

CREW OBSERVATORY

Final Version of 25/August/2021

Deliverable Number D.3.1.1.

Project Acronym	CREW
Project ID Number	10044942
Project Title	Coordinated Wetland management in Italy-Croatia cross border region
Priority Axis	3 Environment and cultural heritage
Specific objective	3.2 Contribute to protect and restore biodiversity
Work Package Number	3
Work Package Title	Creation of the CREW Observatory and definition of the IT-HR cross border Strategy
Activity Number	3.1.
Activity Title	Setting-up of the CREW Observatory on Italians and Croatian coastal wetlands
Partner in Charge	UNICAM
Partners involved	ALL partners
Status	Final
Distribution	Public

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Executive Summary

This document consists of:

- Act of incorporation with which the project partners set up the CREW Observatory and appointed the relative board members on 4th July 2019, within the 2nd CREW transnational meeting in Zadar;
- First annual report summarizing the activities of the CREW Observatory until July 2020;
- Second annual report summarizing the activities of the CREW Observatory from July 2020 to the end of the project in August 2021.

ACT OF INCORPORATION

DATE: 4/July/2019

CREW project aims to develop a management system of Wetlands in the cross-border area of Italy and Croatia by considering scientific, environmental and governance concerns through the implementation of a multilevel governance tool. The tool has the objective to achieve overall effects on coastal wetlands ecosystems and socio-economic related systems by overcoming fragmentations that are often jeopardizing the sustainable development and preservation of these fragile areas. For these reasons, one objective of the project is the setting up of the CREW Observatory, a transnational hub that serves to monitor best practices and data on coastal wetlands in the cross-border region.

On 4th July 2019, within the 2nd CREW transnational meeting in Zadar, the LP and PPs met to set up the CREW Observatory and appointed the relative board members, 1 for each PPs¹:

- Sjetlana Lupret Obradović – Natura-Histrica
- Morana Bačić – Natura-Jadera
- Nikolina Đangradović – JU DU-NE
- Marta De Marchi – IUAV
- Andrea Catorci – University of Camerino (Coordinator)
- Serena Sgariglia – Municipality of San Benedetto del Tronto

The board will meet in the next transnational meetings and be responsible for:

1) defining and sharing the CREW priorities at the first stage of the project to set:

- assessing Italian and Croatian coastal protected wetlands specificities and highlighting common characteristics, problems and challenges;
- analyzing the background framework related to wet-land management within each of the two regions;
- sharing common criteria and objectives to be pursued in Wetland Contracts implementation;
- support the definition of priorities at regional and cross-border level.

2) to provide strategic and technical guidance for the monitoring and assessment of focused areas and to lead the tasks mentioned above;

¹ Two partners were not attending the meeting so their representant will be added in following meetings.

3) improving the dissemination of the CREW Observatory being all the partners responsible in bridging it at EU level;

4) reporting the activity of the CREW Observatory through the publication of an annual report.

Besides, during the 2nd CREW transnational meeting, the CREW Observatory board defined the Observatory functioning. In particular, it will work on three levels:

- **collecting and monitoring all the data related to the project and the cross border protected wetlands:** indicators (such as habitat conservation status maps, water quality, ecological function, biodiversity level), evaluations, and best practices related to the conservation and sustainable management of wetlands, eco-system services and Wetland Contracts. An **ICT tool, the CREW platform with a web-GIS**, will be developed to monitor all data collected through the monitoring systems installed in each target area and ensure wider dissemination of the project results. It will be a forum devoted to collect data and to make them accessible to interested stakeholders, who will thus be able to participate in the CREW Observatory activities;
- **strengthening the network** among Italian and Croatian coastal protected wetlands, **defining and sharing** beyond the project partnership **the cross-border priorities and strategy**, and thus disseminating them within a wider audience. The Observatory will cooperate with international networks, like the ADRIAPAN and MEDPAN (some of the Protected areas involved in CREW are active members of these networks), and with other EU financed projects. Indeed, each PPs member appointed in the Observatory board will engage its competent regional authorities, thus ensuring a wider public engagement on the project and drawing attention to wetlands challenges, recommend appropriate interventions and promote responsible governance;
- **empowering networking for future projects and the transferability of the cross-border strategy and of the project results:** all the information collected during the project implementation and through the monitoring tools installed in the target areas (digitalized on the GIS database available on the web platform), will be transferred to the platform and so available for other organization and further research interested even after the end of CREW, and so to enhance the transnational exchange of expertise and data to create synergies with other UE partners.

