

Five response centres in charge of pilot EPSs equipped with other equipment for all three phases of sea pollution risk management and response system

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Project Acronym	PEPSEA
Project ID Number	10047424
Project Title	Protecting the Enclosed Parts of the Sea in Adriatic from pollution
Priority Axis	2
Specific objective	2.2
Work Package Number	4
Work Package Title	Improving the equipment for efficient and timely response to a sudden sea pollution in EPSs
Activity Number	4.3.
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Partner in Charge	CFR
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Status	Final
Distribution	Public

LP ZADRA NOVA

Introduction

In order to ensure the functioning of the response system in different phases of sea pollution, it was necessary to procure the appropriate equipment for response centres in charge of pilot EPSs. As part of procurement for delivery D.4.3.2. IT-HR-PEPSEA 3, IT-HR-PEPSEA 4 and IT-HR-PEPSEA 5, equipment for all three phases of sea pollution was procured. The procurement addressed the equipment for sea pollution detection and early warning system (1), equipment for pollution confinement, cleaning and safe disposal (2), and equipment for remediation and seawater quality monitoring (3). As part of IT-HR-PEPSEA 3, Geolux d.o.o. was contracted to purchase monitoring equipment (cameras, sensors) and Luveti d.o.o. was contracted to procure equipment for oil spill remediation (dams, absorbents, hydraulic winch), electronic equipment (drone, navigation system) was procured under IT-HR-PEPSEA 4 from company Global Security, and Riz-Itea commerce d.o.o. procured marine equipment (bow thruster) as part of IT-HR-PEPSEA 5.

D.4.3.2. Five response centres in charge of pilot EPSs equipped with other equipment for all three phases of sea pollution risk management and response system.

Procurement of equipment within IT-HR-PEPSEA 3 was divided into 4 groups, of which 2 procedures were successfully implemented. Due to the lack of offers on the market, the procurement procedure was restarted and JS approved the procurement of equipment in the last six months.

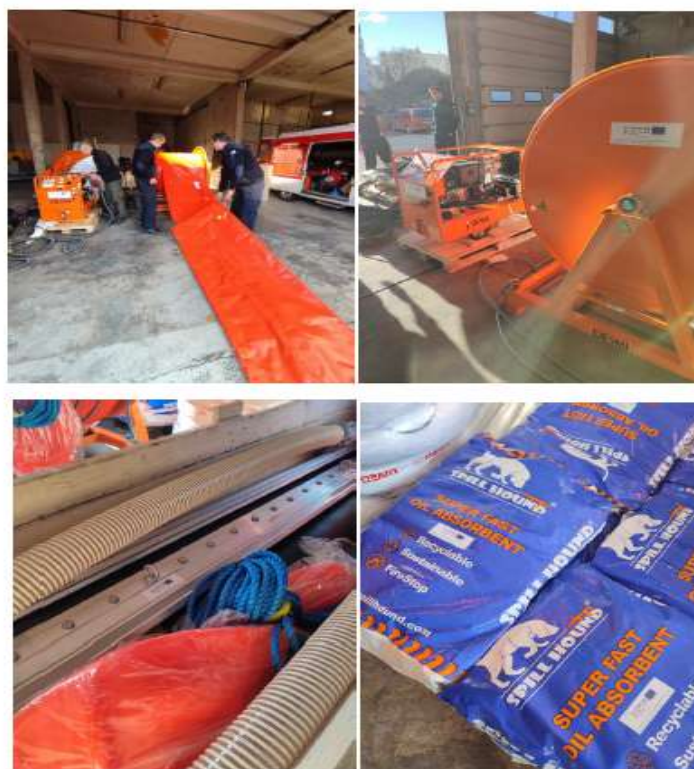
The Zadar County Development Agency conducted a simple procurement procedure and the company Geolux d.o.o. was selected as part of it. Supplier Geolux d.o.o., Ljudevita Gaja 62, 10430 Samobor, OIB: 52616021041, based on the Contract for Public Procurement of equipment in Case of Sudden Marine Pollution, Group 1 Monitoring equipment, registration number: IT-HR PEPSEA 3, concluded with the Client Zadar County Development Agency Zadar County ZADRA NOVA.

As part of IT-HR-PEPSEA 3, monitoring equipment was set up on two pilot locations – Sali and Zrmanja. The official handover of monitoring equipment took place on Decembar 14, 2021. On the same day, education of users by handling equipment in case of sudden sea pollution was held in Zadar County fire brigade (Put Murvice 24, 23000 Zadar). The training was attended by 9 members who received instructions for using appropriate equipment.



The Zadar County Development Agency conducted a simple procurement procedure and the company Luveti d.o.o. was selected as part of it. Supplier Luveti d.o.o., Lavoslava Ružičke 48, 10000 Zagreb, OIB: 32586594426, based on the Contract for Public Procurement of equipment in Case of Sudden Marine Pollution, Group 4 Oil spill remediation equipment, registration number: IT-HR-PEPSEA 3, concluded with the Client Zadar County Development Agency Zadar County ZADRA NOVA.

As part of IT-HR-PEPSEA 3, on December 14, 2021, the supplier Luveti d.o.o. delivered and put into operation Oil spill remediation equipment (dams, absorbents, hydraulic winch). Also, education of users by handling equipment in case of sudden sea pollution was held in Zadar County fire brigade. The training was attended by 13 members who received instructions for using appropriate equipment.



The Zadar County Development Agency conducted a simple procurement procedure and the company Global Security was selected as part of it.


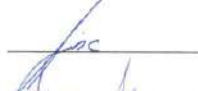

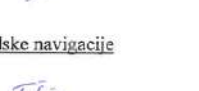
Supplier Global Security, Zrinsko-Frankopanska 38, 23000 Zadar, Croatia, OIB: 78959865841, based on the Contract for Public Procurement of equipment in Case of Sudden Marine Pollution, Group 2 Electronic equipment, registration number: IT-HR PEPSEA 4, concluded with the Client Zadar County Development Agency ZADRA NOVA.

The electronic equipment was unpacked and put into use upon receipt. The official handover of electronic equipment took place on March 7, 2022. During the delivery of electronic equipment, on March 7, 2022, training and education of employees of the Zadar Public Fire Brigade was held for the use and management of equipment that is the subject of procurement of equipment in case of sudden sea pollution. User training was conducted by authorized representatives or associates of Global Security, training for drone handling (DJI Matrix 300 drone with camera) was completed by 4 employees of JVP Zadar, while training for handling GARMIN marine navigation system was completed by two employees of JVP Zadar.




Djelatnici Javne vatrogasne postrojbe Zadar koji su pohađali edukaciju za rukovanje opremom:

DJI Matrice 300 dron s kamerom

- Ante Lončar 
- Vladislav Krpina 
- Marin Musulin 
- Ivan Perović 

GARMIN sustav brodske navigacije

- Tomislav Šoša 
- Domagoj Grbić 

The Zadar County Development Agency conducted a simple procurement procedure and the company Riz-Itea commerce d.o.o. was selected as part of it. Supplier Riz-Itea commerce d.o.o., Davorina Bazjanca 23, 23000 Zadar, OIB:81226962294, based on the Contract on simple procurement of marine equipment in Case of Sudden Marine Pollution, Group 3 Marine equipment, registration number: IT-HR PEPSEA 5, concluded with the Client Zadar County Development Agency Zadar County ZADRA NOVA. Marine equipment was unpacked and put into use on the same day, and the official handover took place on February 28, 2022.



Conclusions

Appropriate equipment has been installed at all pilot sites, thus increasing the level of protection of the sea and coast from pollution from ships, platforms and land-based sources of pollution. The equipment was assigned to the Zadar County Fire Brigade in permanent ownership. Thanks to this equipment, five response centres in charge of pilot EPSs will be able to react in the case of sudden marine pollution for all three phases of sea pollution.

