



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.

Ref. Ares(2023)6623910 - 30/09/2023



## EXCELSIOR Project

H2020-WIDESPREAD-2018-2020   Grant Agreement No 857510	
Project full title:	<b>ERATOSTHENES: Excellence Research Centre for Earth Surveillance and Space-Based Monitoring of the Environment</b>
Project acronym:	<b>EXCELSIOR</b>
Work Package:	<b>WP6 Strategic Growth Roadmap</b>
Deliverable:	<b>D6.12 Report on the extroversion programme activities</b>
Version:	<b>Final D6.12</b>
Dissemination level:	<b>Public</b>

© Copyright by the **EXCELSIOR** consortium, 2019-2026. The project that has received funding from the European Union's Horizon 2020 Research and Innovation programme under Grant Agreement No 857510. More info regarding the project you can find here: [www.excelsior2020.eu](http://www.excelsior2020.eu)

DISCLAIMER: This document contains material, which is the copyright of **EXCELSIOR** consortium members and the European Commission, and may not be reproduced or copied without permission, except as mandated by the European Commission Grant Agreement No 857510 for reviewing and dissemination purposes. The information contained in this document is provided by the copyright holders "as is" and any express or implied warranties, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose are disclaimed. In no event shall the members of the **EXCELSIOR** consortium, including the copyright holders, or the European Commission be liable for any direct, indirect, incidental, special, exemplary, or consequential damages (including, but not limited to, procurement of substitute goods or services; loss of use, data, or profits; or business interruption) however caused and on any theory of liability, whether in contract, strict liability, or tort (including negligence or otherwise) arising in any way out of the use of the information contained in this document, even if advised of the possibility of such damage.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



 	<b>H2020-WIDESPREAD-2018-2020/ H2020-WIDESPREAD-2018-01</b> <b>Grant Agreement No 857510</b> This project is funded by the <b>EUROPEAN COMMISSION</b> in the Framework Programme for Research and Innovation (2014-2020).	
Call / Topic:	<b>H2020-WIDESPREAD-2018-01 /</b> <b>WIDESPREAD-01-2018-2019</b> <b>Teaming Phase 2</b>	
Project full title:	<b>ERATOSTHENES: Excellence Research Centre for Earth Surveillance and Space-Based Monitoring of the Environment</b>	
Project acronym:	<b>EXCELSIOR</b>	
Work Package (WP): Task (T):	<b>WP6 Knowledge transfer and capacity building</b> <b>Task 6.4 Extroversion programme</b>	
Deliverable (D):	<b>D6.12 Report on the extroversion programme activities</b>	
Due date of deliverable:	<b>30 September 2023</b> <b>(Month 48 of the project)</b>	<b>30 September 2023</b> <b>(Month 48 of the project)</b>
Author(s):		CUT: <b>Diofantos HADJIMITSIS</b> ECoE: <b>Kyriaki FOTIOU, Zampela PITTAKI</b> DLR: <b>Gunter SCHREIER</b> NOA: <b>Mariza KASKARA, Stavroula ALATZA, Maria PAPAKONSTANTINO, Ilias FOUNTOULAKIS, Ilias TSOUMAS, John MPOTHOS, Vasilis SITOKONSTANTINO, Fotini SALTA, George GIANNARAKIS</b>
Contributor(s):	CUT: <b>Argyro NISANTZI, Christodoulos METTAS, Christiana PAPOUTSA</b> ECoE: <b>Kyriacos THEMISTOCLEOUS</b> DLR: <b>Gunter SCHREIER</b> NOA: <b>Haris KONTOES</b> TROPOS: <b>Albert ANSMANN, Johannes BUEHL</b> DEC-MTCW: <b>George KOMODROMOS</b>	
Start date of project:	<b>1 October 2019</b>	Duration: <b>84 months</b>
Dissemination Level:	<b>Public</b>	



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



## Document Sign-off

Nature	Name	Role	Partner	Date
<b>DRAFT</b>	Mariza KASKARA, Kyriaki FOTIOU, Zampela PITTAKI	WP6 Participant	NOA	04/09/23
<b>REVIEWED</b>	Haris KONTOES	WP6 Participant	NOA	07/09/23
<b>REVIEWED</b>	Gunter SCHEIER Johannes BÜHL Diofantos HADJIMITSIS	WP6 Participants	All	14/09/23
<b>REVIEWED</b>	Kyriacos THEMISTOCLEOUS	Project Manager	ECoE	18/09/23
<b>APPROVED</b>	All partners			26/9/2023

## Work Package 6: Knowledge transfer and capacity building

### D6.12 Report on the extroversion programme activities

Sections to be protected	Sections to be protected	Sections to be protected	Sections to be protected	
			Period	Type*
				PD

\*PD: Public dissemination CA: Confidentiality Agreement required for disclosure



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



## Executive Summary

This deliverable presents the review of the actions regarding extroversion that took place during RP3. The extroversion programme aims to upscale the Eratosthenes Centre of Excellence strategic positioning to address regional and European challenges to broaden the horizons of the Eratosthenes Centre of Excellence's staff, to attend international events for shaping the Eratosthenes Centre of Excellence strategy and perform ad-hoc trainings and discussions with professionals in industries. The report includes detailed information of the activities that were undertaken, including:

- Lectures by invited speakers.
- (Virtual) workshops organized by the Eratosthenes Centre of Excellence
- Other activities, such as conference attendance, meetings with stakeholders of the Eastern Mediterranean, Middle East and North African (EMMENA) region, trainings etc.



