EMME-CARE

EASTERN MEDITERRANEAN MIDDLE EAST – CLIMATE & ATMOSPHERE RESEARCH CENTRE

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D9.8 Fifth Annual Report contents of the PDER, knowledge and data management, and IPR protection, communication, outreach & public engagement

August 2024

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Deliverable Number	Deliverable Title	Lead Beneficiary	Type	Dissemination Level	Due Date (in months)
9.8	Fifth Annual Report contents of the PDER, knowledge and data management, and IPR protection, communication, outreach & public engagement	1 – CYI	Report	Public	60

Version	Date	Changed page(s)	Cause of change	Partner
V1	12/07/2024	Initial version		CYI
V2		Edits throughout document	Review/Input	CYI /All
V3 (Final)		Revisions/ Refinements throughout document	Final Version based on the suggestions of the CARE-C Director and RISO team	CYI

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1. Introduction

This document refers to Deliverable "**D9.8: Fifth Annual Report contents of the PDER, knowledge and data management, and IPR protection, communication, outreach & public engagement**", and discusses activities that occurred during M49 – M60 (September 2023 – August 2024).

More specifically, this deliverable addresses the above in relation to the contents of the 'PDER – Plan for the Dissemination and Exploitation of Results', which is linked to Task 9.1.c: "Monitoring the different contents of the PDER (led by the Cyprus Institute [CyI])", knowledge and data management, and IPR protection linked to Task 9.2 of the same name (led by CyI), and communication, outreach & public engagement linked to Task 9.3 of the same name (also led by CyI).

2. Contents of the PDER

This section outlines the Fifth Annual Report on the contents of EMME-CARE's PDER as these link to the CyI-led **Task 9.1.c: Monitoring the different contents of the PDER**, which includes:

- Scientific articles and publications, conferences and workshops.
- Brochures, leaflets and e-Newsletter.
- Website.
- Dissemination activities related to national and regional clusters, and R&D and student mobility programmes.

In the context of the above, the Fifth Annual Report also includes mentions of any other relevant activities undertaken during the reporting period of M49 – M60.

2.1 Scientific articles and publications, conferences and workshops.

Scientific Articles and Publications

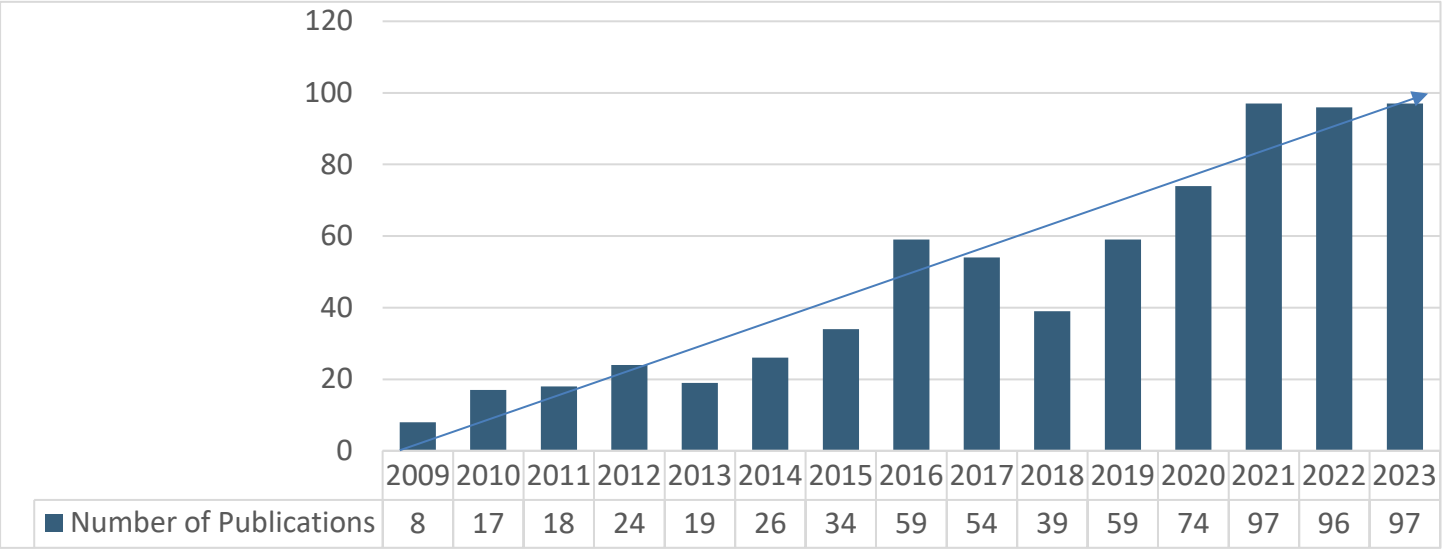
As already clarified in previous reports, (see in D9.6 and in D9.7) for consistency purposes, the reporting convention followed by the CoE for scientific articles and publications is being conducted in line with the reporting timelines and requirements set forth by the Cyprus Institute. Accordingly, the CoE gathers information on scientific articles and publications in two intervals each year: January – June, and July – December. More specifically, for the numbers quoted in this section, information quoted for years up to 2023 represent scientific articles and publications for each respective *calendar* year, whilst for the year 2024, scientific articles and publications reported in this deliverable represent the period January – June 2024.

Regarding peer-reviewed scientific publications, as already stated in the Grant Agreement (section 2.2.2) and D9.3 Data Management Plan (Open Data Pilot) the CoE continues to prioritize Open Access in line with Open Science principles.

Publications through the years:

In 2023, the CoE has reported ninety-seven (97) EMME-CARE scientific articles and publications out of which ninety were from CARE-C CoE. When examining this overall (2009 – 2023), over 63% of publications in 2023 have been published in top-25 cited journals (according to the Scimago Journal & Country Rank). It should also be noted that all three of EMME-CARE's Advanced Partner PIs were recognized amongst the world´s Highly Cited Researchers in the 2023 list announced by Clarivate / Web of Science.

For reference, a bar chart visualizing this information for 2009 – 2023 is included below.



	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Number of Publications	8	17	18	24	19	26	34	59	54	39	59	74	97	96	97

Figure 2.1.1: Publications through the years.

So-far in 2024 (January – June), EMME-CARE counts 19 published journal publications. The list of publications for the CoE per full calendar year can be found on the dedicated webpage on the EMME-CARE website (https://emme-care.cyi.ac.cy/publications/). This ensures that the latest information about CoE publications is openly accessible by all interested and organized by year in a user-friendly way. The website also allows the user the functionality of searching through publications, hence enhancing their findability.

Conferences and Workshops

During the 2023 calendar year the CoE has presented and participated in **seventy-four (74)** scientific conferences, workshops and trainings. So far in 2024 (January – June), the CoE has presented and participated in **nineteen (19),** contributing to the dissemination activities of the Center. The CoE has also successfully organized and hosted workshops and trainings aimed at raising the profile of the CoE and enhancing its visibility, network and reach within scientific and other specialist communities. Some highlights are included below.

Virtual Workshop: Innovation in Atmospheric Measurement Techniques, 27 June 2024

On June 27th, 2024, EMME-CARE in collaboration with 3 EU RIs ACTRIS, ICOS and IAGOS co-hosted the 4th Workshop on Innovation in Atmospheric Measurement Techniques, as a Partner Event of the EU 2024 Green Week. The event was organized by CARE-C with the support of the EMMECARE, Edu4Climate, and ENVRINNOV Horizon projects.

Through a full day of sessions and talks, this workshop brought together atmospheric science communities to discuss the latest innovations in atmospheric measurement techniques. Participants had the opportunity to discuss and find out about new technologies, products, services, and instrumentation and access visibility of opportunities for R&D collaborations. The Workshop gathered over 120 participants from 32 countries and created a unique platform for networking and knowledge-exchange between key contacts from academia, private companies, the public sector and NGOs.

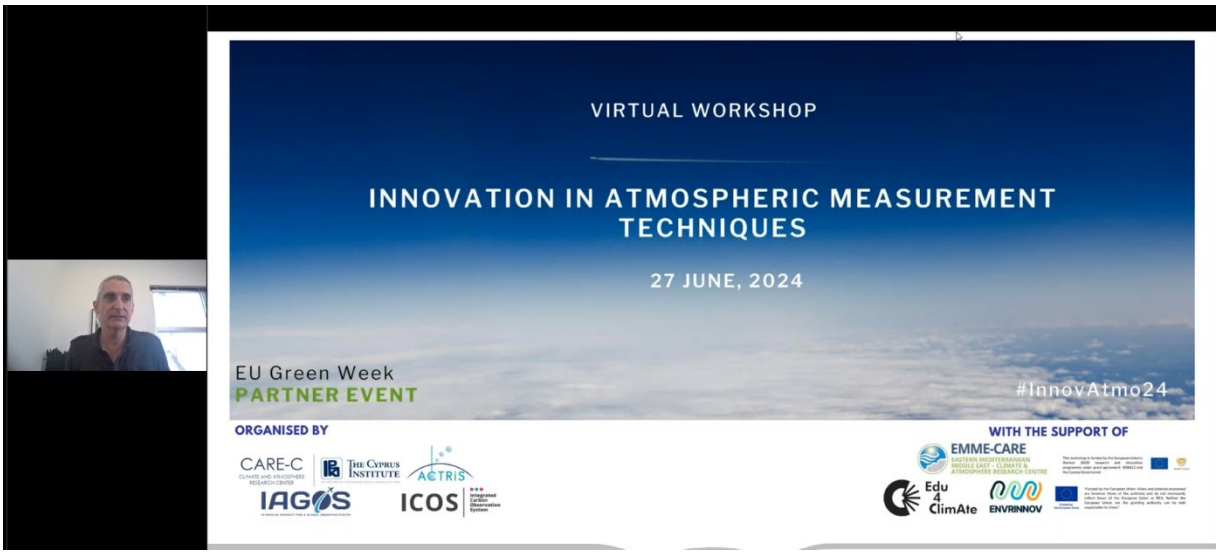
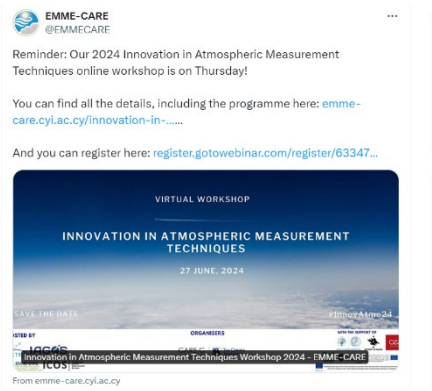
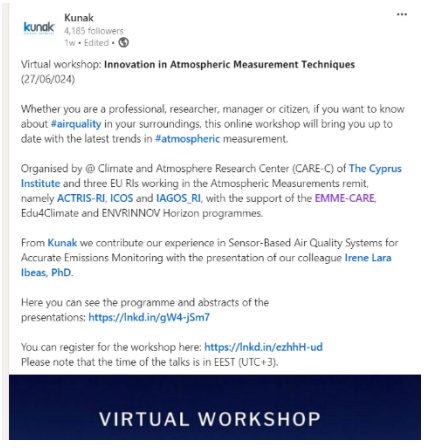
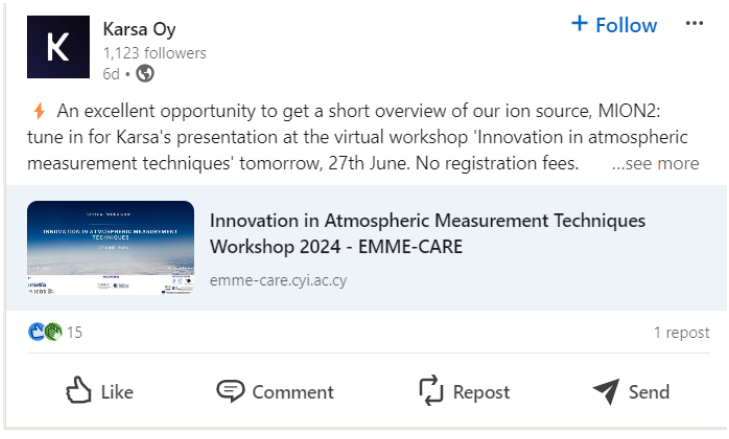