PP3 - SPLIT DALMATIA COUNTY

Introduction

In order to ensure the functioning of the response system at different stages of marine pollution, it was necessary to procure appropriate equipment for the responsible centers in charge of the EPS pilot. As part of procurement for delivery D.4.3.2. IT-HR-PEPSEA, equipment for all three phases of marine pollution was procured. The procurement concerned marine pollution detection equipment and an early warning system (1), equipment to prevent the spread of pollution, remediation and removal and safe disposal of pollutants (2) and equipment for monitoring seawater (3). As part of IT-HR-PEPSEA, Group 1 - Smart Navigation Systems d.o.o. procurement of equipment for the detection of marine pollution and early warning of the system (sensor); Group 2 - Luveti d.o.o. Procurement of equipment for prevention of pollution spread, remediation and removal and safe disposal of pollutants (dams, absorbents, eco sets for ports, skimmers) and Group 3 - Securitas Hrvatska d.o.o. procurement of seawater monitoring equipment (drone and cameras).

D.4.3.2. Five response centres in charge of pilot EPSs equipped with other equipment for all three phases of sea pollution risk management and response system

Procurement of equipment within IT-HR-PEPSEA was divided into 3 groups, of which all groups were successfully implemented. The Split-Dalmatia County conducted an open public procurement procedure. Supplier Smart navigation systems d.o.o., Držićeva 1, 21210 Solin, OIB: 00534793529, based on the Contract for the procurement of equipment for the prevention of marine pollution - PEPSEA project, Group 1 Equipment for the detection of marine pollution and early warning systems, EMV As part of IT-HR-PEPSEA, Group 1, equipment for the detection of marine pollution and early warning of the system - sensor on the buoy "Pličina Purić" located at the pilot site - the Eastern part of Kaštela Bay. The official

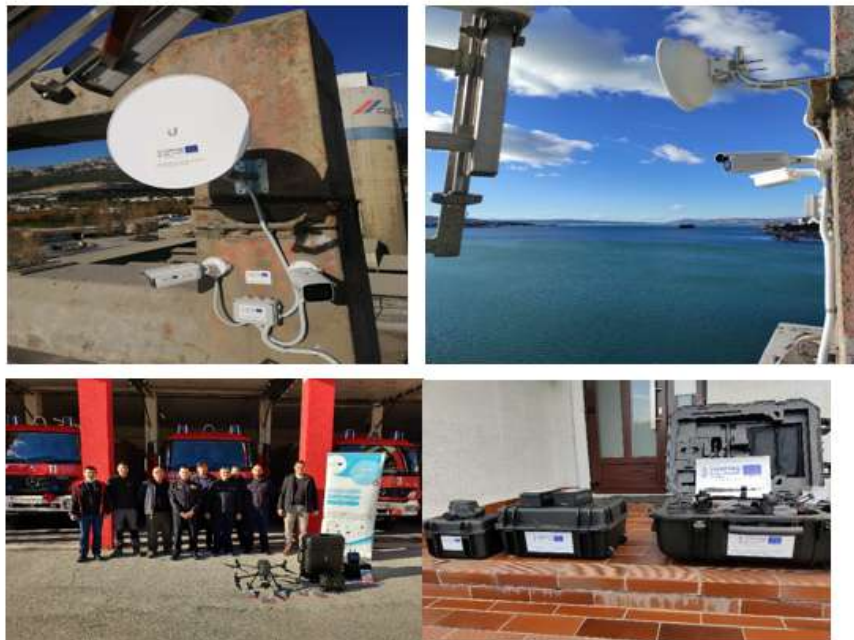
handover of equipment for the detection of marine pollution and early warning system took place on January 27, 2022. On February 9, 2022, training of users of equipment for handling marine pollution was held in the Fire Brigade of Split-Dalmatia County (Hercegovačka 18, 21000 Split). The training was attended by 6 members who received instructions for the use of appropriate equipment.



The County of Split-Dalmatia conducted an open public procurement procedure for Group 3, registration number: EMV 32/21, and the company Securitas Hrvatska d.o.o. was selected within it. Supplier Securitas Hrvatska d.o.o., Oreškovićeva 6N / 2, 10 010 Zagreb, Croatia, OIB: 33679708526, based on the Contract for the procurement of equipment for the prevention of marine pollution - PEPSEA Group 3 project - Seawater monitoring equipment, CLASS: UP / I 406-09 / 21-01 / 0016, REGISTRATION NUMBER: 2181 / 1-09 / 36-21-0035, concluded with the Client Split-Dalmatia County.

IP cameras were delivered and installed and put into use upon receipt. Drone was also delivered.

The official handover of the equipment took place on December 21, 2021. During the delivery of the equipment, on December 21, 2021, training and education of employees of the Split-Dalmatia County Fire Brigade was held for the use and management of equipment subject to seawater monitoring equipment. User training was conducted by authorized representatives or associates of Securitas Hrvatska d.o.o., training for drone handling (DJI Matrix 300 drone with camera) was completed by 4 employees of Split-Dalmatia County Fire Brigade and 1 employee of the Split-Dalmatia county.





AVITEH Audio Video Tehnologije d.o.o.
Bakijanova 41
10000 Zagreb
OIB: 7422838976

AVITEH Audio Video Tehnologije d.o.o.
Bakijanova 41, 10000 Zagreb, Hrvatska
info@avitech.hr • www.avitech.hr

Splitko-dalmatinska županija
Dobrosmirskog rata 2
21000 Split
OIB: 40781519402

POTVRDA O IZVRŠENOJ OBUCI

Potvrđujemo da su teorijski i praktični dio obuke za rukovanje bespilotnom letjelicom DJI Matrice 300 RTK sa Zenmuse H20 kamerom uspješno pohađali:

1. Zoran Radunčić
2. Ivan Sanader
3. Toni Baran
4. Nikola Bašić
5. Tomislav Vidak
6. _____
7. _____
8. _____

Obuka je održana u sklopu nabave NABAVA OPREME ZA SPRJEČAVANJE ONEČIŠĆENJA MORA – PROJEKT PEPSEA, evidencijski broj E-MV 32/21.

DATUM I MJESTO:
14. prosinca 2021., Split

Mario Jertec, Project Manager

AVITEH
Audio Video Tehnologije d.o.o.
I.A.O. I.P.S. - OIB: 7422838976

AVITEH Audio Video Tehnologije d.o.o., Dobrosmirski rat 2, 21000 Split, Hrvatska
Ivan Radunčić, OIB: 7422838976
Miroslav Jertec, OIB: 40781519402
Projekt je financiran iz Regionalnog operativnog programa "Sustavna potpora razvoju malih i srednjih poduzetničkih poduzeća" (POSUP) za razdoblje 2014.-2020. godine, prioritet 1.1.1. "Poboljšanje konkurentnosti malih i srednjih poduzetničkih poduzeća".

Conclusions

Appropriate equipment has been installed at the pilot site, which has increased the level of protection of the sea and coast from pollution from ships, platforms and land-based sources of pollution. The equipment was given to the Fire Brigade of the Split-Dalmatia County for use free of charge. Thanks to this equipment, the five response centers in charge of the EPS pilot will be able to respond in the event of sudden marine pollution for all three phases of marine pollution.

PP4- ŠIBENIK-KNIN COUNTY.

Procurement addressed equipment for all three phases of sea pollution risk management and response system.

Sea pollution detection and early warning system

Geolux d.o.o. has been selected as best bidder and contract has been signed.

