

EuroGEOSS Showcases: Applications Powered by Europe

D4.8 User uptake Workshops





ABSTRACT

The overarching aim of WP4 is the promotion of e-shape pilots at national and international scale, across vertical markets and among user communities, thereby growing a pool of candidates for codesign, making pilots more globally accessible, and increase their market uptake. Through the three tasks assigned to this WP – user uptake, Capacity building and Institutional alignment -, this report focuses on the first task, supporting the uptake of the 37 e-shape pilots across new markets and community of users.

The objective of this document is to provide an overview of the first half of the workshops (24 in total) conducted by EARSC and WP4 partner Eurisy. It provides (i) An analysis of the e-shape User uptake workshops organisation and achievements: (ii) Showcase the level of interaction of the e-shape pilots with potential new users through the workshops as emerged during the first half of the project and (iii) Recommendations for improving the second half of the workshop's organisation for the period 2022-2023.

e-shape delivers a comprehensive suite of Earth Observation (EO) services to EU citizens, businesses and policy makers through the implementation of 37 pilots spanning 7 thematic areas, supporting GEO's global priorities including the UN 2030 Agenda for Sustainable Development, the Paris Climate Agreement and the Sendai Framework for Disaster Risk Reduction and six out of the eight GEO Societal Benefit Areas: food security, health, energy and mineral resources, biodiversity, water resources, disaster resilience and the transverse Climate topic in GEO.

The report explores to what extent the user uptake strategy and the attached workshops activities have supported the awareness of European EO capabilities and the connection of the e-shape pilots with the communities of direct relevance for them, providing user needs inputs, access to local data for testing and development of the pilots.

The user uptake workshops targeted both showcases and pilots, to reach a primary EO user community first (EARSeL, European Maritime Day, Space Climate Observatory, EGU, EXPANDEO workshops M12-24), and a secondary user community later(Water Europe, Committee of the Regions M24-M48), expanding the latter outside its "comfort zone".

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1. INTRODUCTION

1.1 Background

The user uptake strategy comprehends the engagement of the e-shape Pilots with different user communities and the actions to support it.

Based on this rationale, the partners' work has been focused on increasing the pool of potential users through a three-step approach:

- 1) Develop a strategic plan to increase the user uptake based on the needs of the pilots
- 2) Expand networks of the pilots both in Europe and internationally using multipliers such as Copernicus relays, Copernicus Academy and GEO
- 3) Organize User uptake workshops focused on groups of target users for pilots (sector, geographic and institutional)

This report will focus and expand the 3rd point, i.e. showing the level of interactions of the pilots to expand their networks into new communities and nearby geographies, through the 3 levels of uptake.

1.2 Scope of this report

EARSC with EURISY, experienced in the engagement with community of users through its members, have developed in the first 2,5 years of the project the first half of workshop (14 workshop organized over a total of 24 scheduled). This report provides:

- An overview of the project's achievements
- The level of interaction of the e-shape pilots with potential new users during the project's workshops and
- Recommendations for improving the workshops organisation for the second half of the workshops.

2. METHODOLOGY

This chapter defines the user uptake methodology and the workshops' structure to implement it, starting from the assumptions – length, thematic/country, pilots' challenges as defined in the e-shape sprint's activities -, general considerations, key objectives and finally the actual workshop's outline.

The user uptake strategy builds on two concepts:

- the active interaction between the e-shape pilots and the potential community of users during the workshops and the follow-up meeting;
- the uptake, meaning reaching new communities of users that can integrate the e-shape pilots into their operational workflows. This is divided into 3 sub-cathegories:
 - 1. User's feedback, to finetune the service
 - 2. User of the service, meaning the integration of data from the potential user (beta testing-evaluation)
 - 3. Recurrent user, meaning as ultimate goal the adoption of the service from the user (sustainabilty)

To reach the user uptake of the e-shape pilots, WP4 has established a methodology based on market and user expansion through the organisation of workshops along the 4 years of the project's duration,

to ensure that all pilots will reach the necessary maturity to promote their services (Described in deliverable D4.6).

2.1 Assumptions

- Half day workshop (difficult to attract new people to invest more than this amount of time).
 Workshops started at the same time of the pandemic; it has been noted that the level of attention of the audience during online workshops tend to decrease over time. The maximum duration was capped at 2:30h.
- Users would have some knowledge of EO capabilities
 - o Or Users wouldn't have knowledge of EO capabilities
- Some workshops would be organized at Pilot level, some at showcase level (depending on similarity of Pilots/User communities).
- Some workshops would support the pilots in reaching their challenges:

Challenge 8 - "Increase the number of key organisations involved » - will be more generic (i.e. covering more than one SC/Pilot) as we need to show an overview of the European sector to international organisations

Challenge 9 – 10 « increase the number of user communities involved (non-partners)" – Organisation of a series of capacity building activities will focus on sparking the interest of user communities and organising dedicated follow up sessions

The thematic and geographic expansion will be addressed once organizing the workshop. At this level, only the design of the workshop is provided.

2.2 General considerations

At the time of discussing the workshops strategy, EARSC has come up with some general considerations to take in account:

- The partners organising the workshops (EARSC, EURISY) shall ensure a very strong understanding of the community with which we will interact to ensure the event is at pitched at appropriate level.
- Final goals will be Challenge / Pilot specific, but an overall goal can be seen at general level as engaging new individuals in an ongoing relationship with the EO community (service providers/e-shape) to encourage integration of European EO services in their sector/community.

No significant capacity building can be achieved in a short 3-hour session; thus, the spark must be set, and opportunities for dedicated trainings to be organised in the future must be set up. Working backwards from this goal, EARSC analyzed that to stimulate the interest in the EO products/services and engage the communities' imagination as how their work and objective and key results could be improved through the uptake of European EO services, the pilots should focus their presentations on the solutions' benefits, rather than the how-to tutorial only.

Based on EURISY experience in engaging with users' communities the pilots have been advised to not list a set of abstract potential benefits but to provide examples of actual, concrete benefits of early adopters.

The following section introduces the key objectives, workshop outlines and country definition.

2.3 Key Objectives

1. Create an ongoing dialogue with workshop attendees.

The workshops shall be considered as the starting point to create connections and personal interaction. This shall be achieved not simply through a follow up survey but creating and nurturing a personal contact with each of the attendees. Considering the 24 workshops, with for example, 12 people in each workshop leads to nearly 300 new contacts. Between EARSC and EURISY this number of contacts is eminently manageable yet has the power to make a measurable impact on European EO community.

This should look like 3 emails with half or more of the attendees within a 6-month timeframe after events, and one email exchange at 6 - 12 months.

These emails should lead to the individual being introduced to an appropriate training or service provider(s). It should be ensured through follow up that this leads to an engagement, or else introduce the initiate to another provider.

To achieve this result, the partners should engage the initiate firmly at the user uptake workshop. This means a relatively small group of e.g. 12 people.

2. The pilot speaker should feel understood and heard.

The presenter shall provide a concise overview of the solution's final market/sector/needs, to set the stage by defining the scope and making the audience comfortable with acquainted contents. The focus should be on the e-shape pilots services, but other associated products/services can also be mentioned to stretch as much as possible the positive effects of the solution presented to the whole sector. Then a roundtable or other plenary panel discussions should take place allowing open exchange about the concepts presented. To achieve this, a strong engagement since the beginning of the workshops is needed, engaging with a small number of people (max 12) to ensure a fruitful exchange between the pilots and the audience as well as a 1-to-1 engagement to promote the opportunity to engage them in the EO sector.

The workshop should not be one way information sharing. The achievement of objective 1, ongoing dialogue, is strongly connected with objective 2, that the message is passed to the audience, and to achieve so a highly effective moderator is required.

2.4 Workshop outline

The partners at the beginning of the project defined a standardized workshop outline:

- All (WP4 speakers, e-shape pilots and/or other speakers) Round the table introduction including outlining their exposure to space/EO.
- e-shape team (WP4) provides an introduction about space and Earth Observation, focusing
 on the benefits of satellite-based applications already integrated in other domains (potentially
 closely related)
- e-shape team (WP4)— provides an outline on the understanding of pain points in that sector, depending on the workshop thematic and audience
- e-shape team (e-shape pilots and/or other speakers)— provides an overview of where and how space-based/Earth Observation services can impact on these pain points.
- All (WP4 speakers, e-shape pilots and/or other speakers) Round the table with reactions to the points presented, feedback from the audience on the perceived relevance of solutions, potential issues, and other benefits.
- e-shape team provides a presentation for follow up about material and next steps to support the engagement pilot-new user.

2.5 Workshops topics and country

This sub-chapter provides a breakthrough about the thematic and market expansion for the e-shape pilots through the EARSC taxonomy point of view that is to date one of the best efforts to provide a coherent approach to Earth Observation service classification, supporting the identification of common users for the e-shape user uptake strategy. Indeed, each e-shape pilots have been classified according to the EARSC taxonomy, and current and potential user communities are defined along. The themes/areas that have the highest degree of alignment with Pilot user uptake can be identified as Policy authorities, international bodies, and Services (e.g. insurance/finance, real estate and travel/tourism). This accurately reflects the state of the market to date, where the public sector is the largest client sector 56% according to the EARSC EO Industry Survey Report (2021).

The categories less represented are managing living resources, industrial and energy and natural resources. The thematic or greatest relevance are atmosphere and climate, land (ecosystems and inland waters) and ocean and marine. These areas and Pilots are indicated in Figure 1; hence we grasp this connectivity using the EARSC thematic taxonomy. A major advantage of using EARSC Taxonomy, is also to assess crossovers to be able to identify possible communities of interest that can be exploited as an efficient way to expand existing user communities and/or the uptake of new products or services within them.