This project has received funding from the European Union’s Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



## Table of Contents

Executive Summary .....	4
1. Introduction.....	7
2. Monitoring of activities .....	8
2.1 Lectures by Invited Speakers.....	8
2.2 Virtual EXCELSIOR workshops .....	9
1.1.1 First virtual EXCELSIOR workshop .....	<b>Error! Bookmark not defined.</b>
1.1.2 Second virtual EXCELSIOR Workshop.....	<b>Error! Bookmark not defined.</b>
1.1.3 Third virtual EXCELSIOR Workshop .....	9
1.1.4 Fourth virtual EXCELSIOR Workshop.....	10
2.3 Other activities .....	10
3. Conclusions.....	26



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



## Abbreviations

<b>CUT</b>	Cyprus University of Technology
<b>DLR</b>	German Aerospace Centre
<b>ECOE</b>	Eratosthenes Centre of Excellence
<b>EO</b>	Earth Observation
<b>EMMENA</b>	East Mediterranean/Middle East/North Africa
<b>ESA</b>	European Space Agency
<b>NOA</b>	National Observatory of Athens
<b>RP</b>	Reporting Period
<b>SAR</b>	Synthetic Aperture Radar
<b>TROPOS</b>	Leibniz Institute for Tropospheric Research
<b>WP</b>	Working Package
<b>CUT</b>	Cyprus University of Technology
<b>DLR</b>	German Aerospace Centre
<b>ECOE</b>	ERATOSTHENES Centre of Excellence
<b>EO</b>	Earth Observation
<b>EMMENA</b>	East Mediterranean/Middle East/North Africa



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



## 1. Introduction

The Report on the extroversion programme activities is included in the WP6 “Knowledge transfer and capacity building”, whose major objective is to perform specific knowledge transfer activities between the Strategic Partners and the Eratosthenes Centre of Excellence (ECoE) and to upscale ECoE’s research capacity and potential.

This specific report puts emphasis on ECoE’s Extroversion programme activities in EMMENA region and will be modified at specific intervals to indicate any updates and reveal the specific actions that need to be taken.

The objective of the report is to explain the importance of the various formats of the extroversion activities and analyse their goals. The extroversion actions are taken place are the following:

- Organisation of Lectures by Invited Speakers to broaden the horizons of ECoE’s staff.
- Organisation of an annual EXCELSIOR workshop with participation of national and international stakeholders to work towards the sustainability of ECoE;
- Organisation of targeted meetings with stakeholders of Cyprus and EMMENA region to stimulate collaboration, data exchange and understating of needs.
- Attendance in targeted workshops to foster cross-fertilisation of ideas.
- Attendance at international conferences to raise awareness on the activities of ECoE.
- Attendance at conferences to assist ECoE staff to shape business strategy and keep up to date with state-of-the-art services and developments in the European Research Area and relevant Innovation activities, such as Digital Innovation Hubs Workshops.
- Organise trainings with the Advanced Partners (NOA, DLR, TROPOS) to exchange expertise and foster collaboration for new proposals.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



## 2. Monitoring of activities

This section will mention all the activities that have been taken place during RP3. The activities have been categorized as follows:

- Lectures by invited speakers.
- (Virtual) workshops organized by ECoE.
- Other activities, such as conference attendance, meetings with stakeholders of EMMENA region, trainings etc.

### 2.1 Lectures by Invited Speakers

During RP3, the ECoE organised various lectures, (as noted in Table 1), where invited speakers presented a range of topics relevant to Earth Observation and Remote Sensing. The lectures were attended by researchers and EO/RS professionals in Cyprus, Europe, EMMENA region, Africa, Asia, and N. America.

Table 1: Summary of invited talks – RP3

Date	Topic	Speaker	Link
13/4/2022	Ocean Monitoring using remote sensing platforms	Dr. Lohitzune Solabarrieta	<a href="https://youtu.be/9HjZGu-qFJk">https://youtu.be/9HjZGu-qFJk</a>
18/7/2022	Mediterranean Forest Map	Dr. Virginia Garcia Millan	<a href="https://youtu.be/gE9wxP7EMes">https://youtu.be/gE9wxP7EMes</a>
16/11/2022	GIS Day 2022	Cyta, CUT, Department of Forests (Cy), Department of Land and Surveys (Cy), Electricity Authority of Cyprus, Geomatic Technologies (Cy), Geografica Ltd (Cy), NOA (Gr) and Marathon Data Systems (Gr)	<a href="https://www.facebook.com/events/1376795162855363">https://www.facebook.com/events/1376795162855363</a>
15/12/2022	The Swiss Data Cube: EO Open Science for Environmental Monitoring	Universite de Geneve	<a href="https://youtu.be/uIBWQ-ktBdE">https://youtu.be/uIBWQ-ktBdE</a>
02/02/2023	Our urban world – Dynamics, dimensions, and forms of global urbanization processes	Dr Hannes Taubenboeck	N/A