Zadar, 4th July 2019

ANNEX 1 – FIRST ANNUAL REPORT OF THE CREW OBSERVATORY (2019-2020)

DATE: 9/July/2020

1. DOCUMENTS, REPORTS, GEOREFERENCED DATA USEFUL TO THE CONSTRUCTION OF THE WEB PLATFORM

- PIDNIC has collected materials and documents for Wetland contract and had done meetings with potential stakeholders. Materials and documents are: mapping of transitional habitats and biodiversity in the Neretva Delta, research and mapping of four-lined snake (*Elaphe quatorlineata*), european ratsnake (*Zamenis situla*) and hermann's Tortoise (*Testudo hermanni*) in the Neretva delta, research of butterfly fauna in the Neretva delta, mapping of selected invasive plants in Neretva delta, sediment analysis from the Neretva estuary, eurasian otter (*Lutra lutra*) and bat monitoring in Neretva region. These materials are in .pdf versions and .shp files and they date from last or this year.
- The Municipality of San Benedetto has collected the datasets currently available in national and regional opendata portals and at municipal level, the datasets are mainly in shapefile format and made in accordance with the INSPIRE directive. A first list of available data is as follows: Land cover, Land use, DEM 20, Nature 2000 sites, Protected areas, Administrative boundaries, Census datasets.
- IUAV: It is available the open access platform of the *Atlante della Laguna* (Lagoon Atlas), which offers a consistent amount of data and maps on: air, water, biology, geology, protection of the territory, human environment, environmental impacts, history, daily life, projects (<http://www.atlantedellalaguna.it/>). Another important platform is the *Geoportale della Regione del Veneto* (Veneto Region data platform), with cartographic and statistic data on the entire regional territory, useful especially for the mainland dynamics (<https://idt2.regione.veneto.it/>).
- JUNH: An overview of existing data was made concerning different aspects of scientific expertise for the area; (Format: Word document, Excel Sheet); A list of bird species observations by the former ranger is collected (Format: manuscripts, Word document); Reports on bird observations and bird ringing for 2018 and 2019. (Word document); Georeferenced layers of PA border and cadastre were obtained (Format: shp, wms); Georeferenced data on specific points and are collected; Photo archive is being set-up, newer photos are georeferenced; A list of parameters that are going to be monitored is produced (Format: Excel Sheet).
- UTI: The list of available/existing data (water quality, ecological function, biodiversity level) ad available/existing data format and collection was presented to the CREW partners during the

technical meeting in San Benedetto del Tronto on Wednesday 13/11/2019; To assess the quality of marine-coastal and transitional (lagoon) waters, monthly analyses are carried out on a total of 52 sampling stations distributed in 19 marine-coastal water bodies and 20 transitional water bodies. The monthly monitoring of marine and transitional waters (lagoons and river mouths) is carried out under the D.M. 260/10 and of the Legislative Decree 190/2010. The data are acquired with multi-parametric probe in 77 sampling stations; Oceanographic data in transitional waters are recorded through 5 buoys placed in rotation in the areas identified by the lagoon water bodies. The temperature, conductivity / salinity, pH and dissolved oxygen data are acquired and presented daily. From the beginning of April 2019, the continuous turbidity monitoring of the lagoon waters is observed in two stations: one is located in a canal site near Aprilia Marittima (Canale Coron - Lignano Sabbiadoro); Phytoplankton, chlorophyll A, macrophytes, benthic macro-invertebrates, physico-chemical elements of the sediment, fish fauna, physical chemical elements - multi-parameter probe for temperature, salinity, dissolved oxygen and minimum, maximum and average ph, chemical elements - nutrients, chemical elements in support in water, substances in the priority list in water, toxicity in sediments, waters assigned to shellfish life // continuous monitoring of water turbidity. [Format: .csv (comma separated value/excel)]