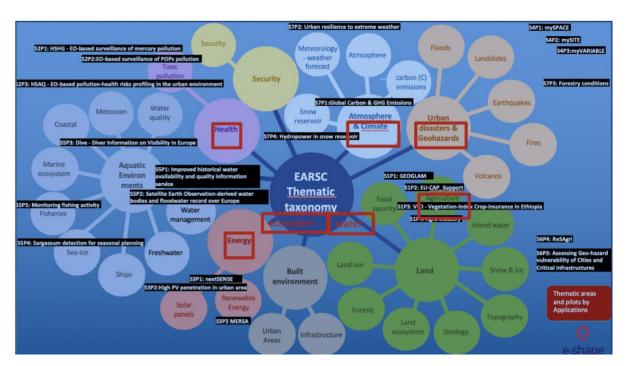


Figure 1 e-shape EARSC taxonomy mapping

To grasp the initial communities and those potential suited for the pilots, the first stage of the workshop organisation involved an initial assessment survey of all the e-shape pilots to gather their global state and the readiness of the initial state of the solutions to be developed.

In this survey the pilots had to describe and mention what kind of events and community of users they are already connected to and towards those they wish to expand. This information supported the partners in:

• Creating a list of European and international events based on their interests and communality to the pilots (audience, stakeholders) retrieved from the e-shape initial assessment survey.

- Creating a timeline to divide the events related to the 27 pilots among the 48 months based on their readiness to demo their service and to showcase it for the country expansion.
- Assessing the geographic scope for expansion. A shorter list has been retrieved for the first 6
 months and then updated every semester with new and up to date events. EARSC, as WP
 leader decided to contact the pilot leaders indicating a list of potential events that could be of
 interest to the pilots, making them choose the event they believed of most interest for them.

EARSC and EURISY to optimize time and resources and based on the outcome of the assessment, have decided to select internally the most promising and best matching events. This process proved to be more effective in terms of response and engagement with the pilots.

A workshop timeline has been set up to ensure that all pilots are allocated to a dedicated event around which creating the workshop based on the known needs of the pilot/showcase, their readiness, known relevance of organisation they wished to engage with, and community of interest.

Based on this preliminary analysis and despite the Covid-19 pandemic affecting the development of the workshops, the following workshops within bigger events were organised:

Table xx e-shape workshops

Title	Location	Date
United Nations/Austria Symposium	Virtual	1-3 September 2020
Smart Farming 2020	Virtual	9 October 2020
EARSC- SCO	Virtual	13 October 2020
Spaceforcities	Virtual	27 October 2020
Wind Energy Conference	Virtual	3 December 2020
The Challenges of the blue World	Virtual	February 2021 - 5 May 2021
Space Opportunity for climate challenges	Virtual	3 March 2021
Water Europe	Virtual	24 March 2021
EARSeL	Virtual	30 March 2021
EGU21	Virtual	26 April 2021
European Maritime Days	Virtual	21 May 2021
ExpandEO21	Virtual	17 June 2021
IRLOGI	Virtual	23 Ju ne 2021
Smart Farming 2021	Virtual	1 October 2021
GEOGRAMA	Virtual	4 November 2021

European Week of the Regions and Cities	Virtual	10 November 2021
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3. OVERVIEW OF THE WORKSHOPS (M1-M13)

The organisation, content and result of each workshop are described in detail in the individual workshops report (Annex 1). This chapter provides an overview of the effectiveness of the workshops.

This is done through the:

- Participation in the workshops
- Impact of the workshops (14/24) and
- Organisation and lessons for the future

3.1 Workshops participation

From the initial user uptake strategy (D4.1), the workshops were foreseen as side events within bigger events matching the needs of the uptake of the e-shape pilots to capture the broader audience of the events interested in the e-shape side events.

Due to covid-19, and the consecutive transfer from physical events to online events, the organisation of the side events increased in difficulty. EARSC and EURISY, took advantage to engage with different events and modality available to disseminate the pilots. The level of attendance lacked predictability as it was not possible for each of the workshops to introduce a specific registration form within the existing conference registration systems. This applies specifically to those workshops embedded in plenary events: Water Europe, EGU, EARSeL, European Maritime Day, Smart Farming 2020, Wind Energy Conference.

The workshops have experienced different participation level as depicted by the below figure: Space for Cities with 83 participants and Water Europe with 70 participants have been the most successful ones, followed by European Maritime Day with 50 participants (side event), the lowest is GEOGRAMA21 with 10 participants ("by invitation only" event). Despite the higher numbers or participants, the "by invitation only" events proved to offer a direct exchange between the audience and the pilots through the breakout rooms as well as a higher response to the final survey of the workshops (IRLOGI), thing that lacked in the embedded workshops.

Through the workshops pilots connected to EO and non-EO communities and stakeholders: the uptake is on-going as is supported by the development of on-going Joint Action Plans. Section 7 provides the cases most relevant on the uptake.

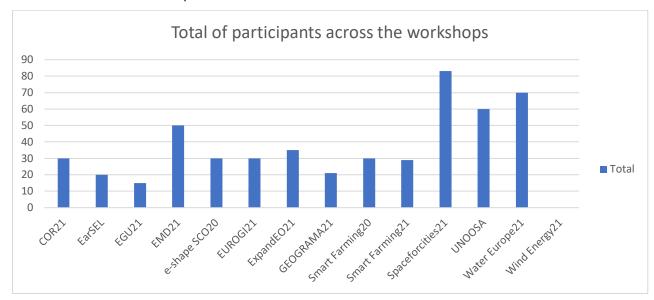


Figure 2 Total of participants across the workshops

3.2 Composition

The differences in the composition of participants are illustrated below. Each workshop attracted a diverse audience, and the user communities were represented in a balanced manner, with a slight over representation of the marine community. The process to engage with the energy and mineral resource community is due for M36-48.

In terms of stakeholders, the private sector (11%) was the most represented followed by the public sector (6%), Civil society (6 %), Government (5%), Institutions (4%).

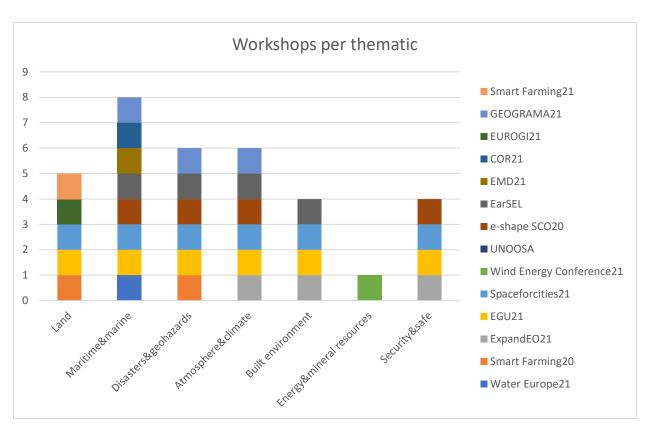
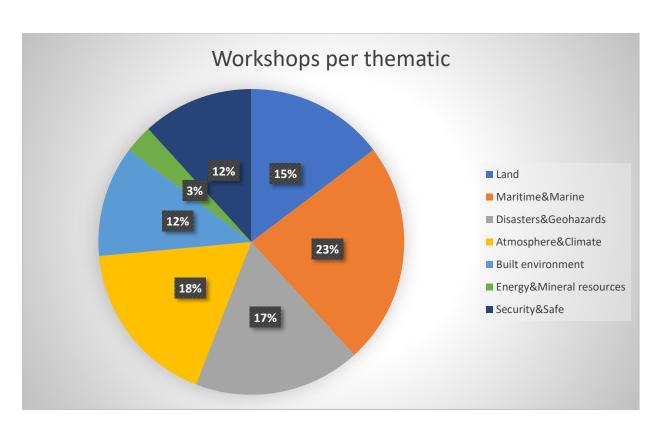


Figure 3 Overall composition of the audiences



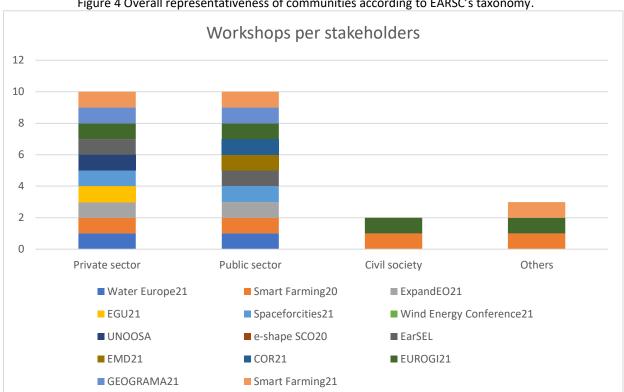


Figure 4 Overall representativeness of communities according to EARSC's taxonomy.





Figure 6 Overall composition of the audiences

4. OVERVIEW OF THE USER UPTAKE WORKSHOPS

The table below represents a timeline overview of the workshops supporting the promotion and the potential uptake of the e-shape pilots. The overview of each workshop is provided in the Annex 1.

