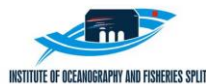


Mid-term Conference – Follow up report

Activity 2.4 - Sushi Drop Events and EUSAIR
Conference
WP2 - Communication activities
SUSHI DROP project (ID 10046731)

Final Version of 31/12/2021

Deliverable Number D.2.4.2



Project Acronym	SUSHIDROP
Project ID Number	10046731
Project Title	SUustainable fiSHeries with DROnes data Processing
Priority Axis	3
Specific objective	3.2
Work Package Number	2
Work Package Title	Communication Activities
Activity Number	2.4
Activity Title	Sushidrop Events and Eusair Conference
Partner in Charge	PP5 – County of Split and Dalmatia.
Partners involved	PP1 - Institute of Oceanography and Fisheries (IoF), PP4 – Association for nature, environment and sustainable development (SUNCE),
Status	Final
Distribution	Public

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Abstract

SUSHI DROP SUsustainable fiSHeries wIth DRONES data Processing is a project financed by European Union through the Interreg Italy-Croatia Programme. The project aims at enhancing knowledge on accurate and non-invasive methods for mapping the marine ecosystems of Adriatic Sea, in order to assess environmental status of habitats and fish stocks population as reliable and up-to-date information about the state of marine resources are essential to support sound management decisions.

The most important goal of SUSHI DROP is to better understand the sensitivity of the habitats to fishing pressures and to design and implement more effective marine management plans. SUSHI DROP evaluates the adoption of drones (UUVs - unmanned underwater vehicles) equipped with sensors to monitor physical, chemical and biological features. In particular, acoustical and optical technologies will be employed as a non-invasive mean to assess fish stocks population.

The findings of the opto-acoustic surveys will be compared with classical procedures based on fish sampling and to assess the accuracy in deriving single-species abundance indices (in numbers or weight) for direct input into stock assessments. The data gathered during the project will be collected in a Geographical Information System known as GIS.

It will serve as an open database for collecting, maintaining and sharing the scientific data acquired by the UUVs and as a useful resource in further research and preservation of the biodiversity of the Adriatic.

The partnership of the project has been able to pool all skills and competences of relevant institutions in order to achieve the set of project results, having the capacity to create strong links to target groups addressed by the project.

This document is the deliverable **D.2.4.2. Mid Term Conference report** and shows, the contents and the presentations of this relevant seminar held to present the intermediate results of the project, organized jointly with the INNOVAMARE project on April 27 and 28 in Zadar and online.

The Mid-term Conference of the SUSHIDROP Project

The Mid-term Conference has been organized in Croatia by PP5 - Split and Dalmatia County in cooperation with PP1 - Institute of Oceanography and Fisheries (IoF), PP4 – Association for nature, environment and sustainable development (SUNCE). The conference was targeted in particular to the fishermen and environmental associations and research institutes potentially interested in developing biodiversity-monitoring systems based on UUV.

The conference “Innovative Solutions for the Sustainability of the Adriatic Sea” was organized jointly with the INNOVAMARE strategic project and on Tuesday, April 27 and Wednesday, April 28, in Zadar and online, due to Covid2019 restrictions.

The InnovaMare project is designed to develop and establish a model of the innovation ecosystem in the field of underwater robotics and sensors for the purposes of monitoring, control and surveillance of pollution in the Adriatic Sea. The SUSHI DROP project deals with the development of custom drones (UUV technology) with acoustic equipment and optical technology, and for the development of non-invasive methods of environmental habitat assessment, fish stocks and general monitoring of marine ecosystem biodiversity in areas where classical sampling is not possible. One of the main challenges of the InnovaMare project is to increase the efficiency of innovation activities in the relevant areas of the blue economy - by increasing the transfer of knowledge within the area of cooperation. The aim of this cooperation was to combine knowledge, experience and information from the strategic and operational level with the aim of developing new innovative solutions through the innovation ecosystem with a mission on the sustainability of the Adriatic Sea.

The focus of this event was to bring together stakeholders as decision-makers at the national, local and regional level as well as the scientific research community and open a discussion on the development of innovative solutions through the innovation ecosystem in the blue growth area. On the first day, April 27, 2021, emphasis was placed on the InnovaMare project and importance of decision makers in creating and sustainability of the innovation ecosystem as well as the importance of availability of funding sources in the development of new technological products and services for the preservation of the Adriatic Sea.



