

COMMUNICATION OF ENGAGEMENT (COE)

Period covered by this Communication of Engagement

From: September, 2020

To: September, 2022

Part I. Statement of Continued Support by the Chief Executive or Equivalent

September 27, 2022

To our stakeholders:

I am pleased to confirm that Institute for Research in Environment, Civil Engineering and Energy reaffirms its support to the United Nations Global Compact and its Ten Principles in the areas of Human Rights, Labour, Environment and Anti-Corruption. This is our Communication on Engagement with the United Nations Global Compact. We welcome feedback on its contents.

In this Communication on Engagement, we describe the actions our Institute has taken in the last two years to support the UN Global Compact and its Principles as suggested for an organisation like ours. We hold to high standards of ethics and integrity, and demonstrate good governance. IECE operates with five key aims in the area of sustainability and responsibility:

- To increase IECE's excellent research profile for business ethics and sustainability
- To broaden the teaching of sustainability principles throughout all education programs
- To pursue external engagement opportunities that contributes to a sustainable society
- To reduce IECE's environmental footprint
- To maintain high ethical standards in the management of research and education programs

We also commit to sharing this information with our stakeholders using our primary channels of communication and engage them in our activities.

Sincerely yours,

Prof. Dr. Angelina Taneva-Veshoska



Part II. Description of Actions

Actions our Institute has taken in support of the Global Compact:

1. **IECE guided one business partner** – Corporate responsibility projects in collaboration with our business partner **CEIM towards sustainable oriented practices in line with the 10 principles from Global Compact:**

- Involvement of the initiative "European Mobility Week", where as part of this event, employees who used an alternative sustainable mode of transport received monthly salary bonus and other benefits (discounts for bike repair or buying bike, certificates, etc).
- Procurement planning and careful selection of raw materials that are sustainable and control waste recycling that contributes to reducing costs and increasing competitiveness.
- Environmental action for collecting waste cooking oil, from the company's employees.
- Supporting Humanitarian-environmental action "One cap - one hope" in order to collect as many plastic bottle caps as possible, which are then handed over to "Pakomak", a packaging and waste management company. Pakomak recycles the plastic bottle caps and uses them for creating parts for wheelchairs.
- Increased reuse of raw materials and waste from unused materials, which leads to lower costs for their procurement.
- Introduction of waste records, which raised awareness and the need for savings, directly indicating the spots where costs could be reduced and where there is potential for reuse.
- Organizing an Eco action in the sign of #EarthHourMK for the employees in IECE and GIM in order to raise awareness about energy saving in the workplace.
- Sustainable use of renewable energy sources such as geothermal energy used for space heating.
- Reuse of waste concrete cubes from the process of their mechanical testing in the laboratory as a building material.
- IECE conducts educational programs for eco-managers and sustainable leaders.
- "Happy employees, successful organisation". The project started in October, 2014 and is still ongoing. For this project the company Civil Engineering Institute Macedonia has received the highest price – CSR award in the field "Investing in employees".

2. New project funded by Erasmus+ in the program Strategic partnership in higher education, VET and adult education.

➤ CATALYST - European VET Excellence Centre for Leading Sustainable Systems and Business Transformation

The European VET Excellence Centre for Leading Sustainable Systems and Business Transformation (CATALYST) project aims to strengthen the sustainable competitiveness of professionals, students and small and medium-sized enterprises (SMEs). Upskilling and re-skilling are crucial for long-term and sustainable growth, productivity, and innovation and therefore a key factor for the competitiveness of businesses of all sizes, in particular SMEs. The goal of the project is to provide citizens participating in various VET programmes the right skills to work more effectively and take advantage of new technologies. The **main goal** is with the **establishment of united CATALYST Centre of Vocational Excellence in 5 countries** to give support, create an educational offer to tackle personal and organisational development, and to embrace transformation in SMEs, enabling and inspiring them to re-think and re-design their business models, co-creating and sharing between educational and business organisations. The CATALYST project addresses sustainability from an **organisational, social and economic perspective**.

