

## UNECE study tour “Innovation for the Circular Economy: Empowering Start-ups to Achieve More with Less” for SPECA participating States

### Report on train-the-trainer sessions<sup>1</sup>

**Location and date:** Tbilisi, Georgia (20 December 2023)

**Event type:** train-the-trainer sessions on 20 December 2023 for officially nominated representatives of SPECA participating States (*see the list of participants Annex I*)

#### **Work accomplished, conclusions and results:**

1. During the first day of the study tour, participant received an overview of the circular economy concept and key elements of the innovation policy that address the circular transition process (*see the scenario of the first part of the training session in Annex II*). During this first part of the training session the principal objective was to enhance the ability of participants to critically assess how circular economy concepts can be applied in context of the SPECA participating States as well as to ensure understanding of frameworks associated with innovation policies that support the transition to a circular economy.
2. The training covered the importance of the circular economy for SPECA participating States, examining existing policies and exploring concrete steps for implementation. Participants discussed innovative strategies in state policies and the practical use of innovation tools. The training was based on the methodological framework of [Key Entry Points for the Circular Economy to Enable Innovative High-Growth Enterprises](#) and [Aligning Innovation Policies for a Circular Economy Ecosystem in the SPECA Sub-region](#).
3. In the second part of the training, participants focused on integrating the circular economy into business incubation and acceleration processes (*see the scenario of the first part of the training session in Annex III*). The training followed the methodological framework outlined in the UNECE [Guide for the SPECA Network of Business Incubators and Accelerators on Promoting Innovation for Circular Economy](#).
4. Training attendees were highly involved in the discussion, demonstrating a keen interest in the subject. During the training sessions, participants engaged in two group activities aimed at enhancing their understanding and ability to promote circular economy practices.
5. In the first activity, groups analysed possible innovation policy tools to promote the circular economy in SPECA participating States, and then proposed solutions and policies to address existing gaps. Working in groups provided trainees with the opportunity to reflect on the theoretical materials and practical examples presented during the training. They engaged in a brainstorming session to identify the most suitable and preferable measures applicable in their respective countries. As result, representatives of SPECA participating States emphasized recommendations and aspirations for further accelerating the circular transition with a focus on strengthening innovation policies (*provided below*).
6. The second exercise involved evaluating circular innovation within start-ups by analysing real-life cases from Uzbekistan. Through structured assessments covering positive and negative impacts of business models, value proposition, and end-of-use scenarios, participants draw conclusions and recommend strategies to reinforce circularity in start-up business models (*see the template for start-up evaluation in Annex IV*). The focus was on providing participants with a hands-on understanding of how to approach and motivate start-ups to adopt circular practices. The objective was to empower trainees with the knowledge and tools needed to effectively enable the integration of circular economy principles by start-ups incubated or accelerated in their countries. This group work

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<sup>1</sup> Report is prepared by Anastasia Pankova, International Consultant, UNECE, upon conducting 2 train-the-trainer sessions under the UNDA project 2023N “Strengthening Innovation Policies for SPECA Countries in Support of the 2030 Agenda for Sustainable Development”

facilitated trainees in adopting the perspective of a start-up, encouraging them to contemplate the degree of circularity at various stages of a business cycle.

7. On the second day of the study tour, a valuable collaboration of UNECE with Impact Hub Tbilisi enabled Georgian successful start-ups to present their business models to the training attendees. Their expertise offered a tangible illustration of how circular economy concepts are implemented in real-life scenarios, providing practical insights and examples.

### **Further measures to accelerate the circular economy transition in SPECA participating States**

#### **Capacity-building**

- Enhance the capabilities and knowledge of educators in the field of circular economy through targeted initiatives administered by national educational ministries. These initiatives should be designed to provide focused training programs that equip educational professionals with the expertise needed to effectively integrate circular economy principles into their teaching methodologies.
- Provide training sessions for the managers of business incubators and accelerators, focusing on the principles and practices of the circular economy.

#### **Education**

- Introduce educational programs focused on the circular economy within both university and school curricula, aiming to enlighten students and cultivate responsible attitudes toward environmental protection. An exemplary model is the SDG training course offered at Kazakh-British University, spanning a semester of 15 weeks.

