adriatic Sea: what should we expect for the next 20-50 years? The new IPCC WGII report**
10:40 - 11:00 Coffee break &Networking	***Coffee break & networking***	
	Opening of the Posters Area ***Posters short introductions***	
11:00 - 11:20	**Giovanni Coppini,** Foundation Euro Mediterranean Centre on Climate Change (CMCC)	**The United Nations Decade of Ocean Science for Sustainable Development (2021-2030) and perspective for coastal environments**
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12:00 - 12:20	**Carlo Cacciamani,** National Agency for Meteorology and Climatology, ItaliaMeteo Agency	**What Italy is doing to protect its coasts/territory from CC?**
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12:40 - 13:00	**Open Discussion (among speakers and with the audience)**	

Posters


ADRI LIFE
The molecular life of the Adriatic Sea Phytoplankton
ADRI LIFE
HRZZ
Duration 01.03.2021 – 28.02.2025 Total budget KN 1, 988 500.00
To understand the dynamics of marine phytoplankton and its reactions to changing environments (like e.g. global climate changes or/and anthropogenic pressures) it is of great importance to understand the physiological basis at species at molecular level. This project will employ metatranscriptome analysis for this purpose and thus will drive the current research approaches of the involved institutes and in general for the regions towards research methodologies that involve high throughput methodologies and deep molecular biological analysis of marine environments and especially marine phytoplankton.
SAMPLING SITES
Croatia
Adriatic Sea
Italy
Dubrovnik
Key species from the Adriatic phytoplankton (CIM Culture Collection) will be subjected to a variety of culture conditions (e.g. changes in nutrient availability, temperature simulating Global climate change). We will analyse physiological reactions (e.g. changes in lipid production, morphology and enzymatic activity) and transcriptomes under the different culture conditions and establish a reference transcriptome project database. This reference transcriptome database will be used to increase the taxonomic and physiological resolution in the analysis of in situ metatranscriptomes, derived from field samples along spatio-temporal ecological gradients.
PROJECT TEAM
SCIENTIFIC TEAM
TECHNICAL SUPPORT TEAM
SCIENTIFIC CONSULTANTS
In situ metatranscriptomes will be analysed in the context of the respective ecological conditions and community compositions, taking into account the results from long terms observations of phytoplankton community compositions and oceanographic conditions along the investigates spatio-temporal gradients.
To further improve our understanding the phytoplankton physiology and transcriptomics we will compare results from the highly productive northern Adriatic and the oligotrophic southern Adriatic, where we can observe connected populations under very different conditions in situ.
PROJECT PARTNERS

ATE INDICATORS BASED ON RIVER DISCHARGE
he Adriatic Sea using EFAS (1991-2020)

Leonardo **Aragão**[1], Nadia **Pinardi**[1], Lorenzo **Mentaschi**[1], Giorgia **Verri**[2], Alfonso **Senatore**[4], Luca **Furnari**[4], and Silvana **Di Sabatino**[3].

[1] Inter-Departmental Research Centre for Environmental Science (CIRSA), University of Bologna, Italy.
[2] Department of Physics and Astronomy "Augusto Righi", University of Bologna, Italy.
[3] Centro Euro-Mediterraneo sui Cambiamenti Climatici, CMCC, Italy.
[4] Centro Studi per il Monitoraggio e la Modellazione Ambientale (CeSMMA), University of Calabria, Italy.
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ABSTRACT

The present study aims to validate the river discharge (RD) within the Adriatic Sea basin extracted from the *European Flood Awareness System* (EFAS) to estimate five climate indicators into the 1991-2020 period foreseen in the AdriaCLIM project : RD-1 River Discharge, RD-2 Mean River Flow, RD-3 Minimum River Flow, RD-4 Standardized Flow Index (SFI), and RD-5 Maximum River Discharge.

The RD data were extracted, processed, and validated (Figure 1) at several river-mouth positions to validate the WRF Hydro simulations, used as input on NEMO climatic simulation. All rivers flowing to the Adriatic with climatological average of Daily RD higher than 1 $m^3.s^{-1}$ were considered and gathered by their respective Adriatic Sea section and Pilot Area (Figure 2). The summary of the 86 rivers was based on AdriaCLIM D3.2.1 and the AdriaCLIM WRF/Hydro NEMO simulation benchmarks. The EFAS gridpoint selection regarding the river mouth's actual position follows two criteria: nearest neighbour and, when possible, the highest correlation with the available monitoring data.

The unavailability of observed data limited the RD validation to 76% of the considered rivers. For the same reason, it was not possible to use a uniform validation period, as well as the distance from the monitoring station to the river mouth. The results confirm the Shallow Northern Adriatic as the primary holder of RD with a daily average that exceeds 2 500 $m^3.s^{-1}$ and accounts for 62% of the entire river water input in the Adriatic (Figure 3). The annual cycle of RD presents a well-defined pattern, with the dry season in the spring and summer months (peak in August) and the wet season during autumn and winter (peaks in November and December). According to the RD-4 (SFI-12, Figure 4), the last climatological cycle was drier than usual (54%). However, about 20% were classified as moderate to extremely wet, against 15% between moderate to extremely dry, indicating that drought periods have been more extended while wet periods have been more intense.

Figure 2 ↗ Distribution of the 86 river mouths (circles) considered in AdriaCLIM within the 8 subdivisions of the Adriatic Sea. The main river (Po) is represented by 11 branches between the Po di Volano and Po di Levante rivers.

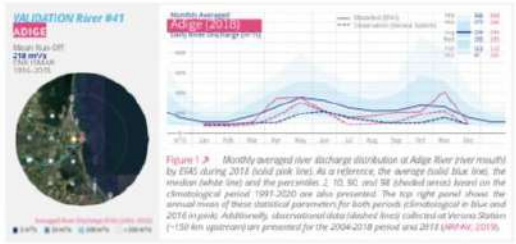

Figure 1 ↗ Monthly averaged river discharge distribution at Adige River (river mouth) by EFAS during 2018 (solid pink line). As a reference, the average (solid blue line), the median (white line) and the percentiles 2, 10, 90, and 98 (shaded areas) based on the climatological period 1991-2020 are also presented. The top right panel shows the annual mean of these statistical parameters for both periods (climatological in blue and 2018 in pink). Additionally, observational data (dashed lines) collected at Verona Station (~150 km upstream) are presented for the 2004-2018 period and 2018 (ARPAV, 2019).

Figure 4 ↗ SFI for the entire Adriatic Sea basin analysed from 1991 to 2020 with a 12-month scale. Positive values represent wet months (blue areas), while negative values represent dry months (red areas). Both are plotted on a scale from Near Normal (NN) to Moderate (Mod. ± 1.0), Severe (Sev. ± 1.5) and Extreme (Ext. ± 2.0). The monthly average of RD (blue line) is shown in $m^3.s^{-1}$ on the secondary scale.

Figure 3 ↗ Same of Figure 1, but for the Adriatic Sea sections.

AdriaClim Observations in ERM Pilot Area: Benthic nutrients

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[2]Department of Physics and Astronomy (DIFA), Alma mater Studiorum-Università di Bologna, Italy.
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Objective

To study the spatial distribution of sediment organic carbon (OC), total nitrogen (TN), and total phosphorous (TP) in Emilia-Romagna pilot area.

Materials and Methods

We collected surface sediments at four transects located at increasing distance from the coast and from the Po River in December 2020. Elemental composition (OC and TN) was determined using EA, and phosphorous was measured spectrophotometrically at 880 nm after extraction with 1M HCl [1].

Figure 1 Sampling map of Emilia Romagna Pilot Area

Figure 2 Water and sediment samples collection

Results

- Sediment OC and TN increased at increasing distance from the coast, varying from 0.43±0.42 % to 0.02±0.01 % and 1.04±0.35 % to 0.10±0.01 %, respectively, at 0.5 km and 10 km offshore;
- Spatial distribution of TP displayed a somewhat north-south decreasing pattern with higher TP values measured at Po di Volano transect (762±205 mg kg^{-1}) and lower values at Cesenatico (631±67 mg kg^{-1}). Inorganic phosphorous (IP) contributed to 61 ±19 % to the total sedimentary TP;
- Water column Chlα fluorescence also displayed a north-south pattern with near-surface values decreasing from the Po River prodelta to Cesenatico.
- The shape of the chlorophyll-a profiles varied in terms of the depth and the magnitude of the maximum chlorophyll concentration ranging from 2.8 to 5.3 ug l^{-1} at 10km offshore.