Figure 2.1.2: Screenshot from the opening of Innovation Workshop in Atmospheric Measurement Techniques.







Figures 2.1.3, 2.1.4, 2.1.5 & 2.1.6: Screenshots of social media posts from participants of Innovation Workshop in Atmospheric Measurement Techniques

3rd Annual Workshop: Climate and Atmosphere Research & Innovation in the Eastern Mediterranean & Middle East, 7 November 2023

On 7 November 2023, CARE-C with the support of its Advanced Partners: the Max Planck Institute for Chemistry (MPIC) in Mainz, the French Alternative Energies and Atomic Energy Commission (CEA) and the University of Helsinki (UHEL), organized the 3rd Annual Online Workshop on Climate and Atmosphere R&I in the EMME.

This one-day online event gathered the international scientific community to discuss the latest innovations and exchange knowhow, on the science of climate change and air pollution, as well as to highlight related challenges, impacts and potential solutions for the EMME region. Also, the workshop provided a great opportunity for networking and enhancing regional collaboration and national capacities for addressing the climate crisis.

Prof Charbel Afif, a professor at Saint Joseph University in Lebanon and an adjunct professor at the Cyprus Institute gave the introductory speech welcoming all the participants at the workshop. His opening speech was followed by 22 oral and 34 VPICO presentations delivered by representatives of universities, research institutions and private companies, actively engaged in the topics of air pollution and research innovations related on climate change.

More than 340 scientists, researchers, students and industry professionals in research & innovation on climate change and air pollution in the EMME region, registered and participated at the workshop, from over 50 countries.

The workshop was organized by the EMME-CARE Consortium.

Figure 2.1.7: Banner of EMME R&I Workshop 2023.

EMME-CARE Autumn School 'Atmospheric Measurements Using Miniaturised Sensors and Drones'

The 2nd Autumn School, organised by CARE-C, entitled 'Atmospheric Measurements Using Miniaturised Sensors and Drones' was held from 30 October to 3 November 2023. The week-long course took place at the Cyprus Institute's premises in Nicosia, Cyprus and it was attended by 13 students from 10 different countries including Lebanon, Finland, the UK, India, Belgium and other.

The focus of this year's autumn school was both practical and theoretical approaches in miniaturised sensors and drone technologies and it included short lectures as well as a field trip to Orounda airfield where students had the opportunity to participate in drone test flights and collect data that were further analysed and reported. The aim of the course was to teach the students the whole cycle of scientific field work, from how to design measurements, collect data, analyse data to publishing a report of the

experimental work and data.

This Autumn School was organized within the framework of the H2020 Teaming Project EMME-CARE (emme-care.cyi.ac.cy), and the Horizon Europe project Edu4Climate (edu4climate.cyi.ac.cy). Course organization was led by CARE-C, The Cyprus Institute, with the contribution of the EMME-CARE Advanced Partners and the Edu4Climate Consortium partners.

Figure 2.1.8: Photo from the 2023 Autumn School (30/10/2023-3/11/2023)

Brainstorming on Synergies between the Cyprus Centres of Excellence

Representatives of CARE-C at the Cyprus Institute took part in a roundtable discussion entitled "Brainstorming on Synergies Potential – Cyprus Teaming for Excellence". The event was hosted in the framework of the kick-off event of the newly established PHAETHON Research and Innovation Centre of Excellence for Intelligent, Efficient and Sustainable Energy System (PHAETHON CoE) on 11 October 2023 and gave an opportunity to exchange views and identify synergies between all seven of Cyprus' Centres of Excellence. The session was addressed by the Minister of Energy, Commerce and Industry of the Republic of Cyprus, Mr. Giorgos Papanastasiou. The discussion on synergies was addressed and chaired by the Head of the Operational/Project Management Sector (REA C3 – 'Widening Participation') at the European Research Executive Agency (REA), established by the European Commission (EC), Mr. Patricio Ortiz de la Torre. CARE-C was represented by the Director of CARE-C Prof Jean Sciare, Managing Coordinator Ms Marina Papageorgiou, and Scientific Coordinator Ms Andri Charalambous.

Figure 2.1.9: Photo from the CARE-C CoE in Brainstorming on Synergies Potential – Cyprus Teaming for Excellence, 11/10/2023

2.2 Brochures, leaflets and e-Newsletter.

As already mentioned in previous reports (D9.4 - D9.7), the CoE has already produced a variety of print and video material. Updated versions of the leaflets, brochures and videos of the CoE are always accessible in digital format through the CoE website (https://emme-care.cyi.ac.cy/news/#br).

CARE-C Activity Report 2020-2023

During this reporting period, a new comprehensive report highlighting the achievements of CARE-C since its founding in 2020, was published and widely disseminated digitally via email lists and social media, with hard copies also distributed, including to the CoE's Scientific Advisory Committee.

Figure 2.2.1 CARE-C Activity report (2020-2023)

The full digital version of the report is available on the website (link here).

Research Highlights

A new communication initiative was launched in January 2024, to further promote the high-quality research produced and published by the CARE-C researchers. Specifically, a monthly research highlight newsletter was launched, presented as a feature focused on a recent scientific publication by CARE-C scientists. This is featured on the EMME-CARE website (https://emme-care.cyi.ac.cy/research-highlights/), disseminated via social media, and distributed through the CARE-C community email list.

CARE-C CLIMATE AND ATMOSPHERE RESEARCH CENTER | THE CYPRUS INSTITUTE

Research Highlight

'Improvement of atmospheric remote sensing measurement techniques'

Summary

We introduce a new method for improving aerosol typing by lidar, through characterizing depolarization measurements using a reference system. Focusing on the Nicosia CIMEL CE376 lidar system and utilizing as reference the Polly XT in Limassol, our study retrospectively applies the approach to measurements obtained during the 2021 Cyprus Fall campaign. We focus here on how aerosol particles in the atmosphere affect the polarization of light, which allows to identify desert dust and other aerosols. We emphasize the significance of precise lidar measurements in advancing our comprehension of atmospheric aerosols and their implications for climate and human health.

Impact

By using the new method, we retrospectively improved previous data, acquired in 2021 during a multi-instrumented campaign, which included UAVs and remote sensing, and which would otherwise have been less accurate.

Moreover, we presented an approach that can be exploited to transfer the polarization parameters from one system to another (e.g. in the case of a travelling standard) and we believe that this type of application will become more and more useful as the density of instrument networks increases.

Lidar is a widely used tool allowing to retrieve highly resolved information on the spatial and temporal distribution of aerosols, which are one of the atmospheric constituents affecting radiative forcing, and one of the major uncertainties on our understanding of climate change.

Authors' bios

Alkistis Papetta is a PhD candidate at the Climate and Atmosphere Research Center (CARE-C), with a background in Physics and Wind Energy, and has experience with lidar technology for atmospheric measurements. Her research interests lie in the development of innovative techniques for remote sensing applications, particularly in conjunction with UAV technology, to investigate the distribution and properties of free tropospheric aerosols and their impact on climate.

Figure 2.2.2 Screenshot of the April 2024 Research Highlight

e-Newsletter

As reported in D9.4 - D9.7, the EMME-CARE newsletter is prepared and circulated to the CoE's mailing list, and includes articles, news items and updates from the CoE and its Advanced Partners. The latest issue of the e-newsletter was circulated to the mailing list in December 2023 with title: "A year in review: 2023 Highlights" and it is available on the EMME-CARE website. All issues of the e-newsletter are accessible at any time through the CoE website at https://emme-care.cyi.ac.cy/news/#nl.

To better complement and minimize duplication with the continuous updating of the News Section of the EMME-CARE website, and mailings to promote sign-up to CoE events, workshops and training, the e-Newsletter has been revamped into a year-in-review update. A mailing list sign-up form remains available on the EMME-CARE website to further encourage sign up.

