

# Foresight-Driven Pathways for Circular Economy Integration

## Uzbekistan's Food and Tourism Sectors



## Acknowledgements

The Report, *Foresight-driven pathways for Circular Economy integration in Uzbekistan's food and tourism sectors*, was prepared on behalf of the EU SWITCH-Asia Policy Support Component (PSC) by Dilmurod Abidov, with inputs on strategic foresight by Dr Yelena Muzykina and on circular economy by Malkhaz Adesihvili. It was written under the supervision of Elodie Maria-Sube, Key Expert, SWITCH-Asia Policy Support Component, and Dr Zinaida Fadeeva, Team Leader, SWITCH-Asia Policy Support Component.

### The SWITCH-Asia Programme

© 2025 SWITCH-Asia

### Disclaimer

The information and contents in this document are the sole responsibility of the authors and do not necessarily reflect the views of the European Union.

# Table of contents

<b>Executive Summary</b> .....	<b>4</b>
<b>Introduction</b> .....	<b>5</b>
<b>Stage 1. Laying the foundation</b> .....	<b>6</b>
1. Uzbekistan's tourism trajectory .....	6
2. Environmental and food-system challenges .....	6
3. Emerging circular economy opportunities in tourism and food systems .....	7
4. Conducting interviews, and collecting and analysing data .....	8
<b>Stage 2. Foresight sessions: Development scenarios for Uzbekistan</b> .....	<b>11</b>
1. Introduction .....	11
2. Probable scenarios for tourism development in Uzbekistan in 2040 .....	13
3. Implementation risks .....	18
<b>Stage 3. Policy Recommendations</b> .....	<b>20</b>
Pillar 1. Enabling governance and policy .....	20
Pillar 2. Green infrastructure and investment .....	20
Pillar 3. Value chains and community .....	21
Pillar 4. Skills, innovation and digitalisation .....	22
Pillar 5. Regionalisation .....	23
<b>Stage 4. Stakeholder engagement</b> .....	<b>25</b>
From an environmental perspective .....	25
From a tourism perspective .....	25
From a food and agriculture perspective .....	26
<b>Concluding remarks</b> .....	<b>27</b>
<b>Appendix A. Findings from stakeholder interviews</b> .....	<b>28</b>

## Tables and Figures

Table 1. Stages of the project .....	5
Figure 1. Example of a scenario matrix .....	13
Figure 2. Scenario matrix: Uzbekistan .....	14

## Abbreviations and acronyms

<b>ADB</b>	Asian Development Bank
<b>CE</b>	Circular economy
<b>CBT</b>	The Community-based Tourism Association
<b>EU</b>	European Union
<b>F&amp;B</b>	Food and beverage
<b>NGO</b>	Non-governmental organisation
<b>SMEs</b>	Small and medium-sized enterprises
<b>STEEP</b>	Social, technological, economic, environment, and political

# Executive Summary

---

The core findings of the *Strategic Foresight for the Circular Economy in the Tourism and Hospitality Sector with a Focus on Food in Central Asia* project, focusing on Uzbekistan, reveal a significant momentum toward sustainability coupled with critical systemic challenges. There is a clear and growing awareness among stakeholders, including hoteliers, tour operators, and non-governmental organisations (NGO)s, that Circular Economy (CE) principles are not merely an environmental mandate but also a market advantage for attracting eco-conscious travellers and ensuring long-term profitability.

This awareness is translating into practical implementation measures across the hospitality sector, such as the adoption of sustainable procurement policies, proactive steps to reduce food waste through better portion control and composting, and the promotion of renewable energy technologies, particularly in remote tourist areas. Furthermore, the government of Uzbekistan has established a supportive policy environment, highlighted by presidential decrees on green tourism, financial subsidy programmes for green innovation, and the introduction of the 'Yashil Belgi' eco-labelling scheme to incentivise and signal environmental compliance.