Table 1 Workshops timeline 2020-2021

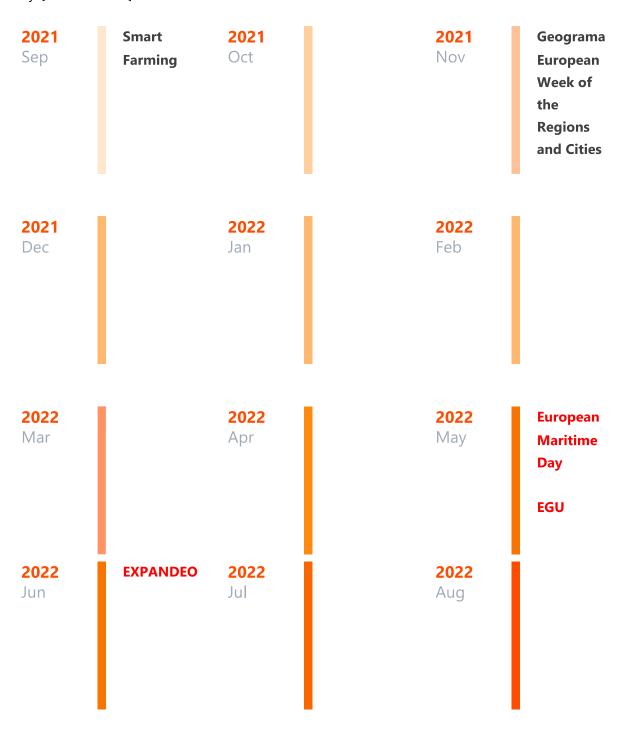
Title	Location	Date	Community	Stakeholders	Attendees
United Nations/Austria Symposium	Virtual	1-3 September 2020	Security & safe, Built environment, Atmosphere & Climate, Disasters & Geohazards	diplomatic community, statisticians, the private sector and academia, as well as UN entities, Public International/local sector, R&D	60
Smart Farming 2020	Virtual	9 October 2020	Land, Built Environment	Farmers Growers Agricultural industry Technology suppliers	30
EARSC- SCO	Virtual	13 October 2020	Disasters & Geohazards, Atmosphere & Climate, Maritime & Marine	e-shape pilots and SCO community, GEO	30
Spaceforcities	Virtual	27 October 2020	Security & safe, Built environment, Atmosphere & Climate, Disasters & Geohazards, Land Maritime & Marine	Local administrations, NGOs, private, decision- makers	83
Wind Energy Conference	Virtual	3 December 2020	Energy & mineral resources	Scientists, corporations	N/A
The Challenges of the blue World	Virtual	February 2021 - 5 May 2021	Maritime & Marine	Space stakeholders, Maritime industry, Technology suppliers	25
Space Opportunity for climate challenges	Virtual	3 March 2021	Land, Built Environment, Atmosphere & Climate	Space and non-space sector. Forestry industry, Technology suppliers	50

Water Europe	Virtual	24 March 2021	Maritime & Marine	Private-Public sector Water industry	70
EARSeL	Virtual	30 March 2021	Atmosphere & Climate Built environment	EO Scientific and research communities	20
EGU21	Virtual	26 April 2021	Land Maritime & Marine Disasters & Geohazards Atmosphere & Climate Built environment Energy & mineral resources	EO research and scientist	15
European Maritime Days	Virtual	21 May 2021	Maritime & Marine	Relations with EMODnet Secretariat	50
ExpandEO21	Virtual	17 June 2021	Land, Built environment, Maritime & Marine	EO community Research, end users and civil society	35
IRLOGI	Virtual	23 Ju ne 2021	Land	National farmers associations, national government agricultural departments, environment protection agency, research	30
Smart Farming 2021	Virtual	1 October 2021	Land, Built Environment	EO agricultural companies, researchers, universities, governmental agencies, space agencies.	29
GEOGRAMA	Virtual	4 November 2021	Maritime & Marine, Disasters & Geohazards, Atmosphere & Climate	Tourism management, coastal territory management	10
European Week of the Regions and Cities	Virtual	10 November 2021	Land Maritime & Marine Disasters & Geohazards Atmosphere & Climate	regional/local administrations, SMEs and research centres, Local and regional authorities, EU institutions, policy makers	30

Table 2 Workshops timeline 2021-2022

Iddulal Workshop timeline

By: [EARSC-EURISY]



In red the workshops taking place from Q2 2022.

5. IMPACTS OF WORKSHOPS

5.1 In-depth considerations achieved by the EARSC-EURISY workshops

This section wishes to provide a final overview of the workshop's performance and their success, as well as their support to the e-shape pilots solutions to connect with new community of users.

The partners based on the taxonomy, the list of events developed, and the initial assessment survey completed by the e-shape pilots, has put them in contact with the dedicated audience to create useful interactions with potential users for co-design as well as with new community of users.

The responses rate of the pilots to the EARSC-EURISY calls of engagement is high, among 41 pilots invited (1 pilot took part to at least 1 or more workshop), 31 pilots took part in the workshops, with only 10 pilots in total that didn't reply to the invitations email. The responses from the pilots have been always supportive and of interest related to the audience that will be attending and the country focus.

The following figures present the numbers of participants to the workshops and the interactions the e-shape pilots had with the stakeholders present. Across 14 workshops, the total sum of registered people is 285, and of the participants 503; 31 pilots have interacted with potential users (figure 8).

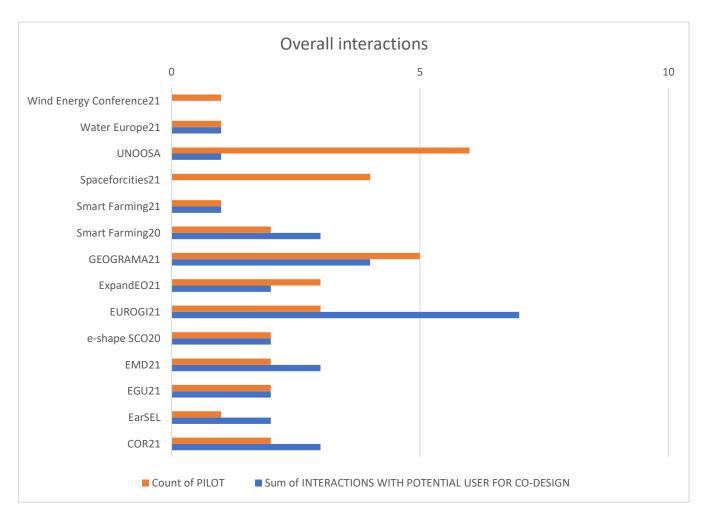


Figure 7 Total of interactions

From figure 8 it is shown that for the workshops COR, EGU, EXPANDEO and Smart Farming 21, the sum of registered people and actual attendees matches; for GEOGRAMA, EUROGI and SCO on the contrary

there is a light discrepancy. For the GEOGRAMA workshops some attendees confirmed that they could not participated because of conflict with the timing and "personal matters"; the latter is valid also for EUROGI. For the rest of the workshops there is missing data as for several embedded-in-bigger-eventsworkshops the partners couldn't track the registrations system or sending a dedicated registration form due to logistics definition of the organisers.

WP4 intends as interactions the discussion during the workshops and the interest gathered by the audience in purse a further contact with the pilots' speakers. The sum of interactions reflects the interested connections resulted from the surveys and the follow-emails. The "by-invitation" workshops (IRLOGI & GEOGRAMA) are those that showcase the interested and established connections seen as concrete results, as these potential users have been invited on purpose to these workshops being already interested in a sort of cooperation with the pilots.

The overall impact of each workshop reflects the individual pilot's needs and the composition of the participants. The dual approach of the workshops to support the uptake of the solutions, sectorial (community expansion) and geographical (market expansion) have been important features to provide the pilots with broader hosting events and audience on one side, and on the other side country specific needs and stakeholders.

To gather the overall impressions about the organisation and the degree of interest to engage with the pilots' speakers, WP4 following the workshops has sent a final survey to the attendees, when it was possible. It resulted that many survey have remained uncompleted even though WP4 has sent reminders via email. In a last attempt, WP4 has sent a last survey upon those sent singularly after each workshop. Figure 8 displays that across 6 dedicated surveys, 1 per workshop providing an abstract per pilot, only 3 surveys have been answered:

- 1) Space Opportunities for Climate Challenges
- 2) Earth Observation solutions contributing to EuroGEO: cross-benefits benefits e-shape and SCO communities.
- 3) European Week of the Regions and Cities

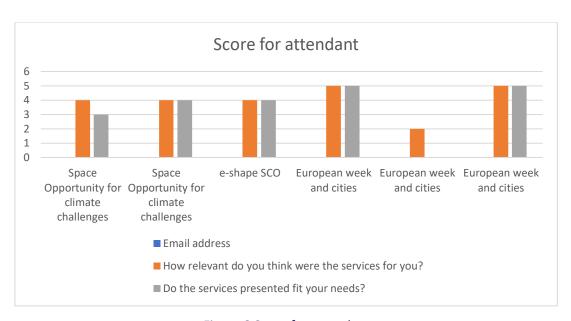


Figure 8 Score for attendant

The table below shows in detail the community per workshop that wishes to interact with the pilot:

Table 3 Engagement

Workshop	Interest to engage	Pilot
Space Opportunities for Climate Challenges	Public/Private sector	"Improve historical water availability and quality information services", Dr. Ilias Pechlivanidis, SMHI
Earth Observation solutions contributing to EuroGEO: cross-benefits benefits eshape and SCO communities.	Public sector	Seasonal preparedness - Andrea Vajda, Finnish Meteorological Institute (FMI)
European Week of the Regions and Cities	Public sector (umbrella association)	"EO-based surveillance of POPs pollution", Jana Klanova, prof. RNDr., Ph.D. Head, Human Exposome Masaryc University
		"Monitoring fishing activity", Aida Campos, senior researcher at IPMA, the Portuguese Institute for Sea and Atmosphere

Moreover, clear indication about whether the service would fit the participants' needs are:

- There are problems with long-term access of EO data (2)
- The service doesn't fit my needs (2)
- There are problems with long-term access of EO data (1)

WP4 has also gathered feedback from the pilots that took part in the workshops.

In the following graphic, for each pilot it is represented the degree of satisfaction in relation to the three questions over a range 0-5. Currently, given the reduced replies from the pilots (9), only the mean is shown. For the review meeting in June, with more results, if we notice an asymmetrical distribution, the median will be considered.