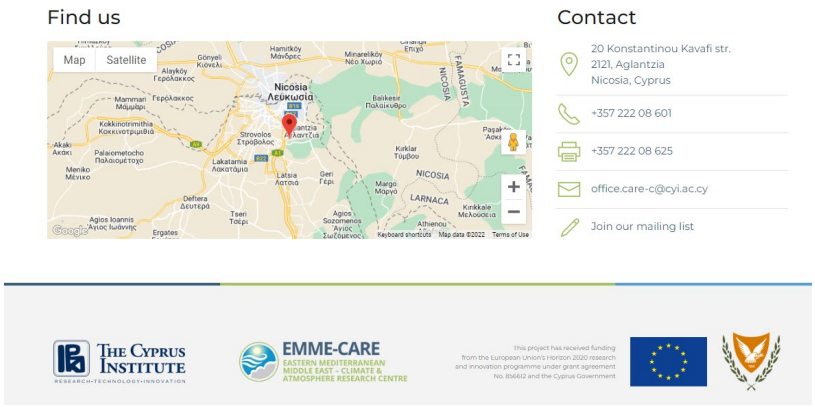


Figure 2.2.3.: Screenshot of the EMME-CARE newsletter sign up link on the website landing page.

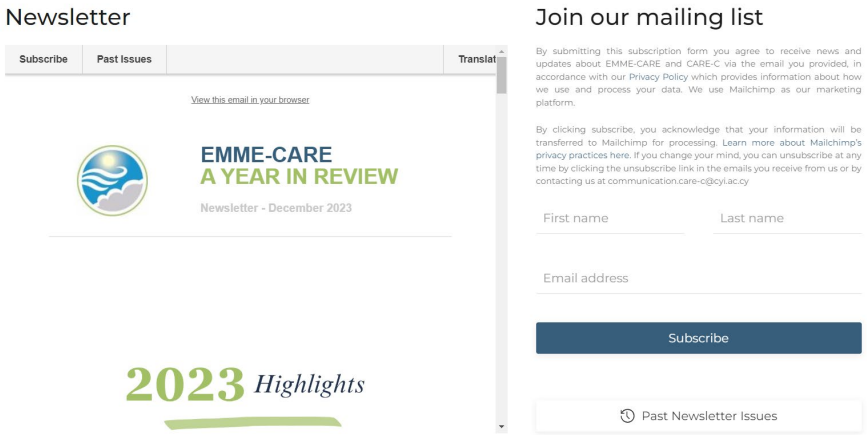


Figure 2.2.4.: Screenshot of the EMME-CARE newsletter and sign-up link on the website

2.3 Website

Further to the upgrades and developments mentioned in previous reports, the dedicated website (https://emme-care.cyi.ac.cy/), continues to be updated regularly in technical and content aspect, allowing to increase the impact and visibility of the CoE to the general public as well as to promote its objectives and work to the scientific community and researchers on the field.

This section outlines:

a) Website Performance Metrics

b) Annual maintenance upgrades (M49– M60)

a) Performance metrics of the website

As already outlined in previous reports, the CoE tracks website traffic and related visitor metrics for its site, that are analysed to optimize the CoE's approach to marketing, user experience and server performance. Indicatively, during the M49-M60, the analysis shows that the site has been visited by 6000+ new users, allowing the CoE to determine the visits to the website that can be compared with

CoE promotional activities, contributing to measuring and assessing their impact, and adjusting them in real time for maximum effect. In 2023, the Google Analytics platform has been upgraded to version 4. In line with GDPR the functionality of this tool is covered in the Privacy Policy and Cookie Policy readily available and easily accessible at all times through the footer of the EMME-CARE site.

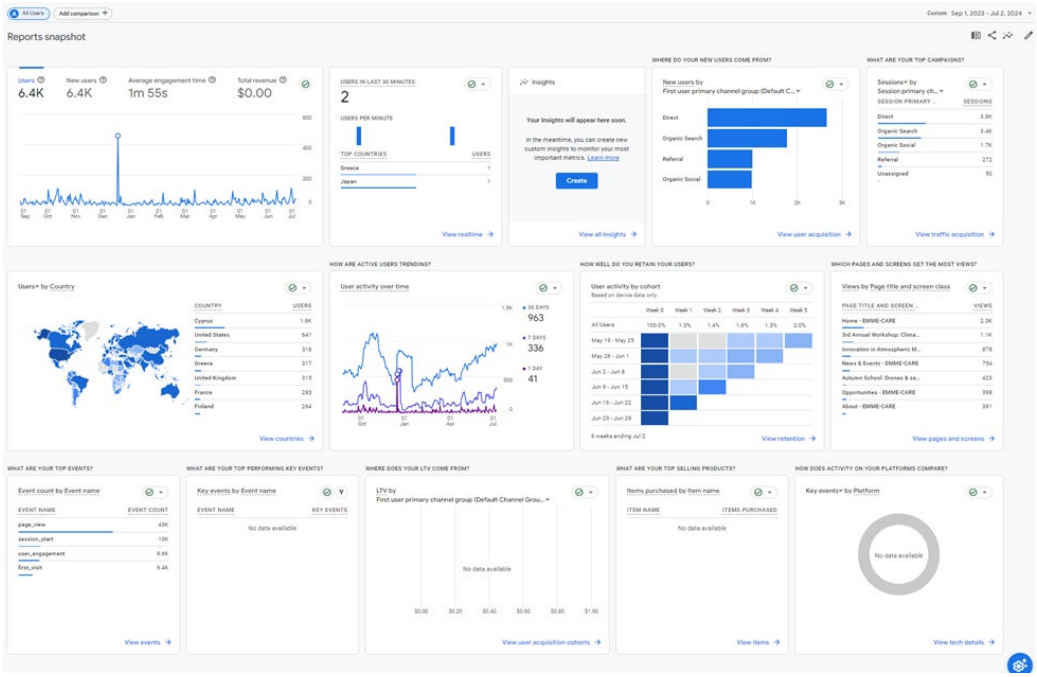


Figure 2.3.1: Screenshot of CoE website traffic metrics dashboard

b) **Annual maintenance upgrades (M49 – M60)**

During M49 – M60, the website has been updated with a “Research Highlight” homepage section and dedicated page:

Figure 2.3.2: Screenshot of CoE website Research Highlight homepage section.

Also, the Oceanic data section has been populated with high resolution plots of near-real time data from the new instruments installed in CARE-C Cyprus Atmospheric Observatory (CAO) Ineia station:

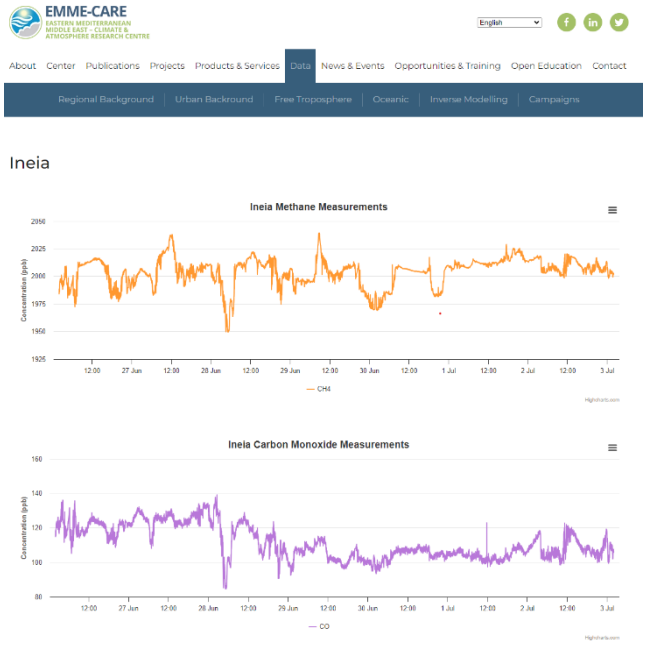


Figure 2.3.3: Screenshot of CoE website – Oceanic page

2.4 Other dissemination activities related to national and regional clusters, and R&D and student mobility programmes.

During the reporting period for this deliverable (M49 – M60), the CoE has further strengthened and expanded its growing network of national, regional and international clusters with a variety of stakeholders from academia, the public and private sectors as well as NGOs and International Organizations, as these were first established and reported in D9.4 (for M1-M12) as well as in D9.5 (for M13-M24) and D9.6 (M25-36). Relevant updates below.

Updates on EMME-CARE National Clusters

Beyond what has already been reported in D9.7, during the reporting period, the CoE has expanded its network of national eco-innovation clusters through innovation activities as these were reported in submitted deliverable D8.1. It has also expanded its support of Cyprus Government Departments, through collaborations with the Geological Department, and the Department of Meteorology.

Updates on Regional and International Clusters

<u>EMME-CARE Regional Professorship Programme</u>

As mentioned in D9.7, EMME-CARE's Regional Professorship Programme aims to strengthen, expand and enhance collaboration networks in the EMME region to tackle air pollution and climate change and their impacts, through the establishment of collaborations with top Universities in the countries of the EMME region. During this referenced period, the CoE has been strengthening and expanding its ongoing collaborations, including with:

1) The National Kapodistrian University of Athens (Athens, Greece),

2) The St Joseph University (Beirut, Lebanon),

3) The Egyptian Japanese University of Science and Technology (Alexandria, Egypt)

4) The Kuwait Institute for Scientific Research (Kuwait),

5) The Qatar University (Doha, Qatar),

6) The Qatar Energy & Environment Research Institute (Doha, Qatar).

Please see submitted deliverable D1.8 (section 3.2.2) for more details.

Other International Networks

In addition, the CoE has also engaged in scientific collaboration through bilateral agreements with:

• Cairo University (CU) for the establishment of educational programs (under/post-graduate curriculum on Air Pollution) in collaboration with the World Bank.

• The Environment Agency of Abu Dhabi (EAD) for cooperation on a major atmospheric research project named Atmospheric Research Expedition to Abu Dhabi (AREAD), that took place in 2022, and marked the world first offshore atmospheric research expedition between Spain and UAE. As well as a 2023 ship campaign investigating the Transport of Hydrocarbons and Ozone Formation downwind of the Arabian Gulf (THOFA).

• the King Abdullah University of Science and Technology (KAUST), contributing to the modelling component of THOFA.

The CoE has more actively engaged with European Research Infrastructures ICOS and IAGOs, within the framework of organization of the 4th Innovation Workshop on Innovation in Atmospheric Measurement Techniques and the Environmental Research Infrastructures community more widely, through the ENVRINNOV project consortium. Other networks, in which the CoE remains engaged are featured below.