List of equipment and supporting service that has been purchased:

2. Sensor for oil detection on the water surface and sensor for temperature monitoring LDI ROW StainlessSteel oil detector for harsh areas quantity: 2
3. Non-contact water level meter Geolux LX-80 Level Sensor quantity: 2
4. Non-contact surface water speed meter Geolux RSS-2-300W Surface Velocity Radar quantity: 2
5. Surveillance camera Geolux Hydro am quantity: 3
6. GSM Smart Observer Data logger with GSM communication Velux Smart Observer Data logger quantity: 4
7. Solar panel Velux Hydro Station PSP quantity: 3
8. Video system for monitoring vessel traffic and vessel counting module
9. Velux Marine Watcher system quantity: 1
10. Montana Velux modular carrier of Hydro Station quantity: 4
11. HTML 5 web aplikacija Geolux HydroView application
12. Pristup mobilnoj podatkovnoj mreži T-mobile SIM quantity: 4
13. računalna radna stanica Computer workstation

This equipment has been installed at 5 locations:

A. Skradinski most – Šibenik

1. Geolux modular carrier of HydroStation



2. Geolux LX-80 Level Sensor



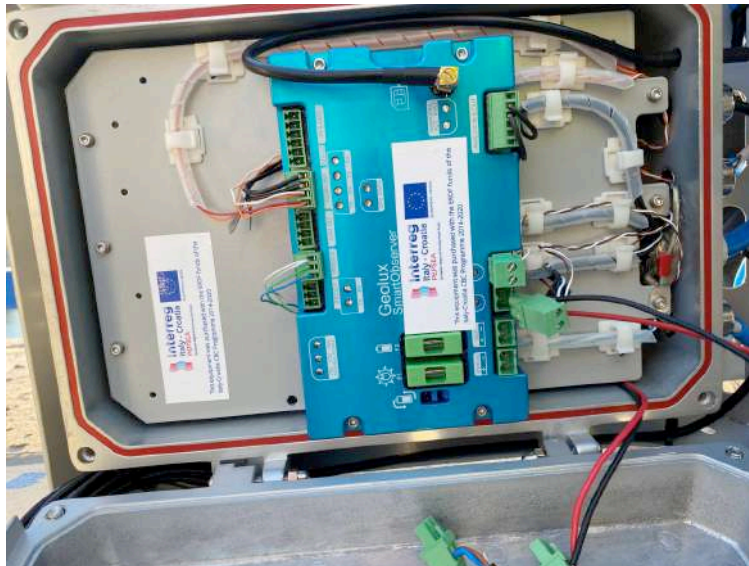
3. Geolux HydroCam



4. Hydro TempIR non contact temperature sensor



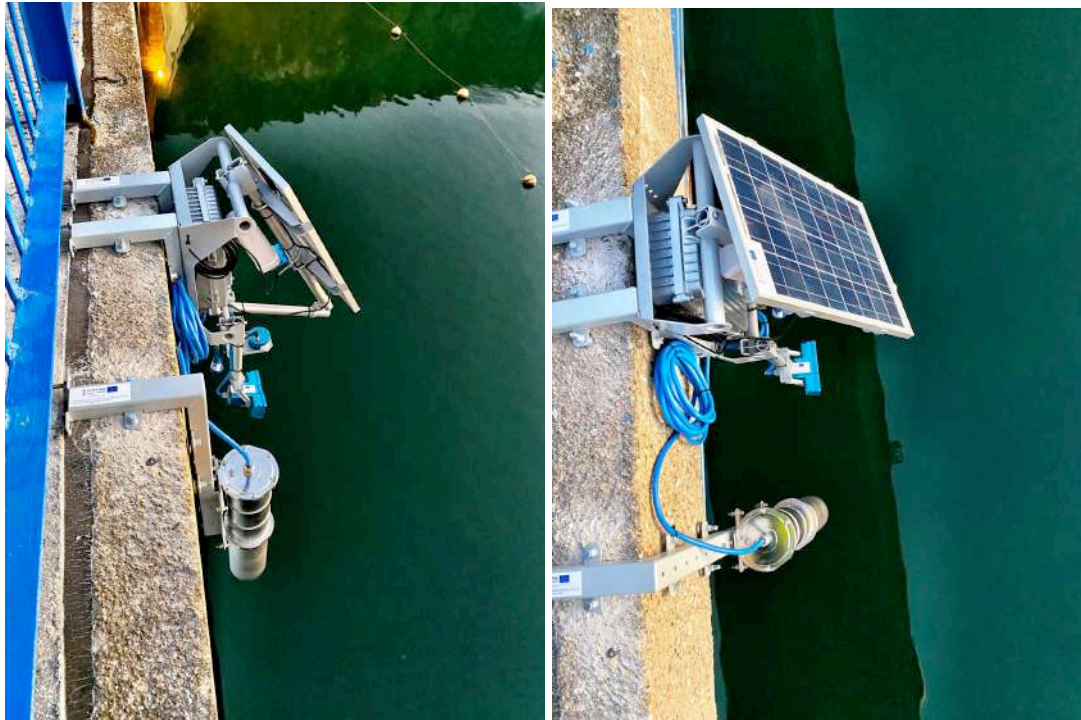
5. Geolux SmartObserver Datalogger and Geolux HydroStation PSP



6. HydroStation Case



7. Hydrostation – solar panel and LDI ROW StainlessSteel oil detector



B. Atlagića most – Knin

1. Geolux modular carrier of HydroStation



2. Geolux LX-80 Level Sensor



3. Geolux HydroCam



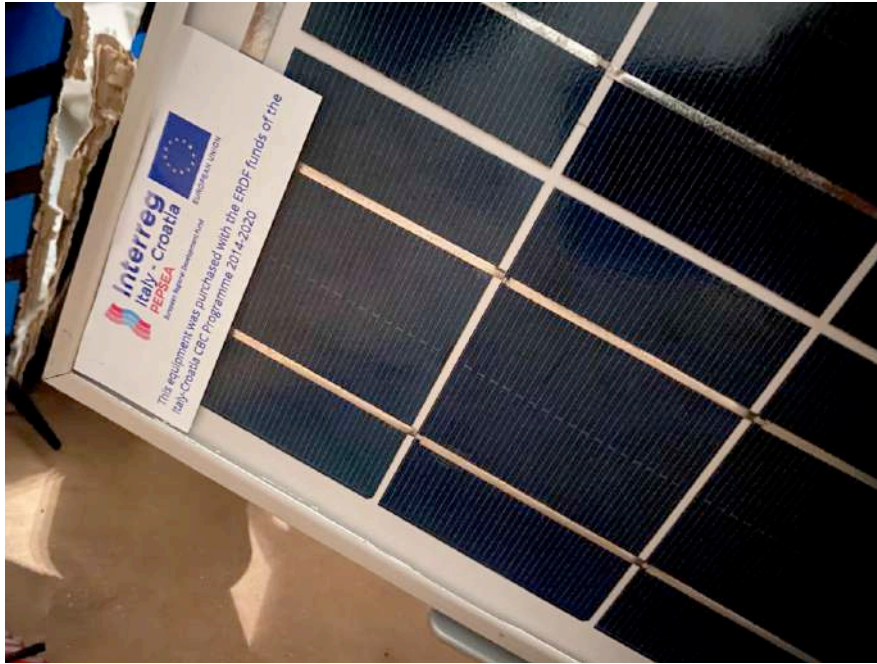
4. Geolux SmartObserver Datalogger and Geolux HydroStation PSP



5. HydroStation Case



6. Solar panel

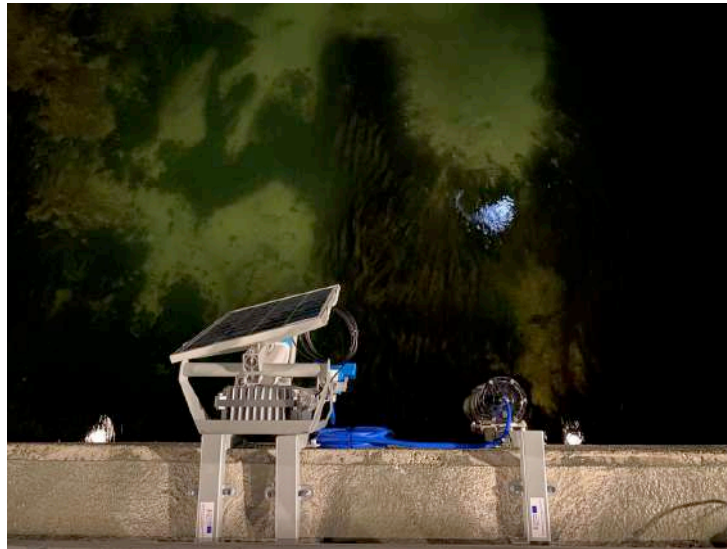


7. LDI ROW StainlessSteel oil detector



8. Overview – Hydrostation PSP, solar panel, LDI ROW Stainless Steel sensor for oil detection, HydroTemp non contact temperature sensor, RSS-2-300W Surface Velocity Radar