The second day, April 28, 2021, was dedicated to the results of the SUSHI DROP project and the development of adapted drones (UUV technology) with acoustic equipment and optical technology for the development of non-invasive methods for assessing the state of the environment, fish stocks and general monitoring of marine ecosystem biodiversity. Further, examples of good practice showed the importance of technology in the tradition of fishermen and the preservation of the Adriatic.

The Agenda of the Conference

INNOVATIVE SOLUTIONS FOR SUSTAINABILITY OF ADRIATIC SEA

Focus of this event is to gather stakeholders as decision makers on national, local and regional level as well as scientific-research community and to open a discussion on development of innovative solutions thru innovation ecosystem in blue growth area. This event is organized together by strategic project Innovamare and project Sushi-Drop that are both financed by Interreg program Italy-Croatia.

Aim of this collaboration is to combine knowledge, experience and information both from strategic and operational level with aim on development of new innovative solutions thru innovation ecosystem with mission on sustainability of Adriatic Sea.

Event will be organized as offline & online event. Some of the speakers and participants that are available will join us in Zadar and other will join us online.

<i>Day 1 – Tuesday 27 April</i>	
10.30-10:40	Welcome speech and Introduction to the agenda of the event
10:40-10:50	InnovaMare project and Sushi Drop project video
10.50-12:15	<p>ROUNDTABLE 1: „How decision makers and policies can support development of innovation ecosystem?“ (moderator: Mateo Ivanac, InnovMare project manager, Croatian Chamber of Economy, Lead Partner of InnovaMare project)</p> <ol style="list-style-type: none"> 1. dr.sc. Tomislav Radoš, Vice President for Industry and Sustainable Development, Croatian Chamber of Economy 2. Josip Bilaver, State secretary, Ministry of Sea, Transport and Infrastructure 3. Šime Erić, State secretary, Ministry of Regional Development and EU Funds 4. Goran Pauk, County Prefect, Šibenik-Knin County 5. Božidar Longin, County Prefect, Zadar County 6. Ante Šošić, prefect deputy, Split Dalmatia County

12:15-13:00	<p>Presentation and discussion EU funding opportunities for development of innovative solutions in blue growth sectors!</p> <ol style="list-style-type: none"> Marija Rajaković, Head of Sector for financial monitoring and strategic reporting, partnership dialogue and coordination of fulfillment of conditions that enable the implementation of EU funds, Ministry of Regional Development and EU Funds dr. sc. Vlatka Godinić Mikulčić, National Contact Point for Food safety, sustainable agriculture and forestry, marine, maritime and inland water research and bioeconomy HORIZON 2020, Agency for Mobility and EU Programmes
13:00-14:00	<p>Break</p>
14.00-15:30	<p>ROUNDTABLE 2: „The role of science in generating a stronger innovation ecosystem“ (moderator: Edvard Tijan, PhD, University of Rijeka, Faculty of Maritime Studies)</p> <ol style="list-style-type: none"> Petra Karanikić, PhD, Assistant Professor, University of Rijeka, Department of Biotechnology Frane Šesnić, Director – Zagreb Innovation Centre ZICER Goran Vukelić, PhD, Vice dean for research, University of Rijeka, Faculty of Maritime Studies Nebojša Stojčić, PhD, Vice rector for business affairs, University of Dubrovnik Stavros Kalognomos, Executive Secretary, Balkan and Black Sea Commission Elena Andonova, Policy Officer, EU Commission, DG Joint Research Centre (JRC) Prof. Dr. Nikola Mišković, Vice Dean for Research at University of Zagreb, Faculty of Electrical Engineering and Computing, Head of LABUST Saša Aksentijević, PhD – Aksentijević Forensics and Consulting Josip Rukavina, Vectrino Ltd. Lovro Maglić, PhD, director, Center for Maritime Technologies, University of Rijeka, Faculty of Maritime Studies Nikola Balić, University of Split, Head of Department for science and innovation