Figure 2.4.1.: Creating a bridge between top R&I network and the EMME Region

Student Mobility Programmes

As already mentioned in previous reports (D9.4-D9.7), and outlined in section 1.1.4.2 of the Grant Agreement, and in accordance with the scope and objectives of WP3 Education and Training, with

the support of its Advanced Partners, the CoE aims to become a regional hub for student exchanges between EU and the EMME region, as well as promote wider international exchanges. During M49-M60, the CoE is working continuously to build on establishing new networks and collaborations as well as to promote international mobility.

1. Erasmus+ Outgoing Activities for the period 01/09/2023 to 31/08/2024

Student Mobility for Training at the University of Versailles Saint Quentin-En Yveline, France (26/02/2024-22/03/2024)

The objectives of this mobility were to engage in intensive practical sessions to enhance the proficiency of the trainee in data analysis, participate in collaborative discussions with the research team to foster knowledge exchange and address any queries the trainee may have, and attend relevant seminars and workshops aimed at enriching the skill set and expanding the understanding of the trainee on atmospheric science methodologies.

Student Mobility for Training at the National and Kapodistrian University of Athens, Greece (01/03/2024-28/03/2024)

The training of this student included familiarisation with how risk estimates of heat-stress are used in their early warning system, how these indices computed and what data are required, in addition to the knowhow behind the early warning system and introduction to bio-thermal indices.

Student Mobility for Training at University of Bremen, Germany (12/03/2024-12/04/2024)

The main objective of this mobility was for the student to gain hands-on experience, focused on the retrieval of data using the Total Carbon Column Observing Network Data Retrieval software (i2s, GFIT and LINEFITsoftware). Specific practice on the data acquired by the TCCON Nicosia site. This training equipped the trainee with the necessary skills to employ data analysis tools facilitating the extraction of scientific information from remote sensing data, attend events and experiencing networking opportunities.

Student Mobility for Training at LSCE, Gif-sur-Yvette, France (02/04/2024-29/04/2024)

The main objective of this mobility was for the student to be trained in image processing of satellite images to be used in the development of the first National airborne tree inventory of Cyprus. During their visit, the student worked with experienced researchers to learn what is the most efficient way to gain knowledge from satellite images. The student also tested several image augmentation methods and image processing models and was introduced to a new model for building counting and estimation of carbon emissions of buildings to be adapted to the Cyprus landscape.

Staff Mobility for Training at the Technische Universität Darmstadt (TUDa), Germany (03/04/2024-05/04/2024)

The overall objective of this traineeship mobility was for the participant to develop expertise on dust mineralogy, dust particle shape, and the corresponding challenges, uncertainties and applications. Additionally, this training strengthened the collaboration between TUDa and the Cyprus Institute and increased the potential of new experiments and research proposals.

Student Mobility for Training at the Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT), Madrid, Spain (05/04/2024 – 05/07/2024)

The main objective of this mobility was for the student to gain knowledge in simulating different strategies for adapting Nicosia's built environment to climate change and heat extremes. More specifically, the student learned about the definition of a set of strategies (e.g., cool roofs, photovoltaic panels, green roofs, and urban trees) to apply to Nicosia's built environment to identify which solution helps the most in reducing air temperature and improving outdoor thermal comfort.

In addition to this, the student worked on the development of a part of the code that will allow WRF users to choose whether to use a static set point of cooling/heating simulations or an adaptive model based on the adaptive thermal comfort models.

2. Transferable Skill Courses (TSC) 01/09/2023 TO 31/08/2024

(a) Staff and students from CARE-C attended the TSC in "Proposal Writing for Research Grants" that was offered in November – December 2023.The course's main objective was to introduce its participants to the European and National funding ecosystem, show them how to identify suitable funding opportunities and explain the constituents of a high-quality research proposal which will satisfy the evaluation criteria.

(b) Three students from the EAS PhD program, attended the TSC in "Effective communication skills" that was offered in February 2024 through the CyI Graduate School.

The course's main objective was to enhance the participants' communication skills, both verbal and non-verbal in various personal and professional contexts. The primary purpose of such a course is to empower individuals with the tools and knowledge needed to communicate more effectively, fostering better understanding, collaboration, and relationships.

(c) Three students from the EAS PhD program attended the TSC in "Publishing in academia: How to be a successful author and reviewer" that was offered in February - March 2024. The course's main objective was to guide the students through the entire process of scientific publishing of research papers, from understanding what is publishable and what is not, all the way to proof reading of an accepted manuscript or dealing with a rejection.

(d) Three students form the EAS PhD program attended the TSC in "How to cope with stress" that was offered in March 2024. The course's main objective was to enhance the understanding of participants on the physiology of stress, to teach them basic techniques for quick relief from stress but also long-term, more effective strategies such as time management, prioritisation and work-life balance.

(e) One student from the EAS PhD program attended the TSC in "Common Rules of Scientific Writing" that was offered in March 2024. The course's main objective was to transfer practical advice on how to become an effective writer of science, focusing on original research papers and touching on related activities such as the peer review process and drafting of personal statements. The objective was to increase the attractiveness of students' writing, making them aware of what strengthens a piece of writing and what weakens it.

3. International Dual Degree PhD

During this reporting period, six PhD students engaged in Joint/Dual Degrees with the following Universities: University of Paris-Saclay, University of Helsinki and the National and Kapodistrian University of Athens.

4. Stakeholder Mapping

As reported in D9.7, the Consortium has created a template format that has allowed it to review and categorize its relations with all actors (beyond the Consortium) that are *directly* engaged with the CoE and the EMME-CARE project. This functions as a "live record" regularly reviewed and updated by the Consortium in line with relevant EMME-CARE reporting periods. As such, it also serves as a tool for ensuring relevance and efficiency of audience segmentation and planning of DEC efforts.

For mapping purposes, stakeholders were organized in the following categories:

- **Consortium Partner**, partners in funded project
- **Partner**, have signed an MoU
- **Collaborator**, purpose-driven collaboration / collaboration agreement
- **Regional Professorship Program**, part of the EMME-CARE RPP
- **Service users**, recipients of CoE services or products
- **Other**, any other type of relationship for stakeholders directly engaged with EMME-CARE

At the time of writing of this deliverable, EMME-CARE directly engages with stakeholders from **214 organizations (collaborations with 77 new organisations during this reporting period)**, across **35 countries**, from academia, international organizations, public sector & government, third sector / NGOs as well as private companies. An updated breakdown per type of organization is included below.

Type of Organization	**Number per Organization type**	**Percentage per Organization type**
Academic	85	39.7%
Public	74	34.6%
Private	41	19.2%
NGO	10	4.7%
International Organizations	4	1.9%

The above information is guiding the dissemination, and exploitation activities of the Consortium in planning its activities for the next reporting period, while it will also act as a helpful basis in further developing its exploitation plan within the context of WP8 activities.

3. Knowledge and Data Management and IPR Protection

This section outlines relevant updates relating to **Task 9.2 Knowledge and Data Management, and IPR Protection**, led by the Cyprus Institute**.**

3.1 Data Management Plan and FAIR Strategy

D9.3: Data Management Plan (Open Data Pilot)

D9.3: Data Management Plan (Open Data Pilot), is describing the overall approach for producing, collecting and processing research data for EMME-CARE and the Research Departments and Infrastructure Units that have been consolidated in the context of the CoE, including the CoE's FAIR Strategy. The DMP submitted in March 2021 is considered to be up to date.

During the reporting period, the following improvements and additions have been made at the technical aspect of Data Management:

- Four additional instruments have been imported into the database, accompanied by their respective MATLAB and Python scripts.
- A custom VM and a relevant datastore have been created to accommodate the needs of a resource-intensive instrument.
- A monitoring appliance has been installed, which gathers usage metrics from the infrastructure and collects error logs from the instrument scripts. Based on these metrics, events are generated, and the responsible technicians are informed by teams' messages.

3.2 Formulation and revision of IPR strategy, specifically in the context of exploitation activities

As already reported and presented within the framework of the EMME-CARE 3rd Periodic Review Report, the IPR strategy of the CoE has been reviewed and revised as necessary, and in line with the recommendations of the EC review comments stemming from the 2nd Periodic review report.

In summary, IPR conditions are defined at the following levels:

- **Between Teaming Consortium**: through the Consortium agreement, which determines the rights and obligations of the parties related to background and results and the management of intellectual property (GA – section 3), including arrangements relating to confidentiality, background or pre-existing IP brought into the Consortium, foreground IP, especially relating to ownership and/or joint ownership of the project's results, side ground IP, relating to intellectual outcomes generated parallel to the activities of the project, legal protection of results, settlement of disputes, and commercial exploitation of results and relevant access rights. EMME-CARE Consortium Agreement: IPR management, rights and obligations of Beneficiaries (background, foreground, results)
- **At CoE:** ownership rights emanating from research of and/or materials produced by CoE employees and postgraduate students are determined via the defined CyI IPR policy and Spin-off policy (more details here: https://www.cyi.ac.cy/index.php/research/innovation-and-entrepreneurship/policies-and-procedures.html)
    - **CoE Tech Transfer Process**: including KERs Mapping, Discovery & IPR Protection measures recommendations. Protection measures are examined to support exploitation, including patents, copyright, design rights, database rights and copyright, know how, rights in proprietary and confidential information and any other rights in inventions. Strategic intelligence specifically regarding patents is gathered to determine freedom to

operate and any potential barriers to commercial exploitation, to find relevant research and/or other commercialization partners, and to identify licence-in opportunities, as they relate to the expected CoE products and/or services. This process is managed through the CoE's RISO Unit (as per its scope outlined in submitted deliverable D8.1) and with the support of CyI's Innovation & Entrepreneurship Office.

- **Other external parties**: when it comes to new projects or related activities involving the CoE and partners beyond those involved in the EMME-CARE Consortium (including SMEs), the CoE's approach to managing IPR, knowledge transfer and exploitation builds on the principles and guidelines described in the European Commission Recommendations on the management of IP in knowledge transfer activities and Code of Practice for universities and other public research organisations, and also considers the policies of the private entities and the stakeholders that are part of each respective consortium. In the case of engagement of other external parties on a bilateral basis, IPR conditions are examined and determined on a case-by-case basis in respective bilateral agreements, via the use of NDAs and Agreement Templates (with IPR conditions clearly outlined).

4.Communication, Outreach & Public Engagement

This section outlines the Fifth Annual report on EMME-CARE Communication, Outreach & Public Engagement as these link to **Task 9.3 Communication, Outreach and Public Engagement**, led by the Cyprus Institute.