C. Uvala Minerska – Šibenik

1. Geolux modular carrier of HydroStation



2. Geolux LX-80 Level Sensor and two Geolux RSS-2-300W Surface Velocity Radar



3. Geolux HydroCam



4. Geolux SmartObserver Datalogger and Geolux HydroStation PSP



5. HydroStation Case



6. Solar panel



7. Overview of installed equipment



D. Svjetionik Jadrija – Šibenik

1. Electronics case with protection



2. HydroCam + PTZ camera



3. Geolux MarineWatcher system and Smart Observer Datalogger



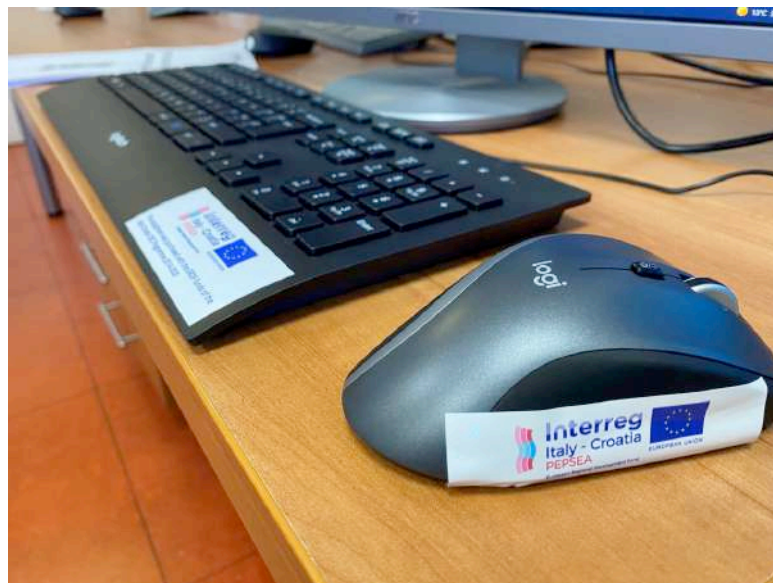
4. Overview - Pole, electronics case and camera



E. Response team premises (Center 112, handed over for use to the Šibenik-Knin County Fire Brigade)

1. Computer workstation





2. Geolux HydroView application

<http://www.hydro-view.com/#/pepsea-sibenik>



Through monitoring application and GIS system response team has access to data that is being gathered with sensors and monitoring equipment at four (4) locations.

Equipment for pollution confinement, cleaning and safe disposal

LUVETI d.o.o., Zagreb, Lavoslava Ružičke 48, OIB: 32586594426 has been selected as best bidder and contract has been signed. List of equipment that has been purchased:

1. Inflatable floating protective dam (handed over for use to the Šibenik-Knin County Fire Brigade)

Desmi Troilboom AFPU 900 with a set for tow and storage bags

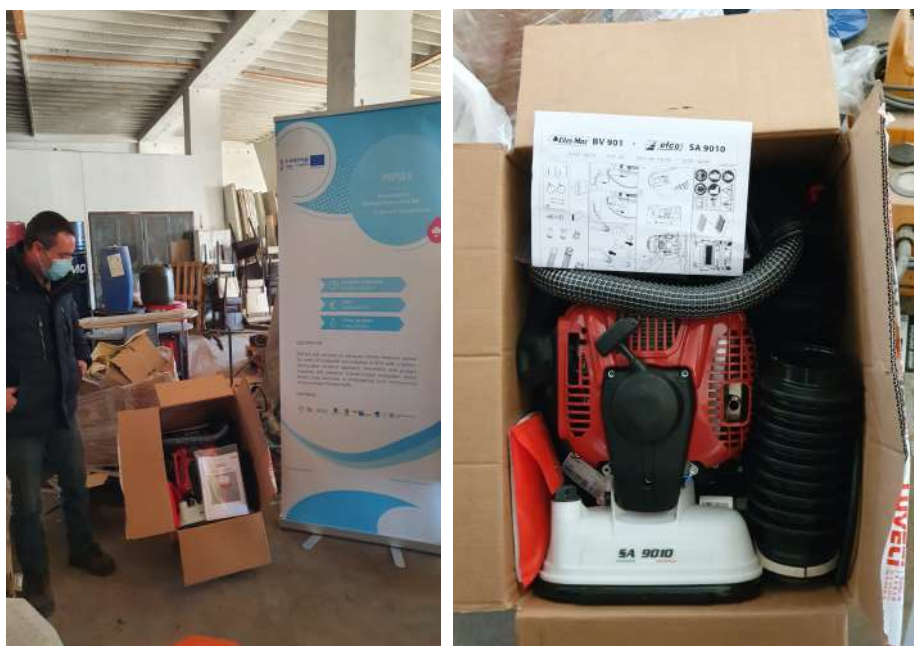
quantity: 200 meters



2. Air blower (handed over for use to the Šibenik-Knin County Fire Brigade)

Desmi air blower

quantity: 1 set



3. Device for collecting oil contaminants - Number 1 (handed over for use to the Port Authority of Šibenik-Knin County)

DESMI DBD13-4 Skimer with 7.5 kW power unit

DESMI LOBE pump for oil transfer with pipe set

quantity: 1 set



4. Oil and contaminant tank (handed over for use to the Port Authority of Šibenik-Knin County and Šibenik-Knin County Fire Brigade)

DESMI TROILTANK 1000

quantity: 2 sets

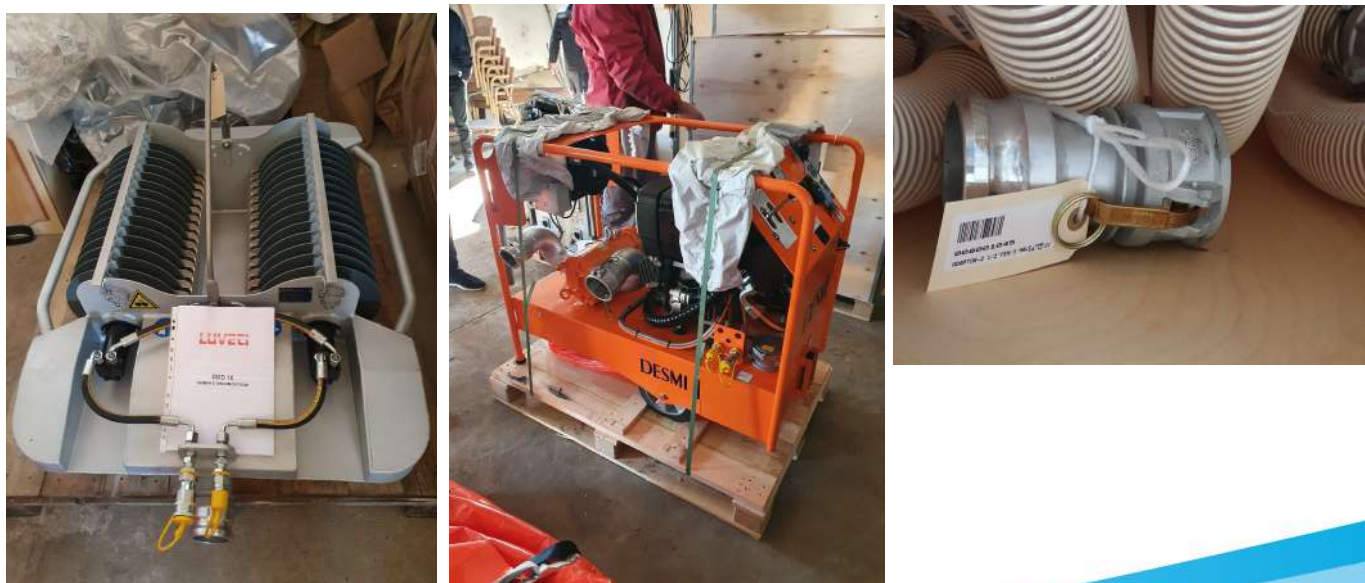


5. Device for collecting oil contaminants - Number 2 (handed over for use to the Šibenik-Knin County Fire Brigade)

DESMI DBD 16/D Skimer with 7.5 kW power unit

DESMI LOBE pump for oil transfer with pipe set

quantity: 1 set



6. Absorbent dam (handed over for use to the Šibenik-Knin County Fire Brigade)

Absorbent dam 21-1010 FyterTech Nonwovens Limited

quantity: 100 pieces



7. Absorbent cloth (handed over for use to the Šibenik-Knin County Fire Brigade)

Absorbent cloth 77-7000 FyterTech Nonwovens Limited

quantity: 400 pieces



8. Absorbent cloth (handed over for use to the Šibenik-Knin County Fire Brigade)

Absorbent cloth 76-7002A FyterTech Nonwovens Limited

quantity: 2 pieces



9. Absorbent of plant fibers (handed over for use to the Šibenik-Knin County Fire Brigade)

Spill Hound absorbent of plant fibers

quantity: 50 kilogra

2. Equipment for remediation and seawater quality monitoring.

A. SERVIS KOŠIĆ d.o.o., Bjelovarska cesta 7, 48260 Križevci, OIB: 49900173834 has been selected as best bidder and contract has been signed. Miniwashers with power units have been delivered.