Coordinator: Institute for Research in Environment, Civil Engineering and Energy

Project partners:

1. Civil Engineering Institute MACEDONIA, N. Macedonia – <https://gim.mk/>
2. Small Business Chamber, N. Macedonia – <https://www.sbch.org.mk/>
3. Collaborating Centre on Sustainable Consumption And Production Gmbh, Germany – <https://www.cscp.org/>
4. Bells, Germany
5. Green Business Federal Association, Germany – <https://www.bnw-bundesverband.de/>
6. BEST Institute for vocational further education and personal training GmbH, Austria – <https://www.best.at/>
7. Fh Joanneum University of Applied Sciences, Austria – <https://www.fh-joanneum.at/en/>
8. APFLBUTZN, Austria – <https://www.apflbutzn.at/>
9. Iscte-University Institute of Lisboa, Portugal – <https://www.iscte-iul.pt/>
10. ICAA – Intellectual Capital Association, Portugal – <https://icaa.pt/>
11. CENTIMFE – Technological Center for the Mouldmaking, Special Tooling and Plastic Industrie, Portugal – <https://www.centimfe.com/en-home.html>
12. Athens University of Economics and Business – Research Center, Greece – <https://www.aueb.gr/en>
13. Creative Thinking Development, Greece – <https://www.crethidev.gr/>
14. Sporos Circular Solutions Private Company, Greece – <https://www.sporosplatform.com/>
15. SDSN Association Paris, France – <https://www.unsdsn.org/>

Budget line: Erasmus+ The project is co-funded by the Erasmus+ Program, CoVEs Partnership for Excellence – Centers of Vocational Excellence.

Period of project implementation: June 2022 – May 2026

Effects:

The project fosters innovation and applied knowledge in approaches of learning and tailor-made VET program via the **“Enable component”**, as well as support of SMEs to create sustainable businesses via the **“Inspire component”**.

The **CATALYST project** is developed and envision to:

- Champion in business transformation
- Accelerate high quality VET education
- Transcend challenges of SMEs and professionals
- Applicable knowledge and increased employability
- Lead sustainable partnerships between educational and business organisations
- Yield high returns from investments and effort made in education
- Shape sustainable systems
- Treasure competences for greener and circular economy

Website: <https://projectcatalyst.eu/>

➤ **ARSINOE - Climate Resilient-Regions through Systemic Solutions and Innovations**

Project objective: The project aims to build an ecosystem for innovative solutions to adapt to climate change. The mission of the ARSINOE project is to enable the fundamental transformation of economic, social, and financial systems, strengthening their climate resilience and adaptability, through a systemic and innovative approach. The project will support the social and scientific community in effectively assessing the environmental and economic effects of climate change and understanding the impact of possible interventions, by implementing advanced methodologies, analytical and communication tools, using an interactive platform that will enable stakeholders to collaborate in finding solutions for multi-sectoral climate adaptability.

System Innovation Approach (SIA) addresses the developmental complexity, interdependence, and interconnectedness of modern societies and economies, encompassing the functions of the cross-sectoral system as a whole and the corresponding diversity of stakeholders. The Climate Innovation Window (CIW) to be implemented in the Project is the European Union Innovation Market for Climate Change Adaptation Technologies.