3. ACTIVITIES FOR STRENGTHENING THE NETWORK AMONG ITALIAN AND CROATIAN COASTAL PROTECTED WETLANDS

- IUAV provided Croatian partners with documents related to the Italian experience on wetland contracts (reports, laws, study cases and wetland contract documents fac-simile). On summer 2019, IUAV participated to an exhibition related to the Interreg Italy-Croatia programme, organised by Veneto Region in Venice in the frame of Mostra del Cinema. During the exhibition, IUAV projected the interview to prof. Maria Chiara Tosi recorded during CREW Kick-off meeting, where she presents the CREW project, partners and objectives.

4. ACTIONS FOR EMPOWERING INTERNATIONAL NETWORKING SO TO ENHANCE THE TRANSNATIONAL EXCHANGE OF EXPERTISE AND DATA IN ORDER TO CREATE SYNERGIES WITH OTHER EU PARTNERS

- The Municipality of San Benedetto del Tronto, as the managing body of Reserve Sentina, participated in the conference Urbanpromo Green 2019 which was held in Venice on 19 and Friday 20 September 2019. During the conference the topic addressed was how sustainable development is applied both in the planning of the city and the territory, and in the design and implementation of interventions. The theoretical reflection was compared with good practices, the technical-scientific profile of the problems with concrete solutions. The event, promoted by INU - Istituto Nazionale di Urbanistica and the IUAV University of Venice, was attended by technical or political representatives of other bodies from all over the country, architects and planners, academics and students.

On this occasion, the representatives of the Authority showed the ongoing process that will lead to the signing of the Wetland Area Contract for the Sentina Reserve by the end of CREW project. Further details were presented, such as: the peculiarities of the area, the attending stakeholders, the activities carried out and the management methods of the reserve itself.

- During the CREW meeting in San Benedetto del Tronto a networking activity was promoted with the Interreg MED Coasting project, which concerns the integrated management of coastal areas through governance tools such as the Coast Contracts. On the occasion of the presentation of Coasting, it was discussed the possibility to create synergy with the wikisource of the project that presents good practices of governance at Mediterranean level.
- IUAV offered to a group of students from Liverpool University, a number of lectures on different topics related to Venice and its lagoon: wetland contract and governance, historical heritage, tourism and other economic sectors, regulatory and planning framework. IUAV are organising an atelier inside the Italian convention called Urban Promo Green, that will take place on September 2020. Taking advantage from the fact that this year the convention will be organised on-line, IUAV decided to invite experts from abroad to participate to the atelier on wetland governance. Some representatives of wetland contracts developed in the frame of WetNet project are invited to present their experience so far, one year after the contract was signed.
- JUNH: One-day study trip to Škocjanski zatok Nature Reserve (Slovenia), November 2019. The goal was to see how the concrete conservation actions were applied and to collect data on monitoring schemes and educational programmes in the Nature Reserve

5. SUGGESTIONS TO THE DEVELOPMENT OF FUTURE ACTIVITIES OF THE CREW OBSERVATORY

- In order to enhance synergies with other projects, contact persons from other Interreg MED projects such as WetNet, Tune Up and Coasting could be invited to the Observatory.
- It would be useful to build a solid network with other Wetland Contract in Europe, for example reaching partners from WetNet project. Some of them, in fact, have already signed their Wetland Contract and the monitoring of their process would represent useful practices to implement CREW wetland contracts.
- Collecting wetland contract best (and worst) experiences in order to have a wider frame on the possible results of this governance tool.
- Searching for new potential partners and target areas to enlarge the community of institutions involved in wetland contracts.