15:30-15:45	Coffee break
15:45-16:30	Presentation and discussion Best practices and newest technological solutions in maritime sector? 1) GALO INDUSTRIES j.d.o.o. 2) Geolux d.o.o. 3) SeaCras j.d.o.o. 4) CBRO project
16:30-16:45	Questions&Answers
16:45-16:55	Portrait, life and energy of the Adriatic

Day 2 – Wednesday 28 April	
10.00-10.10	Introduction to the agenda and rules for participation-Martin Bučan, The County of Split and Dalmatia
10.10-10.20	Introduction to the SUSHIDROP project Luca De Marchi, Alma Mater Studiorum -University of Bologna, Department of Electronics, Computer Sciences and Systems
10.20-10.35	SUSHIDROP UUV/ROV Systems and Control Engineering MASSIMILIANO MENGHINI, Alma Mater Studiorum-University of Bologna, Department of Electrical, Electronic and Information Engineering
10.35-10.50	Cabled deep sea acoustic observatories: Science and technological applications GIORGIO RICCOBENE, PhD, Laboratori Nazionali del Sud-INFN
10.50-11.10	Marine robotics, sensors and environmental monitoring equipment-market requirements and their widespread application over the next decads Alan Ivan Blažeković, director, PRIMOTRONIC d.o.o.
11.10-11.30	The sea through the fisherman's eyes Joško Pedišić, Fisherman, Croatian Chamber of trades and crafts, Šibenik-Knin County
11.30-12.00	Questions&Answers
12.00-13.30	Break
13.30-13.40	Portrait, life and energy of the Adriatic Ivana Miletić, Artist, Member of the International Federation of Photographic Art
13.40-13.55	Southern Adriatic Biodiversity Conservation Aleksandar Jaksimović, director, Institute of Marine Biology, Montenegro

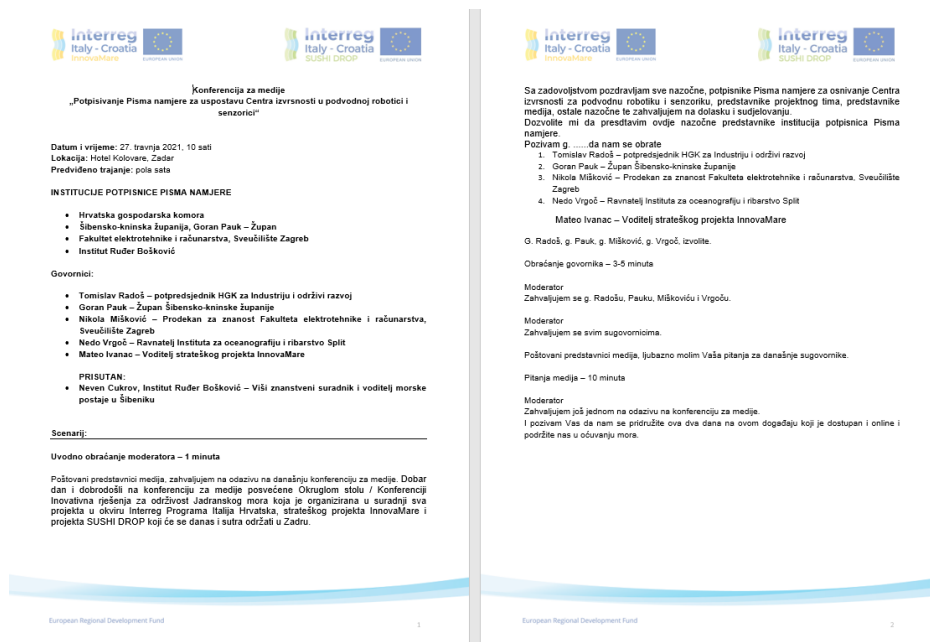
13.55-14.10	<i>Mediterranean marine protected areas-examples of good practises</i> <i>Mosor Prvan, WWF Adria, Marine Program Manager</i> <i>Danijel Kanski, WWF Adria, Marine Program Manager</i>
14.10-14.30	<i>Protection mechanisms of biodiversity conservation in „Jabučka kotlina“</i> <i>doc.dr. Igor Isajlović, Laboratory of Fisheries Science and Management of Pelagic and Demersal Resources, Institute of Oceanography and Fisheries</i>
14.30-14.50	<i>Invasive species in the Adriatic</i> <i>prof.dr.sc. Jakov Dulčić, Laboratory for Ichthyology and Coastal Fishing, Institute of Oceanography and Fisheries</i>
14.50-15.00	<i>The importance of seagrass in climate change mitigation and adaptation</i> <i>Ivan Sekovski, UNEP MAP PAP/RAC, PhD in Marine and coastal management</i>
15.00-15.30	<i>Questions&Answers</i>


