

2014 - 2020 Interreg V-A

Italy - Croatia CBC Programme

Call for proposal 2019 Strategic

# CoAStal and marine waters integrated monitoring systems for ecosystems proteCtion AnD managemEnt CASCADE

Project ID: 10255941

**Priority Axis: Environment and cultural heritage** 

Specific objective: Improve the environmental quality conditions of the sea and coastal area by use of sustainable and innovative technologies and approaches

D2.4.4

## n. 1 Summer School

PP in charge: PP9 – Unisalento

Final version

Public document

October, 2022



Project acronym	CASCADE
Project ID number	10255941
Project title	CoAStal and marine waters integrated monitoring systems for
	ecosystems protection AnD managemEnt
Priority axis	3 - Environment and cultural heritage
Specific objective	3.2 - Contribute to protect and restore biodiversity
Strategic theme	3.2.1 - Marine environment
Word Package	WP2
number	
Word Package title	Communication activities
Activity number	Activity 2.4
Activity title	Events, Training and Workshops
Partner in charge	PP9 – Unisalento
Partners involved	PP9 – Unisalento



Work Package:	2. Communication activities
Activity	2.4 – Events, Training and Workshops
Deliverable:	2.4.4 - Summer school

Project Partner:	PP9 UNIVERSITY OF SALENTO
Name of event:	SUMMER SCHOOL  The Adriatic coastal and marine system  Monitoring, protecting and managing biodiversity and ecosystem services
Date:	16 - 22 October, 2022
Event type:	Summer school with workshop and field activities  Organized event
Event venue:	Brindisi – Palazzo Guerrieri and Reserve of Torre Guaceto
Short description of the event:	The summer school was organized in Brindisi from 16 to 22 October 2022. The Summer School was organized in Italy, at Torre Guaceto and Palazzo Guerrieri in Brindisi. The school included participants from the CASCADE Consortium area. It dealt on the conservation, management and sustainable exploitation of the coastal and marine Adriatic areas. The summer school included also sampling sessions. Different topics were discussed such as: the Adriatic coastal and marine system: biodiversity, ecosystem functioning and service providing; the Adriatic coastal and marine system: the human environment (history, threats, value); the Adriatic coastal and marine system: Legislation, Management, Citizen Science. Sessions about the pilot areas were also included.  The aim of the summer school was to provide participants with an overview of the most innovative approaches relating to the knowledge, protection and management of ecosystems in the Adriatic area, with particular attention to transitional waters and the marine-coastal zone. This initiative had great relevance for the dissemination and communication goals of the CASCADE project. A particular focus (three dedicated lessons slots) was dedicated to each of the CASCADE Pilot Areas and on the achieved project results. Technical and practical sessions were organized in the field at the sites of Torre Guaceto and Saline di Punta della Contessa (Province of Brindisi, Puglia Italy, Pilot Area 3). The lessons (2 h each) were presented by both project members and guest scientists or field experts.



Speakers speeches,
brief summary and
conclusion:

Speakers speeches were about: The Adriatic coastal and marine system: biodiversity, ecosystem functioning and service providing; The Adriatic coastal and marine system: the human environment: History, threats, value; Pilot area 1 & 2 Introduction and main CASCADE results; Pilot area 5 & 8 Introduction and main CASCADE results; XXI century Adriatic coastal and marine system: ecological modelling; Pilot area 7, 10 & 11 Introduction and main CASCADE results; Summer school wrap up and student final test.

The names of speakers are included in the Annex 2.

At the end of the summer school, participants were asked to answer some general questions such as:

- General understanding of the CASCADE project goals
- Specific understanding of the environmental drivers and anthropogenic pressures in one or more pilot areas of the CASCADE project
- Large-scale effects of human development on environmental conditions
- General understanding on approaches and activities useful to mitigate impacts and reinforce adaptation of biodiversity and ecosystem services to anthropic pressures, including climate changes

Some examples of final tests are reported in Annex 5.