- Building a European network of wetland areas, where experienced stakeholders and authorities can offer support to new territories interested in the development of wetland contracts.
- JUNH suggests that unique list of biotic/abiotic parameters to be monitored is created, as the description of monitoring methodology
- UTI_RBF suggests to include qualitative and quantitative indicators to assess the outcome of the wetland contract process, including for instance: number of people involved (and involved to total population ratio), number of public and private bodies entities involved (and involved to total bodies ratio), water quality, tourism and economic benefits.

ANNEX 2 – SECOND ANNUAL REPORT OF THE CREW OBSERVATORY (2020-2021)

DATE: 25/August/2021

1. DOCUMENTS, REPORTS, GEOREFERENCED DATA USEFUL TO THE CONSTRUCTION OF THE WEB PLATFORM

CREW Wiki:

Each project partner added information on CREW Wiki (wetland contract, good practices, scientific support, regulatory framework)

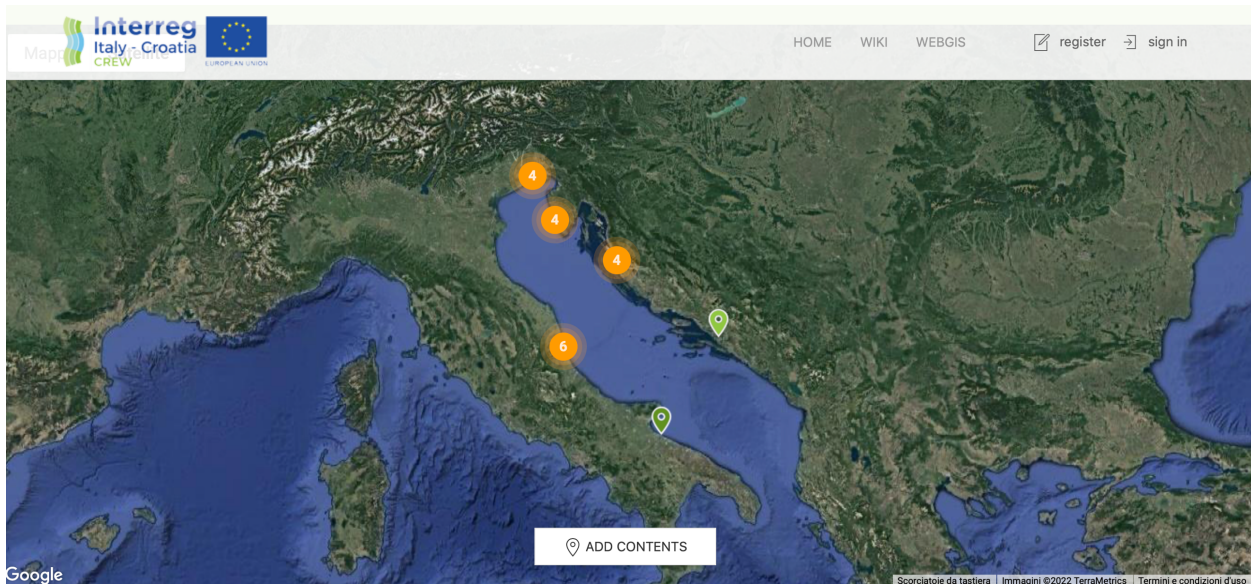




Figure 1 - CREW Wiki. Source: <http://crew-observatory.unicam.it/wordpress/wiki/>

2 Good practices:

- 
GOOD PRACTICE 23249 Municipality of Poveljana, Croatia
Velo i Malo blato

- 
GOOD PRACTICE San Benedetto del Tronto, Marche Italia - Sentina Nature Regional Reserve
Controlling invasive alien species