List of equipment that has been purchased:

- high-pressure washers with included power generators

Karcher HDS 7/16 – 4C Classic with power generator Karcher PGG 8/3

quantity: 4 sets

Three (3) sets have been handed over for use to the Šibenik-Knin County Fire Brigade and one (1) set has been handed over for use to the Port Authority of Šibenik-Knin County.



B. **PEVEX d.d.**, Savska cesta 84, 10360 Sesvete, OIB: 73660371074 has been selected after extensive market research and order form has been sent. Protective clothing and other material has been delivered and handed over for use to the Šibenik-Knin County Fire Brigade.

List of equipment that has been purchased:

1. Protective equipment mask FFP2 with valve,
quantity: 50 pieces



2. Protective equipment polyester gloves with coating, size 10,
quantity: 50 pairs



3. Protective clothing disposable coveralls, size XXL,
quantity: 50 sets



4. Protective equipment safety glasses Monolux,
quantity: 50 pairs



5. Protective gloves with coating against chemicals, Sofrat long,
quantity: 50 pairs



6. Bags for disposal with laces, reinforced, 120L, 10/1
quantity: 50 packages



Conclusions

Šibenik-Knin County purchased equipment for all three phases of sea pollution risk management and response system from four (4) different suppliers.

Needed equipment has been handed over for use to the Šibenik-Knin County Fire Brigade and Port Authority of Šibenik-Knin County.

Contribution to the deliverable **D.4.3.2. Five response centres in charge of pilot EPSs equipped with other equipment for all three phases of sea pollution risk management and response system** has been fully achieved for Šibenik-Knin County.

PP6 PO DELTA VENETO REGIONAL PARK

Introduction

In order to ensure the functioning of the response system in different phases of sea pollution, it was necessary to procure the appropriate equipment for response centres in charge of pilot EPSs. As part of procurement for delivery D.4.3.2, equipment for all three phases of sea pollution was procured. In order to ensure the functioning of the response system in different phases of sea pollution, the Park Authority purchased n. 2 multiparametric automatic detection stations and n. 3 sensors to be integrated with the existing monitoring system of the lagoon water as well as of n. 1 unmanned remotely operated drone (with service boat). In addition, radio devices (numbers 12 hand portables) and a supply of floating barriers was purchased.

D.4.3.2. Five response centres in charge of pilot EPSs equipped with other equipment for all three phases of sea pollution risk management and response system

In order to ensure the functioning of the response system in different phases of sea pollution, it was necessary to procure the appropriate equipment for response centres in charge of pilot EPSs. As part of procurement for delivery D.4.3.2, equipment for all three phases of sea pollution was procured.

The procurement addressed the equipment for sea pollution detection and early warning system (1), equipment for pollution confinement, cleaning and safe disposal (2), and equipment for remediation and seawater quality monitoring (3).

During the IT-HR PEPSEA 4 (period 01/07/2020 - 31/12/2020) for "procurement of the equipment for response center" of Po Delta, the first tender procedure was awarded on 27 November 2020 to ORION SRL. The purchase of "n. 2 (two) multiparametric automatic detection stations (equipped with YSI EXO3 multiparameter probes, complete with all cables, fittings, protection systems, support structures and steel fixing) and n. 3 sensors" to be installed in the EPS areas of the Po Delta, was entrusted to ORION srl

of Veggiano (Padova) (a company specialized in "water monitoring" through the latest generation of technological tools). Tender procedure carried out pursuant to art. 36 paragraph 2) letter b) of the Italian Procurement Code D. Lgs. N. 50/2016.

This equipment procurement was necessary because the data gathered and analyzed in activity 3.4 clearly showed that the equipment for monitoring EPS was largely insufficient and were to be improved. In particular a multiannual (2019-2019) set of data on salinity and oxygen were considered, but data were not available for all the pilot areas Po Delta and neither available for monitoring on request of specific areas. The equipment provide both continuous monitoring data and also local "on request" data such as in case of accident. In case of accident continuous data are extremely useful in order to have an ex-ante situation to compare and evaluate damages from accident.

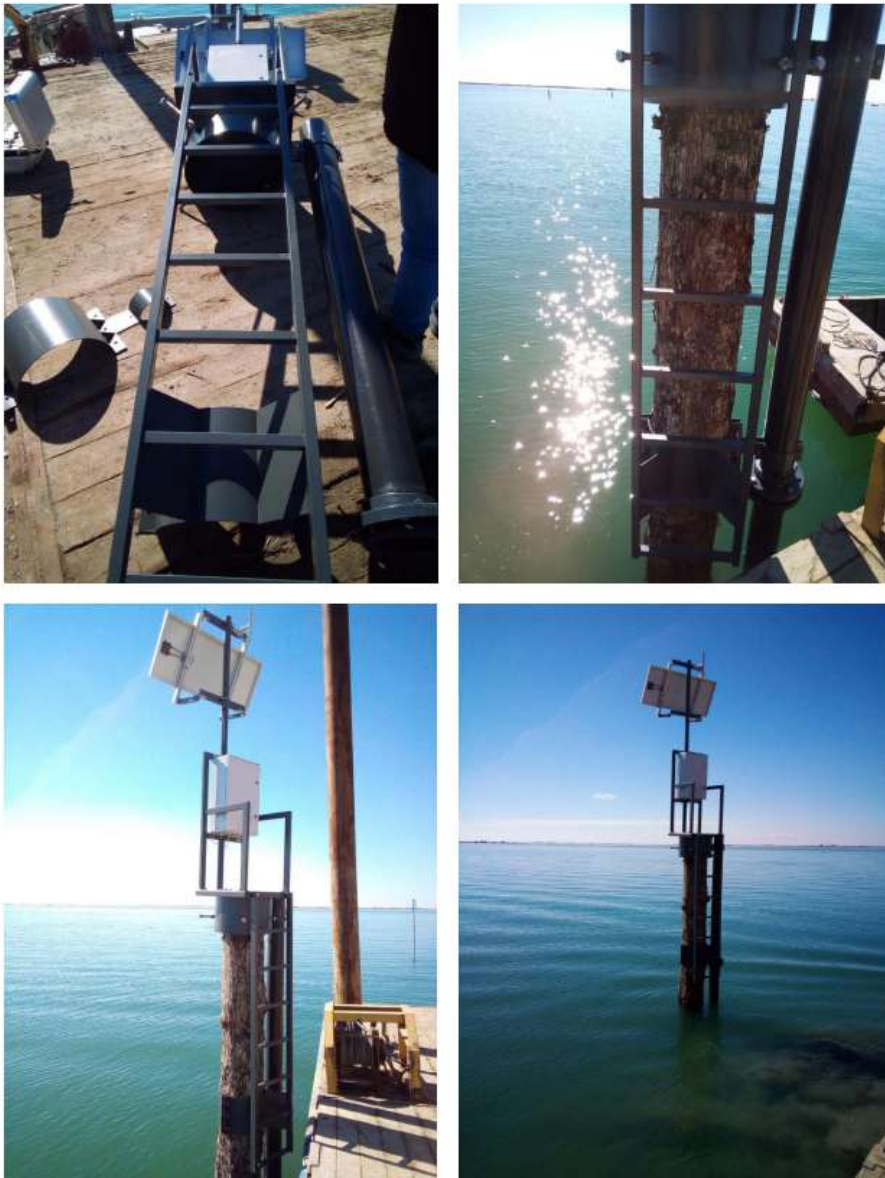
The data collected are: level, temperature, pH, conductivity and dissolved oxygen. Especially, the YSI EXO3 multi-parametric probes have been developed to transmit the acquired data strings at specific frequency (by sending data with SIM) through a Datalogger system (ZENO), designed entirely by ORION.