Some of the speakers participated in presence, while other join the Conference via Zoom. The agenda of the Conference was also shared by means of a dedicated newsletter and the programme was available in the three languages (Italian, Croatian and English) to facilitate the involvement of local stakeholders.

A Press conference was organized to present the event and an ad-hoc press kit prepared jointly with the Innovamare Project.



Press kit delivered





SUSHI DROP PROJEKT

Trajanje projekta 01.01.2019 – 30.11.2021.
Ukupna vrijednost projekta: 1,72 milij. €

PARTNERI:
GP - Alma Mater **Stjepanović** - Laboratorij morske biologije i ribarstva u Fanu pri Sveučilištu u Bologni (IT)
Udruga za prirodu, okoliš i održivi razvoj - **SUNCE** (HR)
Spiltsio-dalmatinska županija (HR)
Institut za oceanografiju i ribarstvo (HR)
Regija **Mladost** - Odsjek za ekonomiju ribarstva (IT)
Lokalna inicijativa za ribarstvo „Coast **del'Urbosco**“ (IT)

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Kontakt glavnog partnera:
Luca De Marchi
Ldemar@unibo.it

1. Što je SUSHI DROP?

SUSHI DROP je akronim naziva **Sustainable Seafood Processing** odnosno Održivo ribarstvo uz prikupljanje podataka dronovima. Riječ je o projektu koji se financira iz programa prekogranične suradnje **Interreg** Italija-Hrvatska te za cilj ima zaštitu bioraznolikosti, uvođenje monitoringa morskog staništa uz pomoć **podvodnih dronova** s posebnim naglaskom na teško dostupna područja (velike dubine i hridi, područja koja su rizična za ronice) te osigurati dostupnost dobivenih podataka svim zainteresiranim (regulatorna tijela, znanstvenici, proizvođači...).

2. Koja nova tehnologija se razvija u sklopu projekta?

U sklopu SUSHI DROP projekta talijansko – hrvatski istraživački tim razvija podmorski dron te implementacija senzornog sustava baziranog na UAV tehnologiji (**Autonomous Undersea Vehicle / Autonomous podvodnih uređaja**) koji pomoću akustičnih i optičkih instrumenata procjenjuje **podvodna staništa** na većim dubinama. Projekt postavlja novi standard u praksi (**podvodni nadzor**) nadzora morske bioraznolikosti korištenjem podvodnog drona. Bespilotna letjelica u našem slučaju postaje sve traženija i bespilotna (**drone**) koja će u sebi integrirati najsuveravniju optičku i akustičnu tehnologiju, opremljena sustavom videoja, kontrole i navigacije baziranim na inovativnim algoritmina koji dopuštaju samostalno istraživanje, bez ljudskog nadzora, a modularna arhitektura podržava brzu prilagodbu na konfiguraciju morskog dna. Dron će imati kapacitet samostalnog istraživanja u trajanju do šest sati, na dubinama do 300 metara.

3. Koje su prednosti korištenja novih tehnologija u nadzoru morskog staništa?

Suvremenoj tehnologiji na području podvodne robotike i **drone** ima sve veću upotrebu kontrole i nadzora onečišćenja i stanja ribnjeg fonda u Jadranskom moru. Omogućuje smanjenje troškova analize morskog staništa, smanjuje rizik kojem su se do sada izlagali ronici prilikom uzorkovanja ribe, a i dobivamo precizniji indeks ribnjeg fonda te neuporedivo kvalitetnije procjene bioraznolikosti u područjima velikih dubina i stjenovitih morskog grebena koja su do sada bila ne samo rizična za ronice već i teško dostupna. Upotreba suvremene tehnologije olakšat će donošenje odluka o upravljanju Jadranskim morom, s posebnim naglaskom na politike koje se odnose na ribarstvo i litoralne promjene.