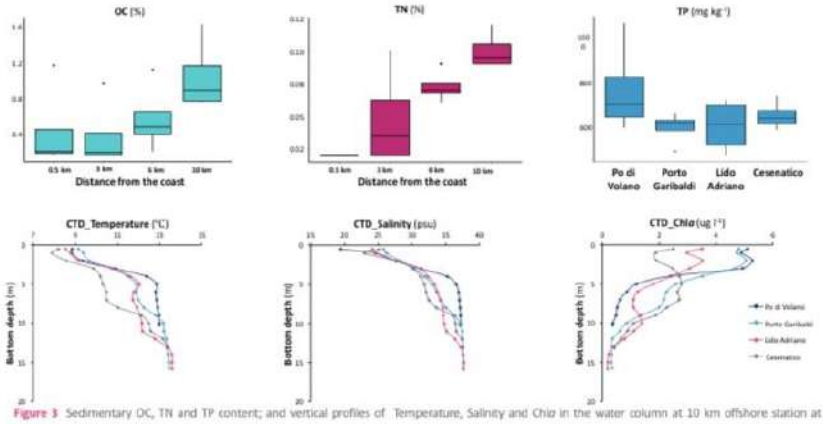

Figure 3 Sedimentary OC, TN and TP content; and vertical profiles of Temperature, Salinity and Chlα in the water column at 10 km offshore station at each transect in ERM Pilot Area

Goals

The observed data contribute to AdriaClim activity 3.1 'Design and implementation of the observing system updates' in ERM Pilot area, with a focus on spatial and temporal variability of: a) the biogeochemical components at the water-sediment interface, and b) the chemical-physical and biological water column conditions.

References: [1] Aspila K., Agemian H., Chau A., 1976. A semi-automated method for the determination of inorganic, organic and total phosphate in sediments. Analyst 101, 187–197

ADRIACLIM MID-TERM INTERNATIONAL CONFERENCE • PROTECT THE COAST, ADAPT TO CLIMATE CHANGE
WP. 3.1 • Design and implementation of the observing system updates
7 and 8 June, 2022 - Split, Croatia.

MARINE HEAT WAVES IN THE ADRIATIC SEA: A PROPER DEFINITION OF THE BASELINE PERIOD IN A CHANGING CLIMATE

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Marine heatwaves (MHWs) are anomalous warm seawater events widely recognized for their capacity to disrupt marine ecosystems (Oliver et al., 2021, Jacox et al., 2022). An MHW is defined as a discrete period of prolonged (more than 5 days) anomalously ocean temperatures exceeding a defined threshold, in a particular ocean region. **Anthropogenic climate change** has strong impact on the long-term trends of the MHW characteristics (frequency, intensity, and duration). These increases are expected to continue under projected future emissions scenarios, and it is possible that much of the global ocean will reach a **permanent MHW state** by the late twenty-first century (Oliver et al., 2021). Due to significant ocean warming, one of the important questions that arises for MHW analysis is the definition of an appropriate baseline period to calculate **a local, daily based and upper-percentile climatology** of Sea surface Temperature SST (Hobday et al., 2016) as the threshold above which MHWs are detected. The **baseline period** choice affects the long-term trend in mean SST, and hence the MHWs detection and characteristics. The choice of using a fixed or a moving baseline would be guided by specific research questions of interest.

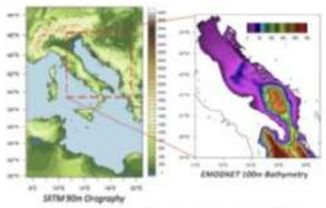

Figure 1 – Adriatic Sea region from the AdriaClim model used to MHW climatological baseline analysis.

This work studies the effect of a fixed versus moving baseline period on the characterization of MHWs in the Adriatic Sea region (Figure 1), based on the results of a **regional climate model** (CMCC MedCordex – Ruti et al., 2016 – from 1991 to 2006 on historical mode and from 2007 to 2080 on RCP8.5 projection mode – Figure 2). For this, two different approaches to calculate the SST anomaly (Figure 3) and the 90th percentile SST climatology (Figure 4) time series: one using a fixed 30-year baseline period (1991 to 2020) and one using a moving 31-year baseline centered on the year analyzed (p.ex. to analyze the year 1991, the time window used will be from 1976 to 2006 - the as suggested by Oliver et al., 2021). We then used the exceedances above the resulting thresholds (Figure 4) to determine MHWs following the Hobday et al. (2016) method.

Overall we aim at critically reviewing our current **understanding of MHWs** from a **climatological perspective** and looking at the physical climate characteristics (long-term warming, climate variability changes), the ecosystem slow/fast adaptation capacities and the societal needs.

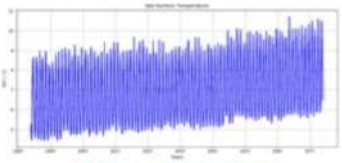

Figure 2 – SST time variation for the Adriatic Sea region.

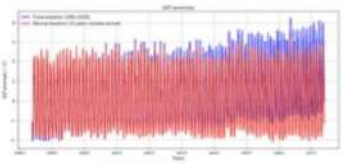

Figure 3 – SST anomaly time variation.

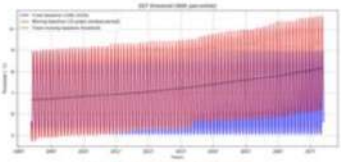

Figure 4 – 90th percentile SST climatology.

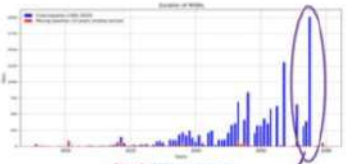

Figure 5 – MHWs events duration.

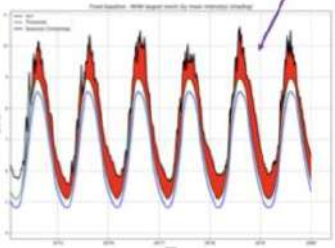

Figure 6 – Last MHW event using fixed baseline – permanent state.

A fixed-baseline period leads to a saturation of SST above the threshold, which in turn leads to long-term MHW (**the permanent MHW state**) from 2075, while a moving-baseline period leads to more stationary MHW properties over time (Figure 5 and 6).

Both methods of calculating baseline climatologies are important and depend on the use of such MHWs indicator. For the policy makers, MHWs indicator using a fixed baseline might be more interesting as it highlights the warming impact on the local ecosystem, since most interest in MHWs is motivated by ecological and socio-economics impacts. In terms of a research which, for example, intend to compare climatological models, the use of the moving baseline is more interesting and reasonable, as this emphasizes variability to the detriment of long-term warming. The use of both **definitions of the baseline period with an hybrid or a parallel approach** could allow to answer different questions on physical climate variability and/or long-term warming effects. This approach will be proposed with the results of the **AdriaClim sub-regional climate model** reaching 5 times higher resolution than CMCC MedCordex RCM here shown, thus more suitable to assess the CC impacts at local scales.

Watercare

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Interreg Italy - Croatia WATERCARE

(1.1.2019 – 31.12.2021)

INTRODUCTION

The monitoring of bathing waters is necessary to protect human health and to help protect and improve the quality of the marine environment. The quality of bathing waters of Italy and Croatia are mostly excellent although a lower quality can be detected in scarce areas. Abnormal rain showers caused by climate change could lead to the overflooding of the smaller streams and urban sewage systems thus potentially causing the microbial pollution of the bathing waters which can have a negative effect on tourism and related activities.

MATHERIALS AND METHODS

The study was conducted from June to October 2020 and from April to October 2021 at 11 coastal locations in the central Adriatic. A total of 51 sampling campaigns were conducted every two weeks during the bathing season. In case of a rain event (>2 mm of precipitation), sampling was carried out immediately the next morning, as well as 24 and 72 hours after the first sampling, to determine the possible influence of precipitation on the changes in the concentration of indicators of microbiological pollution. Concentrations of *Escherichia coli* and intestinal enterococci were determined in a total of 605 samples along with abiotic parameters such as temperature, salinity and pH, and meteorological conditions.

Figure 1. Study area with meteorological stations (MS1 and MS2) and sampling stations

RESULTS

The quality of bathing waters in the Kaštela area was significantly lower than in the Split area, which is due to the condition of the sewage system in these areas and not to the precipitation effect.