The 2 multiparametric automatic detection stations are placed in the lagoons of Scardovari and Caleri and the 3 sensors are placed in the existing monitoring stations of Marinetta, Canarin and Basson.

On 29 March 2021, the equipment was supplied and installed.

3. SCARDOVARI SITE

At the Scardovari site, a stainless steel structure was installed on 17/03/2021 and installed on the existing briccola as required by the specifications.



4. CALERI SITE

On 24/03/2021, a stainless steel structure was installed at the Caleri site and an existing structure was inst



A copy of the contract signed in Mepa, on 11 January 2021, with the supplier ORION are shown below.

During the IT-HR PEPSEA 4 (period 01/07/2020 - 31/12/2020) and IT-HR PEPSEA 5 (01/01/2021 – 30/06/2021), for “procurement of the equipment for response center” of Po Delta, the second tender procedure was awarded on 23 March 2022 to ORION SRL.

The tender procedure for the supply of "a remotely controlled unmanned floating drone, for environmental monitoring and sampling of water" in the EPS areas of the Po Delta, was finished in March 2021. The supply was entrusted to ORION srl di Veggiano, (Decreto del Presidente n. 46 del 23/03/2021, a company specialized in "water monitoring" through the latest generation of technological tools). Tender procedure carried out pursuant to art. 36 paragraph 2) letter b) of the Italian Procurement Code D. Lgs. N. 50/2016.

This equipment procurement was necessary because the data gathered and analyzed in activity 3.4 clearly showed that the equipment for monitoring EPS was largely insufficient and were to be improved. In particular a multiannual (2019-2019) set of data on salinity and oxygen were considered, but data were not available for all the pilot areas Po Delta and neither available for monitoring on request of specific areas. The floating drone provide data local “on request” data such as in case of accident or pollution events.

In case of accident local data are extremely useful in order to have a current and updated situation to compare and evaluate damages from accident. On request data will be produced by the unmanned floating drone used safely on the specific part of EPS such as in case of an oil (or polluting oils) spill.

To improve the use of the drone also in open sea areas, a boat was purchased to serve the drone. The boat will also be used for the necessary interventions of drafting the oil absorbing barriers.

The unmanned drone is enable the Park to operate in the shallow water, even in case of floating vegetation, and to collect samples and data with good spacial resolution and at close frequency, in order to achive a more accurate knowledge of the evolution of key quality parameters of the surrounding water.

The procurement contract includes the following:

- 1) supply of n. 1 unmanned remotely piloted drone, to operate environmental monitoring and water sampling.
- 2) hardware e software tools for the drone remote control, system management, data collection and data processing.
- 3) practical/theoretical training event on use and management of the system, on correct positioning, operation, programming and maintenance of the drone and the relevant equipment.
- 4) two measurement campaigns of one-day each at a venue to be agreed.
- 5) technical assistance, preventive and corrective maintenance up to June 30th 2022
- 6) Service boat: Fiberglass boat with flat hull or weakly pronounced V, self draining, CE approved project category "C".

On 29 November 2021, Orion delivered the boat (in service to the floating drone).

The delivery of the drone was postponed due to the climatic conditions that made it impossible to test in water (documento di trasporto ricevuto il 29/11/2021)

On 17/18 May 2022, the drone has been delivered, with practical/theoretical training event on use and management of the system, on correct positioning, operation, programming and maintenance of the drone and the relevant equipment.

On the same days, practical/theoretical training of users by handling equipment in case of sudden sea pollution was held in locality Vallona di Porto Viro to ARPAV and Po Delta technicians. The training was attended by 2 members who received instructions for using appropriately equipment







During the IT-HR PEPSEA 6 (period 01/01/2022 - 30/06/2022), for “procurement of the equipment for response center” of Po Delta, the third tender procedure was awarded on 02 May 2022 to G.E.G. srl di Cene (BG), for a supply of 12 “Tetra Sepura SC2124 radio apparatus”.

The contract includes: the supply of 12 “Tetra Sepura SC2124 radio apparatus”, for the for activities of monitoring, confinement of polluting accidents and remediation in the waters of the EPS of the Po Delta.

The radio equipment will be delivered (13/16 June 2022) and made available to the Local Civil Protection Groups, trained to intervene in the event of accidents at sea. The training and education of the Civil Protection Groups, appointed by the Local Administrations to intervene in the event of a marine accident, took place in February and March 2022 (action WP5).



SC21 SERIES HAND-PORTABLES



DIMENSIONS

Height: 122.5mm (excluding antenna and rotary)
Width: 60mm (54mm)
Depth – standard battery: 27mm
Depth – high-capacity battery: 31.5mm

WEIGHT

With standard battery: 194g (excluding antenna)
With high-capacity battery: 220g (excluding antenna)

TETRA FREQUENCY BANDS

380-430MHz – SC2120
403-470MHz – SC2124
806-870MHz – SC2128

POWER SUPPLY

7.4V (nominal) lithium polymer battery packs
Intelligent reporting batteries
1160mAh standard battery¹
1880mAh high-capacity battery¹

TETRA RF PERFORMANCE-

RF power

380-430MHz – SC2120
• MS power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹
• MSPD power Class 3 (2.7W)¹, Class 3L (1.8W) & Class 4 (1W)¹
• DMO repeater power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹

403-470MHz – SC2124

• MS power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹
• MSPD power Class 3 (2.7W)¹, Class 3L (1.8W) & Class 4 (1W)¹
• DMO repeater power Class 3 (2.7W)¹, Class 3L (1.8W), & Class 4 (1W)¹

806-870MHz – SC2128

• MS power Class 3 (2.5W)¹, Class 3L (1.8W), & Class 4 (1W)¹
• MSPD power Class 3 (2.5W)¹, Class 3L (1.8W) & Class 4 (1W)¹
• DMO repeater power Class 3 (2.5W)¹, Class 3L (1.8W), & Class 4 (1W)¹

RF power customisable for:

- TMO/DMO/DM-repeater
- Adaptive power control
- Receiver class A & B

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Going further in critical communications

Sepura's policy is to continually improve its products and services. The features and facilities described in this document were correct at publication, but are subject to change without notice.

380-430MHz – SC2120

- Receiver static sensitivity -116dBm
- Receiver dynamic sensitivity -107dBm

403-470MHz – SC2124

- Receiver static sensitivity -116dBm
- Receiver dynamic sensitivity -107dBm

806-870MHz – SC2128

- Receiver static sensitivity -114dBm
- Receiver dynamic sensitivity -105dBm

AUDIO PERFORMANCE

Speaker audio power: 1W
Rugged accessory connector (sRAC)²
Water-porting technology continually clears water from mic/earpiece & speaker to allow use in constant rain

ENVIRONMENTAL PERFORMANCE

Operational temperature (conformance tested) -20°C to +60°C
Operational temperature (min./max.) -30°C to +65°C³
Storage temperature -40°C to +85°C⁴

Dust & water protection to IP65 and IP67:

- IP6x (dustproof)
- IPx7 (waterproof - submersible, 1m depth for 30 mins)
- IPx5 (waterproof - heavy rain/spray/jets)
- ⁵Fit for purpose⁵; tested for full 8-hour shift in heavy rain

Shock, drop & vibration: ETS 300 019 S M3

Salt fog: MIL810E 509.4(I); duration 24hr salt⁶

RFID PERFORMANCE

Internal tag: HITAG S2048, short range, 125 KHz, ISO11784 & ISO11785 compliant
User accessible storage: 2048 bits, passive technology pre-programmed (user editable):

