ILCA
Innovation Laboratories for Climate Actions

YURIY FEDKOVYCH CHERNIVTSI NATIONAL UNIVERSITY

CASE STUDY

CLIMATE INNOVATION LABORATORY

Yuriy Fedkovych Chernivtsi National University

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INTRODUCTION

The **Climate Innovation Laboratory** is established within ILCA project. The EIT Climate-KIC project "Innovation Laboratories for Climate Actions – ILCA" brings together four higher education institution (HEIs) and three research institutes from five different countries under the theme of climate change, https://ilca-project.eu/.

The project aims to strengthen human capital in climate innovation and entrepreneurship for systemic problem solving. It advances multidisciplinary climate and social innovation capacity by establishing Climate Innovation Laboratories and involves ecosystem actors in the design of Climate Innovation. The preparedness and competitiveness of small- and medium-sized (start-ups, scale-ups) enterprises in climate transition & digitalization is supported.

Project Objectives

- Strengthen human capital in climate innovation and entrepreneurship by training and mentoring students, academic and non-academic staff in systemic problem solving;
- Advance multidisciplinary climate and social innovation capacity by establishing climate innovation laboratories and involving ecosystem actors in the design of climate innovation projects;
- Support the preparedness and competitiveness of small and medium enterprises (SMEs) in climate transition and digitalisation.

Project Consortium

Savonia University of Applied Sciences, Finland
Natural Resources Institute (Luke), Finland
Vilnius College of Technologies and Design, Lithuania
Lithuanian Research Centre for Agriculture and Forestry, Lithuania
University of Forestry, Bulgaria
Ștefan cel Mare University of Suceava, Romania
Yuriy Fedkovych Chernivtsi National University, Ukraine
National Scientific Center "Institute of Agriculture NAAS", Ukraine
King Danylo University, Ukraine

Innovation and collaboration are essential components in addressing climate change effectively.

Innovation drives the development of new technologies and solutions that can reduce greenhouse gas emissions, improve energy efficiency and promote sustainable practices. Such innovative solutions also have the potential to increase resource efficiency, reduce waste and optimise the functioning of existing systems across sectors, which in turn will contribute to significant reductions in emissions.

Collaboration is also a key element in the fight against climate change, as it allows us to combine diverse knowledge, resources and approaches to achieve a common goal of preserving our planet for future generations. Collaboration among governments, businesses, academic institutions, and NGOs is crucial for developing adaptation strategies to mitigate the impacts of climate change. Each sector has its own knowledge, resources and capabilities that can be used to address climate

change. Collaboration allows these diverse approaches to be brought together to create integrated and effective strategies.

Climate challenges have no borders and require global coordination to address. Cooperation allows for the pooling of resources and knowledge from different countries and regions to work together to combat climate change.

Collaboration with local communities is vital for implementing climate solutions that are culturally appropriate and socially equitable. Engaging communities in decision-making processes and providing access to education and resources can empower individuals to take meaningful action against climate change.

Collaboration between policymakers, scientists, and stakeholders is essential for developing and implementing effective climate policies. This includes setting regulatory standards, providing incentives for sustainable practices, and fostering innovation through research and development funding.

Overall, innovation and collaboration play interconnected roles in addressing climate change by driving technological advancements, fostering global cooperation, creating economic opportunities, empowering communities, managing risks, and shaping effective policies. These efforts are essential for transitioning to a sustainable and resilient future for generations to come.

An Innovation Laboratory, often referred to as an Innovation Lab, is a dedicated space or initiative that fosters creativity, collaboration, experimentation, and the development of innovative solutions to complex challenges.

Innovation Labs serve as catalysts for generating new ideas, technologies, and approaches to address climate change. They provide a structured environment where diverse stakeholders, including researchers, entrepreneurs, policymakers, and community members, can come together to brainstorm, prototype, and test innovative solutions.