#### **Research and innovation**

- Allocate funding to support research and innovative programs in the circular economy in SPECA participating States, aiming to drive sustainable practices and foster innovation in line with our strategic objectives.

#### **Intellectual property rights**

- Enhance the protection of intellectual property rights to mitigate the risk of copyright infringement at regional or international levels. This can be achieved by integrating local authorities into international initiatives, particularly in the context of circular economy ideas entering external markets.

#### **Digitalisation**

- Promote digital tools, e.g. blockchain technology, to guarantee traceability in critical sectors in SPECA participating States, like agriculture aiming to assess the circularity levels of these sectors and ensure compliance with ecological standards.
- Establish an online platform within the SPECA sub-region to facilitate industrial symbiosis for companies and start-ups, resembling the successful model of the Turkish Material Marketplace (TMM). This platform would serve as a central hub for businesses to exchange waste materials as valuable resources. By fostering collaboration and resource sharing, industries within the SPECA sub-region can optimize their operations, reduce waste, and contribute to a more sustainable regional economy. This initiative aligns with the principles of circular economy, transforming what was once considered waste into valuable inputs for other industries. Start-ups from SPECA countries should be granted free access to the TMM database.

#### **Private sector support (circular economy methodology and certification, finance, business-incubators and accelerators)**

- Encourage start-ups to incorporate circular economy indicators into their projects when collaborating with business incubators and accelerators and with state authorities to qualify for economic incentives.
- Establish a dedicated module within state business incubators and accelerators, specifically tailored to enhance their expertise in the circular economy.

- Establish a standardized framework for the circular economy in SPECA participating States, which would issue certifications to companies for producing circular economy-compliant products. By implementing a recognized certification system, businesses will be incentivized to adopt more sustainable practices, fostering a shift towards circular business models. This will not only ensure accountability but also provide consumers with a clear indicator of a company's commitment to environmental responsibility.
- Initiate a circular economy ranking system for companies in the SPECA sub-region, establishing a foundation for allocating privileges and support measures, including financial assistance. This ranking system should evaluate and recognize businesses based on their adherence to circular economy principles. By creating a tangible metric for circularity, companies striving for sustainable practices should be incentivized through privileges and funding support.
- Implement circular economy vouchers for businesses, allowing them to commission scientific research on specific circular economy production processes. This will promote collaboration between the business and scientific communities and accelerate the development and implementation of sustainable production methods.
- Offer tax incentives to innovative companies and start-ups (drawing inspiration from the successful experience of Kazakhstan).
- Implement hybrid financing mechanisms, incorporating the provision of grants and credit financing for start-ups in the circular economy (as demonstrated by Tajikistan's experience).
- Encourage start-ups that have received government support, such as grants, to reinvest in other start-ups in the circular economy. Start-ups are free to select other start-ups collaborating with business incubators and accelerators. Thus, start-ups make a strategic choice between hybrid financing and reinvesting in another start-up. This commitment becomes a prerequisite for accessing preferential government funding (according to the practice in Kyrgyzstan).

#### **Lessons learnt and implications for UNECE:**

1. Engaging in group activities provided participants with the opportunity to reflect on both theoretical concepts and practical examples presented during the training. This group dynamic served as an excellent exercise, fostering discussions that could potentially translate into real-life applications in the future.
2. The inclusion of trainees from a diverse array of sectors, encompassing innovation ministries, universities, and governmental and non-governmental associations, significantly enriched the discussions during the UNECE training. This approach brought forth a spectrum of perspectives not often attainable in a standard normative work at UNECE promoting inclusive decision-making processes in SPECA participating States.
3. To enhance innovation policies in SPECA participating States, UNECE is advised to capitalize on current momentum and actively seek funding for new technical assistance projects. These projects should be specifically tailored to strengthen innovation policies in Central Asia and Azerbaijan, aiming to unlock the advantages of the circular economy in these regions for the purposes of economic diversification of their economies and environmental considerations.
4. The presentation of Türkiye's experience in establishing the online circular economy material marketplace garnered significant interest among trainees. Leveraging its established contacts, UNECE can facilitate collaboration between the Business Council for Sustainable Development (BCSD) in Türkiye, which manages the platform, and SPECA participating States. This potential partnership holds promising opportunities to replicate the successful Turkish experience in Central Asia and Azerbaijan.