This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



15/03/2023	8 <sup>th</sup> Copernicus User Forum	Dr Kyriacos Themistocleous	N/A
17/03/2023	INWAT PRIMA Project	Dr Constantinos Panayiotou	<a href="https://inwatproject.eu/node/22">https://inwatproject.eu/node/22</a>
29/03/2023	Pythia Open Day	N/A	N/A
03/04/2023	The Interplay of Data Sciences and Earth Observations addressing Environmental Challenges	Prof Thomas Krauss	N/A
03/04/2023	Remote sensing of arid lands	Prof Dan G. Blumberg	N/A
06/04/2023	EO Applications in Forest Fire Management - A European Mediterranean perspective	Prof. Ioannis Gitas	N/A
06/04/2023	Investigation of a vertically integrated approach for the study and treatment of coastal erosion (example from Greece)	Prof Thomas Hasiotis	N/A
26/06/2023	Disruptive Technologies: A top-down approach	Mr Stelios Neophytidis	N/A

The invited lectures focused on a wide range of earth observation applications. These invited lectures were attended by participants from various countries and several types of organizations.

## 2.2 Virtual EXCELSIOR workshops

During RP3, the 'EXCELSIOR' H2020 Teaming Project Consortium and the ERATOSTHENES Centre of Excellence (ECoE) organised the Third and Fourth Virtual International Workshop. The Third Virtual International Workshop on 'Entrepreneurship and Innovation in Earth Observation' and the Fourth Virtual EXCELSIOR Workshop focused on "Earth Observation Research Trends in the EMMENA region".

### 2.2.1 Third virtual EXCELSIOR Workshop

On June 21st, 2022, the 'EXCELSIOR' H2020 Teaming Project Consortium and the ERATOSTHENES Centre of Excellence (ECoE) of the Cyprus University of Technology organized the Third Virtual International Workshop on 'Entrepreneurship and Innovation in Earth Observation'. This Workshop is a part of a series of annual workshops with participation of national and international stakeholders of EXCELSIOR, addressing all the different activities of the ECoE, i.e. infrastructure, research, education and innovation through entrepreneurship.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



The third virtual workshop brought together experienced stakeholders from the industry that develop innovative applications using EO data.

The recording of the workshop is also available on the YouTube channel: <https://youtu.be/hIW3XyR9W2s> and <https://youtu.be/bTbq1OfnmRE>.



Figure 1: Third Virtual EXCELSIOR Workshop Speaker announcement (example of Monika Krzyżanowska)

## 2.2.2 Fourth virtual EXCELSIOR Workshop

On the 5<sup>th</sup> of July 2023, the Fourth virtual EXCELSIOR workshop was held online in zoom platform. The topic of the Fourth Virtual EXCELSIOR Workshop focused on “Earth Observation Research Trends in the EMMENA region”. Speakers from the EMMENA region presented Earth Observation current research trends being performed in their region and the wider Mediterranean region. It is noted that many efforts were carried out to identify female researchers in the EMMENA and reach out to them to invite them as speakers in this workshop.

The recording of the workshop is also available on the YouTube channel: <https://www.youtube.com/watch?v=0DUoUJRyfdI>

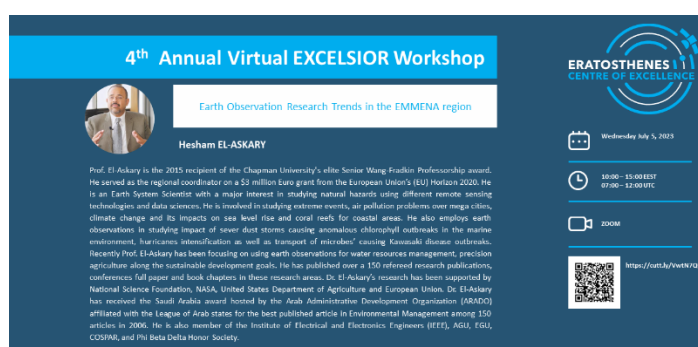


Figure 2: Fourth Virtual EXCELSIOR Workshop Speaker announcement (example of Hesham El-Askary).

## 2.3 Other activities

As mentioned in Chapter 2, except the invited lectures and the workshops organised by ECoE, ECoE staff also attended various other activities, as outlined in the table below:



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



Table 2: Summary of other activities

Date	Activity	Type	Description of the event (Aim, size of the audience, type of the audience)
09/4/2022	Sixth European Space Generation Workshop 2022	Workshop	ECoE participated as hosts and supporters. Related link: <a href="https://spacegeneration.org/6th-esgw-2022">https://spacegeneration.org/6th-esgw-2022</a>
11/04/2022	Meeting with Geological Survey Department	Meeting with stakeholders	There were eight participants from the ERATOSTHENES Centre of Excellence. The general discussion focuses on the Geohazards demonstration project
9-11/5/2022	Secondment at TROPOS	Training	Two-week secondment of Eleni Loulli at the Leibniz Institute for Tropospheric Research (TROPOS) premises and the completion of the first secondment under ERATOSTHENES Centre of Excellence. During her stay, Eleni was trained on ground-based radar data processing under the supervision of Dr Johannes Bühl.
23-27/5/2022	EGU General Assembly 2022	Conference	Dr Silas Michaelides participated as a convener at the session AS1.13 Precipitation: Measurement, Climatology, Remote Sensing, and Modelling. Mrs Maria Prodromou presented "The implementation of the Forest Canopy Density (FCD) model for Coniferous ecosystems in Cyprus forests, using Landsat-8 and Sentinel-2 satellite data". Ms Eleni Loulli presented "Precipitation classification and quantitative mapping using ground-based radar data, intended for drought monitoring in Cyprus"
21/6/2022	Third Virtual EXCELSIOR Workshop	Workshop	The Third Virtual EXCELSIOR Workshop: "Entrepreneurship & Innovation in Earth Observation" workshop was held virtually.
5/9/2022	Kick-off Meeting - AGREEMAR PRIMA Project	Meeting	Dr. Constantinos F. Panagiotou and Ms. Eleni Loulli participated in the meeting in Dresden Germany. This activity was held under the AGREEMAR project.
14/09/2022	EARSeL Workshop on Developing Countries	Workshop, Networking	N/A ( <a href="https://cyprus2022.earsel.org/">https://cyprus2022.earsel.org/</a> )