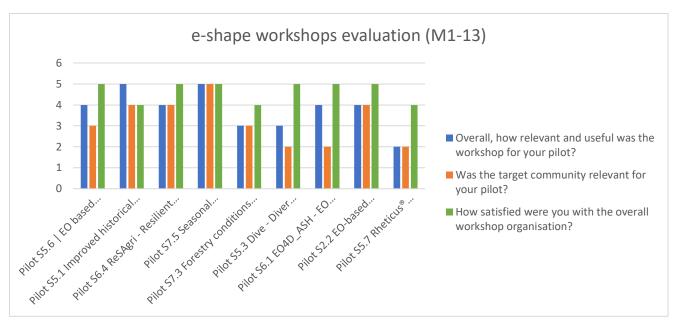


Figure 9 e-shape workshops evaluation (M1-M13) - pilots

All the pilots had the possibility to interact with the workshop attendees, confirming the average number of the general usefulness of the workshops.

However, specifically for three pilots the communities presented in their respective workshops didn't satisfy the pilots. WP4 understood this was mainly due to language barrier in the GEOGRAMA workshop (see comment in section 7.5 lessons learnt).

General feedbacks are:

Pilot S6.4 ReSAgri - Resilient and Sustainable ecosystems including Agriculture and food: "Yes, in forms of users contacting me for setting up collaboration"

Pilot S2.2 EO-based surveillance of POPs pollution: "well organised, well attended"

Pilot S5.7 Rheticus® AquaculturePlus: "As per my previous answer, it's important to find a method to involve as more people as possible in target with the pilot we offer".

In specific, the workshops reached the following level of pilot's uptake:

- 1. Active interaction: the active interactions between the e-shape pilots and the potential community of users, during the workshops: 31 pilots
- 2. Uptake:
 - User's feedback: S1P6 's challenge to expand to academic communities was fulfilled through the IRLOGI workshop, providing the pilot with contacts and events involvement as well as data to integrate in the EO service. This pilot is also discussing with one of the attendees the integration of its service into an application for disaster resilience.
 - User of the service, meaning the integration of data from the potential user (beta testing-evaluation): The pilot S5P3 expanded geographically (from a UK centre focus to the Mediterranean) and identified some sites of local interest, generating some initial scores for these sites.

 Recurrent user, meaning as goal the adoption of the service from the user (sustainability): For the pilot S5P3, the pilot's new potential user and data provider will potentially integrate the service.

The next 13-15 months will focus to support the interaction of the pilots to integrate a new potential user

5.2 Overall considerations achieved by the EARSC-EURISY workshops

The general overall considerations achieved by the EARSC-EURISY workshops have been:

- For the Water Europe workshop, raising awareness of Earth Observation and the potential of the application in the marine sector to cover aspects like runoff forecasting, spillway design, flood risk, hydrochemical modelling, monitoring the ocean quality and its ecosystem.
- For the Committee of the Regions workshop, supporting the political recognition of EO solutions in innovation policies related to regions and communities. This was also led through EARSC institutional liaison (Joint Action Plan).
- For the IRLOGI and GEOGRAMA workshop, the relation between the e-shape pilots and potential users to support their service development.
- Moreover, a qualitative outcome is that the audience have a better understanding of the benefits of EO in the reference sectors. This cannot be counted with a specific KPI but has been assessed given the positive feedback received during and after the events organised.

In general, all the workshops provided an ideal platform for networking and promote the European Earth Observation capabilities provided by the e-shape pilots in the hosting region and facilitating exchange both within and between stakeholders from the research community developing applications and the commercial sector providing services.

- Raising awareness: The Water Europe workshop has been the first workshop reaching a non EO community, highlighting the satellite-based applications providing a market and users' benefits perspective in maritime spatial planning towards the private sector and specialised water companies Space4cities workshops, brought together other actors as ESA and dotSpace by bringing together research, government and industry experts to talk about their innovative solutions and funding opportunities, providing highly multidisciplinary networking and knowledge sharing platform where space & non-space peers can exchange ideas, discover opportunities and meet people to help improve their activities (business, decision-making, legal, research, education, etc.).
- Political recognition: The CoR workshop has been seen as a catalyst to attract representatives
 from cities, local and regional municipalities to demonstrate the benefits of Earth Observation
 to optimise informed decision-making and to support specific needs of public authorities as
 part of their workflow and procedures. These communities face as barriers long-term access,
 building trust, cost-efficiency and lack of skills, among others, to integrate EO services. This
 workshop was supported by the Committee of the Regions Enve committee, with whom the
 partners have started interactions to reach the EU members representatives.
- Relation with users: during both workshops, interactions with the stakeholders present and the pilots were deepened through breakout groups. In the Geograma workshop, issues and questions were raised among the aquaculture farming pilot and its market positioning, the challenges faced by shellfish sector and the EO opportunities. From the discussion, a suggestion was made to collaborate in a Horizon Europe (old H2020). In the Irlogi workshop, general conclusions reported that the workshop was very useful, that the breakout rooms were "made between people working in the same field on the island of Ireland but who had

previously not met or been aware of what the others were doing"; from the perspective of networking, in this regard it can be considered as being very successful given that all 25 of the attendees in the three breakout groups indicated that they would be happy to share their contact details so that the can make contact with the presenter(s) and engage in further discussions.

The following table seeks to provide an overview of how the e-shape workshops had and are currently supporting some of the pilots' challenges for sprint2. For details about each action per pilot, see Annex 1 with dedicated tables per workshop.

Figure 10 How the e-shape workshop sustained the pilots individual challenges

Ticket#	Sprint 2#Challenge	SxPx	Initial contact/ Need analysis	Comment
1	#8 Increase	S5P4C8	ongoing WP4 user identification	EMD 2021 + TBD to engage with DG mare
	number of key			
2	organisations	S5P5C8	ongoing WP4 user identification	EMD21 to engage with DG mare + CoR
	involved			workshop
3		S5P3C8	closed	Dive Base Malta data provider
4		<u>S4P3C8</u>	ongoing WP4 user identification	started
5		<u>\$1P2C8</u>	ongoing WP4 user identification	Irlogi workshop contact with private user
7	#9 Increase	S3P2aC9	to establish- no need	
8	number of user	<u>S6P1C9</u>	ongoing WP4 user identification	user communities EU-USA identification
9	communities	<u>S3P4C9</u>	ongoing WP4 user identification	
10	involved (non	<u>S5P1C9</u>	closed	Water Europe contact + EARSC potential
	partners)			JAP
11		<u>S1P6C9</u>	closed	ICON contacts+universities contacts
12		<u>S2P3C8</u>	ongoing WP4 user identification	
13		<u>S5P2C9</u>	ongoing WP4 user identification	Support to the LIST spin off commercial part of the pilot.
14		S3P1C9	ongoing WP4 user identification	
15		S1P4C9	ongoing WP4 user identification	Irlogi workshop contact with private user
16]	S7P1C9	ongoing WP4 user identification	
17		S1P1C9	ongoing WP4 user identification	Irlogi workshop contact with private user
		S2P4C9	ongoing WP4 user identification	community identified through the
				taxonomy and waiting for validation from the pilot
		<u>S1P7C9</u>		community identified through the taxonomy and validated by the pilot. EARSC is establish the first contact for the pilot
		<u>S6P5C9</u>	ongoing WP4 user identification	community identified through the taxonomy and waiting for validation from the pilot
18		<u>S5P7C9</u>	ongoing WP4 user identification	Irlogi workshop contact with private user
20	#10 Number of	S5P6C10	ongoing WP4 user identification	Irlogi workshop contact with private user
21	capacity building	S2P2C10	ongoing WP4 user identification	COR workshop
22	exercises	S1P3C10	no need of support	
23		S3P3C10	ongoing WP4 user identification	eurisy ws
24	_	S7P1C10	ongoing WP4 user identification	TUA workshop June21
25	_	<u>S1P5C10</u>	ongoing WP4 user identification	smart farming21 workhshop
26		S7P5C10	ongoing WP4 user identification	GEOGRAMA workshop
27	_	S4P2C10	ongoing WP4 user identification	TUA workshop June21
28		S6P6C10	ongoing WP4 user identification	community identified through the
				taxonomy and waiting for validation from the pilot
29		<u>S7P6C9</u>	to establish	contacted the pilot twice but not reply

This section has provided an in-depth and more general overview of the workshops impacts for the e-shape pilots. Despite the online format, modalities of workshop and platform, the e-shape pilots have interacted with different type of communities, developing and reaching a type of uptake that will focus in the next 13-15 months to integrate a new potential user. The following

and last section will provide a panoramic about the practical aspects of the workshops' organisation and the lessons learnt to apply for the next round of workshops.

6. ORGANISATIONAL ASPECTS

6.1 Scope

For each event, the introductory presentations, included presentations from the e-shape pilots, EARSC and EURISY, as well as speakers from the EU and UN institutions, GEO ecosystem and private sector representatives, providing information on the EO ecosystem.

EARSC and EURISY hosted and moderated all workshops. They would also provide relevant insights on latest technology developments and markets trends as well as sectorial data defining the relevance of the potential selected sector.

Based on the type of events hosting the e-shape workshops, the e-shape pilots presentations were tailored on the audience present, hence either more technical and research oriented (EGU, EARSeL), or users oriented, highlighting the solution's benefits especially to non-EO communities (Water Europe, European Maritime Days, Committee of the Regions), resulting in more thematic user-oriented workshops rather than country workshops (the geographic expansion due the online nature of the workshops has resumed in M36-48 due to Covid19).