6 Wetland Contract:

- WETLAND CONTRACT Marano Lagunare, Friuli Venezia Giulia Italia
Contratto di Area Umida per il Sistema della Laguna di Marano / Wetland Contract for the Marno Lagoon
- WETLAND CONTRACT 23249 Municipality of Poveljana, Croatia
Wetland contract Velo i malo blato
- WETLAND CONTRACT 20344 Desne, Hrvatska
Dela River Neretva
- WETLAND CONTRACT 63074 San Benedetto del Tronto, Marche Italia
Wetland Contract of Sentina
- WETLAND CONTRACT Kalandra, Hrvatska
Palud Wetland Contract
- WETLAND CONTRACT San Benedetto del Tronto, Marche, Italia. Sentina Nature Regional Reserve
Sentina Wetland Contract


5 scientific support:

- SCIENTIFIC SUPPORT 23249 Municipality of Poveljana, Croatia
Ihtiofauna research
- SCIENTIFIC SUPPORT 23249 Municipality of Poveljana, Croatia
Scientific research
- SCIENTIFIC SUPPORT Palud Ornithological Reserve, Hrvatska
Palud – Coleoptera list
- SCIENTIFIC SUPPORT Palud Ornithological Reserve, Hrvatska
Palud Ornithological Reserve
- SCIENTIFIC SUPPORT San Benedetto del Tronto, Marche, Italia. Sentina Nature Regional Reserve
Study on ecosystem services

7 regulatory framework:

 **REGULATORY FRAMEWORK** San Benedetto del Tronto, Marche, Italia. Sentina Nature Regional Reserve
Management Plan of the Sentina Nature Reserve

 **REGULATORY FRAMEWORK** San Benedetto del Tronto, Marche, Italia. Sentina Nature Regional Reserve
Regional law for the institution of the Sentina Nature Regional Reserve

 **REGULATORY FRAMEWORK** Marano Lagunare, Friuli Venezia Giulia Italia
ATLAS OF GOALS FOR THE DIFFUSION OF RIVER, LAKE AND COSTAL (CdF) CONTRACTS IN THE FRIULI ...

 **REGULATORY FRAMEWORK** Palud Ornithological reserve
Law on Nature Protection

 **REGULATORY FRAMEWORK** Marano Lagunare, Friuli Venezia Giulia Italia
Friuli Venezia Giulia Regulatory Framework

 **REGULATORY FRAMEWORK** Marano Lagunare, Friuli Venezia Giulia Italia
Friuli Venezia Giulia Regulatory Framework

 **REGULATORY FRAMEWORK** 76016 Margherita di Savoia, Puglia Italia
Ofanto River regional nature park

CREW WebGIS:

Each project partner added geolocalized informations on the CREW WebGIS (Natura 2000 sites, Habitat quality maps, Habitat degradation maps, Ecosystem maps, Ramsar sites)