Despite these positive drivers, several systemic challenges are preventing the large-scale transition to a circular model in the country's tourism sector. Key obstacles include the weak implementation of CE in rural areas largely due to a lack of investment and infrastructure, and poor coordination of waste management systems in major tourist zones. A significant capacity-building gap exists, marked by a lack of qualified personnel and a mismatch between educational curricula and the practical needs of the tourism industry, particularly in vocational training. Stakeholders also noted legal ambiguities, such as the absence of formal definitions for alternative types of tourism such as agritourism, which limits targeted support.

The foresight process described in this findings of this report culminated in defining the 'Preferred Future' for Uzbekistan's tourism, which participants unanimously agreed should be achieved through what are termed 'Adaptive Changes'. This vision is predicated on establishing a favourable investment climate, ensuring the availability of highly qualified personnel, and developing robust quality infrastructure. This desired future will essentially require the tourism sector to actively apply circular approaches at scale, supported by increased green and climate financing. This direction will solidify Uzbekistan's position as a sustainable and high-quality tourist destination, but it will also necessitate continuous strategic planning to leverage existing resources while addressing legacy challenges.

To achieve this preferred future, the project's policy recommendations insist upon the need for institutional and financial reform. These reforms include developing a national legislative framework specifically focused on promoting CE and creating a favourable tax climate – such as tax breaks and subsidies – to motivate the private sector to implement CE principles. Moreover, policymakers must focus on developing domestic capacity through educational reform and the creation of conditions that will stimulate cross-sectoral and intergovernmental coordination so that a holistic transition across the tourism, agriculture, and waste management sectors will be possible.

Looking towards the future, experts anticipate a noticeable rise in eco- and gastronomic tourism, which will in turn drive increased demand for local, organic, and low-impact food experiences, accompanied by a more widespread use of biomaterials and eco-design in tourism infrastructure. Ultimately, a successful and thriving integration of CE principles will hinge on an integrated, multi-stakeholder collaboration. The effective transition to circularity will require coordinated actions among government agencies, small and medium-sized enterprises (SMEs), educational institutions, and small-scale farmers so that production can be connected to the sustainable tourism value chain, thereby unlocking the full potential for inclusive growth in the tourism and hospitality sector.

# Introduction

The project *Strategic Foresight for the Circular Economy in the Tourism and Hospitality Sector with a Focus on Food in Central Asia* is a part of the SWITCH-Asia Programme financed by the European Union (EU). It is an important step in shaping the future of tourism, a circular economy (CE), and agriculture in the region. Promoting circularity and encouraging the transition to more sustainable practices will significantly reduce waste and resource consumption in the tourism and hospitality sectors. As a cross-sectoral project, the focus is on how resources are used and will be used in the future in the tourism sector, thereby paving the way for a more sustainable and efficient development of the industry.

The project was developed using a holistic approach, involving local and regional experts, government partners and various stakeholders. This approach ensured that sufficiently objective and reliable data were collected. The project was carried out in three stages, each of which confirmed the thoroughness of the process. The first stage included various interviews as a means of collecting information and a preparatory stage for the foresight session. The second stage consisted of a series of workshops in Kazakhstan, Kyrgyzstan, Uzbekistan and Tajikistan, which brought together SWITCH-Asia executives, local experts, government representatives, business, hoteliers and other stakeholders from the tourism and agribusiness sectors. The sessions used foresight tools to help identify signals of novelty and continuity, such as emerging food trends, as well as challenges in the industry. These signals and trends were used to model alternative future scenarios and identify key ideas for further actions to support ongoing government efforts to embed CE in both the tourism/hospitality sector and in agriculture. The scenarios and templates for various activities resulting from the second stage are included in this report.

In the third stage, the project team developed policy recommendations that could significantly accelerate sustainable development of the tourism and hospitality sector in the region. These recommendations include developing a national legislative framework focused on promoting the circular economy, creating a favourable tax climate for the private sector to implement circular economy principles, focusing on developing domestic capacity and capabilities, and creating conditions to stimulate cross-sectoral and intergovernmental coordination.