## Role of CASCADE partner in the event:

The summers school was organised by the University of Salento; the Scientific responsible, Prof. Alberto Basset, opened the sessions and introduced to the CASCADE project, Dr. Francesca Gigante participated supporting participants for administrative aspects, Dr. Franca Sangiorgio collaborated to the organization of the event.

# Type of audience/target groups involved:

21 participants were registered to the summer school among which undergraduate students, PhD students and biologists, coming from different countries. Some of them came from Italy (also students of master's degree of the University of Salento), others from Croatia, Tunisia and Albania. The list of the participants is the following: Alessandro Fiore, Andrea Nestola, Asma Yayaoui Bardo, Christian Simeoni, Desiree De Michele, Dolapo Olatoye, Elena Allegri, Hamidat Odugbemi, Iva Alac, Ludovico Lezzi, Luka Erlic, Marco Anglano, Marco Elia, Mariantonietta La Marra, Martina Pulieri, Franca Sangiorgio, Odeta Shukrtaj, Stefano Padovani, Fabio Vignes, Victoria Alabi, Xhesian Abedin.

Target groups
(AF Section F)

Target groups reached in this event

**Details of involved target** 



General public	
Local, regional and national public authorities	On October 17 <sup>th</sup> the summer school included Institutional welcome addresses with local and regional public authorities and the Marine Protected Area and Natural Terrestrial Reserve of Torre Guaceto.
Associations	
NGOs	
Education and training organizations as well as universities and research institutes	Department of Biological and Environmental Sciences and Technologies – University of Salento; Euro-Mediterranean Center on Climate Change.

#### **Annexes:**

- 1. Brochure
- 2. Agenda with speakers
- 3. Application letter
- 4. Certificate of participation
- 5. Tests of students (example)
- 6. Lists of teachers and students
- 7. Photos of the event
- 8. Video/ interview realized during the summers school to Teachers, Students and Institutions.

## **ABOUT THE PROJECT**

As part of the project objectives (WP 2.4), University of Salento, in collaboration with the lead partner Regione Puglia and the project partner CMCC will organize a summer school entitled "The Adriatic coastal and marine system: Monitoring, protecting and managing biodiversity and ecosystem services" in Brindisi from 16 to 22 October 2022.

The Summer School aims to provide participants with an overview of the most innovative approaches to knowledge, protection and management of the ecosystems of the Adriatic area, with particular attention to transitional waters and the marine-coastal strip. Internationally renowned teachers, both belonging to the project and guests, will hold lectures; in addition, there will be technical and practical sessions to be held in the field at the sites of Torre Guaceto and Saline di Punta della Contessa.

The summer school is aimed at university students, doctoral students, young researchers, staff of universities, research institutions and administrations that have consistent interests.

#### **APPLICATIONS**



Applications for participation must be received by 03/10/2022 at the mail addresses:

- alberto.basset@unisalento.it
- francesco.cozzoli@cnr.it

### **SELECTION CRITERIA**

Participants will be selected on the basis of their age with priority given to younger candidates, a short CV (max 2 pages, in English) and motivation letter in English explaining their interest in the Summer School, documentation or self-certification of an adequate knowledge of the English language. The date of receipt of the application will constitute a criterion of priority in the case of equivalence of the other qualifications. The eventual achievement of a university degree and / or a research doctorate (also in progress) will be considered as additional merit criteria.

#### FUNDING

The costs of participation in the courses, board and lodging will be fully refunded by the project for the first 20 applicants in the ranking. An additional 50% of positions (i.e. up to a total number of 30 subscribers) will be available without full covering of the cost of accommodation and meals.

### CERTIFICATE OF PARTICIPATION



At the end of the course a certificate of participation will be issued, which will also be valid for 4 ECTS.