- 32-bit unique identifier
- Serial number
- Hardware code
- TEI

PRODUCT OPTIONS

GPS & BeiDou2 support

Bluetooth

Wi-Fi

Man-Down alarm⁷

DM-Repeater Type-1A

Air Interface encryption

End-to-end encryption

Enhanced security module (ESM)

End-to-end encryption smart card support

Wide range of languages supported

User-changeable coloured keymat bezel for easy identification

DISPLAY & USER INTERFACE

Screen:

- 37 x 49mm active LCD area
- High-resolution display QVGA (320 x 240 pixels)
- Sunlight-visible Transflective TFT display, 262K colours

Menu:

- Intuitively-enhanced user interface
- 'Favourite feature' shortcut & event notification bar, with missed call indicator LED
- Choice of three user interface presentation styles (compatibility, grid & list modes)
- Customisable top-level screen content
- Customisable SmartMenus supporting 100s of intuitively arranged soft keys
- Quick change menu for rapid & intuitive selection of talkgroups, status & user profile
- Custom zoom/normal, large & very large mode text
- Night mode to reduce low-light glare in vehicles

- Invert display for easy viewing whilst lapel- or belt-mounted
- Customisable privacy screen image
- Customisable user profiles e.g. 'cover', 'quiet', 'in a meeting' & 'loud'

Controls:

- Dual-language alpha-numeric keypad option
- Four-way navigation keys
- Three context keys for intuitive menu interaction
- Three configurable feature-activation side keys: blind-find & glove-friendly
- 12 configurable keypad feature activation keys
- Manual & automatic keypad lock
- Hard-capped keys
- Large, easy reach, blind find, glove-friendly PTT
- Blind-find emergency key
- Single rotary

Haptics:

- Vibrate on call/message
- Haptic technology for enhanced key tactility when used with gloves

TALKGROUP MANAGEMENT

- 9900 talkgroups including TMO & DMO
- 50 DGNA
- 5000 folders
- Five multi-level structure
- Quick groups/quick folder
- Home group
- Group toggle
- Talkgroup stack toggle
- Talkgroup selection:
 - Single or user-defined scan list (UDSL)
 - 20 UDSL each with 10 talkgroups
- Folder selection:
 - 4987 folder scan list of 22 scanned talkgroups each
 - Each folder scan list with 75 talkgroups
 - 10 editable folder scan lists
 - Background talkgroups in folder scan list

NETWORK

Multiple home networks

Up to 30 configurable networks

Simple & mutual authentication

Aliasing with Radio User Assignment (RUA)

• Radio user-initiated log-on/log-off process

• Dispatcher-initiated log-on/log-off process

Preferred location area

Fixed location area

PHONEBOOK

2000 contact names

Up to six numbers per contact (to a max. of 6000 stored numbers)

64 contact folders including favourite folder

VOICE SERVICES

Individual/group/broadcast call

Half-duplex (individual & group)

Route pre-emptive half-duplex call to internal loudspeaker

Half-duplex audio toggle

Full-duplex calls (to MS & PABX/PSTN)

Full-duplex auto-answer

Independent volume control

Speed, one-touch & direct dialling

Call priority

Calling/talking party identification

DTMF/MSISDN/abbreviated dialling

Ambience listening

Privacy & whisper modes

Group focus

Transmit inhibit with on/off status messaging

Call history

Multiple alert tones

DMO SERVICES

DMO individual & group call
DMO emergency & intelligent emergency call
DM-repeater inter-working call
DM-gateway inter-working call
Channel-only talkgroup
DM-gateway talkgroup pair

SECOND DATA-BEARER CAPABILITY

Wi-Fi
• IEEE standard: 802.11b, 802.11g & 802.11n
• Frequencies: 2.4GHz band
• Authentication & encryption: WPA2-PSK, WPA2-Enterprise authentication (radius) with AES encryption

DATA SERVICES & APPLICATIONS

Dual-data-bearer support: TETRA & broadband Wi-Fi
Single- & multi-slot packet data

WAP support:

- WAP 2.0
- WAP browsing via TETRA
- WAP shortcuts embedded in SDS for faster data access
- WAP access OTA via TETRA or second data-bearer

Bluetooth module:

- Bluetooth v2.1+EDR
- Bluetooth v4.x

Bluetooth audio:

- Headset profile (HSP)
 - PTT extension to HSP support
- Bluetooth data services:
- Serial Port Profile (SPP) for data connectivity with body-worn printers/scanners
 - Dial-up networking (DUN)
 - Discovery mode
 - Generic attributes profile (GATT)
- Hardware-ready for the following Bluetooth capabilities:
- Object push profile
 - Heart device (heart rate & temperature)
 - Battery service profile
 - Devices identity profile
 - Hands-free
 - MAP
 - HID
 - HoG

Bluetooth trusted device, auto re-connect

- PEI access
- USB 2.0 support:
 - Host support for interaction with body-worn accessories such as printers & scanners
 - Slave support allows use of SC21 as a modem
 - PEI access
 - High-speed programming

Enhanced Short Data Applications (eSDAs):

- Supports all existing SC20 & STP SDA capabilities⁷
- Supports data accessories such as body-worn printers & scanners via Bluetooth or USB
- Supports online database access & interaction with returned data

Messaging:

- SDS messaging (in TMO & DMO)
- Picture Messaging via SDS or packet data
- Concatenated SDS messaging
- Auto-capitalisation in SDS text entry
- Status messaging (in TMO & DMO)
- 350 predefined status messages (up to 140 Unicode characters)
- Up to 30 quick status messages

Callout & paging:

- TETRA simple callout
- Full callout
- Paging alert

AT commands:

- ETSI & enhanced commands
 - Via PEI serial port profile over Bluetooth & USB
 - Voice call control supported
- Over the air control & programming:
- Status-triggered functions
 - Group management via Sepura Public Profile (SPP)
 - Battery status at start-up
 - Missed event application



Going further in critical communications

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Major radio status change notification application

SAFETY FEATURES & APPLICATIONS

Emergency call

- Pre-emptive priority
- Hands-free live mic operation
- Emergency voice call & alerting to current or defined talkgroup
- Emergency status/SDS/location report to defined control user/group
- Full-duplex or half-duplex emergency calls
- Manual activation via red emergency key
- Automatic activation via Man-Down⁶ option
- Automatic TMO/DMO selection
- Emergency through DM-repeater/DM-gateway
- Loud, distinct audio & visual indication
- Silent alarm call

Man-Down⁶:

- Immobility detection
 - Unusual inclination detection
 - Customisable alerting (see Emergency call capability)
 - Lone-Worker feature
 - Blind-find emergency button
- Wake-on-Alarm allows user to switch on radio & signal an emergency in one action

LOCATION-BASED SERVICES

GPS integrated option -194dBw (-164dBm) tracking sensitivity

- Over-The-Air GPS reporting
- ETSI location standard reporting (LIP)
- NMEA & Sepura compact messaging
- Max. simultaneous satellite track = 24

Integral antenna plus active external antenna input option for use in sky-obscured vehicles

GPS-based compass

Enhanced start-up & acquire through 'predictive ephemeris'

Bluetooth location-system compliant

RFID tag equipped

BeiDou2 support

SECURITY SERVICES

TETRA

- Authentication
- Class 1, 2, 3 & 3G TETRA security
- Air Interface encryption TEA1/2/3/4¹
- Smart card E2E encryption²
- Embedded E2E encryption³
- Enhanced security module (ESM)
- In-country E2E encryption algorithm⁴
- Multiple E2E algorithm⁵
- Temporary disable (stun)
- Permanent disable (kill)
- 600KEK crypto groups

Wi-Fi

- WPA2-PSK, WPA2-Enterprise authentication (radius) with AES encryption

DM-REPEATER SERVICES (LICENCE REQUIRED)

DMO voice repeated
Status & SDS repeated
Group status & SDS repeated
Type 1A efficient operation over one RF channel
Presence signal support
Emergency call
Monitoring & participation in calls

CONNECTIVITY

TETRA voice & data
Bluetooth support for voice & data
USB support for data
PEI data via USB or Bluetooth
Wi-Fi support
Accessory connections via rugged accessory connector (sRAC)⁷
Audio & data connection via bottom connector (sDAC)
Passive 125KHz RFID tag
sRAC - rugged side connector⁸
• Rapid tool-less fitting & removal