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



13-16/9/2022	EARSeL Symposium: Earth Observation for Environmental Monitoring	Conference	Dr. Constantinos F. Panagiotou conducted 3 presentations. This activity was held under the AGREEMAR and MEDSAL projects.
27-30/9/2022	International Conference on	Conference	"Integrate Groundwater Management of Mediterranean Coastal Aquifers"
27/9/2022	Meeting with the Department of Meteorology	Meeting with stakeholders	Discussion on signing an MoU between the ERATOSTHENES Centre of Excellence and Cyprus Department of Meteorology
30/9/2022	European Researchers Night 2022	Networking	This event was held in Nicosia. The participants had the opportunity to learn and interact with ERATOSTHENES Centre of Excellence's activities and research. Our team participated with the booth "It's Earth Observation o'clock", where people of all ages were informed about the science of Earth Observation and Remote Sensing.
2/10/2022	Lanitio High School- information desk for the promotion of Eratosthenes CoE	Networking	N/A
3/10/2022	EU SpaceWeek 2022	Networking	<a href="https://www.euspaceweek.eu">https://www.euspaceweek.eu</a>
5/10/2022	Gender, Science and Earth Observation: Strategies to support gender responsive leadership	Social Responsibility event	The event hosted Prof. Dr. Maria Rentetzi, Head of the Chair of Science, Technology and Gender Studies, FAU Erlangen-Nürnberg and Mrs. Barbara Ryan, Executive Director, World Geospatial Industry Council (WGIC) for introductory keynote speeches. The speeches were followed by a panel discussion on "Strategies to support gender responsive leadership at ERATOSTHENES Centre of Excellence (ECoE)".
6/10/2022	Achieving Sustainable Groundwater Management: Promising Directions and Unresolved	Conference	Dr Silas Michaelidis participated by physical presence in Valencia, Spain.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



	Challenges (Sustain 2022)		
11/10/2022	Meeting with Cyprus Civil Defence	Meeting with stakeholders	A meeting was held between the ERATOSTHENES Centre of Excellence and the Civil Defence at the Limassol Civil Defence District Office, where we presented the activities of the ERATOSTHENES Centre of Excellence, and discussed, among other things, the needs of the Civil Defense and ways of cooperation between the two entities. From the ERATOSTHENES Center of Excellence, Dr Marios Tzouvaras, Dr Christodoulos Mettas, Ms Maria Prodromou and Mr Evagoras Evagorou participated online, the Civil Defence representatives from the Limassol Civil Defence District Office participated by physical presence and the Civil Defence District Offices of Nicosia and Paphos participated online.
21/10/2022	Visiting at Cyl Proteas facilities	Meeting with stakeholders	
24-27/10/2022	ACTRIS Week 2022 and ACTRIS Aerosol Remote Sensing Workshop	European Research Infrastructures Events and Workshops	Dr. Rodanthi-Elisavet Mamouri attended the event as representative of the Planning National Facility for Aerosol and Cloud Profiling - CARO hosted by the ERATOSTHENES Centre of Excellence.
09-10/11/2022	Training for Cyprus Agricultural Payment Organization's (CAPO) staff	Workshop	Crop Classification and the use of Sen4CAP platform
02-03/11/2022	Advanced 'Masterclass' workshop for writing Proposals in Horizon Europe	Workshop /Training	Dr. Rodanthi-Elisavet Mamouri attended an advanced 'Masterclass' workshop for writing Proposals in Horizon Europe, the European Commission's (EU) Framework Program for Research and Innovation (R&I) for the period 2021-2027, organized by the Research and Innovation Foundation (RIF).
3/11/2022	Visit of Professor Kypros Pilakoutas at	Networking	Professor Kypros Pilakoutas (The University of Sheffield, UK) visited the ERATOSTHENES CoE to discuss future collaboration between