4.1 Creation and updating of social media profiles and public forum

As already reported previously, CoE social media accounts were created from the first months of the project and continue to be active, aiming to speak to various stakeholders across Facebook, Twitter, LinkedIn and Research Gate.

The CoE's efforts have culminated in a steady expansion of its online community, with 2,202 followers for CoE social media platforms which the CoE aims to continue to grow. Indicatively, at the time of writing (August 2024) the EMME-CARE X (previously known as Twitter) account has brought its total follower count to 761 followers. Similarly, the CoE's Facebook Page has gathered a sizeable support of 784 followers, an 9.1% increase since August 2023. Finally, the EMME-CARE LinkedIn page has attracted 657 followers, an increase of 257 followers since August 2023.

Figures 4.1.1 & 4.1.2: Screenshots of CoE social media posts on Facebook (left: CARE-C seminar on Climate Change and Health, 11/04/2024) and (right: Virtual workshop on Innovation in Atmospheric Measurement Techniques, 20/5/2024)

4.2 Giveaways, memorabilia and distribution of promotional material

The CoE continues to make good use of the promotional material created (see D9.4) to continue to develop the impact and visibility of the CoE, including through the creation of "briefing packs" to delegations of formal visits to the CoE as well as distribution in formal meetings with external contacts, and in the context of other events organized and hosted by the CoE as appropriate.

4.3 Organisation of Climate Conference series

A 3rd iteration of an International Conference on Climate Change in the EMME co-organized by the CyI will take place on 26-28 September 2024, in Cyprus. Within the framework of the conference, two pre-conference workshops will be held on 24 and 25 of September, organised by CARE-C researchers focusing on 'Climate Change and Health' (24-25 September) and 'Urban Overheating in the Mediterranean and the Middle East-North Africa (25 September), while CARE-C faculty and researchers will contribute with invited participations to the Conference. Additionally, the CoE has continued to host on annual basis the Online Workshop on Climate and Atmosphere Research & Innovation in the EMME, creating a virtual forum for networking, knowledge exchange and to further strengthen collaboration with regional actors on an ongoing basis.

4.4 Outreach and Public Engagement Events

Over the period reported in this deliverable, the CoE has organized, actively participated and attended several outreach and public engagement events to enhance its visibility and impact.

These contributed to the growth of the public forum created with the EMME-CARE stakeholder community and the wider public at large, primarily through face-to-face events and activities enhancing the promotion of the Center.

More information and selected highlights from outreach and public engagement events the CoE has organized or participated during the reporting period of this deliverable, are outlined below. The latest information about upcoming CoE events as well as previous participation/organization of events, can be found on the dedicated webpage of the EMME-CARE website (https://emme-care.cyi.ac.cy/news/#ue) .

CARE-C's CAO school presentation for Earth Day

Members of the Cyprus Atmospheric Observatory (CAO) team at CARE-C of the Cyprus Institute, joined the effort of the Cyprus Research and Innovation Foundation – RIF, on the occasion of Earth Day 2024, to raise awareness about climate change and its impacts, by delivering a presentation on this topic to high school students. Dr Michael Pikridas, associate research scientist at CARE-C, gave a presentation on "Climate change, air pollution, health impacts and other tales from the natural World", which was prepared in collaboration with technical research specialist Ms Nikoleta Lekaki and senior research affiliate Mr Filippos Tymvios, to students of the Archbishop Makarios III lyceum, on the 17th of April 2024.

The presentation was part of the programme 'Researchers at Schools' ("Ερευνητές και Ερευνήτριες στα Σχολεία"), which aimed to increase contact and interaction of primary and secondary students and educators with researchers from all research fields in Cyprus, enhancing students' interest in the fields of science, research and innovation. At the same time, the programme aimed to highlight the

importance and benefits of the work of researchers in various aspects of everyday life, as well as to promote research careers as an option for the future of students.

Figure 4.4.1: Photo from the school presentation, 17/4/2024

CARE-C at the 2024 sCYence Fair

Researchers and other staff from CARE-C of the Cyprus Institute took part at the 2024 “sCYence Fair”, organised by the Cyprus Institute, on 17 April 2024.

Firstly, researchers from the Emissions Reporting team prepared and presented the 3-D Emissions Web booth. Their booth allowed visitors to examine the source and distribution of greenhouse gases and air pollutants originating in Cyprus. Throughout the event, visitors helped build a colourful web by connecting an emissions source category, such as transport, wastewater, or energy industries, to the pollutants it produces. Learning about the pollutants and the processes that produce them, starts the conversation about what actions can be taken to reduce their levels for the improvement of air quality and the environment. Additionally, several CARE-C research scientists were members of the Evaluation committee, which assessed the school team entries. Finally, CARE-C admin staff helped on the day as volunteers, ensuring the event ran smoothly and efficiently.

“sCYence Fair” aims to stimulate scientific interest and to encourage participation by young students and nurture the future generation of Cypriot scientists. The event, which over 60 student teams from more than 50 schools across Cyprus participated in, provided an opportunity for young scientists to increase their awareness of the wonders of science, add to their knowledge and broaden their scientific horizons.

Figure 4.4.2: Photo from the CARE-C booth at sCYence Fair, 08/06/2023

CARE-C's USRL team at the inaugural FIA Fire Summit in Cyprus

The Unmanned Systems Research Laboratory (USRL) of CARE-C at the Cyprus Institute had a strong representation at the inaugural Fire Summit in Cyprus, organised by the UK Fire Industry Association (FIA), on Thursday, 10 October 2023 at the Cyprus State Fair in Nicosia.

THE USRL team participated with a booth at the exhibition, in conjunction with the Department of Forests (DoF) and additionally, the Head of Operations and Research and Development Scientist of USRL, Dr Christos Keleshis took part in the conference, organised during the Summit, as one of the speakers at the panel discussion on 'Challenges of the modern Fire and Rescue Services'. During the discussion, Dr Keleshis and Mr Kostas Papageorgiou, Senior Conservator of Forests and Head of the Fire Protection and Forest Engineering Sector at DoF, referred to the close collaboration between the two units, and explained how modern technologies such as drones can assist in forest fire prevention in Cyprus. The panel was chaired by Sir Ken Knight, CBE, QFSM, Former London Fire Commissioner and Renowned Fire Safety Expert.

The aim of the Fire Summit was to improve fire safety in Cyprus, by bringing together professionals of the fire safety industry and public sector to discuss the challenges they face and exchange best practices. It also signified the official launch of FIA Cyprus.

Figure 4.4.3: Photo from the CARE-C booth at the FIA summit, 11/10/2023

CARE-C at Reflect Festival

Members of CARE-C at the Cyprus Institute, have successfully participated in the 2023 Reflect Festival, held in Limassol on 20- 21 September 2023, with a dedicated booth alongside other Institute colleagues from different departments, as well as a featured talk by the Centre's Director Prof Jean Sciare.

During the festival, the CARE-C communication team and members of the Unmanned Systems Research Laboratory (USRL) had the opportunity to discuss with different festival participants from a wide range of sectors and backgrounds, about the cutting-edge research and innovation the Centre in general, and USRL more specifically do, through the development of innovative technologies such as drones, which can assist in fire prevention, among other uses. Additionally, on Day 2, CARE-C Director, Prof. Jean Sciare, delivered a compelling talk on the topic of 'Addressing Devastating Wildfires: Can Technology Make a Difference?'.

The Reflect Festival is one of the largest technology, innovation, and business festivals in Cyprus

and offers a dynamic environment that encourages cross-disciplinary dialogue, creative thinking, and networking opportunities with experts and enthusiasts from various fields, and it has provided a great platform for showcasing the Centre's contribution to research and innovation as well as establishing meaningful connections and expanding the Centre's network.

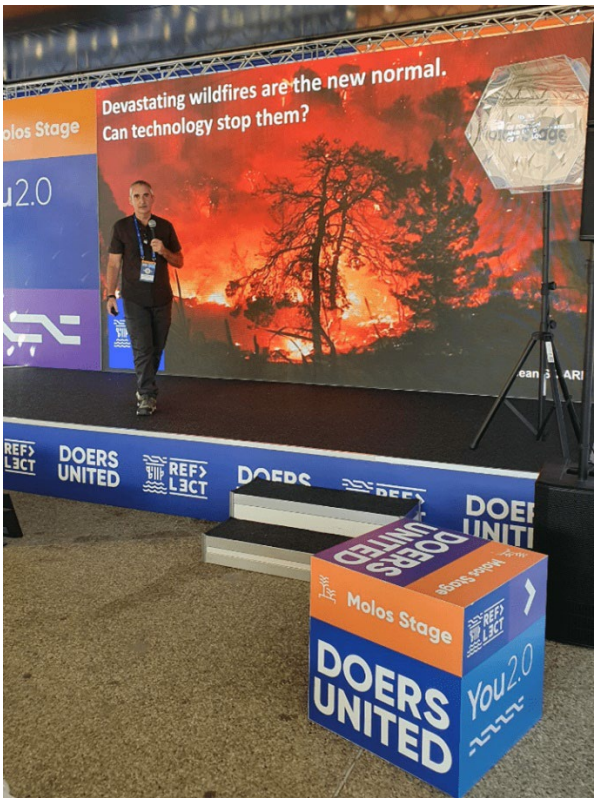


Figure 4.4.4: Photo from Prof Sciare's talk at Reflect Festival, 21/09/2023.

CARE-C Researchers at European Researchers' Night 2023

On Friday, 29 September 2023, researchers of CARE-C at the Cyprus Institute, among other colleagues from the Institute, actively participated in the 2023 European Researcher's Night that took place in the Cyprus Expo in Nicosia. The Cyprus Institute displayed the work of the Sustainable Built Environment Group in a joint booth with colleagues from EEWRC, STARC and CARE-C, under the title "I never thought trees were so important to the city".