6.2 Content

All the workshops were rich in content and relevant for the pilots not only to connect with communities but also thanks to the injections of the workshop attendees' feedbacks supporting their co-creation objectives.

The presentations from EARSC and EURISY have been mostly informative, providing food for thoughts on pain points and benefits of the satellite-based services for communities new to EO whilst the eshape pilots' representative have been providing on a case-by-case basis hands-on trainings guiding the audience into the practical use of their solutions to tackle the needs and challenges of the sectors addressed in the workshops. The final Q&As sessions and round table as well as break out rooms have provided the value for more in-depth discussions and possibility of network also among the attendees themselves.

The e-shape pilots' presentations, depending on the type of communities they were presenting to, were either informative, such as highlighting the benefits of the EO solutions to region and municipalities (Committee of the Regions, European Maritime Days), and non EO final users (Water Europe) or technical, such as providing demo of the EO services (EGU, EARSeL).

It is important to note, that as the e-shape pilots are also research-to-business services, especially at the beginning of the project, not all the services presented were operational. This factor, however, did not impede their promotion and knowledge exchange with the participants to engage with new community of users and supporting the pilot's development.

6.3 Discussion

The workshops were envisaged as a space of ongoing dialogue with the participants with a personal interaction and not simply a follow up survey. The objective was to create and nurture a personal contact with each of these people and both EARSC and EURISY have the knowledge and capacity to create an impact on the European EO community. Of the 14 workshops, 31 pilots have reached user

uptake level 1 active interaction; 1 pilot level 2 use of the service (divebase malta as service provider); 1 pilot new user of the e-shape pilot (dive base malta).

The format of EO introductions, presentation of the e-shape pilots benefits to the audience, final Q&A and or/round table with effective moderators proved efficient to spread information and opportunities for discussion during the workshop. The 14 workshops were conducted online. In terms of impacts:

- 1) Lack of responses to the final survey sent after each workshop to engage with the audience
- 2) When the workshop took place within a bigger event, the impossibility to track the number of the attendees
- 3) Impossibility to contact the audience due to GDPR
- 4) Political stall due to change of board management and general elections in associations.

Despite these challenges, the number of participants to the workshops has been high, surpassing the initial 12-people involvement stated in Section 2.1(Assumptions), the interactions between pilots and audience were pursed (31 interactions), 3 pilots involved with new users and 28 initial interactions reached.

6.4 Language

The first language of the workshops has usually been English, as the events in which the e-shape workshops were hosted where European-focused, with few international participants and guest speakers knowledgeable about the GEO ecosystem.

Also, the first two country workshops hosted by Ireland and Spain were held in English. While for the Irish one the communication and interaction among the e-shape pilots and the audience was clear, for the Spanish one, the use of the English language, instead of the local Spanish one potentially restricted the outreach and discussion between the e-shape pilots and the stakeholders. The local language should have been encouraged as the participants were all Spanish and the language barrier strong, hence the intervention of simultaneous interpretation would have enhanced a higher debate and a higher rate of registered participants to the workshop.

The two workshop organisers confirmed that native language use is a very important component of the country workshop, as the intent is to engage locally, but it is also very important to sustain the ecosystem of outreach and dissemination around the event.

6.5 Final remarks and lessons learnt

Within this 2, 5 years of project it is important to take a step back and analysis what worked, and the lessons learnt to implement for the future activities, starting from the country workshop in Italy in May 2022. The covid-19 pandemic has challenged the entire project and obliged the partners to quickly rethink and readjust mitigation measures to ensure at their best a smooth development of the activities.

In this section we will provide the final remarks and lessons learnt captured from the development of the first half of workshops divided under 3 categories: programme/content, logistic and resources.

• Programme/Content

The Covid-19 pandemic has quickly overturned the modalities of engagement between the pilots and the stakeholders' communities. The initial workshop outline the organisation of side-events within a major event has not always been possible, and many have been delayed or cancelled. EARSC and EURISY privileged to attend as many events as possible to promote the pilots, hence each workshop was organised in a different way and different models were used. From the involvement in plenary sessions (water Europe, smart farming 20, EURISY webinars blue challenge, space4cities) to side events externals to the main events (COR, Smart Farming 21). The involvement in plenary sessions had the advantage to address especially non EO-communities (Water Europe and Smart Farming) but didn't produce the engagement hoped with the audience which has been only under the format of Q&A and the lack of possibility to send out a final survey to gather interest from the audience. On the other hand, workshops as external events of bigger events, didn't gather the audience of the bigger events itself but rather counted on the social media outreach and dissemination from the WP4 to gather attendees.

- The Less autonomy and involvement for the workshops organisation embedded in plenary sessions (water Europe, smart farming 20, EURISY webinars blue challenge, space4citie), and in the webinars (blue challenge and space climate among others), as well as the need to follow the fil rouge of the other presenters and overall topic of the conference, left EARSC and EURISY with less involvement in the organisation of the eshape session in terms of lengths of presentations, interaction with the audience and Q&A, and final survey.
- The country workshops proved to be fruitful based on the "by-invitation only" approach. The autonomy left to the organisers (IRLOGI-GEOGRAMA) in the organisation of the workshop had the advantage of creating a "real" regional workshop where the issues most useful to the hosting region were addressed (Ireland, Spain) and the attendees were contacted by phone directly to gather their interest in participating and engage with the pilots before the workshops. For the other workshops, the community gathered was well identified and, in some cases, has mostly interacted directly with the pilot himself (Smart Farming2020). Panel discussions are more effective at the end of the workshop, as well as break out rooms to focus on more in-depth aspect of the pilots' presentations, stimulation the networking.
- Consideration should be given to limiting the duration of the workshops to 2 hours, as online events are difficult to follow even with interactions and online tools to stimulate engagement (mentimeter, slido, polls). A 2-hours workshops provides a good timeframe to present 3 pilots and a final Q&A or 15 minutes break out rooms for more in-depth on more in-depth aspect of the pilots' presentations, stimulation the networking.
- O An adequate amount of time should be specifically allocated in the workshop programme to discuss 'where do we go from here', 'next steps', in particular: filling the survey (audience) expressing their interest to engage with the pilots and in which way (knowledge transfer, data provider, new user); organisation of 1-to-1 meeting between pilot and user facilitated by WP4 to define the engagement between the two parties based on the "availability" of the user; follow-up of WP4 with the pilot to check the engagement development.
- Whilst different conditions may apply in different countries (interest in EO capabilities mainly) which may need different approaches (simple introduction to the EO ecosystem rather than more in-depth training), it is suggested that the 'by invitation only' approach should be adopted as it ensures a more target audience attending the workshops already interested and willing to interact and engage with the e-shape pilots.
- Using English might be a language barrier for participants from some of the non-English speaking countries, hence the suggestion for the regional workshop to use the

- mother tongue of the hosting country and provide interpreting services to purse better interactions among the attendees and the pilots. Until now this service has not been implemented but will be considered for future workshops.
- O It is important to highlight what pilots can offer to their stakeholders and that they include economic value market data in their presentations. This would help also engaging potential future attendees to join the workshop, by showing the economic value of using satellite-based services.
- Regarding the workshop programme, consideration should be given to providing a significant amount of time for smaller focused group discussions to take place. Breakout rooms, where possible in the workshop, proved to be useful to stimulate detailed interaction with the pilots, also thanks to the presence of a moderator. This applies to the IRLOGI workshop, where some attendees would have enjoyed a longer time allocated to this activity.
- The preparation of "by-invitation only" workshop requires at least 1 month and half as it takes a long time to engage with the attendees and convince them to take part. This is paramount since the attendees are not only the potential final user, but also the potential co-designers of the pilot, for example in the case of pilot S1P7 engaging in knowledge transfer and data provider with an attendee. In the GEOGRAMA workshop an attendee was interested in a more in-depth workshop with his members, however for political motivation couldn't get involved until June 2022.

Logistic

- Set a focal point between the audience and the pilots and vice-versa. It is important that the audience sees in WP4 the first contact to get in touch with the pilot to set the stage for their "relation" development. In this first 14 workshops, for the "by-invitation only workshop" IRLOGI, each of the pilots had 3 requests of further engagement, but only 1 pilot effectively connected with concrete actions. For the other workshops, the audience has mostly interacted directly with the pilot himself. This is a positive result, but it led to WP4 not knowing the outcome straight away but only through the final survey.
- o Explicitly set the stage for the next steps after the workshop: survey, "prise de contact" with the attendees and pilots and how the 1st follow-up meeting with the potential new user will be developed and left to the parties to develop. In the case of the IRLOGI workshops, the interaction with S1P6 with a new user has been supported by WP4 in the 1st follow-up meeting, leaving the development of the "relation" to the two parties. The "relation" is confirmed by regular exchange in which WP4 is also involved. Other examples involved a first involvement of WP4 in bringing the pilot and the new user together but with no later follow-up. Interaction with WP4 to understand this flaw is undergoing. WP4 to avoid this is the future, will set a specific "window of interaction" from the day of the workshop up to 1 month, in order not lose the momentum.
- Whilst different conditions may apply in different countries which may need different approaches, it is suggested that the 'by invitation only' approach should be adopted.
 This approach privileges the "local involvement" and is very positive as it targets

- specific attendees; from the other side, it could potentially restrict the audience participation.
- It would be appropriate for an organising country association (or EUROGI itself) to
 evaluate the pros and cons of alternative platforms, bearing in mind that Teams
 provides a more than adequate platform. Teams has proven to be a suitable platform,
 along with gotomeet and zoom meeting, all providing Q&A, chat with the attendees,
 live questions.
- It is essential that all future workshops are well organised. In this regard normal sound management principles should be followed, such as clear allocations of responsibilities, sound pre-planning, good up to the minute tracking of all relevant matters during the pre-workshop period, etc,

Resources

- Set a "time frame of-contact" to contact the attendees that were interested in contacting with the pilots and vice-versa. The risk is that time passes by and the interest from the attendees reduces.
- Whilst different conditions may apply in different countries which may need different approaches, it is suggested that the 'by invitation only' approach should be adopted
- Consideration should be given to providing a higher fee to the organisation organising future workshops to take account of the significant amount of time input required to run a well organised workshop and produce a post-workshop report. For the "byinvitation only", 2 full weeks were dedicated to calls (see report in dedicated file attached).