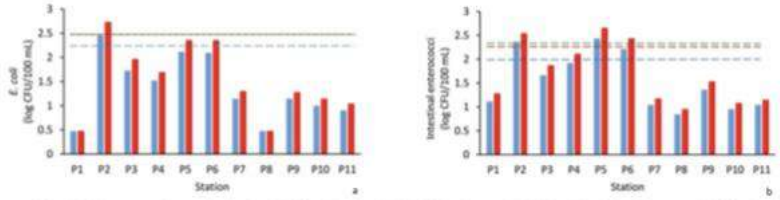

Figure 2. Bathing water quality categories based on 90th (blue columns) and 95th (red columns) per-centile of all *E. coli* (a) and intestinal enterococci (b) values for both bathing seasons. Dashed lines present water quality thresholds (blue-excellent, green-good, red-sufficient).

The impact of precipitation on the quality of coastal bathing waters was not detected in the Split or Kaštela region, probably due to the low amount of precipitation during the bathing season.

Table 1. Spearman's correlation coefficients between the examined variables for both bathing seasons. Statistically significant correlations (p<0.05) are in red.

Parameter	*E. coli*	Intestinal enterococci	Precipitation
T_{air}	-0.074408	-0.097515	-0.116098
T_{water}	0.012499	0.035217	0.010085
Salinity	-0.269378	-0.226446	-0.035646
pH	-0.012774	0.080992	0.141659
E. coli	1.000000	0.688259	0.070780
Intestinal enterococci	0.688259	1.000000	0.055395
Precipitation	0.070780	0.055395	1.000000

Table 2. Spearman correlation coefficients between the examined variables for both bathing seasons for Split area. Statistically significant correlations (p<0.05) are in red.

Parameter	*E. coli*	Intestinal enterococci	Precipitation
T_{air}	0.021580	-0.046341	-0.105498
T_{water}	0.134070	0.113334	0.035564
Salinity	-0.099866	-0.024540	-0.015196
pH	-0.256724	-0.084286	0.143502
E. coli	1.000000	0.503115	0.111749
Intestinal enterococci	0.503115	1.000000	0.143276
Precipitation	0.111749	0.143276	1.000000

Bathing water quality differed depending on the indicator bacteria used for assesment. Moreover, an increased number of samples at a specific site showed that bathing water quality depends on both the time of sampling and the indicator used to assess it. *E. coli* was found to be a better indicator for early morning sampling, whereas intestinal enterococci were more suitable for late morning sampling.

Figure 3. Water samples with different quality (blue-excellent, green-good, yellow-sufficient, red-poor) when assessed with only one indicator bacteria, *E. coli* and intestinal enterococci (IE) separately. The numbers indicate the number of samples.

CONCLUSIONS

1. The influence of precipitation on the quality of coastal bathing waters was not detected in the Split or Kaštela region
2. The quality of bathing waters in the Kaštela area was significantly lower than in the Split area
3. Bathing water quality depends on the time of sampling and the microbial indicator used to assess it
4. Better design of the frequency and number of samples on sites with lower bathing water quality

Project partners

Development of a High-Resolution Biogeochemical Model For the Adriatic Sea

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[2] Centro Euro-Mediterraneo per i Cambiamenti Climatici (CMCC), Bologna, Italy.
[3] University of Cape Town, South Africa.

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ABSTRACT

The Adriatic Sea hosts a variety of ecosystems, characterized by different dynamics and problems. Its shallow north-western portion is dominated by the rivers of the Po Valley, which carry large nutrient loads towards the sea, resulting in a prevalently eutrophic environment. Conversely, the eastern coasts are defined by upwelling and scarcity, which come with prevailing oligotrophic conditions. Finally, the southern portion is characterized by deep-water and by a slow upwelling at the cyclonic gyre (e.g. Pinardi et al. 2006). In this context, a major challenge is the elaboration of an optimal model setup, able to properly reproduce the diverse ecosystems of the Adriatic Sea.

As part of the activity 3.2 of the project AdriaClim, here we developed an offline 3D coupled transport-biogeochemical model on a mesh covering the whole Adriatic Basin with a horizontal resolution of 2 km and 120 vertical levels. For the purpose we employed the circulation model NEMO coupled with the biogeochemical model BFM. The CMEMS reanalysis, along with climatological data from Buteschon et al. 2021, were used to provide initial conditions and the southern open boundary condition for Oxygen O2, Phosphate PO4, Nitrate NO3, Silicate SiO4, Dissolved Inorganic Carbon (DIC) and Total Alkalinity (TA). Ludwig et al. 2009 was used to estimate the nutrient loads carried by the rivers towards the sea.

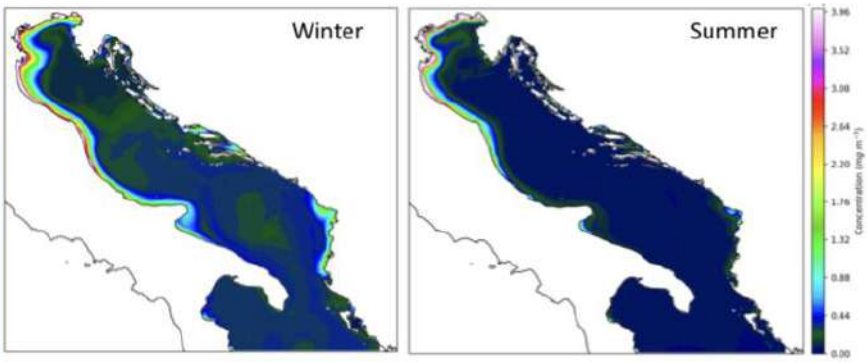
The results show that the model is able to successfully capture the major features of the Adriatic biogeochemistry, such as a seasonal cycle with winters more productive than summers, growth mostly limited by PO4, tendential eutrophic condition in the North-Western portion of the basin and oligotrophic elsewhere.

References:

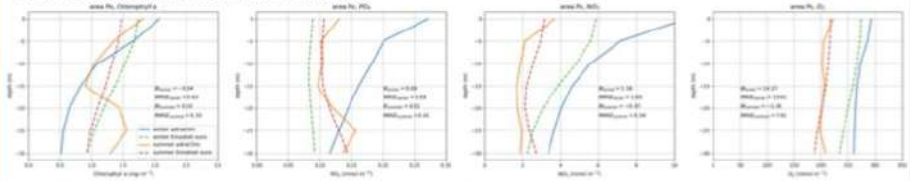
Butenschön M et al. (2021). Alkalinization Scenarios in the Mediterranean Sea for Efficient Removal of Atmospheric CO2 and the Mitigation of Ocean Acidification. Frontiers in Climate, 3, 14.

Ludwig W et al. (2009). River discharges of water and nutrients to the Mediterranean and Black Sea: major drivers for ecosystem changes during past and future decades?. Progress in oceanography, 80(3-4), 199-217.

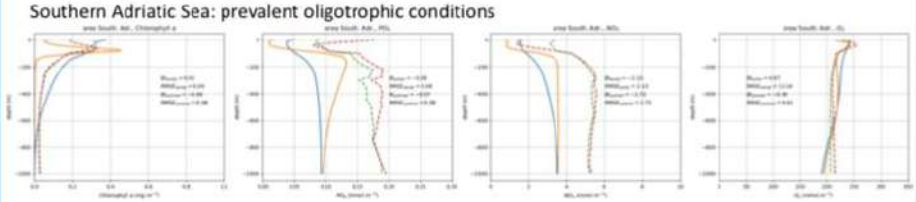
Pinardi N. et al. (2006). The physical, sedimentary and ecological structure and variability of shelf areas in the Mediterranean sea (27). The sea, 14, 1243-330.