Coordinator:

1. University of Thessaly, Greece – <http://old.uth.gr/en/>

Project partners:

1. University of Thessaly, Greece – <http://old.uth.gr/en/>
2. Athens University of Economics and Business – Research Center, Greece – <https://www.aueb.gr/en>
3. KWR Water Research Institute, Netherlands – <https://www.kwrwater.nl/en/>
4. Technical University of Denmark, Denmark – <https://www.dtu.dk/english>
5. The University of Exeter, United Kingdom – <https://www.exeter.ac.uk/>
6. University of Tours, France – <https://international.univ-tours.fr/>
7. Athena Research Center for Innovation in Information Technologies, Communications and Knowledge, Greece – <https://www.athenarc.gr/en>
8. Ludwig Maximilian University – Munich, Germany – <https://www.lmu.de/en/>
9. Spanish National Research Council, Spain – <https://www.csic.es/en>
10. Institute of Communication and Computer Systems, Greece – <https://www.iccs.gr/en/>
11. Cyprus University of Technology, Cyprus – <https://www.cut.ac.cy/>
12. Foundation of the Valencian Community for Promotion Research and Commercial Studies of Valenciaport, Spain – <https://www.fundacion.valenciaport.com/>
13. Aristotle University of Thessaloniki, Greece – <https://www.auth.gr/en/>
14. Middle East Technical University, Turkey – <https://www.metu.edu.tr/>
15. National Research Institute for Biological Sciences, Romania – <https://www.incdsb.ro/en/>

16. Institute for Research in Environment, Civil Engineering and Energy, Skopje
17. Agricultural Research Agency of Sardinia – AGRIS Sardegna, Italy
– <https://www.sardegnaagricoltura.it/innovazione/ricerca/agris/>
18. Center for Advanced Studies, Research and Development in Sardinia, Italy
– <https://www.crs4.it/>
19. University of Cagliari, Italy – <https://www.unica.it/unica/>
20. University of La Laguna, Spain – <https://www.ull.es/en/>
21. Geological and Mining Institute of Spain, Spain – <https://www.igme.es/>
22. GAC, France – <https://group-gac.com/en/>
23. LNH Water, Denmark – <https://www.lnhwater.tech/>
24. Athens Development & Destination Management Agency, Greece
– <https://develop.thisisathens.org/en>
25. Blue Gold s.r.l., Italy – <https://www.blue-gold.it/>
26. Elittoral – Coastal and Oceanographic Engineering Consultancy, Spain
– <https://www.elittoral.es/>
27. Piraeus Port Authority S.A., Greece – <https://www.olp.gr/en/>
28. Natural Environment and Climate Change Agency, Greece – <https://necca.gov.gr/en/home/>
29. Danish Coastal Authority, Denmark – <https://kyst.dk/english/>
30. National Territorial Planning agency (NTPA), Albania – <http://planifikimi.gov.al/>
31. The Council of the Borough of Torbay, United Kingdom – <https://www.torbay.gov.uk/>
32. German Association of Local Public Utilities, Germany – <https://www.vku.de/>
33. Esbjerg Municipality, Denmark – <https://www.esbjerg.dk/>
34. Westcountry Rivers Trust LBG, United Kingdom – <https://wrt.org.uk/>
35. Hellenic Foundation for European and Foreign Policy, Greece – <https://www.eliamep.gr/en/>
36. Cleantech Bulgarian Foundation, Bulgaria – <https://cleantech.bg/en/home/>
37. SDSN Association Paris, France – <https://www.unsdsn.org/>
38. Global Resilient Cities Network Foundation, Netherlands – <https://resilientcitiesnetwork.org/>
39. Organization of the Black Sea Economic Cooperation, Turkey – <http://www.bsec-organization.org/>
40. Romanian National Secretariat of the Network of the Universities of the Black Sea, Romania
– <https://bsun.org/>
41. Brigaid Connect, Spain – <http://brigaidconnect.com/>
42. Water Europe, Belgium – <https://watereurope.eu/>

Budget line: Horizon2020

Implementation period - October 2021 – September 2025

➤ **BEWARE - Development of Professional Courses in Building Resilience and Sustainability to Extreme Weather Events**

The project BEWARE aims to teach professionals to turn the buildings envelope more resilient for weather extremes and prepared for climate change by using innovative and sustainable solutions. Moreover, low carbon footprints will be taught at the site scale. The project will enable the trainees to: assess building's vulnerability; evaluate the characteristics of the building, at the design phase that should be addressed in the design of buildings' resilience to climate change; identify and learn to apply several sustainable solutions to improve the envelope buildings' resilience; increase the energy efficiency of the building, in compliance with the Energy Performance of Buildings Directive with an economic perspective; and learn how to use digital tools to benefit the building envelope's resilience and sustainability to extreme weather events.