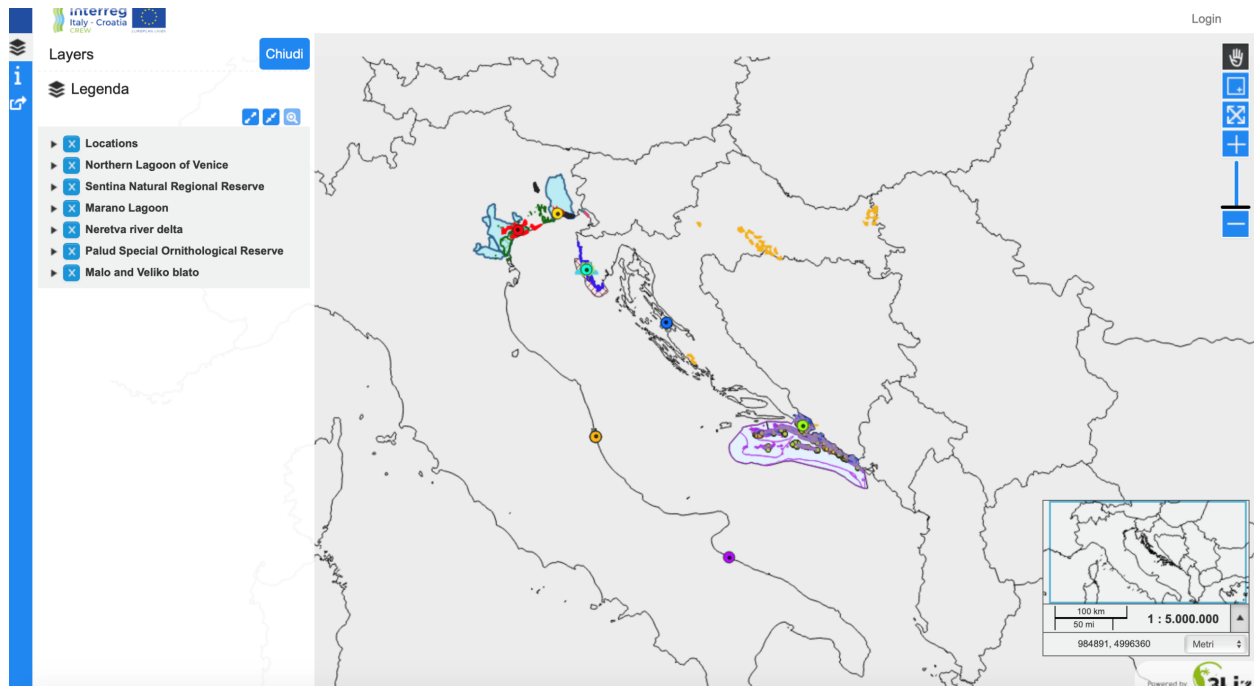


Figure 2 – CREW WebGIS. Source: http://crew-observatory.unicam.it/lizmap/index.php/view/map/?repository=002&project=2018_033_crew_database

2. ACTIVITIES FOR STRENGTHENING THE NETWORK AMONG ITALIAN AND CROATIAN COASTAL PROTECTED WETLANDS AND FOR EMPOWERING INTERNATIONAL NETWORKING SO TO ENHANCE THE TRANSNATIONAL EXCHANGE OF EXPERTISE AND DATA IN ORDER TO CREATE SYNERGIES WITH OTHER EU PARTNERS

- Urban Promo Green 2020 “Wetland governance: Contracts in action” (17 September 2020)
- World Wetland Day: presentation of the CREW Observatory and Web Platform (2 February 2021)
- Interreg Med Tune up (20 May 2021)
- Summer School “Terr_A_mare conoscere e comunicare il paesaggio della laguna di Marano” (3-18 July 2021)
- Interreg Med webinar on processes of capitalisation of results between Interreg programmes in the Mediterranean area (15 July 2021)
- CREW Final Conference (22-23 July 2021)

- Urban Promo Green 2021 “WETLANDS GOVERNANCE. The implementation of Interreg Italy – Croatia CREW wetland contracts” (29 July 2021)
- Final conference of Interreg Italy-Croatia CHANGE WE CARE (7 December 2021)
- UCAMP Ca’ Foscari workshop - Next Steps Venice. Co-design approaches for a sustainable Venice (15 December 2021)
- Networking with the Interreg Med Coasting Plus project

3. FUTURE ACTIVITIES OF THE CREW OBSERVATORY

- 15th Annual meeting of the expert services of all Croatian Public Institutions that are in charge of managing protected areas and ecological network; Held in Jastrebarsko from September 29th to October 1st; organized by the Croatian Agency for the protection of environment and nature (Ministry of economy and sustainable development) – Natura Histrica;
- Networking with other Natura 2000 sites in the cross-border region;
- Networking with other Ramsar sites in the cross-border region;
- Networking with other Wetland Contracts activated in the cross-border region;
- Networking with MedWet Initiatives to disseminate the results at Mediterranean level;
- Networking with other EU funded project working on Environmental Contracts (e.g. Interreg Med Coasting Plus, Interreg Med Tune Up);
- Organize annual events to update and share the implementation results of the Wetland Contract activated by CREW project;
- Keep updating and promoting the Observatory web platform:
(<http://crew-observatory.unicam.it/wordpress/>).