## **OBJECTIVES**

The Interreg Italy-Croatia CASCADE project (https://www.italy-croatia.eu/web/cascade), has as its main objectives:

- Raise awareness on the principles and applications of FAIRness of data through the specific project example
- Increase awareness of the marine environment and the attractiveness of transboundary marine areas
- Increase awareness of the specific contents of the project and the cross-border area covered





























Interreg Italy - Croatia



CoAStal and marine waters integrated monitoring systems for ecosystems proteCtion













**TOTAL BUDGET** 5.817.547,00 €

#### CONTACT LEADING PARTNER

Regione Puglia
Valentina De Pinto
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+390805408013

#### **FOLLOW US**

https://www.italy-croatia.eu/web/cascade



Cascade-Interreg-Italy-Croatia

# THE ADRIATIC COASTAL AND MARINE SYSTEM

Monitoring, protecting and managing biodiversity and ecosystem services
Brindisi - Palazzo Guerrieri
October 16th - 22nd, 2022

**CALL FOR APPLICATIONS** 

European Regional Development Fund



#### **BROCHURE**

# THE ADRIATIC COASTAL AND MARINE SYSTEM Monitoring, protecting and managing biodiversity and ecosystem services Brindisi – Palazzo Guerrieri October 16<sup>th</sup> – 22<sup>nd</sup>, 2022

#### **CALL FOR APPLICATIONS**

The Interreg Italy-Croatia CASCADE project (https://www.italy-croatia.eu/web/cascade), has as its main objectives:

- Raise awareness on the principles and applications of FAIRness of data through the specific project example
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#### **Applications**

Applications for participation must be received by 03/10/2022 at the mail addresses alberto.basset@unisalento.it; francesco.cozzoli@cnr.it

#### Selection criteria

Participants will be selected on the basis of their age with priority given to younger candidates, a short CV (max 2 pages, in English) and motivation letter in English explaining their interest in the Summer School, documentation or self-certification of an adequate

knowledge of the English language. The date of receipt of the application will constitute a criterion of priority in the case of equivalence of the other qualifications. The eventual achievement of a university degree and / or a research doctorate (also in progress) will be considered as additional merit criteria.

#### **Funding**

The costs of participation in the courses, board and lodging will be fully refunded by the project for the first 20 applicants in the ranking. An additional 50% of positions (i.e. up to a total number of 30 subscribers) will be available without full covering of the cost of accommodation and meals.

#### Certificate of participation

At the end of the course a certificate of participation will be issued, which will also be valid for 4 ECTS.

#### THE ADRIATIC COASTAL AND MARINE SYSTEM

#### Monitoring, protecting and managing biodiversity and ecosystem services

Brindisi – Palazzo Guerrieri October 16<sup>th</sup> – 22<sup>nd</sup>, 2022

#### October 16th

Student arrival day

18:30: *Icebreaking meeting* Piazza Vittoria, downtown Brindisi Guided tour to the city (optional)

#### October 17th

*Morning session:* The Adriatic coastal and marine system: biodiversity, ecosystem functioning and service providing

09.00 - 10:30 Welcome to participants and Summer School presentation - *Alberto Basset & Francesca Gigante* 

10:30 - 11:00 Introduction to the CASCADE project - Alberto Basset

#### 11:00 - 11:30 *Coffee break*

11.30 - 11:45 Institutional welcome addresses

11-45 - 13:00 The Adriatic coastal and marine system: biodiversity, ecosystem functioning and service providing (part 1) - *Alberto Basset* 

#### 13:00 -14:00 *Lunch break*

Afternoon session: The Adriatic coastal and marine system: biodiversity, ecosystem functioning and service providing

14:00-15:00 Monitoring of marine biotoxins in shellfish for human consumption *Romana Roje Busatto* 

15:00-16:00 The Adriatic coastal and marine system: biodiversity, ecosystem functioning and service providing (part 2) - *Alberto Basset* 

#### 16:00-16:30 *Coffee break*

16:30 - 17:30 The Adriatic coastal and marine system: biodiversity, ecosystem functioning and service providing (part 3) - *Alberto Basset* 

#### Day 2 (October 18<sup>th</sup>)

Morning session The Adriatic coastal and marine system: the human environment: History, threats, value