Innovation Labs facilitate collaboration among multidisciplinary teams and stakeholders from different sectors. By bringing together experts with varying backgrounds and perspectives, these labs encourage cross-pollination of ideas, knowledge sharing, and co-creation of solutions that are more comprehensive and effective in tackling climate challenges.

The laboratory is a platform for stimulating innovation and creativity among students, teachers and researchers, as well as for cooperation with other institutions, NGOs and businesses in the field of climate action, which will facilitate the exchange of experience and resources for joint projects and initiatives.

Innovation Labs provide a safe space for experimentation and risk-taking. They allow for iterative testing and refinement of ideas, technologies, and strategies before scaling them up for broader implementation. This iterative process fosters learning, adaptation, and continuous improvement in climate actions.

Overall, Innovation Labs serve as dynamic hubs of creativity, collaboration, and transformation in driving climate actions. They leverage innovation, entrepreneurship, research and community engagement to accelerate the transition to a more sustainable and resilient future.

RATIONALE AND OBJECTIVES

The creation of the Climate Action Innovation Lab is a strategically important step in the development of innovative solutions and practices to address climate change.

The laboratory will provide an opportunity to start an active process of creating and developing new innovative solutions aimed at reducing greenhouse gas emissions, adapting to climate change and creating sustainable practices in the field of energy efficiency and sustainable development.

The laboratory will involve experts from various fields, including scientists, entrepreneurs, civil servants and members of the public.

The Climate Action Innovation Lab at the University is an important and reasonable step for the further development of research, education, innovation and cooperation in the field of climate protection and sustainable development.

Objectives of the Laboratory:

- ***To promote and support the creation of innovative projects by start-up entrepreneurs at the stages of their formation and development, from idea development to commercialization.***
- ***To facilitate the unification of participants from different disciplines and industries to ensure the integration of the ecosystem.***
- ***To conduct scientific research on the impact of climate change by areas of activity for their implementation in the practice of enterprises whose activities are related to the use of natural resources.***

DESIGN AND STRUCTURE

Physical space: Modern equipped facilities with interactive zones for collaboration and creativity.

Virtual space: Online communication tools.

Organizational setup: leadership responsible for strategic planning and development, a team of specialists from various fields (economics, ecology, geographers, etc.).

Key roles: Diverse team members with expertise in various fields like science, business representatives of the Chernivtsi region (Bukovyna Entrepreneurs Club, Chernivtsi Business Group, Business Club RIST, IT Cluster Community, LBC Chernivtsi, Inside Business Club), representatives of financial institutions (JSC CB "Privatbank" , JSC "Oschadbank", JSC "Credit Agricole Bank", JSC "Raiffazen Bank", JSC "Ukreximbank"), Chernivtsi regional employment centre, representatives of state and local authorities etc.

The selection process and composition of multidisciplinary teams or stakeholders involved in an Innovation Lab typically involve several key steps and considerations.

The first step is to identify the stakeholders who will be involved in the Innovation Lab. In particular, these stakeholders are scientists from the university, the educational and scientific geophysical laboratory, representatives of entrepreneurship and business communities, IT sector, financial institutions, government and community members, industry experts and agricultural specialists, etc.

Unique features and methodologies:

- Cross-Disciplinary Teams: Formation of cross-disciplinary teams brings together individuals with diverse backgrounds, skills, and expertise. This diversity fosters interdisciplinary collaboration, leading to innovative solutions that draw from multiple perspectives.
- Design Thinking Workshops: Incorporation of design thinking workshops and methodologies encourages a human-centred approach to problem-solving. This involves empathising with end-users, defining problem statements, ideating solutions, prototyping, and testing iteratively.
- Hackathons and Innovation Challenges: Organizing hackathons, innovation challenges, and idea competitions within the lab creates a competitive yet collaborative environment. These events stimulate creativity, inspire teamwork, and drive rapid innovation.
- Mentorship and coaching: Providing personalised support and guidance to teams throughout the process.