Po mouth: prevalent eutrophic conditions



Southern Adriatic Sea: prevalent oligotrophic conditions

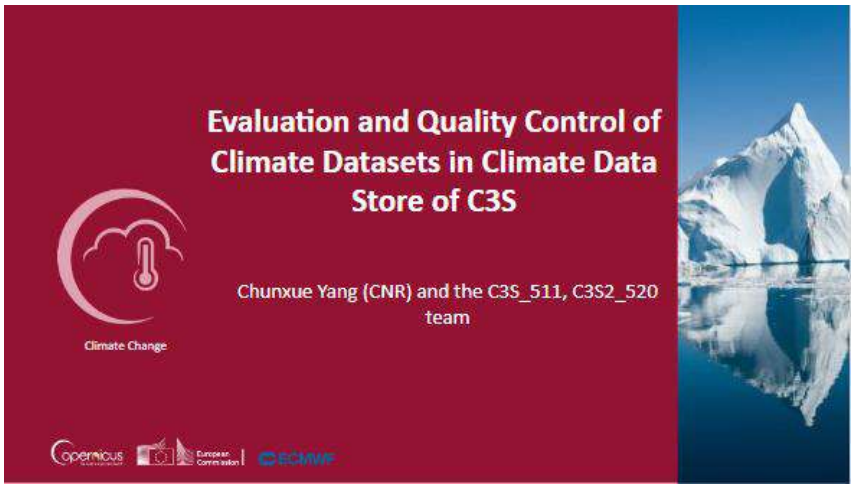


ADRIACLIM MID-TERM INTERNATIONAL CONFERENCE - PROTECT THE COAST, ADAPT TO CLIMATE CHANGE
WP3.2
7 and 8 June, 2022 - Split, Croatia

Presentations

- Veljko Srzić - https://drive.google.com/file/d/1jsElhmfn6pQB2AvK4RTeW2zY-A5dxWsg/view

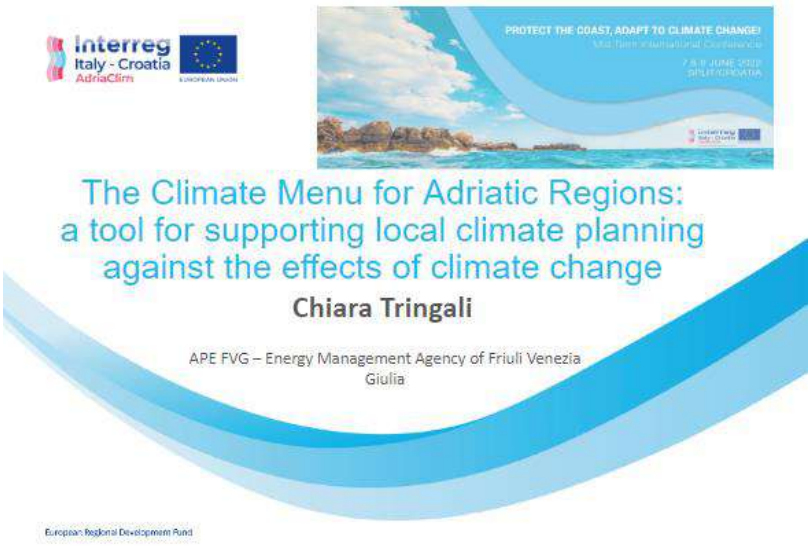
- Chunxue Yang - https://docs.google.com/presentation/d/1rB_C0ePooj-JNQStX9sQhUgJ5RCAll9A/edit#slide=id.p1



- Angel Borja - https://drive.google.com/drive/folders/1GRW_1PpqbhHCNN8wbKT40hVKwTLRKN0N

- Carlo Cacciamani - https://drive.google.com/drive/folders/1GRW_1PpqbhHCNN8wbKT40hVKwTLRKN0N

- Chiara Tringali - https://docs.google.com/presentation/d/1JGR-8S4bL5LfwWJDUA0Q9kM7PbomdvEe/edit#slide=id.p1



- Davide Bonaldo - https://docs.google.com/presentation/d/17zwLodJMPL1sK4VeM1mIqfcnjXA2ywck/edit#slide=id.p1

- Giacomo Mangabosco - https://docs.google.com/presentation/d/1H8KtH_ekj3U2PmpelvddNqKbmWfM4nyY/edit#slide=id.p1

Urbanproof toolkit: a tool to support local governments to plan for climate change adaptation at the local scale.

Giacomo Magnabosco

Università Iuav di Venezia

European Regional Development Fund

- Giovanni Vicentni - https://drive.google.com/drive/folders/1GRW_1PpqbhHCNN8wbKT40hVKwTLRKN0N

- Gusmaroli Giancarlo - https://docs.google.com/presentation/d/1ErzvINYk6tgG-6qCKD3AnQlLd4pbuNEd/edit#slide=id.p1

- Ilija Drmač - https://docs.google.com/presentation/d/1T8TmBHFF18YJz9KNaYUFYW8V2ctMP2MZ/edit#slide=id.p1

- Ivan Sekovski - https://docs.google.com/presentation/d/1IdZdLS-jpIKMb7GhQVsGZV1okqBXlTCw/edit#slide=id.p1

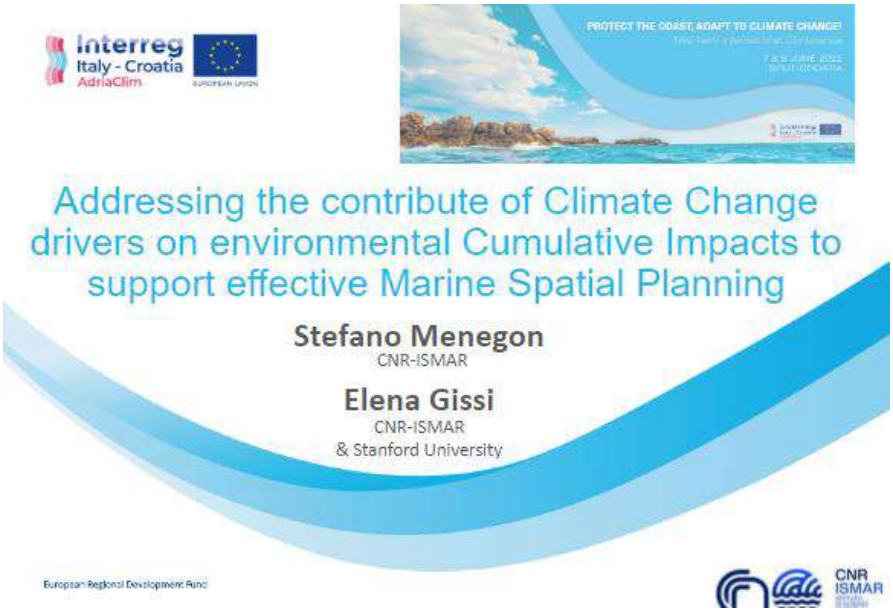
- Lidija Srnec - https://docs.google.com/presentation/d/12hUAia8Z1yV9D7OEk2jIM7kAp2DiPdow/edit#slide=id.p1

- Marin Miletić - https://docs.google.com/presentation/d/1sVKEL6GyeUQlg4JjwVrX5Li5y7gai7SO/edit#slide=id.p1

- Piero Lionello - https://drive.google.com/drive/folders/1GRW_1PpqbhHCNN8wbKT40hVKwTLRKN0N

- Stefanija Štestanović - https://docs.google.com/presentation/d/1mle5pvpeMwo1ZWdqMQkJYkrAOui8I1mO/edit#slide=id.p1

- Stefano Menegon - https://docs.google.com/presentation/d/1Im3kMR3JJCj7rHoMbDLWbM4geAlzqTcA/edit#slide=id.p1



Photos


Protect the coast, adapt to climate change!
CONFERENCE EXPO - POSTER SESSION
7 & 8 June 2022 • Split, Hotel Park
Interreg
Italy - Croatia
AdriaClim

Promo video

https://www.youtube.com/watch?v=uj6_h9FHWbc

Conference promo video

Press

Media promotion

Jutarnji list, 03. 06. 2022. - https://www.jutarnji.hr/planet/konferencija-zastitimo-obalu-prilagodimo-se-klimatskim-promjenama-prilika-je-za-razmjenu-znanja-15205968


PROJEKT ADRIACLIM

Konferencija 'Zaštitimo obalu, prilagodimo se klimatskim promjenama' prilika je za razmjenu znanja

- Dalmatinski portal, 02. 06.2022. - https://dalmatinskiportal.hr/vijesti/adriaclim--u-lipnju-u-splitu-medunarodna-konferencija--zastitimo-obalu--prilagodimo-se-klimatskim-promjenama-/135362


dalmatinski PORTAL

Vjerujem u naš Split!

PROTECT THE COAST, ADAPT TO CLIMATE CHANGE!