Coordinator - Universidade de Lisboa, Portugal – <https://www.ulisboa.pt/>

Project partners

- Rheinisch-Westfaelische Technische Hochschule Aachen, Germany – <https://www.rwth-aachen.de/go/id/a/?lidx=1>
- International University of La Rioja, Spain – <https://en.unir.net/>
- Creative Thinking Development, Greece – <https://www.crethidev.gr/>

Effects:

- VET training program founded on 6 modules, where trainees can choose(s) which module(s) is/are relevant for their professional activity.
- BEWARE VET Digital training platform and the development of training materials and resources: will serve as information support and will provide a database of articles, resources, tools, and cases available for professionals to expand their knowledge.
- BEWARE Practicum with case studies – will address the challenges learners face when starting with Building Resilience and Sustainability to Extreme Weather Events, and will serve as an inspiration to them when dealing with real-life generations, by presenting good real-life examples, best practice examples, and case studies of professionals and organisations who have experience in the field.
- BEWARE Guidelines and Policy Recommendations – will set out the economic and social benefits of extending the BEWARE project to a wider European audience. The report will set out a series of concrete recommendations and arguments and build the case for a national and European-wide strategy promoting and extending the use of BEWARE in many organisations that want to improve employee's skills in Building Resilience.

Implementation period February 2022 – January 2024

➤ **ENCOURAGE - Development of courses for sustainable waste management for municipalities**

The ENCOURAGE project will help to change the current approach, to accept and embrace the sustainable concept of waste management and at the same time act as an influential factor in encouraging other members of the community to follow their example. One of the most important priorities of this project is to encourage and educate the municipal employees how to properly manage the waste generated in the municipalities. The acquired knowledge and skills will encourage them to ensure continuous sustainable management of their waste. Also, the project aims to provide unique support across EU to students, entrepreneurs and innovators dedicated to developing innovative solutions to social challenges.

The project assumes development of high quality innovative IOs dedicated for e-learning. ENCOURAGE will provide well-defined results, services and solutions with precisely analyzed strategies that are up to date with new digital trends. Project tried to underline strong commitment to the continuity of the programs in an outstanding quality and to support the students in acquisition new competence while operating of the training materials available on the innovative e-platform. Lacking knowledge and skills in the field of sustainable WM can be improved by passing the knowledge from know-how countries.

- **Coordinator:** Stowarzyszenie na rzecz innowacji i edukacji Poland – <https://innowacja-edukacja.eu/>

Partner organizations:

- Znanstveno raziskovalno središče Bistra Ptuj Slovenia – <https://bistra.si/en/>
- Creative Thinking Development Greece – <https://www.crethidev.gr/>
- Editc Limited Cyprus – <http://www.editc.eu/>

Effects:

The project training courses will cover topics that will provide implementation of WM legislation, organization and realization of the obligations of the municipalities, establishment of sustainable WM system, reducing of waste quantities and proper waste management in general. Implementation of the gained skills and knowledge in appropriate waste management will contribute to reduction of emissions of GHG, i.e. positive impact on climate emissions, and reduction of air, water and soil pollution, which are directly connected with the WM.

Target groups of the project ENCOURAGE - The aim is the education of the target groups: representatives from waste or environmental department within municipalities, VET schools/teachers/trainees as well as decision makers for sustainable WM in line with the national and EU policies.