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



	ERATOSTHENES Centre of Excellence		the two organisations, in the field of EO and RS as well as within the framework of the EXCELSIOR project, since the UoS has provided a commitment letter. Furthermore, the signing of an MoU was discussed in detail.
10/11/2022	Meeting with Assistant Professor Marinos Stylianou	Networking	Assistant Professor Marinos Stylianou of the Open University of Cyprus met with the ERATOSTHENES Centre of Excellence to discuss potential collaborations for research activities
14-15/11/2022	ACTRIS Cloud Remote Sensing Workshop Nov. 2022	Workshop	N/A
17/11/2022	Meeting with Greek Embassy of Abu Dhabi	Meeting with stakeholders	Mr. Christos Theocharidis visited the Embassy of Greece in the UAE, where he informed the Ambassador Mr. Antonis Alexandridis and the Head of Consular Office Mr. Vasilis Theocharidis, about the activities and targets of ERATOSTHENES Centre of Excellence. The meeting took place in a hybrid format with the participation of representatives from the EXCELSIOR Project, including our strategic partners BEYOND EO Centre NOA. EXCELSIOR coordinator Prof. Diofantos Hadjimitsis gave an online presentation about the vision of the project and discussed ways of future collaboration with strategic partners and stakeholders in the MENA region with the ERATOSTHENES Centre of Excellence.
17-18/11/2022	Training workshop on Solar Radiation/Energy measurements, modeling and applications	Training	ERATOSTHENES staff participated in the Training workshop on Solar Radiation /Energy measurements, modeling and applications, organized by PMOD - World Radiation Center that took place in Davos, Switzerland. The purpose of the meeting was to discuss the Solar radiation and atmosphere interactions, to have hands-on applications on radiation modelling, and to discuss the demonstration project & future





This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



			collaboration between the ERATOSTHENES Centre of Excellence and PMODWRC.
23/11/2022	EUROPEAN YEAR OF YOUTH	Conference	ERATOSTHENES Centre of Excellence participated as Euraxess Service Centre
27/11/2022	Meeting with Cyprus Ports Authority	Meeting with Stakeholders	Members of the ERATOSTHENES Centre of Excellence visited the premises of the Cyprus Ports Authority at the Port of Limassol where they met with CPA representatives to discuss about their needs and finds ways for collaboration through research project proposals and services.
28/11/2022	Mediterranean Geosciences Union (MedGU), Annual Meeting 2022	Conference	<a href="https://www.medgu.org/index.php">https://www.medgu.org/index.php</a>
30/11/2022	The 8th International Conference on Drylands, Deserts & Desertification	Conference	"Monitoring forest health through remote sensing time series analysis to assess the effects of extreme drought events in forest seasonality." <a href="https://www.youtube.com/watch?v=X40CHtv5roo&amp;list=LL&amp;index=1&amp;t=2666s">https://www.youtube.com/watch?v=X40CHtv5roo&amp;list=LL&amp;index=1&amp;t=2666s</a>
18/1/2023	National Info Day "Horizon Europe Work Programme 2023-2024"	Networking	The event began with an introductory session on Horizon Europe and on Widening Participation and Strengthening the European Research Area followed by presentations on all Clusters (except Cluster 3). Parallel sessions took place with presentations on the European Missions and the European Partnerships, followed by a Networking Session.
24/1/2023	Meeting with technician from Meteorology Department	Meeting with Stakeholder	During the meeting, the Meteorology Department agreed to collect a series of climatic data (rainfall, solar radiation, wind speed and temperature) within the frame of the Demonstration Project for the Water Sector with title "Assessment of vegetation dynamics and drivers of drought for the Republic of Cyprus".
8/2/2023	Meeting with the Geological Survey	Meeting with Stakeholders	Dr Panagiotou presented the EXCELSIOR demonstration project for Water Cluster,



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



	Department regarding EXCELSIOR Demonstration Project for Water cluster		explaining the expected outcomes and the contribution of DLR. GSD representatives gave us their feedback and we discussed possible applications of the outcome of the Demo project to their work.
10/2/2023	Schools as EU Ambassadors	Networking	Members of the ERATOSTHENES Centre of Excellence visited Lanitio High School in Limassol, informing students about the ERATOSTHENES Centre of Excellence activities and research areas.
23/2/2023	"Assessment of vegetation dynamics and drivers of drought for the Republic of Cyprus".	Workshop	Workshop with governmental stakeholders from the Department of Geological Survey regarding the activities of the Demonstration Project of the Water Sector.
3/3/2023	Presentation on the 6 <sup>th</sup> Annual Exhibition Report for Entrepreneurship in Cyprus 2021/2022 – GEM REPORT 2021/2022	Conference	This activity took place in University of Cyprus, where the results of the 6 <sup>th</sup> annual exhibition report were presented.
3/3/2023	Meeting with the forest department of Cyprus	Meeting with stakeholders	Members of the ERATOSTHENES Centre of Excellence met with the Forest Department at Nicosia to collaboration through research project proposals and services.
15/3/2023	Presentation by Aristotle University of Thessaloniki and KIKLO	Networking	The coordinator of the ECoE presented the Eratosthenes CoE, while Prof Patias presented the activities of the Kiklo spinoff of the Aristotle university of Thessaloniki. Discussion were held on potential future collaborations between the two entities.
20/3/2023	Workshop at the 4th ATLAS GEORESOURCES INTERNATIONAL CONGRESS (AGIC2023)	Workshop	The scientific committee of the 4th ATLAS GEORESOURCES INTERNATIONAL CONGRESS (AGIC2023) awarded our member Dr. Constantinos Panagiotou, a Certificate of Appreciation as recognition of his outstanding contribution as a speaker and tutor in the workshop with title "Application