## Stages of the project

Table 1. Stages of the project

Stage 1	Stage 2	Stage 3
Laying the foundation	Foresight sessions	Recommendations
<ul style="list-style-type: none"><li>• Collection of information</li><li>• Interviews and data analysis</li><li>• Analysis of official documents and legislation</li></ul>	<ul style="list-style-type: none"><li>• Four republics of Central Asia</li><li>• Horizon scanning</li><li>• Ranking of trends and signals</li><li>• Scenario planning</li><li>• Building a Preferred Future</li></ul>	<ul style="list-style-type: none"><li>• Developing a National Legislative Framework for the Circular Economy</li><li>• Creating a favourable tax climate for the private sector</li><li>• Implementation of circular economy principles in the private and public sectors</li><li>• Attention to the development of internal potential and capabilities</li><li>• Creating conditions to stimulate intersectoral and intergovernmental coordination</li></ul>



# Stage 1. Laying the foundation

## 1. Uzbekistan's tourism trajectory

Uzbekistan is the most populous country in Central Asia and a key cultural anchor in the region. Since the launch of major economic reforms in 2017, the country has positioned tourism as a strategic pillar of economic diversification. The country's rich heritage, including the Silk Road cities of Samarkand, Bukhara, and Khiva, combined with a variety of landscapes and growing accessibility, have enabled accelerated growth in both international and domestic tourism.

Government reforms have directly supported this trajectory. The expansion of visa-free regimes to over 80 countries, investment in new tourism infrastructure, and the modernisation of hospitality services have contributed to a sharp rise in tourist arrivals. Foreign tourist visits grew from 2.7 million in 2017 to 6.6 million in 2023, recovering 98% of pre-pandemic levels. Domestic tourism is also expanding under programmes such as 'Travel around Uzbekistan!', which generated over 21 million regional visits in 2023.

Private-sector engagement in tourism has intensified, with a seven-fold increase in accommodation facilities over the past six years and rapid growth in guesthouses and boutique hotels. Tour operators increasingly design experience-based products – cultural, gastronomic, religious, and adventure tourism – reflecting global trends in the demand for authentic and meaningful travel. At the same time, Uzbekistan's tourism development is becoming more interconnected with food systems and rural livelihoods. Gastronomic tourism is expanding, communities are engaging more directly as providers of services, and the hospitality sector is emerging as a significant consumer of food products. This interdependence between tourism and food creates both opportunities and risks for sustainable development.

The rapid expansion of the sector, combined with rising expectations from international travellers, now requires a shift toward more resource-efficient, resilient, and environmentally responsible models. This sets the stage for integrating circular economy (CE) practices as a strategic feature of Uzbekistan's tourism future.

## 2. Environmental and food-system challenges

Despite positive reforms and rapid sectoral growth, Uzbekistan faces environmental constraints and food-system inefficiencies that directly influence the sustainability of tourism.

### 2.1 Environmental pressures affecting tourism

Uzbekistan's environment has undergone significant stress in recent decades, including water scarcity, land degradation, and the long-term ecological consequences of the Aral Sea disaster. As tourism expands geographically – from major cultural centres to mountain, desert, and rural destinations – the pressure on local ecosystems increases. Challenges include:

- waste generation in tourist hotspots, particularly in historic cities and natural areas where waste collection infrastructure is insufficient
- water resource constraints, particularly during peak seasons, affecting both hospitality operations and agricultural suppliers
- air and soil pollution linked to urban expansion and industrial activity, which can undermine destination quality
- limited waste treatment and recycling infrastructure, especially outside of the major cities

These environmental pressures are increasingly visible to visitors and operators alike, affecting destination attractiveness and raising operational costs.

## 2.2 Food-system inefficiencies

Food systems – central to both hospitality operations and Uzbekistan’s cultural identity – face a variety of vulnerabilities:

- high levels of post-harvest loss due to inadequate storage, logistics, and handling practices
- inefficient food procurement models in hotels and restaurants, leading to oversupply, food waste, and the inconsistent integration of local producers
- the prevalence of single-use packaging and limited alternatives, particularly for take-away food and large events
- a lack of mechanisms to channel food waste into composting or animal feed, especially in rural tourism destinations
- a mismatch between agricultural production and tourism demands, with limited certification for organic, seasonal, or climate-resilient crops

These challenges undermine the long-term viability of Uzbekistan’s tourism growth, increase environmental impact, and limit opportunities for local value creation in rural communities.