AdriaClim: U lipnju u Splitu medunarodna konferencija 'Zaštitimo obalu, prilagodimo se klimatskim promjenama'

Organizator je javna ustanova RERA

- Dalmatinski portal, 03. 06. 2022. - https://dalmatinskiportal.hr/energija-i-ekologija/angel-borja--odgovori-su-preslabi-za-izazove-klimatskih-promjena-s-kojima-se-suocavamo/135434

- Dalmatinski portal, 06. 06. 2022. - https://dalmatinskiportal.hr/energija-i-ekologija/intervju-drmac--hrvatska-je-danas-ovisna-o-fosilnim-gorivima--ali-uz-dobre-projekte-i-upravljanje--u-buducnosti-nece-imati-velikih-problema-u-opskrbi-energijom/135713

- Dalmatinski portal, 07. 06. 2022. - https://dalmatinskiportal.hr/vijesti/foto-adriaclim--vodeci-medunarodni-strucnjaci-za-klimatske-promjene-okupili-su-se-u-hotelu-park/135819

- Dalmatinski portal, 10. 06. 2022. - https://dalmatinskiportal.hr/energija-i-ekologija/poruke-s-adriaclim-konferencije-zastitimo-obalu--prilagodimo-se-klimatskim-promjenama-/136114

- Dalmacija danas, 03. 06. 2022. - https://www.dalmacijadanas.hr/porast-temperature-zraka-uzrokovat-ce-ekstremne-vremenske-uvjete-i-nepoznanica-je-sto-ce-se-dogadati-nakon-sto-dosegnemo-kriticnu-tocku/


DALMACIJA DANAS

Porast temperature zraka uzrokovat će ekstremne vremenske uvjete i nepoznanica je što će se događati nakon što dosegnemo kritičnu točku

Rezultati znanstvenih istraživanja koja se provode zbog porasta temperature zraka ukazuju da nam budućnost nosi sve više ekstremnih vremenskih pojava

- Dalmacija danas, 02. 06. 2022. - https://www.dalmacijadanas.hr/adriaclim-u-lipnju-u-splitu-medunarodna-konferencija-zastitimo-obalu-prilagodimo-se-klimatskim-promjenama/

- Dalmacija danas, 06.06. 2022. - https://www.dalmacijadanas.hr/medunarodna-konferencija-zastitimo-obalu-prilagodimo-se-klimatskim-promjenama-sutra-pocinje-s-radom-u-splitu-jos-ima-vremena-za-prijave-2/


DALMACIJA DANAS

Međunarodna konferencija "Zaštitimo obalu, prilagodimo se klimatskim promjenama!" sutra počinje s radom u Splitu - još ima vremena za prijave!

- Dalmacija danas, 07. 06. 2022. - https://www.dalmacijadanas.hr/u-splitu-se-odrzava-medunarodna-konferencija-zastitimo-obalu-prilagodimo-se-klimatskim-promjenama/


DALMACIJA DANAS

NASLOVNICA DALMACIJA VIJESTI SPORT RELAX SPECIJ

U Splitu se održava međunarodna konferencija "Zaštitimo obalu, prilagodimo se klimatskim promjenama!"

- Dalmacija danas, 09-06. 2022. - https://www.dalmacijadanas.hr/adriaclim-nema-vise-vremena-svi-moramo-djelovati-odmah-i-sada-da-sprijecimo-negativne-posljedice-klimatskih-promjena-kojima-se-suocavamo-i-koje-nas-ocekuju-u-buducnosti/


DALMACIJA DANAS

ADRIACLIM "Nema više vremena, svi moramo djelovati odmah i sada da spriječimo negativne posljedice klimatskih promjena kojima se suočavamo i koje nas očekuju u budućnosti"

- Slobodna Dalmacija, 28. 05. 2022. - https://slobodnadalmacija.hr/eu-projekti-u-dalmaciji/sacuvaj-obalu-prilagodi-se-klimatskim-promjenama-1196429

- Slobodna Dalmacija, 10. 06. 2022. - https://slobodnadalmacija.hr/dalmacija/obala/u-splitu-odrzana-medunarodna-konferencija-o-klimatskim-promjenama-zbog-vremenskih-ekstrema-turizam-ljeti-bit-ce-nemoguc-1199645


SLOBODNA DALMACIJA

U Splitu održana međunarodna konferencija o klimatskim promjenama; zbog vremenskih ekstrema turizam ljeti bit će nemoguć

Galerija

- N1 TV, 06. 06. 2022.

- Slobodna Dalmacija, 10. 06. 2022.

Slobodna Dalmacija
PETAK, 10.6.2022.

sd specijal 11

KONFERENCIJA 'ZAŠTITIMO OBALU, PRILAGODIMO SE KLIMATSKIM PROMJENAMA!' PROMO

Davide Bonaldo

Andrea Vitlov Kurtin

Turizam ljeti bit će nemoguć

Lidija Srnec iz DHMZ-a upozorila je na promjene koje će se dogoditi u turizmu: Glavni utjecaj klimatskih promjena na turizam očituje se u porastu temperature zraka. Znači ono što smo sad već vidjeli jest da će naša tipična sezona u srpnju i kolovozu biti pretopla. Taj turizam ljeti neće biti biti održiv. I tu bi se sad već trebali prilagoditi predsezonski i posezonski jer naša obala to može

Klimatske promjene su otišle predaleko i više nemamo vremena za diskutiranje, vrijeme je za akciju, kazao nam je Andrea Valentini, inženjer zaštite okoliša i oceanograf, voditelj Odjela za morske i obalne numeričke prognoze u Hidrometeo i klimatskoj službi Regionalne agencije za prevenciju, okoliš i energiju talijanske regije Emilia-Romagna (Arpae-SIMC) te voditelj prekograničnog projekta AdriaClim u sklopu kojeg je u Splitu 7. i 8. lipnja u hotelu "Park" održana konferencija "Zaštitimo obalu, prilagodimo se klimatskim promjenama!"

Konferenciju "Zaštitimo obalu, prilagodimo se klimatskim promjenama!" u organizaciji javne ustanove RERA S.D. za koordinaciju i razvoj SDŽ, koja jedne od partnera projekta, održala se u sklopu AdriaClim projektafinanciranog programa Interreg Italija-Hrvatska, a koji okuplja devetnaest partnera iz Italije i Hrvatske koji se have prona inovativna rješenja za posljedice klimatskih promjena na obalna područja i otoke Jadranskog mora.

Glavni ciljevi konferencije bili su podizanje svijesti o utjecaju klimatskih promjena i omogućivanje stručnjacima sa sveučilišta, istraživačkih centara i centara za obuku da kreatorima politike i široj javnosti daju ažurirane informacije s dodanom vrijednošću o utjecaju klimatske promjene na Jadranskom moru.

Kroz čak deset poster-sesija na konferenciji su predstavljeni projekti i provedene prakse vezane za pitanja kako se mjere bolje prilagoditi klimatskim promjenama kako bismo se nosili s trenutnim izazovima. U poster-sesijama sudionici su istaknuli rezultate aktualnih projekata koji se have tematika konferencije: znanost o klimi, znanost o okolišu ili znanost o Zemlji.

Zaštita Jadranskog mora

Sudionici konferencije iskazali su zadovoljstvo zbog kvalitetnije razmjene znanja i iskustava. Andrea Valentini je naglasio da je to vrlo važno ne samo za projekt AdriaClim, nego i za suradnju između Hrvatske i Italije kako bi zajedničkim snagama zaštitili Jadransko more.