This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



			of Unsupervised Machine Learning Models and Traditional Geostatistical Methods to Assess the Status of Groundwater Systems in Tunisia",
20/3/2023	3rd International Conference TMM-CH Transdisciplinary Multispectral Modelling and Cooperation for the Preservation of Cultural Heritage	Conference	This activity was held under the Triquetra project
25/3/2023	Meetings with stakeholders from EMMENA region	Meeting with stakeholders	This activity took place in Tunisia
25/3/2023	Training course provided by Dr. Constantinos Panagiotou during AGIC2023 International Conference in Hammamet, Tunisia	Training	This training was organized by the Water Research and Technology Centre (CERTE)
25/3/2023	Oral presentation in AGIC2023 International Conference in Hammamet, Tunisia	Conference	<a href="https://agic2023.sciencesconf.org">https://agic2023.sciencesconf.org</a>
27/3/2023	Bilateral meetings with personnel of Central Water Development Department (WDD)	Meeting with stakeholders	Discussion on the AGREEMAR project Work Packages
29/3/2023	Workshop with personnel of Water	Workshop	A groundwater model for the Akrotiri and Yermasoyeia aquifer was presented



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



	Development Department		
30/3/2023	Meeting with Geological Survey within the frame of AGREEMAR (PRIMA Project)	Meeting with stakeholders	Discussion on the AGREEMAR project Work Packages
30/3/2023	Bilateral meeting with Federation of Environmental Organisations in Cyprus (OPOK)	Meeting with stakeholders	Discussion on the AGREEMAR project Work Packages
03/04/2023	Ninth International Conference on Remote Sensing and Geoinformation of Environment	Conference	<p>ECoE organized this conference and strongly participated in, including oral presentations and posters.</p> <ul style="list-style-type: none"> <li>• The Data Cube of ERATOSTHENES Centre of Excellence to empower the space-based environmental monitoring in the EMMENA Region.</li> <li>• Classification assessment of wheat plots in Peristerona, Cyprus with the use of multivariate statistical methods</li> <li>• Study the effect of aerosols and especially of dust on the levels of the surface radiation.</li> <li>• "Impact Assessment Of The Catastrophic Earthquakes of 6 February 2023 In Turkey Via The Exploitation Of Satellite Datasets".</li> <li>• Demonstration Project of the Solar Radiation/Energy Group</li> <li>• "Comparative Analysis of Sentinel-1 and PlanetScope Imagery for Flood Mapping of Evros River, Greece"</li> <li>• Investigation Of 2021 Summer Wildfires in the Eastern Mediterranean Using Ground Based and Space Born Remote Sensing Observation".</li> </ul>
05/04/2023	Atmosphere Living Lab Event	Conference	Dr Rodanthi-Elisavet Mamouri, Leader of Atmospheric Cluster at the ERATOSTHENES Centre of Excellence, presented the steps for establishing the ATMO-Living Labs including the vision, the stakeholders' engagement and the Cyprus Atmospheric Remote Sensing



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



			Observatory (CARO) main Research Infrastructures. She highlighted the scientific key outcomes and main components for the development and improvement of several services. A panel discussion followed with the moderator of the panel discussion being Prof. George Zalides, ERATOSTHENES Centre of Excellence & Interbalkan Environment Center (i-BEC).
23/04/2023	EGU23	Conference	<p>ECoE strongly participated at EGU23 between 23-25 April, including PiCO presentations, oral presentations and poster.</p> <ul style="list-style-type: none"> <li>• AS5.7 - Remote Sensing of Clouds and Aerosols: Techniques and Applications.</li> <li>• Conveyer of an EGU Session: ESSI4.2 with title "Earth observation: opportunities and environmental applications towards resilient society"</li> <li>• Demonstration project of Water cluster in collaboration with DLR.</li> <li>• "Demonstrating the enhanced research capacity of the ERATOSTHENES Centre of Excellence for detecting ground displacements in Cyprus using advanced SAR satellite image processing techniques"</li> <li>• AS1.25 Session: Precipitation: Measurement, Climatology, Remote Sensing, and Modelling</li> <li>• Results of the Demonstration Project for the Water Sector</li> <li>• Study related to the Investigation of 2021 summer wildfires in the Eastern Mediterranean.</li> <li>• Co-convener at the Session ESSI4.2 Earth observation: opportunities and environmental applications towards resilient society organized in the frame of the Excelsior project.</li> <li>• Fusion of Sentinel-1 and Sentinel-2 satellite imagery to rapidly detect landslides through Google Earth Engine and the second presentation was held on 27 of April.</li> </ul>



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



			<ul style="list-style-type: none"> <li>The synergy of Sentinel missions for fire damage assessment on land surface and atmosphere: the Arakapas village case study</li> </ul>
27/04/2023	Working meeting between the Cypriot Centers of Excellence and the Public Authorities	Networking	<p>The ERATOSTHENES Centre of Excellence participated in the Workshop organised by the Deputy Ministry of Research, Innovation and Digital Policy between the Government Departments and the Ministries in Cyprus with the 7 Cypriot CoEs. The event provided the opportunity to the CoEs to discuss and inform the stakeholders about the current activities of the 7 Cypriot CoEs with an emphasis on the services they can provide to policy makers. The ERATOSTHENES Centre of Excellence was represented by Professor Diofantos Hadjimitsis (CEO), Professor Andreas Anayiotos (Functional Manager), Dr Christiana Papoutsas (Head of the Agriculture Sector) and Dr Marios Tzouvaras (Research Coordinator). At the event Mr. Giorgos Komodromos Director of the Electronic Communications Department and partner in the EXCELSIOR project was also present.</p>
30/4/2023	SPIE Defense + Commercial Sensing, 2023, Orlando, Florida, United States	Conference	<p>Dr George Melillos presented:</p> <ul style="list-style-type: none"> <li>Oil spill detection and monitoring in the Cyprus region</li> <li>Seagrass mapping in Cyprus area of interest with pixel-based classification</li> <li>Detecting Vessels in exclusive economic zone (EEZ) of the Republic of Cyprus using Sentinel-1</li> </ul>
2/5/2023	Webinar : Dust monitoring and forecasting: 2023 events	Webinar	Training on Dust monitoring
4/5/2023	Online webinar on the topic of "Radiative effects of water vapor and dust in the Saharan Air Layer"	Webinar	Educational webinar regarding the radiative effects of water vapor and dust