Add specific KPIs about the workshop: how many interactions are needed between the pilot and the audience, how many new users involved coming directly from the workshops. The impact has been measured based on the generic KPIs of e-shape and on the challenges of the pilots. For the future workshops to stimulate the engagement between pilots and the audience, EARSC and EURISY will analysis the registrants and communicate them to the pilots to identify in advance potential users to approach at the end of the workshop.

7. CONCLUSIONS

The report explores to what extend the User uptake strategy and the attached workshops activities have promoted the benefits and capabilities of European Earth Observation services connecting the eshape pilots with the communities of direct relevance for them, supporting their co-design approach and future sustainability of their services.

The User uptake workshops were directed at Showcase and Pilot level, addressing them to different thematic communities (land and maritime the most famous) and stakeholders (private, public sector, civil society, institutions, government, etc). Despite the Covid-19 pandemic and adaptation to different modalities of events and shift to online presence, WP4 partners have promoted the European Earth Observation capabilities with and for the users through the organisation and development of 14 workshops spanning from private (Water Europe) to public sector, (EMD), civil society and LRA (COR workshop) to research (EGU,EARSeL).

Overall, the workshops have achieved raising awareness, supporting the political recognition of Copernicus and EuroGEO, as well as the relation with the users. The most successful workshops were

Space4cities with 83 participants and Water Europe with 70 participants (not a side event, but integrant to a plenary session), followed by European Maritime Day21 with 50 participants (side event), the less famous GEOGRAMA21 with 10 participants ("by invitation only" event).

The level of pilot's participation (31), of the total registered people (285), of the total participants (503) and of the interaction with the potential users (31), reaching levels 1 (7 pilots), 2 (2 pilots) and 3 (1 pilot) of the uptake, it shows the successful achievements from EARSC and EURISY to promote and spread awareness of the e-shape pilots' capabilities across new community of users. The next 13 months will be focused to generate further interactions through the last 10 workshops and strengthen those previous (7).

In conclusion, EARSC and EURISY consider achieved the goal of organising the first half of the workshops defined, showing a strong interaction among the two partners to leverage the awareness of the European EO capabilities and supporting the pilots in reaching new EO and non-EO communities. This result has also been achieved through an effective communication from WP6 among the social media channels and the support of the Project Management Team and without any doubt from the strong participation and enthusiasm of the e-shape pilots. The following step is the organisation of the last 10 workshops until May 2023.

8. ANNEX 1

Water Europe	
Date	24 March 2021
Location	Virtual – Zoom webinar
Attendees	70
Recording	Yes
e-shape pilot	S5P1 Improved historical water availability & quality water information service
Presentation	"Exploring the potential of Eos for the water sector: tailoring large-scale water services to ensure local customisation", Dr. Ilias Pechlivanidis - Swedish Meteorological and Hydrological Institute (SMHI)
Description of the activity	Organization of a session including a general introduction to the projects, its objectives and main actions as well as a hands-on training provided by S5P1 Water showcase. Identification of community of users for codesign of the pilot.
Objective of the activity	The objective of this session was to inform water stakeholders on the potential of Earth Observation data for this market by providing also a users' and market perspective overview.
Community	Maritime & Marine
Stakeholders present	Private-Public sector Water industry Technology suppliers (corporate, start-up) System integrators Governmental bodies (Local, Regional, National) Project developers Logistics and Utilities suppliers
Connections identified	EARSC has engaged with the private sector water association accelerator discussing the sector needs and challenges and how the eshape pilots can support.

Promotion to the community	International impact interest in knowing more the EO sector. Meeting with EARSC scheduled in June and potential users to identify synergies (EARSC members and e-shape pilots)
Take aways	Active interaction: Joint action plan with international impact to connect with private water sector users

Wind Energy Conference	
Date	3 December 2020
Location	Virtual
Attendees	N/A
Recording	N/A
e-shape pilot	S3P3 Merging offshore wind products, Merete Badger
Presentation	"Merging offshore wind products using EO assets", Merete Badger, DTU Wind Energy
Description of the activity	Recorded message to be embedded during the online plenary of the conference with the live participation of Ms Ioanna Karagali to reply to questions from the audience
Objective of the activity	To present e-shape project and activities of the S3P3 to the wind energy community
Community	Energy & mineral resources
Stakeholders present	Scientists, corporations
Connections identified	follow up of the university with relevant partners
Promotion to the community	Communication material has been produced including the recordings of the presentations as well as short articles for the virtual promotion
Take aways	Active interaction but without follow-up with the audience as the pilot's presentation was changed of session without the pilot being informed.

United Nations/Austria Symposium "Space Applications for Sustainable Development Goal 13: Climate Action"	
Date	1-3 September 2020
Location	Virtual
Attendees	60
Recording	N/A
e-shape pilot	S6P3 "Assessing Geo-hazard vulnerability of cities and critical infrastructures"
Presentation	"Assessing Geo-hazard vulnerability of cities and critical infrastructures", Pablo Ezquerro Martin, Spanish Geological and Mining Institute (IGME)
Description of the activity	Eurisy participated at the first session of the Symposium: Climate Action, on September 1 st 2020. Eurisy Coordinator illustrated a presentation entitled: User-centric satellite solutions for effective climate actions, elaborating on the unique e-shape co-design approach in general and showing concrete example based on all the pilots developed within the Showcase 7 (SC& climate). The assigned slots were of about 20 minutes including Q&A from the audience.
	EARSC participated as speaker in the Panel 2: International cooperation and best practices for Climate Action, on September 3rd. Emmanuel Pajot, EARSC Secretary General, presented about Earth Observation solutions supporting climate policy making. In this presentation, he gave an overview of the e-shape project introducing the pilots of energy, climate and health showcases, that specifically deliver information targeting policy makers in EU coordinating bodies, networks, and associations, as well as national, regional & EU stakeholders. The 5-minutes presentation was followed by a panel discussion in which participated CNES and the World Bank, among others.

Objective of the activity	The event aims to showcase concrete climate action cases through demonstrations of applications using space solutions. Users of space applications present lessons learnt and experts discuss the role of space applications in climate-related policies.
Community	Security & safe, Built environment, Atmosphere & Climate, Disasters & Geohazards
Stakeholders present	The wider space community, including the diplomatic community, statisticians, the private sector and academia, as well as UN entities, Public International/local sector, R&D
Connections identified	Eurisy has been contacted after the presentation by several interested partners. Contacts passed over to relevant e-shape pilots
Promotion to the community	Communication material has been produced including the recordings of the presentations as well as short articles for the virtual promotion
Take aways	Level uptake1-Active interaction, S5P3 in contact with the British Project Meteor to know more about the pilot

Spaceforcities21 "From innovation to operation" A talk about concrete uses of satellite data and services to support cities' resilience and sustainability		
Date	27 October 2020	
Location	Virtual- Teams	
Attendees	83	
Recording	Yes	
e-shape pilot	S2P3 EO-based pollution-health risks profiling in the urban environment	
	S3P1 nextSENSE: solar energy nowcasting and short-term forecasting system	
	S3P2 High-photovoltaic penetration at urban scale	
	S6P3 Assessing Geo-hazard vulnerability of cities and critical infrastructures	

Presentation	"Use of satellite data to forecast solar energy (PV) potential in cities: from solar cadaster to PV variability at urban scale", Prof. Phillippe Blanc, Armines
	"A web service to control and manage energy supply and demand, and integrate the energy produced from solar systems into cities' electricity grid. The examples of Athens (Greece) and Aswan (Egypt)", Panagiotis Kosmopoulos, National Observatory of Athens, Institute for Environmental Research and Sustainable Development, Greece, and Hesham El-Askary, Schmid College of Science and Technology
	"Assessing Geo-hazard vulnerability of cities and critical infrastructures", Pablo Ezquerro Martin, Spanish Geological and Mining Institute (IGME)
	"Monitoring air quality in cities: the SMURBS SDG indicator 11.6 2 Earth Observation Platform, Evangelos Gerasopoulos, National Observatory of Athens (NOA)
Description of the activity	This workshop presented and discussed solutions to use satellite data and signals, which can make a real difference for public managers willing to increase cities' sustainability and resilience to climate change and critical events. The solutions presented have been recently developed to improve services that already existed or to respond to emerging city challenges, such as climate change and the critical events.
	Representatives from city authorities, SMEs, service providers and NGOs with an interest in satellite-based solutions for cities expressed their views on the relevance of the services presented with regard to their needs and to identify the barriers to the operational use of such services in cities.
Objective of the activity	 Presenting and discussing emerging satellite-based services that can help cities to improve their sustainability and resilience to climate change and critical events.
	 Generating dialogue among stakeholders on the usefulness of the services presented, their sustainability over time, and their adaptability to cities' needs and operations.