The information and activities presented at the booth were part of a multiplier event promoting the Erasmus+ 'Climate Change, Cities, Communities, and Equity in Health' (CliCCHE) project, which CARE-C researchers have been part of. During the event, school students from across the island and other visitors were exposed to some problematic aspects of Strovolos Avenue and were asked to re-imagine it, from a citizen-friendly point of view. By the end of the school visits, a large collection of visual depictions of a reclaimed avenue were displayed on the walls of the booth and participants were engaged in discussions on the role of co-participatory activities involving citizens and other stakeholders. Side activities included outdoor walks and photo shooting with IR thermal camera showing the impact of greenery on urban material, virtual reality application showing the impact of climate change on the Pedieos area close to Strovolos, and dissemination of previous results of the CliCCHE Local Workshops, including student work, e-learning videos and web tutorials.

The multiplier event for Cyprus was a great success, with a large participation of students and the public, and interactive activities and discussions that stimulated visitors to discuss and exchange

experiences. Having a non-formal, conversational style and a relatable example of a highly popular and frequently used urban area made this even more intriguing, since participants were able to share their personal encounters and wishes for their cities. In addition to members of the municipality, students and the public, the event was attended by researchers from other institutions, teachers, professors, private business owners and the Deputy Minister of Research, Innovation and Digital Policy.

Figure 4.4.5. Photo from Researchers Night 2023- 29/09/2023

4.5 CoE Website Upgrade and scoping of web and mobile-app creation

For the M49-M60, the website itself has been updated and transferred to a new, faster, and more secure web server. There have been significant improvements in the aspect of website availability and security, while daily backups allow us to recover all necessary data in case of a failure and ensure data integrity.

4.6 CoE Press Coverage

As part of its communication, outreach and public engagement activities, the CoE plans for targeted, and timely press releases, features in articles and news items as well as public appearances leading to coverage by the traditional print and broadcast media (incl. articles in newspapers and magazines, and features on radio or TV) to maximize its visibility and impact.

During the reporting period of this deliverable, EMME-CARE has had **two hundred and fifty-seven (257) press mentions,** including interviews and dedicated features**,** in various digital and print outlets in at least **six (6) different languages.**

Indicatively, below are highlights from the press coverage the CoE has received during the reporting period of this deliverable. A constantly updated comprehensive list of the press mentions of the CoE can be found on the News & Events page of its website (https://emme-care.cyi.ac.cy/news/).

Press Highlights

- 19 June 2024- Growing Risk of Tiger Mosquito- Borne Infections in Europe

ΑΛΗΘΕΙΑ ΠΕΜΠΤΗ 20 ΙΟΥΝΙΟΥ 2024 ΥΓΕΙΑ 7

VECLIM

Αυξημένος κίνδυνος λοιμώξεων από το Κουνούπι «Τίγρης»

✔ Επείγουσα ανάγκη για εντατική παρακολούθηση των κουνουπιών και λήψη προληπτικών μέτρων, για την προστασία της δημόσιας υγείας μέσα στους επόμενους μήνες

Η τακτεία εξάπλωση πληθυσμού του ασιατικού κουνουπιού «Τίγρης» (Aedes albopictus) και η δυνατότητά του να μεταδίδει λοιμώδεις νόσους, καθιστούν επιτακτική την άμεση δράση στην Κύπρο και σε ολόκληρη την Ευρώπη, ανοφέρει σε ανακοίνωση του, το Κέντρο Κλιματικής και Ατμοσφαιρικής Έρευνας (CARE-C) του Ινστιτούτου Κύπρου (ΙΚυ) μέσω της πλατφόρμας Υποστήριξης Λήψης Αποφάσεων Έγκαιρης Προειδοποίησης, VECtim δημοσίευσαν πρόσφατα νέες εκτιμήσεις που τονίζουν τον αυξημένο κίνδυνο εξάπλωσης δάγκειου πυρετού και άλλων λοιμωδών νόσων, που μεταδίδονται από κουνούπια στην Ευρώπη. Τα δεδομένα της πλατφόρμας VECtim αναδεικνύουν την επείγουσα ανάγκη για εντατική παρακολούθηση των κουνουπιών και λήψη προληπτικών μέτρων, για την προστασία της δημόσιας υγείας μέσα στους επόμενους μήνες.

ΟΠΩΣ αναφέρεται, οι ιοί του δάγκειου πυρετού, τοικουγκούνια και Ζίκα μεταδίδονται από κουνούπια του γένους Aedes, συμπεριλαμβανομένου του ασιατικού κουνουπιού «Τίγρης», ενός εξαιρετικά επεμβατικού είδους που ξεκωρίζει με τις χαρακτηριστικές μαυρόασπρες ρίγες του. Τα κουνούπι αυτά έφτασε για πρώτη φορά στην Ευρώπη τη δεκαετία του 1970 και έκτοτε, υποβοηθούμενο από την κλιματική αλλαγή, έχει εξαπλωθεί σε όλη την ήπειρο, αυξάνοντας τον κίνδυνο επιδημιών, αποτελώντας σημαντική απειλή για τη δημόσια υγεία.

Ο ρόλος της VECtim ως Σύστημα Έγκαιρης Προειδοποίησης

Η VECtim υποστηρίζει τα συστήματα έγκαιρης προειδοποίησης, χρησιμοποιώντας κλιματικά μοντέλα δραστηριότητας κουνουπιών και κινδύνου επιδημιών. Στην πρόσφατη ενημέρωσή της, η VECtim δημοσίευσε μια σειρά εκτιμήσεων στη διαδικτυακή της πύλη (https://veclim.com) βασισμένες σε εκτεταμένα μοντέλα πληθυσμού κουνουπιών και εξάπλωσης ασθενειών.

ΑΥΤΕΣ οι εκτιμήσεις, σημειώνεται, δείχνουν ότι το μεγαλύτερο μέρος της Ευρώπης είναι ευάλωτο σε πιθανή εγκατάσταση του κουνουπιού «Τίγρης», προβλέποντας συχνές, αν και ακετικά περιορισμένες, τοπικές εξάρσεις δάγκειου πυρετού, και πιθανώς, άλλων παράγωνων νόσων. Οι προβλέψεις της VECtim υποστηρίζονται από την ταύτιση των περιοχών υψηλού κινδύνου με τα 275 τοπικά κρούσματα ενδημικής διάδοσης δάγκειου πυρετού που αναφέρθηκαν από το Ευρωπαϊκό Κέντρο Πρόληψης και Ελέγχου Νόσων (ECDC) μεταξύ 2010 και 2023.

Η VECtim προβλέπει ευρύτερη επέκταση των περιοχών κινδύνου το 2024 σε σύγκριση με την τελευταία δεκαετία. Περιοχές ιδιαίτερης ανησυχίας περιλαμβάνουν τις ανατολικές ακτές της Βόρειας Αμερικής και της Βραζιλίας, τα νησιά του Ινδικού Ωκεανού, την Ινδία, την Κίνα και το αρχιπέλαγος της Μαλαισίας. Στην Ευρώπη, αυξημένοι κίνδυνοι εντοπίζονται κατά μήκος του ορίου περιβαλλοντικής καταλληλόλητας του κουνουπιού τίγρη, που εκτείνεται από τις Κάτω Χώρες έως την Τουρκία, και επεκτείνεται προς τις περιοχές της Λεβαντίνης και της Μεσοποταμίας.

Συνέπειες για τη δημόσια υγεία και εξάρσεις

Καθώς το κουνούπι «Τίγρης» εξαπλώνεται πιο διαδεδομένα στην Ευρώπη, αυξάνεται ο κίνδυνος επιδημιών από ιούς όπως ο δάγκειος πυρετός και ασθένειες Τοκουγκούνια και Ζίκα που εκάγονται από άλλες ενδημικές πηέρους. Με τους Ολυμπιακούς Αγώνες του Παρισιού να απέχουν μόλις λίγες εβδομάδες, η VECtim εφιστά όπως οι αρχές στη Γαλλία και σε άλη την ήπειρο να παραμείνουν σε εγρήγορση για την περίπτωση εισαγόμενων περιπτώσεων και ενδεχόμενης τοπικής μετάδοσης των νόσων ιδιαίτερα δάγκειου πυρετού.

ΟΠΩΣ φαίνεται πόλεις υψηλού κινδύνου είναι: η Αθήνα, η Βαρκελώνη, το Βουκουρέστι, η Κωνσταντινούπολη, η Μαδρίτη, το Μιλάνο, η Νάπολη, το Παρίσι και η Ρώμη, καθώς και πόλεις στη Λεβαντίνη και τη Βόρεια Αφρική. Οι εκτιμήσεις της VECtim υπογραμμίζουν την κρίση ανάγκη για εκτεταμένη και συνεχή παρακολούθηση των κουνουπιών και επιτήρηση, τόσο των εισαγόμενων, όσο και των τοπικά διαδιδόμενων περιπτώσεων.

Figure 4.8.1: Alithia Newspaper

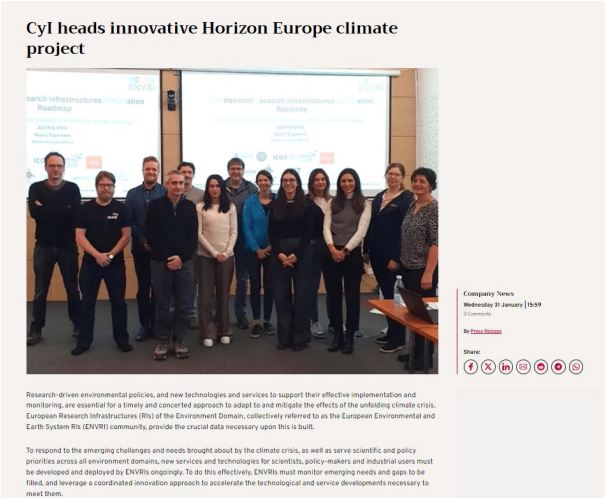
- 23 April 2024- Assoc Prof. Theodoros Christoudias interview – The Possibilities of Solar and Wind Energy

Figure 4.8.2: Sigma TV

- 17 March 2024- CYBC TV episode 'Spiti sti Fysi' (Home to Nature): Environmental and Atmospheric Measurements, Processing and Results - Climate Models & Air Quality

Figure 4.8.3: CYBC 'Spiti sti Fysi'

- 31 January 2024 - CyI heads innovative Horizon Europe climate project


CyI heads innovative Horizon Europe climate project

Company News
Wednesday 31 January | 15:59

Research-driven environmental policies, and new technologies and services to support their effective implementation and monitoring, are essential for a timely and concerted approach to adapt to and mitigate the effects of the unfolding climate crisis. European Research Infrastructures (RIs) of the Environment Domain, collectively referred to as the European Environmental and Earth System RIs (ENVRI) community, provide the crucial data necessary upon this is built.