- Unique anti-overtighten design
- Salt-resistant seal
- sDAC - bottom connector
- Rapid tool-less quarter-turn twist-lock fitting & removal
- Connector Protector salt protection⁵

PROGRAMMING CAPABILITY

High-speed programming via USB slave cable
Six-way USB gang programming supported in 6+6 programmer/charger
Background over the air⁹ programming via Wi-Fi
Radio Manager2 compatible
On-screen programming progress bar

COMPATIBLE SC20/STP ACCESSORIES

Chargers

- SC20 personal rapid charger
- SC20 vehicle rapid charger
- 1+1 desktop charger⁹
- 6+6 desktop charger/programmer⁹
- 12- & 24-way battery-only chargers
- Two-way, battery-only, DC charger for vehicles
- STP RAC-mount accessory compatibility
- All overt range
- All covert range
- All semi-covert range
- All public order range

Batteries:

- Standard capacity battery¹
- High-capacity battery¹

Data leads:

- USB host adapter for wired body-worn accessories
- USB slave data lead for programming & control of SC21/SC20 from a third-party device

Car Kits:

- SC2/STP basic car kit (metal) plus insert

SC21-ONLY ACCESSORIES

- Carrying accessories:
- Stud, belt & shirt pocket attachments
 - Nylon holster
 - Lightweight leather case
- Car kits:
- SC21 modular car kit
- Antennas:
- Overt range
 - Covert range

- 1 - New standard & high-capacity batteries, along with the high power Class 3 feature licence, are required to operate the SC21 in high power RF Class 3 mode. Use of older STP standard & high-capacity batteries will limit SC21 operation to RF Class 3L.
- 2 - Compatible with Sepura STP9000 & STP8000 RAC-based accessories, as well as SC20 sRAC-based accessories
- 3 - Operating at temperature extremes may limit some aspects of operational performance
- 4 - As defined in ETSI EN300 019-2-1 & EN300 019-2-2
- 5 - Connector Protector must be enabled in customisation. An antenna, a battery & a Sepura accessory or sRAC cover must be fitted. Rinse in fresh water to prevent salt crystal build-up
- 6 - The Man-Down alarm should in no way be regarded as a substitute for compliance with appropriate risk assessment & other safety procedures & practices. To enable Man-Down a software licence is required
- 7 - sDAs created for an STP must be reformatted for use with an SC20 or SC21
- 8 - Availability is subject to export licence
- 9 - SC20/STP 1+1 chargers (300-01930) are compatible with SC21, SC20 and STP series. SC20/STP 6+6 charger/programmers (300-00846) are compatible with SC21, SC20 and STP series for charging and SC21/SC20 for charging and programming.



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For more information visit sepura.com

During the IT-HR PEPSEA 6 (period 01/01/2022 - 30/06/2022) , for “procurement of the equipment for response center” of Po Delta, the fourth tender procedure was awarded on 12 May 2022 to CSA DISTRIBUZIONE SRL di San Zeno Naviglio (Bs), for a supply of Oil-absorbing barriers.

The contract includes: the supply of 29 packs of oil- absorbing barriers, for the confinement of polluting accidents and remediation in the waters of the EPS of the Po Delta.

Features of barriers:

White color, dimension "diameter 20 x 300 cm";

average absorption capacity not less than 269lt;

type of packaging: PE bag;

segment length 300cm;

barrier material: polypropylene

connection type: ring carabiner.

The packs of oil absorbing barriers are packed and made available to the Local Civil Protection Groups, trained to intervene in the event of accidents at sea. The official handover of the barriers took place on May 16, 2022. The training and education of the Civil Protection Groups, appointed by the Local Administrations to intervene in the event of a marine accident, took place in February and March (action WP5). On 16 May 2022, the equipment was supplied in the Porto Tolle Civil Protection warehouse, the closest to the Po Delta pilot areas

SCHEDA PRODOTTO: CSA-BO-20-300B

DATI TECNICI


Tipologia	Barriera oleoassorbente litorepellente
Colore	Bianco
Dimensioni prodotto	Ø 20 x 300 CM
Tipologia imballaggio	Sacchetto PE
Pezzi confezione	4
Capacità media assorbimento confezione	269 lt.
Tipologia imballaggio	Sacchetto PE
Lunghezza segmento	300 cm
Materiale barriera	Polipropilene
Tipo connessione	Mocheton e anello



DESCRIZIONE

BARRIERE OLEOASSORBENTI.

Le barriere oleoassorbenti si utilizzano per l'arginamento, il contenimento e l'assorbimento di avvenimenti di olio su superfici, corsi d'acqua o bacini litorali. Inaltonabili anche quando completamente saturi, l'involucro esterno realizzato in resistente rete non danneggiabile dal sole. Alle estremità delle barriere son posizionali degli anelli e dei mocheton in acciaio in modo da poterle collegare o ancorare. Una corda disposta sull'intera lunghezza della barriera ne aumenta la resistenza e ne facilita il recupero.



CSA distribuzione
contenimento stoccaggio assorbimento

www.csadistribuzione.it
info@csadistribuzione.it

Intestataro Fattura
ENTE PARCO REGIONALE VENETO DEL DELTA E
VIA MARCONI N. 6
45012 ARIANO NEL POLESINE (RO)

Destinazione Merce
MAG. COMUNALE PROTEZIONE CIVILE
VIA PO DI GNOCCA
45018 PORTO TOLLE (RO)
0426372261

Documento di Trasporto N. 647 del 16/05/2022

Codice Fisco	Agente	Resp. Interno	Partita Iva	Codice Fiscale	Valuta
C0093383	150	001	90008170293	90008170293	EUR

Condizioni di Pagamento e Banca d'appoggio
BONIFICO 30GG DFFM Pagina 1 di 1

Codice Articolo	Descrizione	Quantità	Uni.
01ACSA-BO-20-300 B*	Rif. Commessa Num. 442 del 13/05/2022 Rif. Vs. Ordine N. 2120955 del 12/05/2022 CIG: Z05362FB6E CUP: F26118017160007 BARRIERE OLEOASSORBENTI DIAM CM 20X300 PER LA CONSEGNA CONTATTARE: SIG SIMONE SCHIBUOLA TEL. 0426 372202 CONSEGNA AL MATTINO.	29,00	PZ

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Vettore, Data e Indirizzo CORRIERE FRANCO SECOND SRL VIA MOROSINI N. 13 BRESCIA		Appalto estero da beni BANCALI 120X120X200+120X120X130
Data Ritiro 16/05/2022	Qty Ritiro 20	Numero Colli 03
Pesi 654,00		Volume +
Allocations		FIRMA DEL CONSIGLIARIO FIRMA DEL DESTINATARIO

CSA distribuzione srl - Via Volta, Traversa III, 4 - 25010 San Zeno Naviglio - Brescia
 Tel. 030 3534520 - Fax 030 3548214
 C.F. e P.Iva 02370580983 - Cap. Soc. € 80.000,00 i.v. - REA di Brescia 444276



Conclusions

Appropriate equipment has been installed at the pilot sites, thus increasing the level of protection of the lagoon and coast from pollution from ships, platforms and land-based sources of pollution. The probes and floating drone with the service boat will be entrusted to ARPAV (Agenzia Regionale per la Protezione Ambientale del Veneto) on “comodato gratuito” (italian civil law contract). The radio equipment and

adsorbent material will be assigned to Civil Protection Group of the Municipalities of Po Delta (Protezione Civile). Thanks to this equipment, five response centres in charge of pilot EPSs will be able to react in the case of sudden marine pollution for all three phases of sea pollution.

This equipment procurement was necessary because the data gathered and analyzed in activity 3.4 clearly showed that the equipment for monitoring EPS was largely insufficient and were to be improved. In particular a multiannual (2019-2019) set of data on salinity and oxygen were considered, but data were not available for all the pilot areas Po Delta and neither available for monitoring on request of specific areas. The equipment provide both continuous monitoring data and also local “on request” data such as in case of accident. In case of accident continuous data are extremely useful in order to have an ex-ante situation to compare and evaluate damages from accident.