## 2.3 Governance and capacity gaps

The environmental and food-system challenges are compounded by:

- insufficient coordination across sectors (tourism, agriculture, environment, and municipal services)
- weak technical capacity among hospitality staff for sustainable operations and circular practices
- gaps in data collection on waste, resource use, and food procurement across tourism value chains
- lack of legal definitions and policies for alternative forms of tourism such as agritourism, limiting targeted support

These structural limitations illustrate the need for a systemic approach that would integrate the development of tourism with CE and sustainable food-system principles.

# 3. Emerging circular economy opportunities in tourism and food systems

Despite the challenges, Uzbekistan holds significant potential to transition toward circular models that enhance tourist-sector competitiveness, protect the environment, and strengthen local food systems.

## 3.1 Rising stakeholder awareness and early-stage adoption

Interviews with tour operators, hoteliers, NGOs, and government representatives indicate growing awareness of CE principles. Stakeholders are increasingly motivated by both environmental concerns and market advantages. Early circular practices already emerging include:

- sustainable procurement policies prioritising local suppliers and energy-efficient products
- food-waste prevention measures such as portion control, menu planning, and composting at hotels like Wyndham Garden Zomin
- use of biodegradable and recyclable materials, especially in take-away services
- pilot projects on renewable energy technologies in remote tourism areas
- eco-labelling initiatives such as the ‘Yashil Belgi’ (Green Mark) certification scheme

These practices demonstrate readiness within both the private and the public sectors to scale CE approaches.

## 3.2 Circular economy as a competitive advantage

Global tourism markets increasingly demand low-impact travel, ethical consumption, and authentic local food experiences. Uzbekistan’s strong culinary heritage and rural tourism potential create opportunities to:

- develop farm-to-table supply chains for hotels and restaurants

- expand gastronomic tourism based on seasonal, organic, and regional produce
- scale eco-designed tourism facilities such as eco-lodges, glamping sites, and modular infrastructure
- promote reuse-based systems such as refillable water stations, reusable containers, and composting at destination level

By positioning CE practices as part of the national tourism brand, Uzbekistan can differentiate itself as a sustainable destination in Central Asia.

### **3.3 Policy momentum toward green transition**

Recent presidential decrees and strategies, including the ‘Uzbekistan – 2030 Strategy’<sup>1</sup> and waste-management reforms, demonstrate increasing government commitment to sustainability. Priority areas include:

- reducing waste and expanding recycling systems
- promoting renewable energy
- strengthening environmental standards
- enhancing food safety and certification systems

These policy developments provide enabling conditions for integrating CE into tourism and food systems.

### **3.4 Foresight as a tool for shaping the transition**

The readiness of the tourism and hospitality sector to adopt circular practices, combined with growing policy support, positions Uzbekistan to pursue a long-term vision in which tourism development is economically competitive, environmentally resilient, and embedded in sustainable food systems.

The foresight process conducted under this project has helped stakeholders explore alternative futures and identify leverage points for circular transition. Insights from interviews and workshops informed the identification of key drivers – such as the investment climate and the country’s environmental conditions – that will shape future scenarios.

Through the stages of interviews, workshops and tourism development scenario planning with stakeholders’ engagement, the foresight process initiative has facilitated the development of context-specific policy recommendations to guide a more sustainable, circular, and inclusive growth in Uzbekistan’s evolving tourism landscape.

## **4. Conducting interviews, and collecting and analysing data**

As part of the survey for the project *Strategic Foresight for the Circular Economy in the Tourism and Hospitality Sector with a Focus on Food in Central Asia*, a series of interviews were conducted in Uzbekistan between December 2024 and February 2025. The interviews engaged a diverse group of professionals representing key stakeholders across government agencies, international organisations, private sector actors, and civil society organisations involved in tourism, hospitality, and food systems.