- Networking and knowledge sharing: Building relationships with experts and stakeholders within the climate action community to facilitate collaboration and exchange of information.

INNOVATION PROCESSES AND TOOLS

Yuriy Fedkovych Chernivtsi National University is in charge with the implementation of the actions related to:

- ***Assisting start-up entrepreneurs in developing their projects from ideation to commercialization (1)***
- ***Star up and Scale up consulting (2)***
- ***Training and mentoring related to fundamentals of agrometeorology and peculiarities of crop production in the context of climate change (3)***
- ***Studying of water availability based on open databases for GIS (software tools) in the context of climate change (4)***
- ***Educational activities to deepen knowledge in the field of energy efficiency and green technologies (5)***

- ***Assisting start-up entrepreneurs in developing their projects from ideation to commercialization (1)***

Description of the activity: The Innovation challenge business incubator at the Yuriy Fedkovych Chernivtsi National University creates favourable conditions for the start-up development of start-ups, micro and small enterprises by providing a range of services and resources. As part of the incubation programme, we organise regular meetings with business representatives, academic and mentoring support for projects, networking, excursions, pitching business ideas and startups, meetings with potential investors, lenders and business angels, expert assessment and valuable advice from business representatives, etc.

The business incubator provides services in the field of business planning, consulting services, as well as work on grant proposals, search and attraction of partners for project implementation, organisation and conduct of trainings, round tables, seminars, competitions and pitching of business projects, conferences, research, creation of information databases, etc.

This project also aims to help internally displaced persons cope with their social problems and ensure quality adaptation by creating conditions for entrepreneurial activities.

Activities:

- regular meetings with business representatives, academic and mentoring support for projects;
- networking events, excursions, expert assessment and valuable advice from business representatives;
- pitching of business ideas and startups with a prize fund;
- meetings with potential investors, creditors and business angels;
- assistance in obtaining a microgrant to start your own business;
- opening of a digital hub and artificial intelligence laboratory (coworking area);
- assistance in employment and additional communication and mentoring from entrepreneurs (requests from entrepreneurs).

Goals:

- preparation for the implementation of own business ideas and the formation of effective specialists ready for practical work;
- promoting entrepreneurial culture among young people;
- formation of an ecosystem of startups at the university;
- increasing the effectiveness of communication in the system "education-science-business-government-civil society";
- creation of preconditions for the development of socially responsible and innovatively active own micro, small, medium and large businesses as the basis for economic development.

- ***Star up and Scale up consulting (2)***

Description of the activity:

Star up and Scale up consulting are aimed at implementing advanced environmental technologies at enterprises, promoting the rational and balanced use of natural resources. We are based on scientific research and analysis to identify and recommend the most effective and innovative technologies for each specific enterprise.

Our services include the development of specific strategies and implementation plans that facilitate the transition to greener technologies and business processes for entrepreneurs. We also help to find organisational and financial support, including financial resources, grants, investment opportunities and other forms of support, for the successful implementation of environmental innovation projects.

Activities:

- consulting services in environmental management;
- information services addressing climate change issues and the implementation of innovations to enhance environmental conditions;
- scientific and analytical services focused on the adaptation of agriculture and forestry to climate change – an essential task for ensuring production sustainability and profitability;
- implementation of recommendations for scaling up and business development within the framework of environmental protection, leveraging funding sources.

Goals:

The project's advisory services are aimed at achieving several key objectives:

- Introduction of innovative environmental technologies: The consultancy aims to introduce advanced technologies that promote the rational and sustainable use of natural resources. This helps to reduce the negative impact on the environment and climate conditions, contributing to the improvement of environmental well-being in general.
- Positive environmental impact: Innovative technologies reduce emissions and the use of harmful substances, and contribute to the efficient use of resources. This leads to a reduction in the environmental burden and improves the quality of the environment.
- Sales growth: Due to their positive impact on the environment and climate conditions, products manufactured using innovative technologies are gaining demand among consumers who are increasingly paying attention to sustainability and environmental friendliness. This leads to an increase in the company's sales.
- Increase in company profits: With the growth of sales and popularity of products made using eco-friendly technology, the company receives more profit. This contributes to the overall increase in the company's profit and financial stability.