Među predavačima su bili renomirani znanstvenici u području klimatskih promjena i ekologije mora poput **Angela Borje**, glavnog istraživača na AZTI (Španjolska) i pomoćnog profesora na Sveučilištu Kralj Abdulaziz u Saudijskoj Arabiji; **Lidije Srnec**, voditeljice Odjela za klimatsko modeliranje, praćenje klimatskih promjena i biometeorologiju u DHMZ-u; **Piera Lionella**, Sveučilište u Salentu; **Giovannia Coppinija**, Zaklada Euromediterranski centar za klimatske promjene (CMCC); **Giancarla Gasmarrolija**, Talijanski centar za obnovu rijeka - Zaklada MedSea; **Veljka Srzića** s Fakulteta građevinarstva, arhitekture i geodezije iz Splita; **Carla Cacciamanija**, direktora Nacionalne agencije za meteorologiju i klimatologiju (ItaliaMeteo agencija); **Sande Skejić** iz Instituta za oceanografiju i ribarstvo Split; **Chunxue Yang**, oceanografkinje iz Instituta za morske znanosti Nacionalnog istraživačkog vijeća Italije (CNR-ISMAR); **Core Hörstmann**, Mediteranski institut za oceanografiju Marseille; **Giacoma Magnaboscoa**, Odjel za arhitekturu i umjetnost-IUAV; **Stefana Menegona**, Institut za morske znanosti Nacionalnog istraživačkog vijeća Italije(CNR-ISMAR); **Stefanije Seslanovic's** Instituta za oceanografiju i ribarstvo Split; **Andree Vitlov Kurtin**, Agencija za razvoj Zadarske županije - Zadra NOVA; **Davidea Bonalda**, znanstvenog istraživača na Institutu za morske znanosti Nacionalnog istraživačkog vijeća Italije (CNR-ISMAR); **Chiare Tringali**, Energetska agencija regije FriuliVenezia-Giulia; **Giovannija Vincentinija** iz gradske uprave Padova; **Kristiana Horvatha**, voditelja meteorološkim istraživanja i razvoja u Državnom hidrometeorološkom zavodu (DHMZ), **Giulie Gollucciо**, Zaklada Euro mediteranski centar za klimatske promjene (CMCC); **Drmać Ilje**, višeg znanstvenog istraživača na Energetskom institutu Hrvoje Požar u Zagrebu te **Ivana Sekovskog**, UNEP MAPPAP/RAC.

Chiara Tringali

Sudionici konferencije su u svojim izlaganjima poručili ono što svi znamo, ali mislimo da ima vremena, da će se dogoditi drastične klimatske promjene koje će isto tako drastično utjecati na živote svih ljudi, od podizanja mora do nestalice hrane.

Pretopla ljeta

Lidija Srnec iz DHMZ-a, Odjela za klimatologiju, upozorila je na promjene koje će se dogoditi u turizmu, ranu toliko važnoj gospodarskoj grani.

- Glavni utjecaj klimatskih promjena na turizam očituje se u porastu temperature zraka. Znači ono što smo sad već vidjeli jest da će naša tipična sezona u srpnju i kolovozu biti pretopla. Taj turizam ljeti neće biti biti održiv. I tu bi se sad već trebali prilagoditi predsezonski i posezonski jer naša obala to može.

No, to nije jednostavno.

Ali svatko od nas već sad može nešto malo učiniti na ublažavanju staklenićkih plinova jer su oni glavni uzrok svemu što se događa i o čemu smo pričali na konferenciji. Možemo mnje koristiti automobile, klima uređaje, hladiti kućanstvo na neke druge načine, npr. spuštanjem roleta... A i donositelji odluka moraju propisati regulative kojih ćemo se pridržavati, kazala je Srnec.

Kristijan Horvath, načelnik sektora za meteorološka istraživanja i razvoj u DHMZ-u, pozdravio je održavanje ovakve konferencije te naglasio da vrijeme i klima nemaju granice, nužna je suradnja i susreti meteorologa i onih koji meteorološke informacije upotrebljavaju najrazjenje rizika, izradu planova prilagodbe klimatskim promjenama.

- Činjenica je da su najveći emiteri ugljičnog dioksida u atmosferu velike firme, ovaka situacija nije rezultat svakodnevnog života običnih ljudi, međutim bez političke potpore ne može se ništa.

Ono što nam pokazuju vremenski i klimatski ekstremi danas jest da je Hrvatska jedna od zemalja koja je najizloženija štetama klimatskih promjena. Ako se fokusiramo na promjene koje će se manifestirati za 30, 50 ili 100 godina misliti ćemo da imamo vremena... no, štete i problemi koje imamo već danas, problemi s kojima se susreću u poljoprivredi, energetici, vodnom gospodarstvu... zaista zahtijevaju da djelujemo sada i da ne odgađamo odlučno o prilagodbi klimatskim promjenama, rekao nam je na kraju Horvath. ●

Andrea Valentini

- Slobodna Dalmacija, 30. 05. 2022.

Glavni ciljevi konferencije su podići svijest o utjecaju klimatskih promjena na jadransku obalu te omogućiti stručnjacima sa sveučilišta, istraživačkih i edukacijskih centara da kreatorima politika i široj javnosti daju aktualne informacije s dodanom vrijednošću o utjecaju klimatskih promjena na jadransko more

LIDIJA SRNEC, HRVATSKI DRŽAVNI METEOROLOŠKI ZAVOD

KAD SE TEMPERATURA ZRAKA POVEĆA PREVIŠE, NEĆE BITI LAKO ZAUSTAVITI PROCESE

Porast temperature zraka utječe na procese u atmosferi, hidrološki ciklus, temperaturu mora, ekosustave, ledenjake. Klimatski sustav zbog zagrijavanja ima sve više energije i pitanje je kad će i na koji način doći do promjena

Koje su klimatske promjene, s kojima se u budućnosti suočit Hrvatska, najviše zabrinjavajuće za gospodarstvo i ekologiju Jadrana?

–Kad govorimo o klimatskim promjenama, teško je izdvojiti jedan njihov segment kao najzanačajniji, budući da se radi o procesima koji su međusobno povezani na način da promjena jednog parametre utječe na drugi, ali i obrnuto. U tom interaktivnom procesu je nepoznanica nelinearnosti i kritične točke iza kojih nismo sasvim sigurni što će se dogoditi nakon što se ona dosegne.

Da pojasnim, porast temperature zraka utječe na procese u atmosferi, hidrološki ciklus, temperaturu mora, ekosustave, ledenjake.

Klimatski sustav zbog zagrijavanja ima sve više energije i upravo je pitanje kad će i na koji način doći do promjena u njezinim obilježjima. Simulacije klimatskim modelima mogu dati smjer u kojem će poeći cijeloi taj složeni sustava reagirati na određeni dodatni porast temperature zraka, no kad se temperatura zraka poveća previše, neka procesa neće biti jednostavno zaustaviti. Ukoliko se zbog toga globalni porast temperature nastoji zadržati do 1,5 °C, odnosno 2 °C u odnosu na

i najmanji pokušaji smanjenja emisija staklenčkih plinova u konatnici se zbrajaju i isplate

Hibridna konferencija koja okuplja vodeće međunarodne stručnjake, političare i donositelje odluka u području klimatskih promjena održat će se u Splitu 7. i 8. lipnja ove godine

U sklopu prekograničnog projekta AdrioClim, u Splitu će se održati hibridna dvodnevna konferencija "Zaštitimo obalu, prilagodimo se klimatskim promjenama" 7. i 8. lipnja 2022. Konferencija okuplja vodeće međunarodne stručnjake, političare i donositelje odluka u području klimatskih promjena.

Glavni ciljevi konferencije su podići svijest o utjecaju klimatskih promjena na jadransku obalu te omogućiti stručnjacima sa sveučilišta, istraživačkih i edukacijskih centara da kreatorima politika i široj javnosti daju aktualne informacije s dodanom vrijednošću o utjecaju klimatskih promjena na Jadransko more.

Konferencija je organizirana u tri sesije: Klimatske promjene i utjecaji na obalu; Prilagodba i promatranje klimatskih promjena alati, modeli, inovacije i Zaštita naših teritorija od klimatskih promjena: iskustva, lekcije, dobre prakse.

Fokus konferencije bit će najbolje prakse planova prilagodbe, razmjena iskustava o praćenju i strategijama održavanja, koje će se koristiti za razvoj informacija i alata koji će se prezentirati posjetiteljima i zajednicama za razumijevanje klime na Zemlji, utjecaja klimatskih promjena i prilagodbi ili ublažavanje u Jadranskom moru.

Promatranje i modeliranje

Prekogranični program AdrioClim je akronim strateškog projekta financiranog u okviru talijansko-hrvatskog Interreg programa suradnje. Projekt je posvećen podršci razvoju znanstveno utemeljenih regionalnih i lokalnih planova prilagodbe klimatskim promjenama. AdrioClim će se baviti prijetnjama klimatskim promjenama razvojem regionalnih i lokalnih planova prilagodbe temeljenih na sučelnim meteorološkim i oceanografskim informacijama dobivenim iz novouvedene sustave promatranja i modeliranja za Jadransko more.

Ukupna vrijednost AdrioClim projekta je 8 823 415,00 eura, od čega su 85 posto bespovratna sredstva financirana iz ERDF-a u sklopu Interreg programa prekogranične suradnje Italija-Hrvatska. Projekt AdrioClim provodi 19 partnera iz Italije i Hrvatske.