Participants included experts and senior representatives from the Food and Security Agency under the Ministry of Agriculture, the Asian Development Bank (ADB), and the Uzbekistan Standardisation Agency, providing insights into policy frameworks and standards relevant to green and circular practices.

Hotel and hospitality sector insights were provided by the food and beverage (F&B) Manager of Whyndham Hotel Jizzakh, while community-oriented and environmental perspectives were shared by NGOs such as EcologUz, Ecomaktab, and Green Building NGO. The Community Based Tourism (CBT) Association also contributed, highlighting grassroots and regional-level practices supporting sustainable tourism.

The inclusion of stakeholders from a broad spectrum enabled a comprehensive understanding of current practices, challenges, and opportunities for integrating circular economy principles into Uzbekistan’s tourism and hospitality sector, particularly in relation to food systems. In addition, a desk research project

<sup>1</sup> [https://gov.uz/en/pages/2030\\_strategy](https://gov.uz/en/pages/2030_strategy)



was conducted to explore the existing regulatory frameworks and relevant policy documents related to sustainable tourism and the hospitality sector.

## **Interview analysis: Circular economy (CE) in tourism and food in Uzbekistan**

### **1. Growing awareness and adoption of CE principles**

The interview responses indicate a clear and growing awareness among stakeholders – especially tour operators, hospitality providers, and NGOs – about the need for sustainable practices. The incorporation of CE principles, such as waste minimisation, renewable energy adoption, and local sourcing, is increasingly seen not just as an environmental imperative but also as a market advantage. Tour operators like *Advantour* and *Aral Sea Discovery* are aligning their offerings with CE values to attract eco-conscious travellers, reduce costs, and be able to stand out in a competitive market.

### **2. Practical measures and innovations in hospitality and tourism**

The interview respondents pointed out that the following measures and practices are being increasingly applied in the tourism and hospitality sectors.

- Sustainable procurement is a key practice: Operators choose suppliers and accommodations that prioritise energy efficiency and waste reduction.
- Food waste reduction is being implemented through better portion control, composting, and menu planning, as seen in hotels like the Wyndham Garden Zomin.
- Renewable energy technologies and biodegradable materials are being promoted, especially in remote tourist areas.
- The use of eco-design and recycled materials is expanding, although scalability remains a concern due to funding and capacity gaps.

### **3. The role of business associations and civil society**

Business associations are emerging as enablers of CE practices. Their activities include:

- facilitating training on waste management and energy-saving technologies
- promoting food composting and separate waste collection
- encouraging knowledge exchange between businesses: NGOs such as *Eco Maktab* and *EcologUz* support pilot projects and awareness campaigns, often funded through grants or donor programmes. Their collaboration with government entities and youth organisations suggests strong potential for policy influence and behaviour change.

### **4. Education and capacity building gaps**

Stakeholders consistently emphasised the lack of qualified staff and limited practical training in tourism and hospitality. A mismatch between educational curricula and industry needs was noted, particularly in vocational education. Interviewees recommended:

- dual education models that integrate classroom learning with industry experience
- updated curricula aligned with sustainability and CE standards
- certification and professional development for existing workers

### **5. Future expectations and trends**

Experts anticipate:

- a rise in eco-tourism and gastronomic tourism, with increased demand for local, organic, and low-impact food experiences

- broader use of biomaterials, recyclable packaging, and eco-design in tourism infrastructure
- enhanced collaboration between businesses and public agencies to solve environmental challenges
- a growing emphasis on environmental education for tourists, reflecting a shift in tourist behaviour toward sustainability

## 6. Policy and institutional developments

Interviews referenced several supportive policy instruments, including:

- presidential decrees on green tourism, waste reduction, and circular economy financing
- subsidy programmes and preferential loans to support green innovation in tourism businesses
- eco-labelling schemes such as ‘Yashil Belgi’, introduced to signal environmental compliance and incentivise green practices

However, stakeholders also flagged the absence of formal definitions for alternative tourism types (e.g. agritourism) in the legal framework, which limits targeted support and measurement.