4. Zašto je važno imati što preciznije podatke o stanju morskog staništa?

Političke posebne zaštite određenih područja od prejaranog izliva donose se temeljem podataka o stanju morskog staništa i ribljih stokova. S preciznijim podacima temeljem kojih se te odluke donose imat ćemo i kvalitetniju politiku održivog ribarstva i bolju zaštitu bioraznolikosti relevantnih ekosustava.

5. Gdje će dobiveni podaci biti dostupni?

Pouzdanje i ažurirane informacije o stanju morskog staništa ključne su za donošenje odluka o zaštiti značajnih ekoloških područja i zato će se u sklopu projekta SUSHI DROP implementirati i platforma otvorene tipa geografski informacijski sustav (GIS) u koji će se prikupljeni i razmjenjivati dobiveni podaci. Baza podataka bit će dostupna istraživačima, nevladinim organizacijama, subjektima uključanima u planu ekonomiju te donositeljima odluka i sadržavat će prikupljene podatke protažile iz primjene autonomnih podvodnih uređaja (UUV-aj), zajedno s procjenom indeksa ribnjeg fonda.

Projekt je osmišljen s ciljem unapređenja znanja o preciznim i nainvazivnim metodama mapiranja morskog staništa, odnosno praćenja i procjene stanja morskog okoliša, indeksa brojnosti ribe te općenito (**podvodni nadzor**) ekosistema mora.

6. Kada će dron biti spreman za upotrebu?

Podmorski dron koji hrvatsko-talijanski istraživački tim razvija u sklopu projekta SUSHI DROP prvi zaron bi trebao imati u Splitu, krajem rujna ove godine, potom će biti testiran u stanju vod u talij s po završetku testiranja i krenuti u redovnu upotrebu u sklopu znanstvenih institucija, partnera u projektu SUSHI DROP.

Media involved:

A	B	C	D	A	B	C	D	A	B	C	D
TEŠAK	IME	FUNKCIJA		TV	IME	FUNKCIJA		Hrvatski Radio SPLIT	IME	FUNKCIJA	
Biozona Dalmacija	Dimitri Dukić	odgov. za uređivanje	11	Zadran TV	Ivana Čičak Žuganec	redateljica	12	Hrvatski Radio SPLIT	Borislav Vučković	novinar	13
Biozona Dalmacija	Ivan Borošević	odgov. za uređivanje	13	HTV - Studio Split	Marijana Šarić	šef uredništva	14	Hrvatski Radio Split	Marijeta Živić	novinar	14
Biozona Dalmacija	Lena Bujak	urednik Dalmacija	14	HTV - Studio Split	Dominik Šimac	redatelj	15	Hrvatski Radio Split	Marija Dumić	novinar, zambor	15
Biozona Dalmacija 2D		Marijeta Žalić	15	HTV - Studio Split	Ivana Šilović	novinar Doprinos	16	Hrvatski Radio Split	Vesna Čekić	novinarica, veštak	16
HNA 2D	Burjana		16	HTV - Studio Split	Marina Šarić	redatelj	17	Radio Dalmacija	Slavica Zekić	direktor programa	17
HNA	Rebecca Jurčić	novinar	17	HTV - Studio Split	Marina Šarić	redatelj	18	Radio Dalmacija	Marina Šarić	redateljica	18
HNA	Marija Dukić	novinar	18	HTV - Studio Split	Marina Žubovčić	urednik	19	Radio Dalmacija	Darko Šaban Jelenc	novinski informativac	19
DZ kralj	Marija Jurčić	novinar	19	Novi TV		organizativna	20	Radio Brač	Slavica Vuković	novinar	20
Večernji list	Stjepan Pilić	novinar	20	NoviTV	Ivan Kaliterna	novinar	21	Radio Brač		redateljica	21
Večernji list BT	Slavica Vučković	novinar	21	RTL	Dragana Matković	novinarica	22	Radio Sunce	Tihomir Jurčić	urednik	22
Zadarski list (dnevnik)			22	RTL	Jelena Tadić	novinar	23	Radio Sunce	Nada Perić	urednik sport	23
Zadarski list (dnevnik)	Luca Perić	redateljica	23	RTL	Marko Kocić	novinar	24	Radio Hvala naša ravnica			24
Zadarski list (dnevnik)	Vjekoslav Kralj	novinar	24	HRT	Marko Žubovčić	odgov. za uredništvo	25	Hrt Radio Šibenik			25
Narodni list	Slavica Šarić	gl. urednica	25	TV Dalmacija	Andrea Kuzmić	šef uredništva	26	Radio Ritam	Milda Bječić	direktor	26
Narodni list	Marina Dukić	novinar	26	TV Dalmacija	Marina Vučković	redateljica	27	Hrvatski Radio ZADAR	Toni Šabić	gl. urednik	27
Narodni list	Marina Vučković	novinar	27	HTV Zadar	Marina Vučković	redateljica	28	Hrvatski Radio ZADAR	Darko Perić	novinarica	28
Narodni list	Marina Vučković	novinar	28	HTV Zadar	Ante Kraljčić	šef uredništva	29	Hrvatski Radio ZADAR	Vjekoslav Jurčić	novinar	29
Narodni list	Marina Vučković	novinar	29	HTV Zadar	Ante Kraljčić	šef uredništva	30	Hrvatski Radio ZADAR	Darko Bječić	novinarica	30
Sutinski ribar	Darko Bujak	gl. urednik	30	HTV Zadar	Marina Vučković	redateljica	31	Hrvatski Radio ZADAR	Darko Bječić	novinarica	31
YACHTS CROATIA	Darko Bujak	gl. urednik	31	HTV Zadar	Marina Vučković	redateljica	32	Hrvatski Radio ZADAR	Darko Bječić	novinarica	32
Otvoreno More	Marina Vučković	gl. urednik	32	HTV Zadar	Marina Vučković	redateljica	33	Radio Biograd n/m	Darko Bječić	novinarica	33
Otvoreno More	Marina Vučković	gl. urednik	33	HTV Zadar	Marina Vučković	redateljica	34	Antena Zadar	Marina Vučković	novinarica	34
Otvoreno More	Marina Vučković	gl. urednik	34	NoviTV	Slavica Vučković	novinar odgov. za	35	Antena Zadar	Marina Vučković	novinar	35
Hone Nagazin	Marina Vučković	redateljica, urednica	35	NoviTV	Slavica Vučković	novinar	36	OSTV.hr			36
Hone Nagazin	Marina Vučković	redateljica, urednica	36	RTL	Marijana Radec Anđ	novinar odgov. za	37	OSTV.hr	Branka Tadić	gl. urednik i urednik sport	37
Burba Nautila	Kristina Miroš	urednik	37	RADIO	IME	FUNKCIJA	38	Novi radio Zadar			38
Burba Nautila	Ivan Bječić	urednik	38	Hrvatski Radio SPLIT		redateljica	39	Radio Korčula	Darko Bječić	novinarica	39
Burba Nautila	Ivan Bječić	urednik	39	Hrvatski Radio SPLIT	Slavica Vučković	gl. urednik	40	Radio Korčula	Darko Bječić	novinarica	40
Burba Nautila	Ivan Bječić	urednik	40	Hrvatski Radio SPLIT	Slavica Vučković	gl. urednik	41	Radio Ploče	Darko Bječić	novinar	41
TBANDIČO	Marina Vučković	urednik	41	Hrvatski Radio SPLIT			42				42
TBANDIČO			42								