Ukupna vrijednost AdrioClim projekta je 8,8 milijuna eura, od čega su 85 posto bespovratna sredstva

AdrioClim je akronim strateškog projekta financiranog od strane talijansko-hrvatskog Interreg programa suradnje. Projekt je posvećen podršci razvoju znanstveno utemeljenih regionalnih i lokalnih planova prilagodbe klimatskim promjenama

Konferencija "Zaštitimo obalu, prilagodimo se klimatskim promjenama", Hotel Park, 7. i 8. 6. 2022.

- **15 predavača - vodećih stručnjaka za klimatske promjene iz Hrvatske, Italije, Portugala i SAD-a**
- **10 gostujućih međunarodnih projekata s više od 50 autora u Expo cjelu**
- **Prijenos uživo preko AdrioClim Project Interreg ITA CRO - službene Facebook stranice projekta**

predindustrijsko razdoblje.

Jedna od zabrinjavajućih klimatskih promjena u vidu podizanja razine mora, prema predviđanjima stručnjaka, pogodit će ekstremno Neretvu i dovesti u pitanje tradicije poljoprivredne kulture. Što Hrvatska čini i čini li dovoljno da spriječi tak ve posljedice?

- Nisam kompetentna u potpunosti odgovoriti na ovo pitanje. Trebalo bi ga uputiti temeljitoj lokalnoj analizi. Jusarili, a također i odgovornima za tu problematiku na nacionalnoj razini. U istraživanjima koja se provode, sa znanstvenog aspekta, znanstvenici govore o posljedicama koje i sami navodite u svojem pitanju. Također se organiziraju skupovi i radionice na kojima se pokušava na što jednostavniji način korisnicima tih informacija dati uvid u ono što bi očekuje. Sjećam se da smo bili u Metkoviću 2014. godine imali jednu od radionica koje je organizirao tadašnje Ministarstvo zaštite okoliša i Regionalni centar zaštite okoliša REC, gdje smo lokalnoj zajednici predstavili rezultate očekivanih klimatskih promjena za južnu Dalmaciju. No za odgovor na pitanje što se čini konkretno da se spriječe posljedice ili ih se barem ublaži trebalo bi pitati donositelje odluka na višim razinama.

Smo li Hrvatska "još dosta vremena" za djelovanje ao spriječavanju i zaštiti ugroženih područja ili možda nismo ni svjesni da smo u odbrojavanju "zaštrcate", da treba djelovati sada i odmah?

- Bit će pozitivna u ovom odgovoru, pa ću reći da se uvijek može i mnoga pokušati. Da smo mogli i ranije, mogli smo. No nikad nije kasno. Pri tome mislim na političku ali i pojedince. I mali koraci mogu doveti do

Projekti poput AdriaClim su više nego pozitivni primjeri kako se na međunarodnoj razini, ovdje su to Hrvatska i Italija, može zajedno raditi na nekom problemu. Naime, klimatske promjene nisu lokalno ograničene i ne tiču se samo jedne zemlje

Globalni porast temperature nastoji se zadržati do 1.5 °C, odnosno 2 °C u odnosu na predindustrijsko razdoblje

promjene, važno je ne odustati.

Posljednjih godina suočavamo se s čestim lokalno ograničenim, ali bernim nevremena su mora u smislu pljavica i oluja. Kako procjenjujete buduće trendove i kako spriječiti njihove nadolazeće posljedice?

- Rezultati znanstvenih istraživanja već dosta dugo pokazuju da nas zbog trenda porasta temperature zraka u budućnosti očekuje sve više ekstremnih vremenskih pojava. Očekuju se da će njihov intenzitet biti jači. A s njima onda dolaze i veće štete, kako ljudska, tako i materijalna. Upravo je zbog toga nužno zaživjeti sustav ranih upozorenja na vremenske ekstreme.

Kako ocjenjujete ovakve primjere prekograničnе suradnje Italije i Hrvatske u okviru projektu AdriaClim i koje konkretne rezultate očekujete da će on donijeti?

- Projekti poput AdroClim su više nego pozitivni primjeri kako se na međunarodnoj razini, ovdje su to Hrvatska i Italija, može zajedno raditi na nekom problemu. Naime, klimatske promjene nisu lokalno ograničene i ne tiču se samo jedne zemlje. Svaka zemlja ima svoje različitosti i osobitosti. Jedan koji nas spaja ima obalu s talijanske strane prilično drukčijih karakteristika nego na hrvatskoj strani. Uzavo je stoga lokle sagledati problem u timskom radu i dijeliti znanje i iskustva. Rezultati projekta bi trebali proširiti znanja o očekivanim klimatskim promjenama na području Jadrana, te obiskti donositeljima odluka kako se suočiti s posljedicama koje nas očekuju.

Što biste za kraj poručili hrvatskoj javnosti, a što donositeljima odluka?

- Svima bih poručila da se i najmanji pokušaji smanjenja emisija stakleničkih plinova u konačnici zbrajaju i ispitte, a donositeljima odluka da razmisle o problematici koja nas očekuje ako ne donesu pravu odluku na temelju poznatih nam činjenica.

U opsežnoj studiji iz Velike Britanije, dokazano je da su ljudi koji žive u blizini obale zdraviji, a posebno je vidljivo u skupini ljudi sa slabijim prihodima, kojima su dostupniji morski resursi. Također, evidentno je i da su zdraviji ljudi koji žive u blizini morskih zaštićenih prostora ili područjima visoke biološke raznolikrosti

Anđel, govornik de ne AdriaClim konferenciji "Zaštitimo obalu, prilagodimo se klimatskim promjenama". Klimatske promjene jedan su od najvećih izazova našeg vremena, a među glavnim problemima je porast razine mora koja povezuje rizik od katastrofalnih poplava.

Kako klimo općenito utječe sa obalu sada, što pokazuju posljednji podaci?

- Glavni efekti koji su uočeni su povećanje temperature, kako na površini vode, tako i dubljim područjima. Također, vidljivi su i učinci zagrijavanja valova koji uzrokuju smrtnost i pomicanje morskih organizama prema sjeveru ili u veće dubine.

Zbog promjene temperature vode, može se primjetiti i pad otopljenog kisika zbog porasta temperature što rezultira promjenom sastava morskih organizama.

ANGEL BORJA, ISTRAŽIVAČ

ZDRAVA MORA ZA ZDRAVE LJUDE

Odgovori institucija i kreatora politike su prespori i preslabi za izazove koji su pred nama, moramo već reagirati i promijeniti većinu naših navika, posebno u pogledu potrošnje energije

Nadalje, javlja se i problem sa zakiseljavanjem vode što utječe na vapnenačke vrste kao što su koralji, neke alge, mekušci i rakovi. I najposljetku klimatske promjene dovode na porast razine mora što rezultira smanjenjem staništa, poplavama i narušavanjem ekosustava.

Imate međunarodna iskustva u području klimatskih promjena. Jeste li zadovoljni nivoom znanja i svijesti odgovornih institucija i kreatora politike a klimatskim promjenama i njihovim posljedicama?

-Odgovori su prespori za izazov koji je pred nama, moramo promijeniti većinu naših navika, posebno u pogledu potrošnje energija. Iskreno ni sam zadovoljan jer odgovori su preslabi za izazove s kojima se suočavamo. Već sad vil bezazleno odlučno reagirati.

Jeste li primijetili razliku u pristupu između zemalja

-Da, velika je razlika između sjevernih razvijenih zemalja i zemalja u ranoju južne hemisfere.

Možete li nagladiti neke zemlje koje su razvile dobre strategije za ublažavanje klimatskih promjena?

-Što se tiče područja Europe, Europske agencije za okoliš, nedavno je objavila izvješće vezano za tri politika i mjera za ublažavanje klimatskih promjena i države koje su pilavile razvile mjere su nedovr. Belgija (215), Francuska (186), Slovenija (152), Španjolska i Hrvatska (93). Litva (10) i Danska (306). Dakako, ono je vezano samo za

Velika je razlika u pristupu između sjevernih razvijenih zemalja i zemalja u razvoju južne hemisfere

plinove. Kada gledamo indeks učinka klimatskih promjena (CCPI) za 2022. godinu, Danska i Švedska imaju najbolje rezultate u borbi protiv klimatskih promjena. Navedeni podaci odnose se na generalne planove, vezane za emisiju stakleničkih plinova i odabir udjelka. Ali, ako promatramo samo planove vezane za obalna područja (Plan za prilagodbu podizanja razine mora), studija iz 2021. Pokazala je da su najveći pomak u razvoju politički smjernica ostvarile Velika Britanija, Njemačka, Belgija i Nizozemska.