09:00 -10:30 Theoretical approaches to the ecological research on biodiversity, ecosystem functioning - *Francesco Cozzoli* 

#### 11:00 - 11:30 Coffee break

11:00 - 12: 00 Ecological research opportunities in coastal infrastructures: the case of Aquatina Research Centre (South Adriatic Sea, Apulia Region, Italy) - *Maurizio Pinna* 12:00 - 13:00 Standard and innovative tools and protocols for marine litter and beach plastics monitoring - *Lucia Fanini* 

13:00 - 14:00 Lunch break

Afternoon session 14:00 - 17:00 Visit to Saline Punta della Contessa

#### October 19th

Morning session Pilot area 1 & 2 Introduction and main CASCADE results

09.00 - 09:40 The Gulf of Trieste and Rocky mesolitoral macrozoobenthos and hydromorphological alterations - *Nicola Bettoso* 

09:40 - 10:20 Continuous monitoring system in the Grado and Marano lagoon - *Federico Pittaluga* 10:20 - 11:00 High resolution modeling of complex coastal areas and lagoons: the CASCADE project results - *Dario Giaiotti* 

11:00 -11:30 *Coffee break* 

11:30 - 12:15 - Phytoplankton monitoring in transition areas. Application of innovative methods in the Goro area - *Rossella Pistocchi* 

12:15 - 13:15 - Adriatic coastal wetlands: threats and recovery potential - Laura Airoldi

13:15 -14:15 *Lunch break* 

Afternoon session Pilot area 5 & 8 Introduction and main CASCADE results

14:15 - 14:45 Introduction to pilot area 5, Gulf of Venice and Tegnùe di Chioggia: conservation values and maritime uses, monitoring and management. *Daniele Brigolin* 

14:45 - 15:15 Food web modeling for supporting management. Elisa Donati

15:15 - 15:45 Integrated coastal marine management systems and land-sea interactions. *Fabio Carella, Elisa Donati, Daniele Brigolin* 

15:45 - 16:00 Pilot area 5 - General discussion

16:00 - 16:30 *Coffee break* 

16:30 - 17:15 Systematic observation of a model coastal ecosystem towards 21 century – The northern Adriatic. Daniela Marić Pfannkuchen, Mirta Smodlaka Tanković, Ana Baričević, Martin Pfannkuchen

17:15 - 18:00 The northern Adriatic as pilot site for molecular approach in monitoring. *Mirta Smodlaka Tanković, Ana Baričević, Daniela Marić Pfannkuchen, Martin Pfannkuchen* 

#### October 20th

Morning session Visit to Pilot area 3: Torre Guaceto

Afternoon session Pilot area 3 main CASCADE results

14:00 - 14:30 Observing and prediction system of Torre Guaceto and Saline Punta Contessa. *Giovanni Coppini* 

14:30 - 15:30 The Torre Guaceto transitional water ecosystems: key ecological characteristics of CASCADE interest. *Alberto Basset* 

15:30 - 16:00 *Coffee break* 

16:00 - 17:30 The Saline Punta Contessa transitional water ecosystems: key ecologicalò characteristics and CASCADE results *Francesco Cozzoli. Alberto Basset, Cosimino Malitesta, Giuseppe De Benedetto, Sabrina Di Masi, Dario Lofrumento, Serena Longo, Vanessa Marrocco Elisabetta Mazzotta, MIlad Shokri* 

#### October 21st

Morning session XXI century Adriatic coastal and marine system: ecological modelling

09:00 - 10:00 Numerical modeling in marine spatial planning. Georg Umgiesser

Morning session Pilot area 4, 6 & 9 Introduction and main CASCADE results

10:00 - 11:00: Analysis of samples from Pilot area 4. Romana Roje Busatto

11:00 -11:30 *Coffee break* 

11:30 - 12:00 The CASCADE vision and expectations. Valentina De Pinto

12:00 - 13:00 Cetina estuary: monitoring activities in the Natura 2000 site. Jelena Kurtovic