Thus, the consultancy aims to achieve these goals by introducing innovative environmental technologies that have a positive impact on the environment, increasing sales and profits.

- ***Training and mentoring related to fundamentals of agrometeorology and peculiarities of crop production in the context of climate change (3)***

Description of the activity: As a result of joining this course, students will gain an in-depth understanding of the relationship between climate, weather and agriculture. Students will be able to use the theoretical knowledge gained to optimise agricultural production in the face of climate change. This course has helped develop skills in analysing and forecasting weather conditions to improve agricultural efficiency in the face of climate change.

Activities:

- Lectures and discussions: theoretical concepts, case studies, and practical examples to deepen understanding;
- Weather analysis exercises: hands-on exercises to analyse historical weather data, interpret weather patterns, and make weather forecasts, tools and software for data analysis and visualization;
- Case studies: case studies and projects that require analysing real-world weather data, understanding its implications on agriculture, and proposing strategies to mitigate the effects of climate change on crop production.

Goals: to gain skills in analysing and forecasting weather conditions, understanding the impact of climate change on agriculture and the ability to apply agrometeorological principles to increase crop yields and resilience to the negative effects of climate change.

- ***Studying of water availability based on open databases for GIS (software tools) in the context of climate change (4)***

Description of the activity: Using open databases and GIS software tools to study water availability in the context of climate change. This innovative approach involves analysing hydrological and climatic data to understand water resources better through advanced GIS tools.

Activities:

- Access to databases: provide access to databases that include information on rivers, water levels and flows, as well as weather and climate parameters in Chernivtsi region;
- Consultancy and methodological support: consulting and methodological support on the use of hydrological and climatic data processing and analysis methods;
- Analysis of meteorological data: analysis of meteorological data of observations of the Educational and Scientific Geophysical Observatory of Chernivtsi National University for a 30-year period;
- Comparison of climatic norms and trends in meteorological data from the Chernivtsi weather station with weather stations across Ukraine;
- Interpretation of weather changes and weather forecasting using appropriate tools and software.

Goals:

- to study water resources using available databases and GIS to analyse and predict their changes in the context of climate change;
- to identify the impact of climate change on rivers (namely water content) in the mountainous and lowland parts of Chernivtsi region;
- to develop water management strategies to optimise water management in the context of climate change based on data analysis and the use of GIS tools;

- to raise awareness of the state of water resources, their changes and the impact of climate change, and to facilitate decision-making in the field of water supply and water management.

- ***Educational activities to deepen knowledge in the field of energy efficiency and green technologies (5)***

Description of the activity:

The level of public knowledge and conscious attitude to the use of energy resources was improved through the organization of open lectures, workshops, master classes, etc. Energy efficiency experts from King Danylo University shared their practical experience, highlighted new trends and innovations in green technologies during events of various formats. Such educational events were held for students, academic staff, SMEs and other audiences, which allowed us to bring together different groups of stakeholders.

Such activities also allowed us to develop and test new innovative approaches in the field of education. A lot of the accumulated knowledge was formed into a block of multidisciplinary skills that were implemented in the educational programs of King Danylo University.

Activities:

• Open lectures on energy efficiency;
• Presentations of green transition opportunities for enterprises;
• Interactive sessions for green entrepreneurship for students;
• Workshops for startups on the development and implementation of green technologies;
• Investigating the effectiveness of solutions for environmental neutrality and green transformation.

Goals:

• Involve all stakeholders for the formation of an eco-conscious society;
• Creation of synergy between various specialists and specialists;
• Deepening students' knowledge in the field of green transformation;
• To increase the general awareness of society about the importance of climate change challenges and possible ways to overcome them;
• Analysis of the efficiency of enterprises in the region.