To respond to the emerging challenges and needs brought about by the climate crisis, as well as serve scientific and policy priorities across all environment domains, new services and technologies for scientists, policy-makers and industrial users must be developed and deployed by ENVRIs ongoingly. To do this effectively, ENVRIs must monitor emerging needs and gaps to be filled, and leverage a coordinated innovation approach to accelerate the technological and service developments necessary to meet them.

Figure 4.8.4: Cyprus Mail

- 12 January 2024 - Wood Burning Can Cause Intense Air Pollution in Areas with Restricted Air Movement, a New Study by CARE-C Researchers Shows


Έρευνα Ινστιτούτου Κύπρου: Η καύση ξύλου προκαλεί αυξημένη ατμοσφαιρική ρύπανση

Παρασκευή, 12/1/2024 - 11:47

AlphaNewsLive

Η ατμοσφαιρική ρύπανση μπορεί να επιδεινωθεί κατά τους χειμερινούς μήνες, λόγω της οικιακής καύσης ξύλων. Αυτό καταδεικνύει νέα μελέτη που δημοσιεύθηκε πρόσφατα με τη συμβολή ερευνητών του Κέντρου Αριστείας για την Κλιματική και Ατμοσφαιρική Έρευνα (CARE-C) του Ινστιτούτου Κύπρου (ΙΚυ).

Figure 4.8.5: AlphaNews Live

- 26 December 2023 - EAD completes first atmospheric research expedition in the Arabian gulf


EAD COMPLETES FIRST ATMOSPHERIC RESEARCH EXPEDITION IN ARABIAN GULF

News Home | More from Local

Tuesday, 26 December 2023 15:56

By ARN News Staff

WAM

Environment Agency – Abu Dhabi (EAD) has completed the first-ever Atmospheric Research Expedition in the Arabian Gulf on board its marine research vessel Jaywun.

Figure 4.8.6: Dubai Eye

- 11 November 2023 - CyI Supplies Department of Forests with Custom-Built Drones to Combat Wildfires

ΑΛΗΘΕΙΑ ΣΑΒΒΑΤΟ 11 ΝΟΕΜΒΡΙΟΥ 2023 ΕΠΙΚΑΙΡΟΤΗΤΑ 7

ΠΑΡΑΔΟΘΗΚΑΝ ΕΞΙ ΜΗ ΕΠΑΝΔΡΩΜΕΝΑ ΑΕΡΟΣΚΑΦΗ ΣΕ ΕΚΔΗΛΩΣΗ ΣΤΗΝ ΑΘΑΛΑΣΣΑ

Ιπτάμενη στήριξη για το Τμήμα Δασών

Συνολικά έξι μη επανδρωμένα αεροσκάφη, από τα οποία τα δύο αφορούν δωρεά της εταιρείας Exness Global Limited και τα άλλα τέσσερα στο πλαίσιο σύμβασης με το Ινστιτούτο Κύπρου, παρελήφθησαν χθες το Τμήμα Δασών. Σύμφωνα με ανακοίνωσή του, η παράδοση των αεροσκαφών διεξήχθη στο πλαίσιο εκδήλωσης στα κεντρικά γραφεία της δασικής περιφέρειας Λευκωσίας, Λάρνακας Αμμοχώστου, στην Αθαλάσσα.

Η δωρεά έγινε στα πλαίσια σύναψης μνημονίου μεταξύ της εταιρίας Exness Global Limited και του Ινστιτούτου Κύπρου προς όφελος του Τμήματος Δασών για τις ανάγκες προστασίας των δασών και του φυσικού περιβάλλοντος γενικότερα από τις δασικές πυρκαγιές. Ανακοινώθηκε επίσης ότι, πέραν από την πιο πάνω δωρεά το Τμήμα Δασών, παράλαβε άλλα τέσσερα μη επανδρωμένα αεροσκάφη από το Ινστιτούτο Κύπρου που αφορά στην υλοποίηση σύμβασης που έχει συνομολογηθεί με το Ινστιτούτο Κύπρου.

Για πρόληψη και κατάσβεση

Στον χαιρετισμό της στην εκδήλωση, η εκπρόσωπος της εταιρείας Exness Global Limited, Μαρία Χριστοφίδη, ανέφερε ότι η δωρεά αυτή αποτελεί συνέχεια άλλων που είχαν προηγηθεί και εξέφρασε την πεποίθηση ότι θα συμβάλει στην πρόληψη και στην κατάσβεση πυρκαγιών μέσω της χρήσης

✔ Τα δύο αφορούν δωρεά της εταιρείας Exness Global Limited και τα άλλα τέσσερα στο πλαίσιο σύμβασης με το Ινστιτούτο Κύπρου

υπεραιώνιων μεθόδων.

Η Μαρία Χριστοφίδη ανέφερε επίσης ότι η τεχνολογία που αναπτύχθηκε από το Ινστιτούτο Κύπρου είναι προσαρμοσμένη στα κυπριακά εδάφη και θα ωφελήσει την προστασία των φυσικών οικοσυστημάτων σε ολόκληρη τη χώρα. Εκτός από τη δωρεά του εξοπλισμού, ανέφερε πως η Exness θα καλύψει το κόστος για τρεις πιλότους για τη λειτουργία των drones για περίοδο δύο ετών.

Υπερσύγχρονες τεχνολογίες

Μιλώντας στη νέα τελετή παράδοσης, ο καθηγητής Jean Sciare του Ινστιτούτου Κύπρου αφού ευχαρίστησε το Τμήμα Δασών και την εταιρεία Exness Global Limited ανέφερε ότι χρησιμοποιούν νέες τεχνολογίες για την ανάπτυξη και την ετοιμασία των νέων υπεραιώνιων μη επανδρωμένων αεροσκαφών και σημείωσε ότι αυτά θα συμβάλουν το μέγιστο σε θέματα πρόληψης και κατάσβεσης των πυρκαγιών.

Figure 4.8.7: Alitheia News

- 06 November 2023 - CARE-C Researchers Play Crucial Role in EarthCARE Satellite Mission for Advancing Global Climate Research

Cyprus Institute's contribution to ESA's Earth Explorer space mission

How Cyprus Institute shines in space research

Pexel photo

Newsroom / CNA 06 NOVEMBER 2023 - 18:42

Share this page:

Researchers from the Cyprus Institute's Climate and Atmosphere Research Center (CARE-C), coordinated by Professor Franco Marenco, are actively involved with the European Space Agency's (ESA) upcoming EarthCARE satellite mission, focused on cloud, aerosol and radiation exploration.

News Room

UN envoy's dual approach ahead of crucial briefing | 10:34

Elderly woman dies while swimming in Geroskipou | 09:50

Murder investigation heats up, land deal at heart of Mykonos feud | 09:41

Let's not forget to whom we owe a debt of gratitude | 09:18

Rain relief on the horizon as thunderstorms break the heatwave | 08:45

LATEST NEWS

Popular

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Figure 4.8.8: Knews Kathimerini

- 6 October 2023 - July, the hottest month in four decades

ΙΝΣΤΙΤΟΥΤΟ ΚΥΠΡΟΥ

Ο Ιούλιος ήταν ο θερμότερος μήνας των τελευταίων 4 δεκαετιών

Το φετινό καλοκαίρι, ήταν με μεγάλη διαφορά το θερμότερο που έχει καταγραφεί παγκοσμίως

Τον Ιούλιο που μας πέρασε η μέση τιμή της θερμοκρασίας στο σταθμό Αθαλάσσας ήταν 40,0°C, με αποτέλεσμα ο μήνας να είναι ο πιο θερμός που έχει καταγραφεί τις τελευταίες τέσσερις δεκαετίες, αναφέρει σε ανακοίνωσή του το Ινστιτούτο Κύπρου. Όπως σημειώνει, το φετινό καλοκαίρι σύμφωνα με την Υπηρεσία Κλιματικής Αλλαγής του Copernicus (C3S), ήταν με μεγάλη διαφορά το θερμότερο που έχει καταγραφεί παγκοσμίως, με μέση θερμοκρασία 16,77°C, ή 0,66°C πάνω από το μέσο όρο.

ΑΝΤΙΣΤΟΙΧΟ φαινόμενο, προσθέτει, και μάλιστα σε μεγαλύτερο βαθμό, παρατηρήθηκε και στην Κύπρο όπου σύμφωνα με ερευνητές του τμήματος Περιβαλλοντικών Προβλέψεων του Κέντρου Αριστείας για την Κλιματική και Ατμοσφαιρική Έρευνα (CARE-C) του Ινστιτούτου Κύπρου, τον Ιούλιο η μέση τιμή της θερμοκρασίας στο σταθμό Αθαλάσσας ήταν 40,0°C, με αποτέλεσμα ο μήνας να είναι ο πιο θερμός που έχει

καταγραφεί τις τελευταίες τέσσερις δεκαετίες. Επιπρόσθετα, κατά τον μήνα Ιούλιο καταγράφηκαν οι περισσότερες συνεχόμενες υψηλές θερμοκρασίες, διάρκειας 16 ημέρων.

ΧΡΗΣΙΜΟΠΟΙΩΝΤΑΣ δεδομένα μετεωρολογικών σταθμών του Τμήματος Μετεωρολογίας, οι ερευνητές του Ινστιτούτου Κύπρου ανέλυσαν τις ετήσιες διακυμάνσεις της μέσης θερμοκρασίας πάνω ή κάτω από τον μακροχρόνιο μέσο όρο, για κάθε καλοκαιρινό μήνα στο σταθμό της Αθαλάσσας, από το 1983 (όταν άρχισαν οι καταγραφές) μέχρι το 2023.