DATUM	MEDU	VELIČINA/TRAJANJE/LINK	DOSEG
WEB			
19.04.	ekovjesnik.hr	https://www.ekovjesnik.hr/clanak/3924/innovativna-riesenja-za-odrizivost-jadranskog-mora	2000
16.04.	morski.hr	https://morski.hr/2021/04/16/innovativna-riesenja-za-odrizivost-jadranskog-mora/	2000
19.04.	nautica-portal.com	https://www.nautica-portal.com/nautica-portal-com/vijesti/2539-innovativna-riesenja-za-odrizivost-jadranskog-mora	1600
19.04.	turizmoteka.hr	https://www.turizmoteka.hr/ekstra/predstavljamo-okrugli-stol-konferenciju-innovativna-riesenja-za-odrizivost-jadranskog-mora/	1800
19.04.	dubrovnikportal.com	https://www.dubrovnikportal.com/novosti/innovativna-riesenja-za-odrizivost-jadranskog-mora/	2000
19.04.	goronija.com	https://goronija.com/2021/04/19/innovativna-riesenja-za-odrizivost-jadranskog-mora/	900
19.04.	noviradio.hr	https://www.noviradio.hr/konferencija-u-zadru-27-i-28-travnja-innovativna-riesenja-za-odrizivost-jadranskog-mora/	800
20.04.	turizam24.com	https://turizam24.com/najava-konferencije-u-travnju-innovativna-riesenja-za-odrizivost-jadranskog-mora-prijave-u-tijeku/	1200
20.04.	turizam24.com	jedst.unutar newslettera	7100
21.04.	kastela.org	http://www.kastela.org/novosti/tu/53811-innovativna-riesenja-za-odrizivost-jadranskog-mora	3000

RADIO	TRAJANJE	DOSEG
HR 1, Pomorska večer	4'5"	5500
Radio Sunce	4'	3500
Radio Brač	7'30"	3500

A wide campaign was set up for the promotion of the Conference by means of dedicate newsletter and project social media:

- Facebook: <https://www.facebook.com/SushiDropItalyCroatia>
- Instagram: <https://www.instagram.com/sushi.drop.project/>
- LinkedIn: <https://www.linkedin.com/showcase/sushi-drop/>
- Twitter: <https://twitter.com/sushidroproje1?lang=en>

At relevant regional radio station and web portals it was carried out direct advertising of the conference via radio jingles from 19 to 26 April, 2021 and web banners in the period from March 27 to April 26, 2021. Total banner reach per page was 593 481. 5 project videos were produced. Three of them show technical activities and interviews of scientist and stakeholders involved, and two videos show a two-day midterm conference. All the video produced are available on the SUSHIDROP youtube channel:

<https://www.youtube.com/channel/UC5E0Zi03omkWs4mo3B3G-CA/videos>

Translation service was available in English and Italian to allow a wider stakeholders participation and engagement.

The presentations of the SUSHI DROP SESSION

Bučan Martin, on behalf of the Split and Dalmatia County introduced the session of the Conference dedicated to the SUSHIDROP project. He welcomed the participants and the speakers. Some of them attended the meeting in presence while others were connected on-line.



Luca De Marchi and Massimiliano Menghini from the University of Bologna - Department of Electrical, Electronic and Information Engineering "Guglielmo Marconi" (Lead Partner of the project) showed in detail the SUSHIDROP DRONE main features. The UUV-based system will allow to monitor the environmental status and estimate fish abundance indices in Marine Areas characterized by rocky reefs and deep waters, in which the classical fish sampling procedures are ineffective or inapplicable. They also gave details on the phases of Drone development (Preliminary design, Functional Design, Prototype design and Final Design) and on the main subsystems and components to handle specific activities.

They gave details on the Navigation, Guidance and Control Subsystem (NGC), on the Scientific Payload meaning all the components designed for the geophysical, biological and bio-marine characterization of the Adriatic Sea and on the Ground Station System. The Ground Station Systems allows communication, supervision and guidance of the drone during the missions. It allows to monitor the mission phases and the health status of the drone. Via the ground station is possible to command the drone using two modes of guidance: Remotely operated (ROV Mode) and Autonomous operated (AUV Mode).

They also showed the roadmap of the surveys with the drone that will be conducted in selected study areas in Croatia and in Italy.





Giorgio Riccobene from the **National Institute for Nuclear Physics (INFN)** - Southern national laboratory (Catania) gave a presentation focused on the Cabled deep sea acoustic observatories and provided some examples and good practices which can provide unprecedented possibilities for marine science and technology. Acoustic data are relevant for MSFD/EU and Marine Spatial Planning.



Alan Ivan Blažeković, CEO of Primotronic, presented some solutions to monitor sea changes by means of marine robotics and sensors which can monitor many parameters and how the market is going to evolve in the next decades (long-term monitoring).



Josko Pedišić, fishermen and representative of Croatian Chamber of Trade and Crafts gave an interesting example of diversification since he is practising for a part of the year tourist trawling that has less impact on the resources (being just a “demonstration” for the tourist) and at the same time can guarantee an income for the fishermen. Also it produce an effect on the prolongation of tourism season and raise awareness on fishermen life and culture.