## Annex I – List of participants

<b>№</b>	<b>Name</b>	<b>Position</b>	<b>Institution</b>
1.	Aisulu Mustapakulova	Head of Innovation and Strategic Division	Kyrgyzpatent
2.	Arslan Omadov	Director of the Center for Digital Economy, Entrepreneurship, and Innovation	Union of Economists of Turkmenistan
3.	Bunyod Rakhmatullaev	Deputy Director	National Office for Innovation Implementation and Technology Transfer, Ministry of Higher Education, Science and Innovation of Uzbekistan
4.	Kozimjon Uralov	Head of project office department	National Office for Innovation
5.	Rustam Madadzada	Project coordinator	Innovation and Digital Development Agency of Azerbaijan
6.	Serdar Ishangulyyev	Head of Youth Start-ups	Union of Economists of Turkmenistan
7.	Shahriyori Vahobzoda	Head	State Business Incubator in Sugd region, Tajikistan
8.	Vladimir Popov	Director	Startup Incubator, Kazakh-British Technical University
9.	Yerbolat Orazbekuly	First vice-president	Kazakhstan Association of the Universities Business Incubators and Accelerators

**Annex II – Training scenario: Train-the-trainer session, part I**

**20 December 2023**

**Train-the-Trainer Session Part I**

**10:15 – 12:30**

**10:15 – 11:30**

**Synergizing Innovation and Circular Economy Policies**

- Fundamental principles and concepts of the circular economy.
- Circular economy applications across industries.
- Structured approach to innovation for the circular economy.
- Aligning innovation policy with the goals of a circular economy (practical case studies).

**11:30 – 12:00**

**Work in groups (1). Mapping exercise: potential innovation policy tools for the circular economy in SPECA participating States and missing opportunities**

**Objective:** To identify existing innovation policy tools and gaps in promoting the circular economy within SPECA countries.

- Participants break into 2 groups of 3 countries each.
1. Groups conduct research and compile a list of existing innovation policy tools related to the circular economy in their assigned countries.
  2. Discuss the effectiveness, strengths, and weaknesses of each policy tool.
  3. Groups discuss reasons for existing gaps and suggest potential solutions or policies to fill them.
  4. Each group presents their findings, mapping, and identified gaps to the wider audience.

## Annex III – Training scenario: Train-the-trainer session part II

20 December 2023

### Train-the-Trainer Session Part II

13:30 – 16:00

13:30 – 15:00

#### **Development of Circular Economy Incubation and Acceleration Programmes in SPECA participating States**

- Market exploration and strategy.
- Business development and support.
- Leadership and management.

The conclusions and recommendations in this part of the training sessions are shaped to address the needs and challenges that exist in the SPECA participating States, as identified during the previous NBIASD training session in 2021-2023.

15:00 – 16:00

#### **Work in groups (2). Evaluation exercise: Accessing innovation and impact of circular economy start-ups.**

**Objective:** Empower training participants to understand and appraise the level of circular innovation within business concepts. These honed skills will enable participants to enhance the support measures for start-ups in their respective countries as they progress in their professional capacities.

- Participants break into 2 groups of 3 countries each. This should be another group formation different from the first work in groups to diversify the networking among participants.