13:00 - 13:30 Description of the location of the pilot area, the biodiversity of the P6 location, - *Marija Kasalo* 

13:30 -15:00 *Lunch break* 

Afternoon session Pilot area 7, 10 & 11 Introduction and main CASCADE results

15:00 - 15:30 Monitoring biodiversity and threats on coastal ecosystems: an insight on the Molise coast. *Francesco Pio Tozzi* 

15:30 -16:00 Monitoring and management of Marine Protected Areas and N2K coastal sites: the case of Torre Cerrabino. - *Tommaso Pagliani* 

16.00 -16:30 Coffee break

16:30 -17:30:00 General discussion

### October 22<sup>nd</sup>

Morning session
Summer school wrap up and student final test
Closing event

#### Attachment A

To the Director of Dipartimento di Scienze e Tecnologie Biologiche ed Ambientali Prof. LUDOVICO VALLI University of Salento

The undersigned
To this end, aware of the criminal penalties provided for by art. 76 of the Presidential Decree 28 December 2000, n. 445, for the hypothesis of falsity in documents and false declarations indicated therein, under his own responsibility, pursuant to art. 46 and 47 of the same DPR. n. 445/2000
DECLARES
to be born in
The following documentation is attached to the application:
Curriculum vitae in European format, self-certified, dated and signed;
Photocopy of a valid identification document;
Motivational letter
Documentation or self-certification of an adequate knowledge of the English language
The undersigned authorizes the processing of personal data pursuant to Legislative Decree 30 June 2003, n. 196 "Code regarding the protection of personal data" and Regulation (EU) 2016/679 (GDPR).
Date Signature of candidate



# The Adriatic coastal and marine system Monitoring, protecting and managing biodiversity and ecosystem services

October 16<sup>th</sup> – 22<sup>nd</sup>, 2022

This is to certify that

has actively participated to the International Summer School organised by the CASCADE project (INTERREG V-A Italy-Croatia CBC Programme 2014-2020 - Activity 4.2, coordinated by PP9 University of Salento). The programme consisted of lectures and practical sessions in the filed on key topics of the CASCADE project. The participant has demonstrated his\her knowledge and understanding of the topics, and successfully completed the final test.

Lecce, 22<sup>th</sup> October 2022

Prof. Alberto Basset Scientific Responsible

#### General understanding of the CASCADE project goals:

The CASCADE project is an international collaboration between Italy and Croatia with the aims of monitoring and managing marine and coastal environments. The project follows different pilot areas such as Grado and Marano lagoon, Neretva river mouth and the Marine Protected Area of Torre Guaceto. Observation and modelling of these pilot areas (which also take into account the local culture and habits) are followed by testing and application of management programs, going from the creation of Marine Protected Areas to the installation of artificial structures for protection, to activities with citizens with the of increasing awareness of ecosystem functioning and services (a pivotal point for prevention).

## Specific understanding of the environmental drivers and anthropogenic pressures in one or more pilot areas of the CASCADE project:

Every pilot area has its own anthropogenic pressure, with different consequences on the local ecosystem and ways to manage them. Some examples will follow.

The pilot area "Saline Punta della Contessa" has been progressively surrounded by the large industrial area of the city of Brindisi in the last decades. This has caused water and air pollution, followed by a drastic biodiversity reduction. Other drivers of the decline of this area have been for example hunting, wastewater discharging in the surrounding areas (there are some large highly polluted pools north of the Saline, reach of heavy metals, which is currently being isolated to reduce surrounding impacts), and various illegal activities favoured by the isolation of the Saline. Also, a recent fire (probably a not natural one) has burned a large portion of the vegetation. However, in this last case, the almost absent slop of the area will help the recovery, as rains won't wash away nutrients. Local plants are already starting to regrow.

The pilot area "Grado and Marano lagoon" shows a high human impact. The most important one is the action on the mouths of the lagoon, which are constantly kept open through sediment removal. This has the aim to help maritime commerce and transport non getting stack in the mouths, but the impact on the water and nutrients exchange between the lagoon and the sea is evident. Other anthropogenic pressures are for example the presence of many cities on the coast of this lagoon, and the presence of two touristic areas on the two sides of the lagoon.