	 Identifying the barriers and showstoppers to the exploitation of satellite-based services in cities. Stimulating connections and ideas to build upon the solutions presented and overcome the challenges identified.
Community	Security & safe, Built environment, Atmosphere & Climate, Disasters & Geohazards, Land Maritime & Marine
Stakeholders present	Local administrations dealing with infrastructure management, energy, air monitoring and health. NGOs, associations, private companies and research centres providing smart management solutions in cities. Decision-makers and policy-makers at all levels. Interested organisations and individuals
Connections identified	S6P3 follow up with some participants from the public sector (municipalities and public authorities)
Promotion to the community	Communication material has been produced including the recordings of the presentations as well as short articles for the virtual promotion
Take aways	Level uptake-1Active interaction: contacts with the following authorities for the pilot's development: Wallonia Region Flanders Region Hungary Presidency of the Council of Ministry Malta Council for Science and Technology (Governmental Agency) Warmia and Mazury Regional development Agency (Poland) The Regional Development Agency of the Pilsen Region Budapest Development Centre Ministry of Transport and Communication of Cyprus Ministry of Foreign Affairs Slovenia Estonian Association of households Turkish association of local authorities Croatian crisis management authority

Smart Farming 2021 - Satellite Earth Observation data supporting smart and resilient agriculture: the e-shape services	
Date	1 October 2021
Location	Virtual - Zoom meeting
Attendees	29
Recording	Yes
e-shape pilot	S1P4 Agro Industry S1P5 Linking EO and Farm IoT for automated decision support
Presentation	"How co-design is used to extract EO value for farmers", Matic Serc, CEO, eVineyardm; Gunter Zeug, Founder; Conrad Bielski, CTO, Riscognition.
	"WatchITgrow: enabling parcel-based monitoring service", Laurent Tits, team leader agricultural applications, VITO; Jurgen Decloedt, Business Development Remote Sensing, VITO
	"EO as a key tool in the 1-st National Research Programme
	Smart crop production", Katya Dimitrova, Project Coordinator, RST-TTO (Risk Space Transfer Office) Bulgarian Academy of Sciences
Description of the activity	The partners organised a full side event in this occasion given the relevance of the audience and the interest showed by the organisers.
Objective of the activity	The objective of the session was to present the solutions relevant for the sector and developed under the umbrella of the e-shape activities and to connect the pilots with potential users interested either in getting involved in the codesign or just to provide useful feedback on their specific needs.
Community	Land, Built Environment
Stakeholders present	EO agricultural companies, researchers, universities, governmental agencies, space agencies.
Connections identified	Overall relations with the private sector present

Promotion to the community	A full set of promotional material has been developed by the organisers including video recordings and abstract. The material has been distributed to the community
Take aways	Active interaction pilots-audience to be explored more in focus in the next 13-15 months

Smart Farming 2020 - About the use of Satellites and data for the Agriculture market	
Date	9 October 2020
Location	Virtual-Zoom
Attendees	30
Recording	Yes
e-shape pilot	S1P2 EU-CAP Support S6P4 ReSAgri-Resilient and Sustainable ecosystems including agriculture and food
Presentations	"Developing tailored services for the agro- insurance sector over northern Greece: The case of Rodopi / cotton crop", Nikolaos S. Bartsotas, Senior Research Associate, National Observatory of Athens/ Beyond Center of Earth Observation Research and Satellite Remote Sensing
	"e-shape - EU CAP Support Pilot: A machine learning enabled system for dynamic phenology estimation and yield prediction using satellite and in-situ observations", Vassilis Sitokonstantinou, Research Associate, National Observatory of Athens
Description of the activity	Eurisy and EARSC organized a dedicated session on the contribution of satellite data and solutions to a more efficient and sustainable agri-food sector. The entire session latest a total of 2h. Eurisy to set the scene presented "Usercentric approach to facilitate a widespread uptake of satellite-based solutions for agri-food sector".

Objective of the activity	The objective of the session was to present the solutions relevant for the sector and developed under the umbrella of the e-shape activities and to connect the pilots (S1P2 EU CAP Support; S6P4 ReSAgri - Resilient and Sustainable ecosystems including Agriculture and food) with potential users interested either in getting involved in the co-design or just to provide useful feedback on their specific needs.
Community	Land, Built Environment
Stakeholders present	Farmers Growers Agricultural industry Technology suppliers (corporate, start-up) System integrators Governmental bodies (Local, Regional, National) Project developers Finance / Consulting Logistics suppliers anyone interested in smart farming
Connections identified	Overall relations with agricultural community from Eastern Europe
Promotion to the community	Sharing of the abstract as well as presentations.
Take aways	Level uptake-1 Private users contacting S6P4 for setting up collaboration.

GEOGRAMA- Satellite-based applications in the disaster and climate domain	
Date	4 November 2021
Location	Virtual-Teams
Attendees	21
Recording	Yes
e-shape pilot	S7P5 Seasonal preparedness S5P3 DIVE-Diver information on visibility in Europe S5P6 EO based phytoplankton biomass for WDF reporting S5P7 Rheticus: AquaculturePlus
Presentation	"Criterion - Short range and seasonal weather forecasts for Unesco Cultural Heritage Monuments", Stavros Solomos from the Greece

	based Research Center for Atmospheric Physics and Climatology of the Academy of Athens.
	"Algae bloom monitoring via satellites, for reporting, management, and early warning", Annelies Hommersom, Water Insight
	"Rheticus Aquaculture: Satellite monitoring service for smart Aquaculture", Alessandra Bleve, Planetek
	"Dive - Simple Water Visibility Information for Dive Planning", Simeon Wilkinson, Plymouth Marine Laboratory.
Description of the activity	A 2h30 country workshop focussed on Spain and the disaster-climate related sector attended by 21 people
Objective of the activity	To raise awareness of the benefits of using satellite EO within the disasters-climate related sector, and secondly, to identify participants who would wish to engage with the presenters after the workshop to help evolve the pilots to become more user-needs orientated.
Community	Maritime & Marine, Disasters & Geohazards, Atmosphere & Climate
Stakeholders present	Tourism management in terms of final users, and those in charge of coastal territory management, and of urban planning and municipalities. 7 attendees who were of direct agriculture or EO involvement, a relatively large number below the target number of 24 registrants
Connections identified	CNC-France
Promotion to the community	General promotion of e-shape and of the pilots presenting
Take aways	Level uptake-1 Interaction for the pilot's design with the shellfish farming organisations (CNC France). However, mainly in France and at EU level these organisations have entered in an electoral period as they have to renew their instances for 3 or 4 years (regard the different organisations concerned). As a consequence, for any strategic choices, the potential user had to wait from the beginning of February until the end of June this year for the renewal of the French presidency at CNC level, as well as the renewal of EMPA board members and

presidency at EU level. The collaboration will
resume on June22. The activity is on-going.

Eurisy Webinar series Space Opportunity for climate challenges	
Date	3 March 2021
Location	Virtual- Teams
Attendees	50
Recording	Yes
e-shape pilot	S1 Agriculture, S4 Ecosystem, S5 Water
Presentation	"Harvester season, forestry planning service", Mikko Strahlendorff "Improve historical water availability and quality
	information services", Ilias Pechlivanidis,
Description of the activity	In this monthly webinar series, Eurisy and dotSpace bring together research, government and industry experts to talk about their innovative solutions and funding opportunities. This highly multidisciplinary initiative also provides an open networking and knowledge sharing platform where space & non-space peers can exchange ideas, discover opportunities and meet people to help improve their activities (business, decision-making, legal, research, education, etc.).
Objective of the activity	The Space for Climate initiative offers a one- stop-shop networking platform to find relevant information, news, events, calls, partners and customers for space applications related to climate.
Community	Land, Built Environment, Atmosphere & Climate (about 50 participants per each webinar)
Stakeholders present	Space and non-space sector. Forestry industry, Technology suppliers (corporate, start-up), System integrators, Governmental bodies (Local, Regional, National), Project developers, Logistics suppliers
Connections identified	Overall relations with the community present

Promotion to the community	After every session Eurisy produced an article for communication purposes including the recording of the presentation as well as relevant links for follow-up information
Take aways	Active interaction to be explored more in focus in the next 13-15 months

Eurisy Webinar series The Challenges of the blue World	
Date	February 2021 - 5 May 2021
Location	Virtual-Teams
Attendees	25
Recording	Yes
e-shape pilot	S5P3 Merging offshore wind products
Presentation	"Merging offshore wind products", Dr Ioanna Karagali
Description of the activity	Eurisy in cooperation with the European Space Agency organized a series of Three webinar on Marine Resources Exploitation (aquaculture; fishery; illegal fishing), Secure Transports and Communication (connectivity, autonomous shipping, logistics) and Maritime Spatial Planning: coastal protection, renewable energy, and port development. The Webinars have been designed to promote the ESA Blue Worlds Task Force Stakeholder Consultation, designed to gauge the understanding and interest as well as current and potential involvement of the European maritime users community in the exploitation of space based systems, data and products.
Objective of the activity	This webinar series, promoted by ESA in collaboration with Eurisy, discussed the current challenges faced by maritime stakeholders, as well as how satellite-based solutions respond to emerging needs and trends. The webinar gathered around a virtual table local authority, NGOs, research centres, and industrial clusters from space and maritime domains.
Community	Maritime & Marine

Stakeholders present	Space stakeholders, Maritime industry, Technology suppliers (corporate, start-up), System integrators, Governmental bodies (Local, Regional, National), Project developers Logistics suppliers
Connections identified	Overall relations with the ESA ecosystem
Promotion to the community	Presentation and video recordings
Take aways	Active interaction to be explored more in focus in the next 13-15 months