Further, the moderator introduced a video for the SUSHIDROP project produced by Ivana Miletić, Artist, Member of the International Federation of Photographic Art. The title of the video: “Portrait, life and energy of the Adriatic”

Video is available on the following youtube channel link:

<https://www.youtube.com/watch?v=1VUBNy2ylqk>

After a short break, presentations continued with the contribution of Aleksandar Joksimović, director, Institute of Marine Biology, Montenegro which presented the recently established (2020) Center for Adriatic Biodiversity Conservation “Aquarium Boka” as organisational unit of the Institute of Marine Biology, Kotor, Montenegro with two sub-units: marine aquarium and rescue.

The Center provides for the following services:

Research:

- Aquarium scientists advise seafood companies on methods to enhance the sustainability of commercial fisheries and trade.
- The Aquarium is hosting various research programmes on the Adriatic wild flora and fauna.

- The Aquarium collaborates with partners around the world to protect marine ecosystems and establish marine protected areas.

Education

- The Aquarium Boka showcases the diversity and importance of marine wildlife with particular focus on the Adriatic Sea.
- The Aquarium Boka tanks inspire visitors with the beauty and complexity of marine ecosystem through replication of various marine habitats.
- Aquarium educators lead a nationwide initiative on climate change and inspire future Adriatic Sea protectors with hands-on programs such as Boka Discoveries Camps, mainly summer camps for students in marine biology

Conservation

- Rescue Centre leads national and regional efforts to rehabilitate and release endangered species.
- Rescue Centre rescues endangered sea species
- Breeding and reintroduction programmes for species otherwise endangered or extinct in the wild

It is expected that services of the Center for Adriatic Biodiversity Conservation "Aquarium Boka" will enable achievement of the se goals:

- ☐ Building public awareness and action;
- ☐ Protecting aquatic species and habitats;
- ☐ Advocating for conservation solutions;
- ☐ Serving as role models; and
- ☐ Moving people to act on behalf of the marine species we seek to protect

Mosor Prvan, representative of **WWF Adria** and Marine Program manager shared some examples of good practices concerning Mediterranean marine protected area and the most relevant point to make MPAs show the reserve effect:

- Enforcement,
- Management Plan

- Fishermen on the management board and fishermen engagement actions
- Activities promoting sustainable Fishing



Igor Isajlović, from the Laboratory of Fisheries Science and Management of Pelagic and Demersal Resources, **Institute of Oceanography and Fisheries in Split** and partner of the SUSHIDROP project gave a presentation of the Protection mechanisms of biodiversity conservation implemented in „Jabučka kotlina“, one of the most valuable marine areas of the Adriatic sea.



Jakov DULČIĆ, professor at the **Institute of Oceanography and Fisheries** focused his speech on the invasive species in the Adriatic Sea underlining that the impact of successful colonizers on the native communities in the Adriatic Sea is unknown yet. However, the relatively fast pace of the invasions suggest that their effects may become relevant soon. He showed pictures and characteristics of non-Mediterranean fish species recorded so far in Adriatic Sea

At the end of the session Ivan Sekovski, , PhD in Marine and coastal management, from the **UNEP MAP PAP/RAC** gave information on the importance of seagrass in climate change mitigation and adaptation and shared objectives and results reached by the AdriAdapt project.



Conclusions

The Mid-term Conference of SUSHIDROP gave at first an overview of the first results of the SUSHIDROPO Project underlining the potential of marine robotics and underwater drone to monitor the biodiversity and collect relevant data in a non-invasive way to improve the

management measures in the Adriatic Sea. It has been also very useful to exchange views and best practises with Institutions in charge of MPAs management and with other scientific Institution from the Adriatic and Mediterranean area which are working on the preservation of the marine ecosystem. Further, it has been underlined the need to involve in the whole process the fishermen since the planning phase.

33 participants attended conference in live. Also, we had 326 registrations for conference online participation and over 500 individual users. Registration of the conference is available at the following link:

<https://www.youtube.com/watch?v=nBqCWbDwvB0&t=7172s>