#### Large-scale effects of human development on environmental conditions:

The largest and most impacting pressure on the environment is currently Climate Change, with many different large-scale effects. Those affecting coastal areas and transitional waters are: sea level rise, endangering many coastal habitats; the increasing frequency of extreme weather events, which don't allow ecosystems to completely recover; the tropicalization of marine environments, favouring the expansion of alien species and pathogens, which threaten local species and food chains.

The high industrialization and urban expansion in the coastal zones also reduces space for these ecosystems, therefore also the interconnection between them.

Finally, another human action affecting coastal areas is the globalization, which favours the diffusion of alien species (for example through ballast waters), even though this was already happening in the past. An example of this action were romans which used to import non-indigenous species.

General understanding on approaches and activities useful to mitigate impacts and reinforce adaptation of biodiversity and ecosystem services to anthropic pressures, including climate changes:

There can be different approaches to mitigate or remove impacts on coastal, marine and transitional water ecosystems, depending on the type of pressure they receive.

The creation of marine protected areas can mitigate intense fishery and touristic impact on the coasts, and at the same time help to collaborate with fishermen in the management of the area, with a mutual profit. Even tourism can be favoured in a more sustainable way, and can be associated with educational activities.

Sometimes artificial structures such as walls and protective cages can be extreme choices for protection of fragile species or coastal erosion, but they must always be well evaluated in other to verify possible side effects such as those on the water circulation in the system, or the amount of nutrients reaching the species of interest. An accurate cost-benefit evaluation is therefore required.

As in any other field, prevention is a key action to protect coastal areas. Activities of citizen science and in general those involving people help improving awareness. The involvement of students at different ages can be the most effective one.



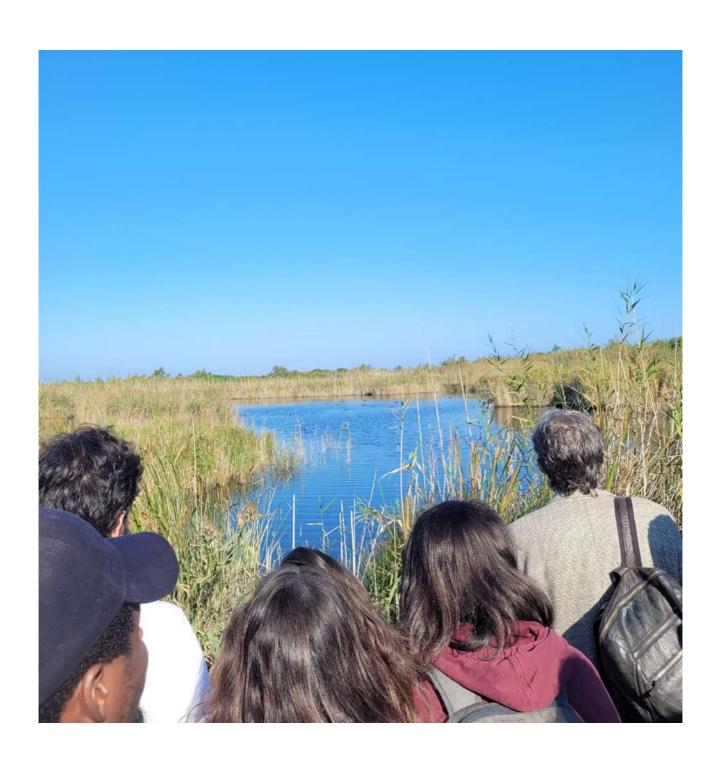












INTERVIEWS realized during the Summer school by the staff of LifeWatch Web TV. Link <a href="https://www.lifewatching.tv/?tv\_show=cascade">https://www.lifewatching.tv/?tv\_show=cascade</a>
Edited by Laura Casciagli and Fabrizio Lecce