## 7. Cross-sectoral collaboration and systems thinking

A recurring theme is the need for integrated, multi-stakeholder cooperation. An effective circular transition will require:

- coordinated actions between government, SMEs, and educational institutions
- support mechanisms for small-scale farmers and producers to connect with the tourism value chain
- inclusive approaches that build both economic resilience and cultural integrity through sustainable food and tourism systems

## 8. Key challenges identified

- There is weak implementation of CE in rural areas due to lack of investment and infrastructure.
- Waste management is poorly coordinated in tourist-heavy zones.
- Only limited engagement from employers in education partnerships.
- Gaps remain in data collection for monitoring sustainability repercussions and progress.

## Conclusion

The interviews conducted with stakeholders in Uzbekistan reveal strong momentum toward integrating circular economy principles in the tourism and food sectors. Although significant policy and grassroots initiatives are underway, scaling and systematising efforts – particularly through improved legal frameworks, education, financing mechanisms, and stakeholder cooperation – will be crucial in unlocking the full potential of sustainable tourism in the country.

# Stage 2. Foresight sessions: Development scenarios for Uzbekistan

## 1. Introduction

In a constantly changing world dominated by complexity, chaos and contradictions, it is vital to learn to adapt to uncertainty and thrive in disorder. One of the tools that helps in this difficult task is foresight, which has been used by many countries around the world since the mid-20th century. Recently, it has begun to make its way to the countries of Central Asia.

**Foresight is a structured and systematic process of thinking about the future that helps us anticipate and better prepare for change.** The process focuses on exploring the various possible futures that may arise, considering and assessing the opportunities and challenges they may pose along the way. Foresight is essential for making informed decisions and determining the best course of action.

The question is: *what will the circular economy (CE) in tourism with a focus on the food sector look like in 2040 in Central Asia? What will change and what will remain the same? Whatever the forces of change, is there anything that we as a sector can do to prepare for change or to build the necessary forces that would make change for the better possible? Are our efforts and resources focused in the right direction, or is there room for innovation?*

It was these questions that prompted the development of the foresight component of this project. The activities at this stage were designed to help organisations improve their awareness of the changing external environment and thus to decide upon what the activities should focus to achieve their goals in an uncertain environment.

By integrating the foresight component into this project it was hoped that:

- the direction of change would be better understood
- possible futures for CE in the tourism and food industries could be imagined
- a vision of a preferred future around which businesses, civil society and policymakers would unite could be described
- important entry points for change from which participants across the system can begin to take action would be identified

The foresight stage of the project also created a platform for developing new thinking about strategy, policy and innovation, providing workshop participants with information about what they could choose to do in the present to more intentionally shape the future they wanted to see. The process included:

- challenging existing assumptions
- the need to avoid surprises as well as to anticipate potential threats
- the creation of new perspectives
- the expansion of the planning horizon
- the creation of new stories about change, and rallying stakeholders around them

Scenario planning, a well-known tool used by organisations and businesses worldwide, is particularly effective in uncertain, complex, and rapidly changing environments. It allows organisations to evaluate their strategies against potential futures, to assess the impact of recent decisions, and to improve preparedness for the unexpected. Scenario planning encourages teams to move beyond the idea of a linear, singular future; to confront complex challenges; and ultimately to shape the future we desire. In a world full of unpredictability, scenario planning serves as a compass to guide and help people weather the unexpected challenges that lie ahead.

## What is scenario planning?

Scenarios:

- take the uncertainty of the future as their starting point
- work in tandem with trends and other forms of knowledge about possible futures
- open up the horizon to multiple possible futures

Scenarios do not predict the future, but they do help to shape and build it.

It must be remembered that the future is not singular or predetermined. Scenario planning makes it possible to go beyond considering only the best and worst possible outcomes, and instead to imagine multiple possible futures. Since reality rarely matches expectations exactly, scenario building becomes a necessary process for exploring different possibilities and reducing potential misses.