Implementation period January 2022 – December 2023

➤ **Embedding collaborative platform for upskilling and networking toward sustainable cities – ENABLE**

The project objective begins from the aspiration for creating a networked academic environment with an intention to challenge the inherited inert high-education models in a south-east European context to an interdisciplinary and transnational educational network with diverse methods already developed in different European high education environments. This will result with a proposed methodology for sustainable cities using multidisciplinary approach tested in a form of a networked syllabus for the course Studio implemented on the three project partners high educational institutions. This strategic approach will take in consideration the field of sustainable city planning education through the topics of urban and economic growth, social inclusiveness, history, innovation, heritage and tourism. With its complex nature the city of Prilep, North Macedonia is chosen as a study case of this project in order to confront it with a collaborative international educational network.

Project partners:

- University American College Skopje, The Republic of North Macedonia
- Institute for Research in Environment, Civil Engineering and Energy – IECE, The Republic of North Macedonia
- Technische Universitaet Wien, Austria
- Universita Degli Studi Mediterranea di Reggio Calabria, Italy
- Nadace Partnerstvi, Czech Republic

Period of project implementation: October 2019 - September 2021

Budget line: Erasmus+ Programme of the European Union, KA203

Effects:

As a result of this project current and future generations will be educated in the multidisciplinary approach in urban planning, which will impact their better performance, which should lead to better performance of the organisations they will work in or will establish. Also, more awareness will be raised about the importance of the topic, as well as the need of new knowledge and skills for architects.

Our desired impact on national level is to continue to educate and train this syllabus, by providing high-quality content. We expect that this syllabus will be very attractive and will make great contribution in the improvement of the work performance of the students in Europe. These students will make changes on local and national level, and participate in networks and projects created internationally.

Website: <https://sites.google.com/uacs.edu.mk/enable/news>

➤ **Sustainable water management – RESONATE**

About the project

The aim of the project “RESONATE” is to provide comprehensive engineering knowledge and develops professionals’ scientific, communication and problem solving skills through a combination of practical, hands-on courses, industry projects and theoretical foundations.

The Professional courses in Sustainable Water Management will be developed in consultation with industry to equip engineering professionals with the advanced technical expertise, critical thinking and professional skills required to remain competitive in a global workforce and succeed in the future career. The courses will be developed jointly following the competence based approach: the industry needs, technology trends, best educational programs and needs of the main target group - engineering professionals.

Project partners:

- Civil engineering institute MACEDONIA;
- Institute for Research in Environment, Civil Engineering and Energy – IECE;
- Universidade De Lisboa;
- Univerzitet u Beogradu and
- Universidad Internacional de la Rioja Sa.

Period of project implementation: October 2019 - September 2021

Budget line: : Erasmus+ Programme of the European Union, KA202

Effects:

Successful realisation of the project activities will provide integrated Professional courses to be developed, implemented and certified, where professional engineers will be able to develop practical skills and useful knowledge relevant to the latest technology trends and industry needs, policies and requirements in Europe regarding sustainability and water management. It is expected that around 6400 people will benefit for this project (as direct and indirect beneficiaries).

The impact of the Professional courses will assure technical excellence of the engineering professionals, with the ability to lead, influence, and integrate - preparing them to weigh the diverse technical, environmental, and societal issues that shape the optimal approaches to planning, design, and construction of sustainable water management systems.

Website: <http://resonate-watermanagement.org/>

➤ **Developing Eco Skills for a Green Economy – DECOS**

About the project

The project Developing Eco Skills for a Green Economy - DECOS is approved within Erasmus + program.

DECOS combines labor market integration with social integration through environmental awareness and green skills. The main objective in the project is to develop a new and innovative curriculum for fostering social and labor market integration of low-skilled adults through green skills. Within the DECOS project will be created Courses with three different modules: waste management, energy management and sustainability for low-skilled adults.

Also within the project will be developed Cross-Media Platform, an interactive online platform for connecting future trainers, trainees, project partners and everyone interested in the project.