U slučaju Jadrana, Bosna i Hercegovina te Slovenija još uvijek nemaju planova, a Italija i Hrvatska imaju samo na lokalnim razinama.

Zdrav ocean

Glavna tema Valing Izlaganja je "Zdravije oceane i čuvanje zdravlje: povezanice i istraživanje". Možete li nam dati više detalja? Kakav je rezultat istraživanja pokazao, kakav je odnos oceana i zdravlja ljudi?

-Sve je očiglednije da zdrav ocean pruža više dobrobiti ljudima, kao i bolje zdravlje.

U opsežnoj studiji iz Velike Britanije dokazano je da su ljudi koji žive u blizini obale zdraviji, a to je još posebno potvrđeno u skupini ljudi sa slabijim prihodima kojima su morski resursi dostupniji.

Također, postoje dokazi da su ljudi koji žive u blizini zaštićenih morskih područja ili blizu područja biološke raznolikosti, zdraviji.

U studiji koju smo proveli tijekom izolacije COVID-a u mnogim zemljama, primijetili smo da oni koji su pod strogim uvjetima izolacije, ali imaju prozore s pogledom na morski i ruralni krajolik, imaju bolje mentalno zdravlje od onih koji imaju pogled na urbane krajolike.

Proučavali smo veze između boljeg fizičkog i mentalnog zdravlja i aktivnosti na moru (npr. surfanje) i postoje jasne pozitivne veze.

Također, predložili smo plan za dubinske istraživanje tih veza u Europi.

U vlastitog stajališta, koliko su važne inicijative i projekti EU-a kao što je AdriaClim u pripremi strategija i planova za prilagodbu klimatskim promjenama?

-Bilo koji plan za upravljanje, prilagodbu ili adaptaciju klimatskih promjena trebaju dobru i pouzdanu podrašku. Također, znanstveni projekti, kao što je AdriaClim, moraju osigurati to znanje za donošenje odluka, kako od strane kreatora politike, tako i šire javnosti.

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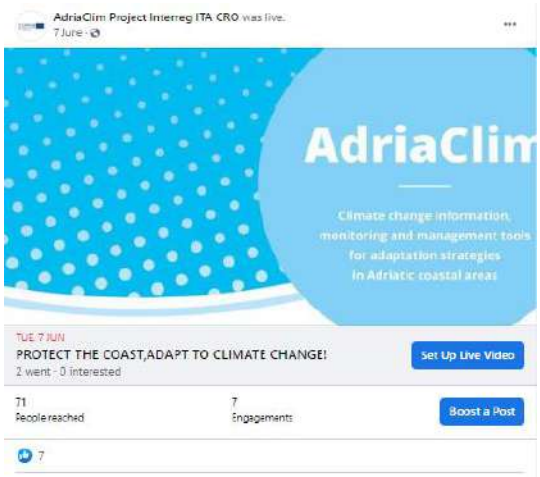

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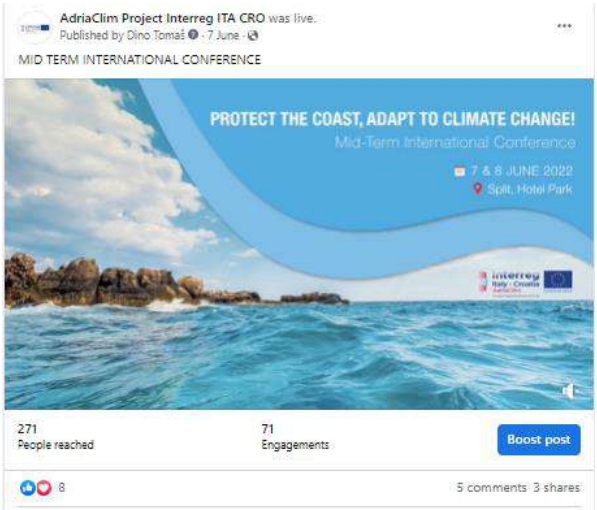

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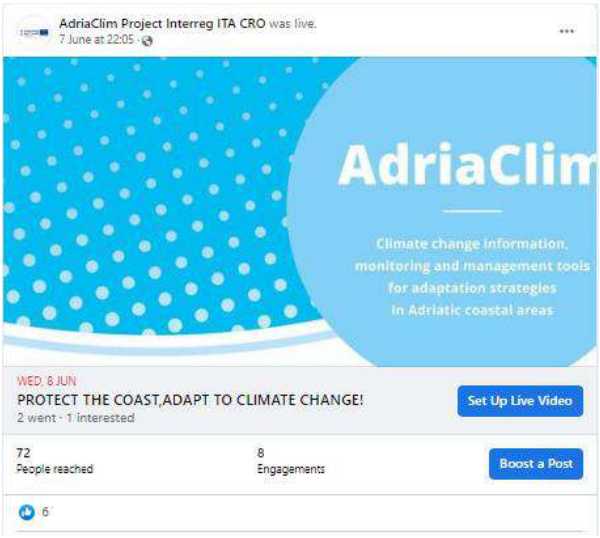

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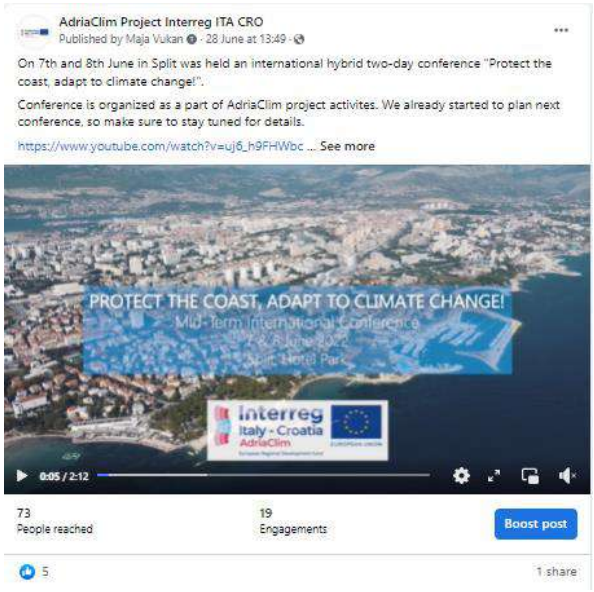

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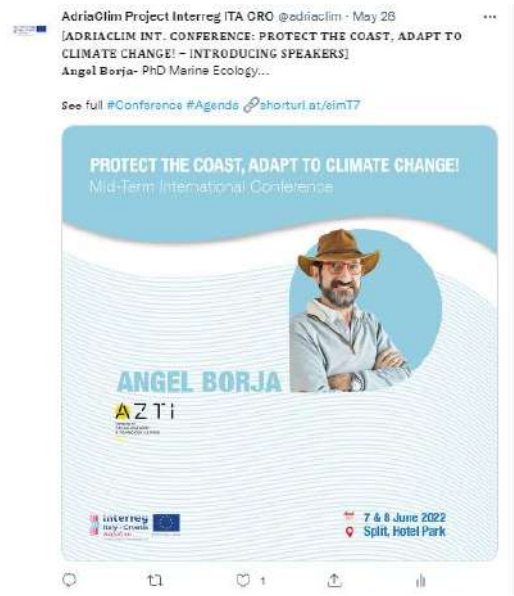

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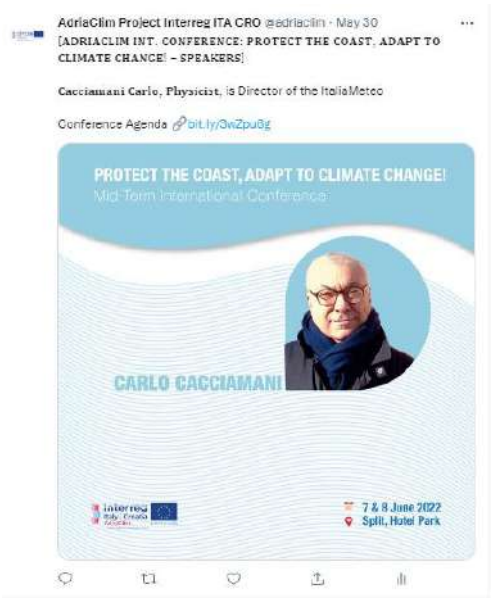

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