COLLABORATION AND ENGAGEMENT

A variety of strategies and approaches are used to promote collaboration and engagement in the innovation lab, including:

Networking and partnerships: The Lab can actively engage participants through networking and partnerships with academic institutions, businesses, NGOs and government agencies.

Holding joint events: Organising joint seminars, conferences, hackathons, workshops and other events where participants can exchange ideas and experiences.

Supporting an innovative culture: Creating a stimulating environment where innovative ideas and initiatives are encouraged and supported.

Learning and development: Providing opportunities for training, skills development and knowledge acquisition in areas relevant to the lab's goals.

Stimulating the attraction of young talent: Promoting the participation of young people and students in the projects and activities of the laboratory to develop their potential and innovative thinking.

Use of modern technologies: Implementation of information technology and innovative communication tools to improve collaboration and information exchange among the Lab members.

The Innovation Lab engages with external stakeholders, such as government agencies, NGOs, businesses and communities, through a variety of strategies and approaches.

Partnership with government agencies: The Laboratory cooperates with local government agencies to share experience, expertise and resources. In particular, participation in grant programmes, joint research, and implementation of innovative solutions in the public sector.

Cooperation with partners: The Laboratory actively cooperates with industry companies, NGOs and government agencies to support and implement innovative projects in the field of climate change. For example, a declaration on the creation of a business incubator was signed between the Innovation Challenge business incubator of Yuriy Fedkovych Chernivtsi National University and various stakeholders, such as business representatives of Chernivtsi region, financial institutions, Chernivtsi Regional Employment Centre, state and local authorities. The goal of this partnership is to promote entrepreneurial and financial culture among young people, improve the effectiveness of communication in the education-science-business-government-civil society system, and create a startup ecosystem.

Community engagement: The Laboratory actively engages with local communities through open events, consultations and meetings to gather feedback and take into account the needs and values of the community in the development and implementation of innovative projects.

IMPACT AND SUCCESS STORIES

As part of the Innovation Lab's activities, a new Business Incubator programme, Innovation Challenge, was launched at Yuriy Fedkovych Chernivtsi National University. The Business Incubator "Innovation Challenge" at Yuriy Fedkovych Chernivtsi National University is a great example of a successful programme that combines education, entrepreneurship and social responsibility. Regarding the main goals of the Innovation Challenge Business Incubator within the ILCA project, it is worth noting that these goals are aimed at creating an effective platform that promotes the development of innovative solutions in the field of climate action and actively involves students and teachers in this process.

At the joint initiative of the Education Department of the Chernivtsi City Council, the Faculty of Economics of the Chernivtsi National University and the ILKA team, the Students' Innovation Business Hub project was launched. This is a series of meetings of students with interesting speakers, successful businessmen and scientists. Upon completion, an Ecoton and pitching of business ideas with an innovative component are planned.

The laboratory's scientific and analytical services were aimed at adapting agriculture and forestry to climate change, which is one of the most important tasks for ensuring the sustainability and profitability of production. In particular, Polonyna Argo LLC and Ukrdereveksim LLC are success stories. Polonyna Argo LLC operates in the Chernivtsi region and is engaged in growing crops. Ukrdereveksim LLC operates in Chernivtsi region, specialising in wood processing and the manufacture of wooden products, including sliced veneer, using environmentally friendly technologies.

Subsequently, following consulting services, each company has developed a clear strategic vision regarding the necessity to adapt to such changes and contribute to sustainable development while mitigating negative environmental trends. Given that these companies are involved in the utilization of natural resources, specifically forest and land resources, their environmental impact hinges on the prudent and balanced utilization of nature, prioritizing the preservation of the environmental ecosystem.