Project partners:

- Institute for Research in Environment, Civil Engineering and Energy – IECE;
- PAPILOT Zavod za vzodbujanje in razvijanje kvalitete zivljenja - Slovenia
- BIT-Management Beratung Gesmbh - Austria
- Valkeakosken kaupunki - Finland
- Austromed Holding -Romania
- Civil Engineering Institute Macedonia - Macedonia.

Period of project implementation: November 2018 – October 2020

Budget line: : Erasmus+ Programme of the European Union

Effects:

- Expand the knowledge for eco skills for a green economy through improvement of competences in the field of sustainable development, waste and energy management
- Develop new innovative educational program for eco skills, supported with online learning environment
- Create exceptional quality of adult education, combining high level of excellence and attractiveness
- Learn innovative techniques and tools to develop eco solutions for green economy

Website: <http://decoslearning.org/>

➤ **Promoting Academia-Industry Alliances for R&D Through Collaborative and Open Innovation Platform - All4R&D**

Project objectives:

- To reinforce existing and to establish new university structures – Cooperative R&D Units together with industry partners in the areas of knowledge creation and transfer, research and innovation, commercialisation of R&D results;
- To develop a methodology for collaboration and open innovation and establish web based platform focusing on knowledge transfer, innovation and networking potential
- To test and review the model of collaboration between universities and companies via pilot projects
- To enhance career development and employability of students and alumni by offering new and innovative opportunities in research and education.

Timeline:

The project will end on 14.11.2022.

Budget Line: Erasmus+, Capacity building

Partners:

1. Civil Engineering Faculty at "Ss.Cyril and Methodius" University in Skopje, Macedonia - UKIM
2. Ruhr - Universitaet Bochum
3. Univeristy of Sarajevo
4. Dzermal Bljedic Univeristy of Mostar
5. National University Architecture and Construction of Armenia
6. National Polytechnic University of Armenia Foundation
7. Yerevan Telecommunication Research Institute CJSC
8. Institute for Informatics and Automation
9. Winner Project d.o.o.
10. HP Investing Mostar
11. World University Service - Austrian Committee
12. Vaasan Yliopisto

Effects:

- The aim of the project is to accelerate research, innovation, knowledge and technology transfer in B&H and Armenia through enhancing strategic academia-industry alliances.
- This project activity will address the priority to improve the knowledge triangle and accelerate innovation in B&H and Armenia. All project activities will increase the awareness on importance of cooperative research and ultimately academia--industry alliances will influence on national innovativeness and competitiveness.

Website: <http://all4rd.net/> & <http://platform.all4rd.net/>

3. Creating national strategic documents for environmental protection and sustainability:

➤ Local Environmental Action Plan

Local Environmental Action Plan (LEAP) as a strategic document serves as a blueprint for environmental improvements in the community and facilitates cooperation among various implementing bodies are closely related to other activities such as sustainable development programs, Local Agenda 21, environmental management systems and SDGs. Having that in mind, we have prepared four LEAPs in order to gain sustainable future. LEAPs for the municipalities of Aerodrom, Karposh, Bitola and Bogdanci were prepared by the team of CEIM and IECE. Right now, we are preparing LEAP 3 for the city of Skopje (the capital city of Republic of North Macedonia). First of all, the existing situation with the environment was described, followed by identifying and evaluating the environmental problems in city of Skopje. This comprehensive evaluation of environmental problems provides a firm basis for setting environmental priorities and searching for adequate solutions. For the first time in North Macedonia LEAP is correlated to achieving SDGs. This is ongoing project.

➤ Ecological Footprint and biocapacity

In 2016 we assessed the Ecological Footprint and biocapacity of city of Skopje to support local strategies and reach SDGs targets. Lessons from this study point to specific policy insights for managing key consumption sectors and reaching key targets such as the UN SDGs.

4. Participation on conferences, symposium and round tables on the topic Global Compact, Corporate Social Responsibility and Sustainable Development Goals.

5. Conducting research and publishing the results on international conferences.