ΟΙ ΣΥΝΘΗΚΕΣ τον Ιούνιο 2023 ήταν φυσιολογικές, με τη μέση μηνιαία θερμοκρασία στους 33,9°C, ακριβώς ίδια με τη μακροπρόθεσμη μέση τιμή. Αντίθετα, η αύξηση της θερμοκρασίας κατά τους υπόλοιπους δύο καλοκαιρινούς μήνες επιταχύνθηκε την ίδια περίοδο, με τη μέση θερμοκρασία του αέρα το 2023 να είναι 40,0°C για τον Ιούλιο και 38,9°C για τον Αύγουστο, 2,6°C και 1,5°C αντίστοιχα θερμότερη από την κανονική της περιόδου 1991-2020. Εκτός από την αύξηση της θερμοκρασίας σε μέση μηνιαία βάση, τα πρόσφατα καλοκαίρια στην Κύπρο παρουσιάζουν επίσης ασυνήθιστα υψηλές θερμοκρασίες σε μεμονωμένες ημέρες, σημειώνεται.

«ΑΥΤΗ η διάρκεια ακραίας ζέστης είναι πρωτοφανής τα τελευταία 41 χρόνια με βάση τα δεδομένα στο σταθμό Αθαλάσσας. Το προηγούμενο ρεκόρ καταγράφηκε τον Ιούλιο του 1987 και του 2000, όπου υπήρξαν 10 συνεχόμενες ημέρες με μέγιστη θερμοκρασία που ξεπέρασε τους 40,0°C.

Figure 4.8.9: Alitheia News

- 13 September 2023 - New International Report Warns: Multiple Negative Impacts of Invasive Alien Species on Biodiversity, Human Health and the Economy

Figure 4.8.10: Philenews

Press Coverage Documentation

A list of the CoE's press coverage is publicly accessible at any time on the CoE's website (https://emme-care.cyi.ac.cy/news/#pr - In the Press).

5. Contribution of EMME-CARE Advanced Partners to PDER, Communication, Outreach & Public Engagement Activities

The CoE continues to collaborate closely with its Advanced Partners on PDER, Communication, Outreach & Public Engagement Activities, through its established mechanisms and contact points, reported on in previous deliverables. An indicative record of some of the activities that have been undertaken by Advanced Partners during the reporting period is outlined below.

University of Helsinki

News items for the EMME-CARE website and social media

University of Helsinki a supporter of the 4th "Innovation in Atmospheric Measurement Techniques" workshop (27 June 2024): The workshop was hosted by three EU RIs working in the Atmospheric Measurements remit, ACTRIS, ICOS and IAGOS, together with the Eastern Mediterranean and Middle East Climate and Atmosphere Research Center (EMME-CARE). It was organized by the Climate and Atmosphere Research Center (CARE-C) of the Cyprus Institute, and Dr Tuukka Petäjä from the University of Helsinki was a member of the scientific programme committee.

University of Helsinki at "Climate and Atmosphere Research & Innovation in the Eastern Mediterranean & Middle East" workshop (7 November 2023): University of Helsinki researchers under the EMME-CARE project contributed to the virtual workshop with 2 talks. Under the "New Instrumentation and Research Infrastructure" session we had 1 talk by Dr Nina Sarnela (female): ACTRIS - University of Helsinki topical centre units provide support for measurements of secondary

aerosol formation. In “Atmosphere & Climate Modelling and Prediction” with1 talk by Dr. Pak Lun Fung “Estimating BC concentration in EMME using a generalised proxy”.

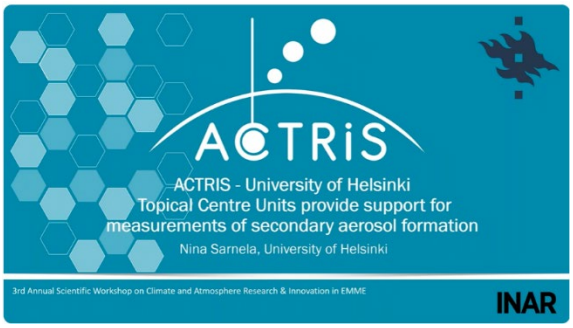


Figure 5.1.1: Dr Nina Sarnela presentation at the Innovation workshop, 8 June 2023

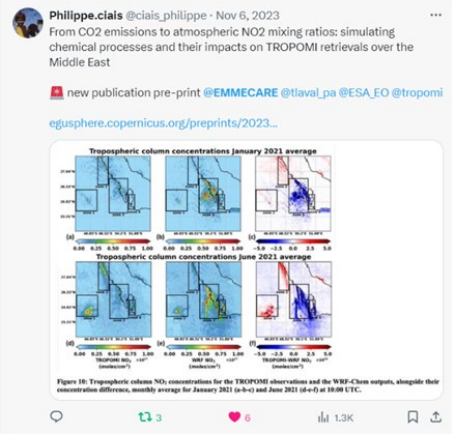
University of Helsinki a co-organiser of the 2nd EMME-CARE Autumn School: Atmospheric Measurements Using Miniaturised Sensors and Drones (30 October – 3 November 2023): The Cyprus Institute (CyI), Eastern Mediterranean Middle East – Climate & Atmosphere Research Centre (EMME-CARE) organised the 2nd Autumn School “Analysis of aerosols, air pollution and their sources in the Eastern Mediterranean” on 30 Oct–3 Nov 2023. The course was organized within the framework of the H2020 Teaming Project EMME-CARE (emme-care.cyi.ac.cy), and the Horizon Europe project Edu4Climate (edu4climate.cyi.ac.cy). Course organization was led by CARE-C, The Cyprus Institute, with the contribution of the EMME-CARE Advanced Partners and the Edu4Climate Consortium partners.

Figure 5.1.2 EMME-CARE Autumn School 2023 participants

Advertising EMME-CARE activities and news on X and other platforms: The University of Helsinki is working continuously towards the promotion and advertisement of EMME-CARE related events and news through the INAR (Institute for atmospheric and Earth system research) X account. INAR currently has 2,147 followers on X.

CEA

Promotion of EMME-CARE events through social media and other digital means. Indicative examples include:



X post – November 2023

MPIC

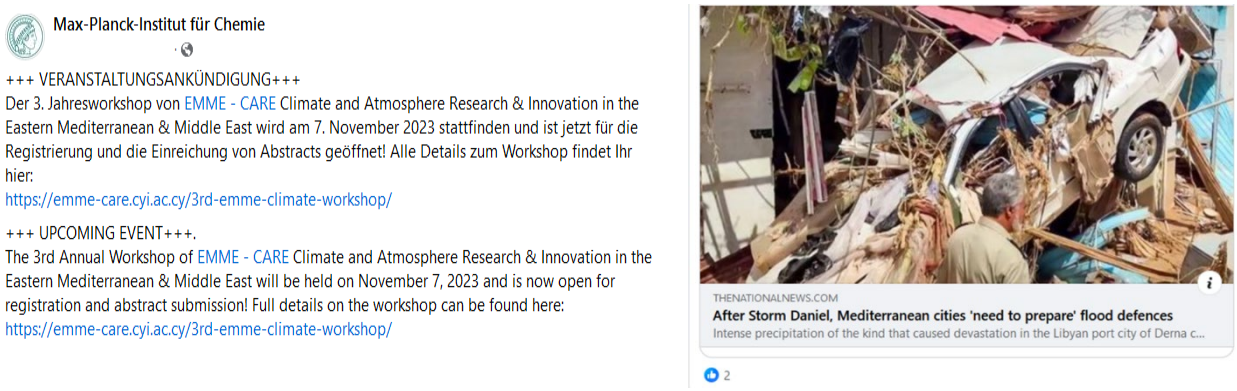
MPIC supported dissemination of EMME-CARE results with various contributions through press releases and Social Media posts across Facebook, X, and LinkedIn with target groups including media, academic community, MPIC alumni and graduate community, others. In terms of social media channels, these included the below MPIC channels:

- Facebook https://www.facebook.com/MPIC.Mainz (1324 followers)
- LinkedIn: https://www.linkedin.com/company/max-planck-institut-fuer-chemie/mycompany (1153 followers)
- X: https://x.com/MaxPlanckChem (892 followers)

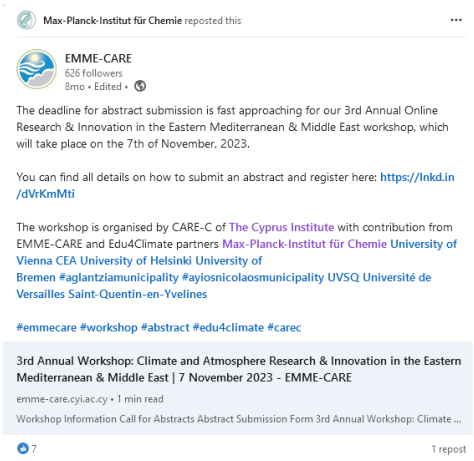
Indicative screenshots of the activities are included below:

Social media dissemination: Facebook, X, Instagram (September 2023-August 2024)

Facebook



LinkedIn



X

5. Key Performance Indicators

In order to measure the effectiveness and impact of the CoE's planned communication, dissemination and exploitation activities, Key Performance Indicators (KPIs) are set, monitored and reviewed.

To avoid confusion between reporting periods (EMME-CARE annual evaluations vs the reporting period of this deliverable), figures are reported on a calendar year basis.

Dimension	Key Performance Indicator	2020	2021	2022	2023	Objective 2026
Effectiveness	Scientific publications (per year)	74	97	96	97	**150**
	% scientific publications in TOP-25% impact factor journals of the field (per year)	56% [41]	65% [64]	67% [64]	63.9% [62]	**>75%**
	% scientific publications in TOP-10 journals of the field (per year)	38% [28]	41% [40]	51% [49]	28.9% [28]	**>60%**
	% scientific publications in TOP-5% impact factor journals of the field (per year)	12% [9]	12% [12]	19% [18]	10.3% [10]	**[8]**
	Plenary/ Invited talks at international conferences	1	7	4	13	**15**
	International conference presentations and workshops	30	41	98	74	**100**
Outcome	Number of CoE public events (per year)	5	8	8	9	**15**
	Estimated number of CoE press coverage (per year)	111	300	338	238	**325**
Efficiency	Number of following in CoE digital platforms (at end of year)	1238	1586	1792	2029	**2500**
	Estimated number of persons reached through events – including digital (per year)	2940	3040	3868	15830*	**4000**
Network	Number of joint publications with regional partners	16	22	37	32	**>40**
	Number of joint publications with Advanced partners	40	61	56	62	**>50**
	Impact factor of joint publications with Advanced Partners	6.53	6.98	14.5	11.2	**>4**

*Includes the number of attendees reported on the news for European Researchers Night and Reflect (14k)

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