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



8/5/2023	11th European Conference on Severe Storms	Conference	Opportunity to meet the European and North-American experts in the field, to raise awareness about the limited studies regarding the EMMENA region, and to discuss possible future collaborations
8/5/2023	Teaming Together' Meeting of The Cyprus Centers of Excellence	Networking	The ERATOSTHENES Centre of Excellence participated in the meeting of the 7 Centers of Excellence established in Cyprus, which took place in Larnaca and organized by the CMMI. During the event representatives of the 7 CoEs as well as the Deputy Minister, Mr Philippos Hadjizacharias and the Director Dr. Stelios Chimonas, of the Deputy Ministry of Research, Innovation & Digital Policy, the Mayor of Larnaca and the Director of Research and Innovation Foundation Dr. Theodoros Loukaidis were present. Professor Diofantos Hadjimitsis, Professor Andreas Anayiotos, Dr Silas Michaelides, Dr Kyriacos Themistocleous and Dr Christiana Papoutsas represented the ERATOSTHENES CoE at the Teaming Together Meeting.
7-8/5/2023	ENIGMA Face-to-Face Meeting	Meeting with stakeholders	Discussions on road map for the completion of deliverable and agenda of the general meeting which took place at the University of Turku.
13/5/2023	Day of Europe celebrations in Nicosia & Limassol	Networking	This event focused on informing the public about Earth Observation and the different activities of ECoE.
17/5/2023	Satellite-based Services for Disaster Risk Management	Workshop	ECoE participated with three presentations and interacted with the participants.
19/5/2023	CYNET and Amazon Web Services for the Academic and Research Community	Networking	Meeting with AWS team regarding the needs of Eratosthenes CoE and possible collaboration.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



22/5/2023	Meeting with the Port and Marine Police	Meeting with stakeholders	Meeting regarding cooperation opportunities and needs of stakeholder.
22/5/2023	CA21133 - Globalization, Illicit Trade, Sustainability and Security (GLITSS)	Conference	COST Action Kick-Off Meeting
23/5/2023	SAR Sessions	Workshop	This workshop was held virtually.
23/5/2023	Data analytics in the era of large-scale machine learning	Training	Further to the 2day training activity, a meeting was held with the president of CASTORC and their team to discuss collaborations and initiate signing an MOU. Mr. Periklis Perikleous and Mr. Georgios Leventis met with the IT department to see the High-Performance Computer facilities.
26/5/2023	Cloud Remote Sensing Community workshop	Workshop	Discussion about the improvement of the available SOPs, defining new strategies for measurements and calibration of DCR.
26/5/2023	Online Meeting with HELLENIC CENTRE FOR MARINE RESEARCH	Networking	Meeting to explore maritime topics for potential collaboration in the future. Discussions included various areas where our collective expertise could overlap, opening opportunities for cooperation and progression. We also addressed the possibility of future signing MoU.
31/5/2023	Meeting with DLR	Meeting with stakeholders	PhD thesis discussion with DLR for Eleftheria Kalogirou
2/6/2023	Workshop with the hydrogeology team of Geological Survey	Training	Two-days training on remote sensing-theory and applications. Discussion about common activities with Cyprus Geological Survey Department
2/6/2023	1st Stakeholders Meeting of WATERVERSE project	Meeting with stakeholders	Participation in meeting to be informed about the scope of the project and exchange ideas for potential collaborations. We saw a great interest from the civil services to collaborate with us.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



6/6/2023	High level event "Climate change, Civil protection and Human security-Towards an efficient Euro Mediterranean cooperation" & Launch of PPRD MED and other UCPM programmes and 2nd meeting of the Union for the Mediterranean Regional Dialogue Platform	Networking	Discussed cooperation between EMMENA countries and capacity building for Earth observation for civil defence.
6/6/2023	ENIGMA General Assembly	Conference	The conference took place at Turkey, Finland
7/6/2023	Formal meeting with the Commercial & Cultural Attaché of the Embassy of Luxembourg in Greece Mr. Nikolaos Kioussi	Networking	Discussions on opening new horizons for collaboration to Luxembourg ecosystem (e.g. industry, academia, government).
7/6/2023	Modeling of solar radiation, part 2 and Scientific applications for Cyprus	Workshop	Online 2nd seminar "Modeling of solar radiation, part 2 (Solar Energy)" as part of knowledge transfer from PMOD/WRC and NOA to the researchers of the ERATOSTHENES Centre of Excellence
7/6/2023	Training course within the frame of Water DEMO Project	Workshop	DLR partners provided with a 3-hour training session on the latest outcomes of the Demonstration Project led by Water Cluster.
7/6/2023	SAR Sessions Breakout Session	Workshop	Online event for SAR Sessions, solely focussed on the trends, benefits, techniques, and applications of Synthetic Aperture Radar (SAR) data and analysis. We gained insights from SAR experts in public organizations and commercial industries, and became aware of the present and future of SAR.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