ExpandEO21- Expanding the Copernicus Services ecosystem - the e-shape contribution	
Date	17 June 2021
Location	Virtual - Zoom
Attendees	35
Recording	Yes
e-shape pilot	S1 Agriculture, S4 Ecosystem, S5 Water
Presentation	"The Agricultural showcase", Laurent Tits, VITO
	"The Ecosystem showcase", Ulf Mallast, Helmholtz Centre for Environmental Research GmbH - UFZ
	"The Water resource management showcase", Nuno Grosso, DEIMOS
Description of the activity	A 90-minute workshop focussed on the use of EO in the agriculture, ecosystem and water environment attended by 35 people
Objective of the activity	To raise awareness of the benefits of using satellite EO within the agriculture, ecosystem and water sector, and secondly, to identify participants who would wish to engage with the presenters after the workshop to help evolve the pilots to become more user-needs orientated.
Community	Land, Built environment, Maritime & Marine
Stakeholders present	EO community Research, end users and civil society that want to benefit from the

	understanding and entering the EuroGEO initiative
Connections identified	2 connections with public-private sector
Promotion to the community	General promotion of e-shape and of the pilots presenting
Take aways	Level uptake-1 CREAF for collaboration to jointly improve the pilots' services, CNRS as data provider. Contact established between the pilots and the respective user. Connection to be explored more in focus in the next 13-15 months. Level uptake 1-

IRLOGI-Satellite support for agriculture in Ireland	
Date	23 June 2021
Location	Virtual – Teams
Attendees	30
Recording	Yes
e-shape pilot	S1P2 EU CAP Support S1P4 Agro Industry S1P6 Service for SDG2.4.1 and 15.3.1 indicators
Presentation	"EU CAP Support", Vassilis Sitokonstantinou, Academy of Athens "Agro Industry", Laurent Tits, VITO "Service for SDG2.4.1 and 15.3.1 indicators", Leonid Shumilo, Ukraine Space Research Institute NASU-SSAU
Description of the activity	A 2h30 country workshop focussed on Ireland and the agricultural sector attended by 38 people
Objective of the activity	To raise awareness of the benefits of using satellite EO within the agriculture sector, and secondly, to identify participants who would wish to engage with the presenters after the workshop to help evolve the pilots to become more user-needs orientated.

Community	Land (26 attendees were of direct agriculture or EO involvement)
Stakeholders present	National farmers associations, national government agricultural departments, environment protection agency, university & research
Connections identified	Dedicated meeting pilots-interested user (eoAnalytics, Icon, TEAGASC)Knowledge and data transfer between S1P6 "Service for SDG2.4.1 and 15.3.1 indicators" representative and eoAnalytics for the "Incubation to produce, test, and implement EO services on a national scale"
Promotion to the community	General promotion of e-shape and of the pilots presenting
Take aways	Level uptake 1-active interaction for S1P2, S1P4, S1P6 Level uptake 2-data integration for S1P6 pilot's development

EARSC- SCO workshop: Earth Observation solutions contributing to EuroGEO: cross-benefits benefits e-shape and SCO communities	
Date	13 October 2020
Location	Virtual-GotoMeetign
Attendees	30
Recording	N/A
e-shape pilot	S6P3 Assessing Geo-hazard vulnerability of Cities and Critical Infrastructures S5P2 Satellite Earth Observation-derived water bodies and floodwater record over Europe S7P5 Seasonal preparedness
Presentation	"Assessing Geo-hazard vulnerability of Cities and Critical Infrastructures", Pablo Ezquerro, Spanish Geological and Mining Institute (IGME) "Satellite Earth Observation-derived water bodies and floodwater record over Europe", Patrick Matgen, Luxemburg Institute of Science (LIS)
	"Seasonal preparedness", Andrea Vajda, Finnish Meteorological Institute (FMI)
Description of the activity	A 90-minute workshop present both SCO and the e-shape project, to create and foster

	opportunities, research and expertise through new collaboration between actors involved in space and players working at the heart of climate and environmental issues.
Objective of the activity	aims at bringing together the representatives of SCO and his community of users, with the eshape pilots, introducing current works and projects. SCO will share its understanding of eshape, how pilots are aligned with their activities/challenges, and opportunities as well for the e-shape pilots user's uptake.
Community	Disasters & Geohazards, Atmosphere & Climate, Maritime & Marine
Stakeholders present	e-shape pilots and SCO community, GEO
Connections identified	Public sector
Promotion to the community	General promotion of e-shape and of the pilots presenting
Take aways	Level uptake 1-S7P5 and S5P2 applied to the call for proposal by SCO

European Maritime Days - Workshop Satellite-based applications in the maritime domain: hands- on the e-shape project	
Date	21 May 2021
Location	Virtual - internal platform
Attendees	50
Recording	N/A- EMD platform and own recording
e-shape pilot	S5P5 Monitoring fishing activity
Presentation	"Monitoring fishing activity", Aida Campos "Sargassum detection for seasonal planning", Marion Sutton, Collect Localisation Satellites (CLS)
Description of the activity	The first part of the workshop will introduce the audience to operational satellite-based applications providing a market and users' benefits perspective in maritime spatial

	planning. The second part is dedicated to the
	planning. The second part is dedicated to the presentation of pilots projects. The presenters will provide hands-on training and users' benefit on two applications, providing a link to most of the different European Directives and Policies and the SDGs.
	The format foresees a Q&A to boost interaction and live engagement between the audience and the pilots through feedback useful to inject in the co-design methodology of the service development.
Objective of the activity	To raise awareness of the benefits of using satellite EO within the marine sector, and secondly, to identify participants who would wish to engage with the presenters after the workshop to help evolve the pilots to become more user-needs orientated.
Community	Maritime & Marine
Stakeholders present	Maritime industry Technology suppliers (corporate, start-up) System integrators Governmental bodies (Local, Regional, National) Project developers Logistics suppliers
Connections identified	Relations with EMODnet Secretariat
Promotion to the community	General promotion of e-shape and of the pilots presenting
Take aways	Active interaction with the community to be explored in the next 13-15 months

EGU21 - Earth Observation based solution supporting disaster resilience: hands-on the e-shape project user-centric approach	
Date	26 April 2021
Location	Virtual-Zoom meeting
Attendees	15
Recording	Yes
e-shape pilot	S5P1 Improved historical water availability & quality water information service

	S6P1 EO4D_ASH - EO Data for Detection, Discrimination and Distribution (4D) of Volcanic ash
Presentation	"Can earth observations evolve the water sector? Tailoring large-scale water services to address the user and market needs", Dr. Ilias Pechlivanidis - Swedish Meteorological and Hydrological Institute (SMHI) "Integration of EO and model data for the monitoring of volcanic plumes critical to aviation
	operations", Nikolaos Papagiannopoulos – Institute of Methodologies for Environmental Analysis (IMAA CNR)
Description of the activity	A 45min workshop focussed on EO-based applications in the water and disaster sector developed within the e-shape project and exemplify solutions that not only can support disaster resilience, raise awareness and risk response capability at the EU level, but can be integrated into users' daily workflows.
Objective of the activity	The aim is to bring together research and scientist communities to discuss about opportunities and challenges, injecting knowledge exchanges on co-design methodologies to develop the operational uptake of mature EO-based services.
Community	Land
	Maritime & Marine
	Disasters & Geohazards
	Atmosphere & Climate
	Built environment Energy & mineral resources
Stakeholders present	EO research and scientist
Connections identified	Relations with EGU communities
Promotion to the community	General promotion of e-shape and of the pilots presenting, as well as of the Call for EO-based Products 2021
Take aways	Active interaction with the community to be explored in the next 13-15 months

Table 18

European Week of the Regions and Cities 21- Earth Observation solutions for smarter and greener regions and cities: hands-on e- shape pilots	
Date	10 November 2021
Location	Virtual
Attendees	30
Recording	Yes
e-shape pilot	S5P5 "Monitoring fishing activity" S2P2 "EO-based surveillance of POPs pollution"
Presentation	"Monitoring fishing activity", Aida Campos, senior researcher at IPMA, the Portuguese Institute for Sea and Atmosphere "EO-based surveillance of POPs pollution", Jana Klanova, prof. RNDr., Ph.D. Head, Human Exposome Masaryc University
Description of the activity	A 1h30 workshop aimed to bring representatives of regional/local administrations, SMEs and research centres to discuss the opportunities and challenges to the operational uptake of mature satellite-based services developed under the project e-shape.
Objective of the activity	To raise awareness of the benefits of using satellite EO within the maritime sector, and secondly, to identify participants who would wish to engage with the presenters after the workshop to help evolve the pilots to become more user-needs orientated.
Community	Land Maritime & Marine Disasters & Geohazards Atmosphere & Climate Built environment
Stakeholders present	regional/local administrations, SMEs and research centres, Local and regional authorities, EU institutions, policy makers
Connections identified	3 stakeholders from public sector that wishes to engage with S5P2 and S2P2.

Promotion to the community	General promotion of e-shape and of the pilots presenting
Take aways	Level uptake 1- active interaction for S2P2 and S5P2. Dedicated meeting pilots-interested user (CPMR).

EARSeL Joint Workshop "EO for sustainable cities and communities"	
Date	30 March 2021
Location	Virtual – EARSeL platform
Attendees	20
Recording	N/A- EARSeL platform and own recording
e-shape pilot	S3P1 nextSENSE
Presentation	"e-shape project: the NextSENSE service case", Panagiotis Kosmopoulos, National Observatory of Athens
Description of the activity	A 2h30 country workshop focussed on Ireland and the agricultural sector attended by 38 people
Objective of the activity	To raise awareness of the benefits of using satellite EO within the agriculture sector, and secondly, to identify participants who would wish to engage with the presenters after the workshop to help evolve the pilots to become more user-needs orientated.
Community	Atmosphere & Climate Built environment
Stakeholders present	EO Scientific and research communities
Connections identified	Relation with EARSeL thematic working group aligned with e-shape: Coastal zones and Geological applications
Promotion to the community	General promotion of e-shape and the nextSENSE pilot

Take aways	Active interaction to be explored more in focus in the next 13-15 months