1. Each group evaluates the level of circularity of a start-up business model (two groups have two different business cases). These are real life case studies from Uzbekistan.
2. Participants analyse a business case and write down the information in the evaluation template provided to them, it includes such elements as:
  - 1) Positive impacts (What are the positive impacts for the local community or their ecosystems?)
  - 2) Negative impacts
  - 3) Key activities
  - 4) Natural resources, technical resources, energy resources,
  - 5) Value proposition (What problems are solved by the offering? What different kinds of value are created for all our stakeholders? What are the key characteristics?)
  - 6) Users and contexts (For whom is value being created? Who are the core target customers and/or end users? In which contexts does the offering solve the problems?)
  - 7) Next use (What is the end-of-use scenario for the product/service and each of its components/packaging? Can it meet new needs at the end of the use cycle? Can the product or its components be reused? Repaired? Recycled? Can the user or partners be involved or rewarded for achieving the zero-waste objective?)
3. Two groups present their findings following the outlined structure. Each group draw conclusions based on their analyses, identifying any missing circularity elements, and recommending ways for start-ups to reinforce their business propositions to achieve greater circularity.

**Business case 1.** Production of cosmetic products based on snail secretions involves.

A natural, cost-effective product suitable for all skin types, with anti-inflammatory properties and rich in vitamins.

The cream, made from snail secretions, contains 99% collagen.

It is composed of natural ingredients, including a blend of grape seed oil, almond oil, and water.

Successful breeding of *Achatina retlika* snails in pairs, providing them with comfortable living conditions. Their diet includes zucchinis, cucumbers, bananas, lettuce, and gammarus. Regular calcium supplementation ensures their health. Additionally, we conduct bi-weekly preventive treatments in their bath using trichopol and metronidazole to prevent illnesses that could lead to loss of appetite and reduced egg-laying capacity. We also focus on breeding new individuals, using both natural and specific conditions for egg laying.

**Business case 2.** Hydraulic pump operating in water flow without external energy.

Our developed hydraulic pump functions in the water stream without external energy consumption. It is capable of lifting water to heights of 40 meters or more, without requiring electrical or thermal power sources for operation. Its installation is simple and requires no additional equipment, making it practical and reliable to use. The main difference between our hydraulic pump and traditional models is its ability to function without electricity or fuel (such as gasoline or diesel).

Thus, our hydraulic pump is environmentally friendly and does not emit harmful gases or oils into the environment. Key market segments and potential customers include farms, public enterprises, vegetable gardeners and cottage gardeners.

The advantage for consumers is the ability to irrigate fields, plots, and vegetable gardens without electricity costs, as well as conducting irrigation in remote areas where there is no access to electricity.

It is known that up to 30% of the cost of production of agricultural products falls on payment for electricity used by electric pumps. In this regard, we can conclude that the use of our hydraulic pump will reduce the cost of agricultural production by 30%.

Annex IV – Start-up evaluation template<sup>2</sup>

<b>8 Environmental Impact</b> <i>Positive and negative How does it support and how does it harm the ecosystem?</i>	<b>6 Resources</b> <i>What it does? What activities create value?(contrast with value(5))</i>	<b>1 Mission</b> <i>What is it for? What problem it addresses? (contrast with needs (2))</i>		<b>7 Future</b> <i>What it does? What activities create value? (contrast with value(5))</i>	<b>8 Social Impact</b> <i>Positive and negative How does it support and how does it harm local communities?</i>
	Natural resources			<b>Distribution</b> <i>How is it delivered? Is there customer service?</i>	
	Technical resources	<b>3 Key activities</b> <i>What it does? hat activities create value?(contrast with value(5))</i>	<b>2 Users</b> <i>What is the need of the users? For whom is it?</i>	<b>Next uses</b> <i>What is the end-of-use of the product? Can it be reused, repaired, recycled? Can it be zero waste?</i>	
	Energy resources	<b>4 Partners</b> <i>Who are the partners needed? What experience do they provide?</i>	<b>5 Value</b> <i>What is the added value that makes it special? What are the key elements? Where is the innovation?</i>	<b>Advertisement</b> <i>How is it publicised?</i>	
<b>9 Circular Economy</b>					
	Materials+Parts	Production	Service providing	Maintenance	End of Life
EXPENSES					
REVENUES					

<sup>2</sup> AEGEE-Europe, Manual for practitioners - Methods and Tools to use the CESCY Framework of Competences. Available at <https://circulareconomy.europa.eu/platform/en/toolkits-guidelines/manual-practitioners-methods-and-tools-use-cescy-framework-competences>