The success stories that result from the activities of the Innovation Lab reveal significant achievements in exploring the thermal regime of the city of Chernivtsi in the context of global warming. These successes include conducting thermal regime analysis, studying the impact of global warming, and developing adaptation strategies for the city. These success stories demonstrate the importance of research in this area and the ability to address the current challenges associated with climate change and the city's thermal regime.

LESSONS LEARNED

Here are some key lessons that can be elaborated on from the Innovation Lab:

The importance of research: The lab teaches the importance of conducting innovation research and implementing its findings to solve current problems.

Collaboration: Working in the lab teaches you how to work effectively with other professionals, combining knowledge and experience to achieve common goals.

Innovative approach: Lab participants learn to think creatively and find innovative solutions to complex problems.

Implementation process: The lab helps to understand the process of putting innovations into practice, including the stages of consulting, testing, evaluation and scaling.

Strategic planning: The lab teaches you to develop strategic action plans to achieve your goals and implement innovative projects.

Risk management: Participants learn to identify, assess and manage risks associated with innovation projects.

Effective communication: Work in the lab develops effective communication skills needed to communicate with the team, partners and stakeholders.

Examples of successes, challenges and critical factors that have contributed to the effectiveness of the Innovation Lab include the following:

Successes: the creation and successful marketing of new innovative products or services, strengthening of partnerships with other academic institutions and companies, and increased prestige and recognition of the laboratory as a centre for innovation.

Challenges: The need to continuously update knowledge and technologies to meet market requirements, insufficient financial support for the implementation of ambitious projects.

Critical factors that contributed to the effectiveness of the work: the availability of qualified and motivated specialists in the laboratory, the creation of a favourable innovation environment with the possibility of open exchange of ideas and knowledge.

Given the importance of innovative climate action labs, here are some *lessons and recommendations*:

Build a multidisciplinary team: Involve experts from different fields, such as climate science, energy, environment, technology and business, to ensure a complete overview of climate change issues.

Partnership with the public: It is important to engage in dialogue with the public, government agencies and civil society organisations to address real needs and help develop effective strategies.

Financial sustainability: Raising funding from a variety of sources, such as government programmes, private investment, and sustainability funds, to ensure the sustainability of the lab and the development of its projects.

Application of the latest technologies: Using modern technologies and analytical tools such as artificial intelligence and data analysis to effectively address climate change issues.

Creating innovative products and services: Developing and implementing new products, services or technologies that contribute to climate change adaptation, energy efficiency and emissions reduction.

These lessons learned and recommendations can contribute to the successful establishment and development of an innovative climate action lab aimed at addressing pressing environmental issues and promoting sustainable development.

FUTURE DIRECTIONS AND SUSTAINABILITY

Discuss the future directions and sustainability of the Innovation Laboratory.

Strategies for scaling up the impact of the Innovation lab and ensuring long-term sustainability:

Expand partnerships: Establish strategic partnerships with industry leaders, government agencies, international organisations, and academic institutions to expand the reach and impact of the innovation lab. Joint efforts can lead to increased resources, expertise, funding opportunities and access to new markets.

Scaling up innovation projects: Develop strategies for scaling up successful innovation projects within the lab (seeking additional funding, forming partnerships for implementation, conducting pilot projects, and leveraging technologies for scale-up).

Capacity Building: Investing in talent development, training programmes and mentoring initiatives to build a skilled workforce capable of driving innovation and sustainable development.

Knowledge sharing and dissemination: Foster a culture of knowledge sharing, collaboration and open innovation in the lab. Share best practices, lessons learnt, success stories and research findings through publications, conferences, workshops and online platforms to inspire others and engage potential partners.

Potential opportunities for replication or adaptation of the innovation lab model:

Regional expansion: Exploring the possibility of replicating the innovation lab model in other regions or countries facing similar challenges or opportunities. Adapting the model to the local context, cultural nuances, regulatory framework and market dynamics, while leveraging the lessons and challenges learned from the original lab.