8/6/2023	Meeting with Deputy Chief of the GEEF Lt. General Mr. Lucas Hatzimichael	Networking	Meeting with Deputy Chief of the GEEF Lt. General Mr. Lucas Hatzimichael. We discussed future collaboration and also getting a permit for DLR flights.
13/6/2023	Meeting with H.E. the Ambassador of Italy in Cyprus, Mrs. Ferrari Bravo	Networking	The meeting was also attended online by member of the Eratosthenes BoD Dr. Rosa Lasaponara. The aim of the meeting was to introduce the Eratosthenes CoE to H.E. Mrs. Ferrari Bravo and explore possible ways of collaboration between Eratosthenes and Italian research organizations and companies.
16/6/2023	Secondment at NOA	Training	Beyond EO Centre NOA hosted Stelios Neophytides from Eratosthenes Centre-of Excellence to their premises as a part of his secondment.
23/6/2023	1st Maritime Safety and Security Workshop	Workshop	'The first working day for Maritime Surveillance and Security was held by the Maritime Safety and Security Sector of the ERATOSTHENES Center of Excellence (ECoE) of the Cyprus University of Technology at their headquarters in Limassol.
26/6/2023	Secondment at the premises of DFKI (partner)	Secondment	The secondment took place within the context of AI-Observer project for the capacity building of ERATOSTHENES personnel on AI and Neural Networks (coding)
3/7/2023	42nd EARSeL Symposium	Conference	The conference took place in Romania, Bucharest.
4/7/2023	Entrepreneurial Mentality July catch up	Meeting with stakeholders	Financial/business planning for EMS. ECoE had the opportunity to catch our business ideas with Mr. Moyses Moysesos
5/7/2023	4th Annual Virtual EXCELSIOR Workshop: "Earth Observation Research Trends in the EMMENA region"	Workshop	4th Annual Virtual EXCELSIOR Workshop: "Earth Observation Research Trends in the EMMENA region"





This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



6/7/2023	Design Maritime Web Platform	Meeting with stakeholders	We discuss the possibility of collaborating with them to design and build a Maritime Safety and Security Web Platform.
13/7/2023	BERLIN Final Project Event & Inauguration of the Nanogrid - Living Lab in Nicosia, Cyprus	Networking	'This was the final event of of the ENI CBC Med Project "Cost-effective rehabilitation of public buildings into smart and resilient nano-grids using storage – BERLIN", combined with the inauguration of the Living Lab developed under the scope of the project at the FOSS Research Centre for Sustainable Energy (one of the BERLIN pilot sites), at the University of Cyprus. During the events we had the opportunity to see the new nano-grid infrastructure of the FOSS research center and discuss with Prof. Georgiou and his team about possible future collaboration with our Center.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



It is important to highlight an important meeting that has already open new horizons of the ECoE in the EMMENA region was the meeting with the representatives of the PPRD Med project in Cyprus. Indeed, on 11 May 2023, the activities of the AI-OBSERVER project and the Excelsior and ECoE have been presented to the "The International Science and Technology Center" ISTC. Representatives. Among other discussions, the possible collaboration between the two organisations was discussed in the framework of the PPRD Med project – Prevention, Preparedness, and Response to natural and man-made disasters in EU Southern Neighbourhood countries – Phase 4 (<https://www.pprdmed.eu/>)



On 18<sup>th</sup> of August 2023, there was another meeting in Cyprus of how CERIDES CoE and ECoE will collaborate on the next steps (implementation phase) of the PPRD Med project. PPRD Med is funded by the European Commission - ECHO (Directorate General European Civil Protection and Humanitarian Aid Operations) and is implemented by ISTC with the support of European Space Agency - ESA as the leading technological partner. The PPRD Med programme aims to increase the resilience to natural and man-made disasters in the Southern Neighbourhood countries and the Mediterranean region by reinforcing cooperation and partnerships between the European Union and Mediterranean countries under the umbrella of the Union for the Mediterranean (UfM). It provides strong support to the UfM in civil protection and disaster risk reduction management, given the increasing impact and scope of disasters across the Euro-Mediterranean region. The programme involves the following countries: DZAlgeria - EGEgypt - ILIsrael - JOJordan - LBLebanon - LYLibya - MRMauritania - MAMorocco - PSPalestine - TNTunisia



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.



### 3. Conclusions

The principal objective of this deliverable is to present extroversion programme activities that were conducted during RP3. The main part of the document presents all activities undertaken by ECoE. In addition, the deliverable describes the objectives of all these activities in detail. The number of activities undertaken during RP3 shows that the significant efforts of the ECoE were successful in expanding collaboration with actors and stakeholders, signing MoUs, expanding knowledge for ECoE researchers and expanding collaboration in Europe and EMMENA. Additional activities, similar to those in RP3, are expected to take place during RP4.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement No 857510.

This project has received funding from the Government of the Republic of Cyprus through the Directorate General for the European Programmes, Coordination and Development as well as the Cyprus University of Technology.