Sectoral focus: Consider replicating the innovation lab model in specific sectors, such as agriculture, renewable energy or smart cities, healthcare, education, etc. Tailor the lab's activities, projects and partnerships to address specific sectoral challenges and stimulate innovation in targeted areas.

Cross-sectoral cooperation: Collaborate with existing innovation ecosystems, incubators, accelerators and research institutions to replicate or adapt elements of the innovation lab model. Promote the development of cross-sectoral partnerships that bring together different stakeholders, expertise and resources to address complex societal issues.

Global Networks: Participate in global alliances and platforms focused on innovation, sustainability and social impact. Share, exchange ideas and collaborate with international partners to facilitate knowledge sharing, replicate successful practices and increase impact on a global scale.

By implementing these strategies and exploring potential opportunities for replication or adaptation, Innovation Labs can scale their impact, drive long-term viability, and contribute significantly to addressing global challenges and fostering innovation ecosystems.

CONCLUSION

The Innovation Lab at the Yuriy Fedkovych Chernivtsi National University successfully carries out a number of key activities:

Supporting start-ups: The lab actively assists startups at all stages, from idea creation to project commercialisation.

Star up and Scale up consulting: Entrepreneurs are advised on business development, innovation and rapid scaling.

Training and mentoring: The laboratory provides training in agrometeorology and crop cultivation in the face of climate change, as well as mentoring support to entrepreneurs.

Water research: The laboratory conducts research on water availability based on open databases for geographic information systems in the context of climate change.

Events and ecosystem: Regular events are organised to facilitate communication and exchange of experience between entrepreneurs and experts, which contributes to the creation of an effective innovation ecosystem.

Through these activities, the Innovation Lab provides support, development and implementation of innovative ideas and projects at the Yuriy Fedkovych Chernivtsi National University.

Innovation labs are important agents of change that contribute to the development and implementation of climate action through the creation of new solutions, learning and collaboration between different stakeholders.

There are several important aspects of Innovation Labs' activities:

Development and implementation of innovative technologies: The laboratories create and test innovative technologies that help reduce emissions and improve energy efficiency.

Experiments and research: The labs conduct research and experiments to help understand the causes of climate change and develop effective adaptation strategies.

Training and skills: The labs provide training and skills development in climate action, which helps to raise awareness and motivation for positive change.

Engagement and collaboration: The labs engage and bring together actors, including students, entrepreneurs, academics and civil society organisations, to work together on climate innovation.

Here are some calls to action and recommendations to further promote and support the establishment of climate innovation labs:

Stimulate innovation: Provide financial support and an enabling environment for the development of innovative ideas and projects in the field of climate technologies.

Partnership and cooperation: Engaging civil society organisations, academia, business and government to work together on climate action through partnerships and networks.

Training and skills development: Providing opportunities for learning and skills development in climate technology and innovation through courses, seminars and hands-on training.

Youth engagement: Facilitating the participation of young people, students and young entrepreneurs in the creation and development of innovation labs, and providing them with opportunities to implement their ideas in the field of climate technologies.

Monitoring and evaluation: Develop a system for monitoring and evaluating the effectiveness of climate innovation labs to continuously improve and identify the most effective approaches.

Public support: Engaging the public and raising awareness of the importance of innovation in addressing climate change to ensure broad public support for these initiatives.

The Innovation Lab at Yuriy Fedkovych Chernivtsi National University exemplifies how dedicated support for start-ups, comprehensive consulting, and targeted research can drive significant advancements in climate action. By fostering innovation, providing essential training, and facilitating collaboration among diverse stakeholders, the lab not only accelerates the development and commercialization of new technologies but also enhances our understanding and response to climate challenges. This proactive approach underscores the vital role of innovation labs in spearheading climate solutions and creating a sustainable future. To build on this success, it is crucial to stimulate innovation through financial support, strengthen partnerships, and engage youth

in the development of climate technologies, all while ensuring effective monitoring and public awareness to sustain momentum and impact.