*Scenario planning can bring many benefits to any organisation and any business, such as:*

- **Improving the risk management process** by helping to identify potential risks and develop effective strategies to address them, ensuring sustainability.
- **Informing decision making** because data-driven insights enable leaders to make confident choices that align with long-term goals.
- **Providing flexibility and adaptability** because this approach promotes proactive thinking, making it possible to quickly adjust strategies in response to external changes.
- **Making resources for innovation available:** scenario planning stimulates creative problem-solving by exploring a variety of future possibilities.
- **Granting a sustainable competitive advantage**, because understanding potential futures allows organisations to gain an advantage over less-adaptive competitors.

Unlike most strategic and planning approaches, scenario thinking fosters a culture of adaptability. Participants use the scenario planning process to create pictures of the world (the external, contextual environment) rather than the day-to-day operating environment of their organisation. Scenarios are then used to consider how changes in this external environment will affect the organisation directly or indirectly, preparing it to adapt to any potential modifications.

There are different methods for scenario planning. *Every scenario modelling exercise begins with understanding trends and emerging signals.*

**Trends** can be defined as large-scale, long-term changes in social, economic, technological, environmental, and political conditions that affect a wide range of activities, processes, and perceptions. Strictly speaking, a trend is a historical change that occurs over time; it is an event or factor that drives current change. Rising prices for rare metals or the growing number of iPhone users are examples of trends. Finding trend data is easy because experts, statistics, reports and the internet can provide it instantly; it is often readily available and widely accepted.

On the other hand, emerging signals are more difficult to detect.

**Emerging signals** can be defined as events about which only partial information is currently available. The signals may have low probability but high impact. Examples of emerging signals include new technologies, potential public policy issues, or a new concept or idea that may represent a fringe topic today but mature into a critical mainstream issue or major trend in the future; robot civil rights may be an example of an emerging signal. Little, if any, information is available about emerging signals. They are not widely discussed and are not part of public discourse.

To sum up, it is possible to say that trends and emerging signals are the basis for constructing scenarios.

*To begin the scenario planning process, a clear theme and direction must first be chosen.*

This study, '*Strategic Foresight for the Circular Economy in the Tourism and Hospitality Sector with a Focus on Food in Central Asia*', states clearly that it is about the circular economy and its integration into the tourism and food industry.

The next step is to list the dominant trends that influence the topic. Trend analysis typically uses the STEEP (social, technological, economic, environmental, and political) method as the most common and effective framework for sorting trends, and it acts as a guide to ensure that trends across multiple areas can be considered. Each STEEP category requires at least 5–10 trends.

Analysis requires searching unusual places and finding content from different areas. This process is more art than science, and the goal is not to ‘predict the future’ but rather to ‘spot’ things that may have a certain impact. Not all emerging signals become trends, and the reason for using them is to challenge our thinking and point out blind spots in knowledge. The STEEP analysis method can also be used to ‘scan the horizon’ for emerging signals. Social media sites such as Instagram, Twitter or Facebook can be sources for finding emerging signals. Usually, it is enough to collect 2–3 new signals in each STEEP category. **Participants in the Uzbekistan workshop collected over 55 trends and emerging signals.**

The next step is to move on to the scenario planning process. Finding the right scenario building method depends on the chosen topic and the results of the analysis of trends and emerging signals.

*One of the most popular methods is the 2x2 matrix.*

The advantage of this method is its simplicity. In most cases, no special preparation is required. Participants come to the workshop, bring their ideas, knowledge, and experience and start working without any foresight experience. The success of the process can be explained by how easy it is to implement and create highly contrasting scenarios in a short period of time.

This method helps to generate up to four scenarios relevant to a particular domain by placing two factors (also called *uncertainties* or *drivers*) influencing the future of the problem under study on two axes. They intersect to form four quadrants. To make the right choice of uncertainties, workshop participants rank the results of their STEEP analysis exercise, i.e. the trends and emerging signals that can be collectively called *drivers*. Some forces, such as demographics, are relatively deterministic or predictable. Others, such as public opinion, are highly uncertain. Workshop participants discuss how important each trend/emerging signal is for the topic under consideration. When more than two uncertainties are identified, the 2x2 matrix requires combining (clustering) two or more uncertainties into a more complex graph (see Figure 2).

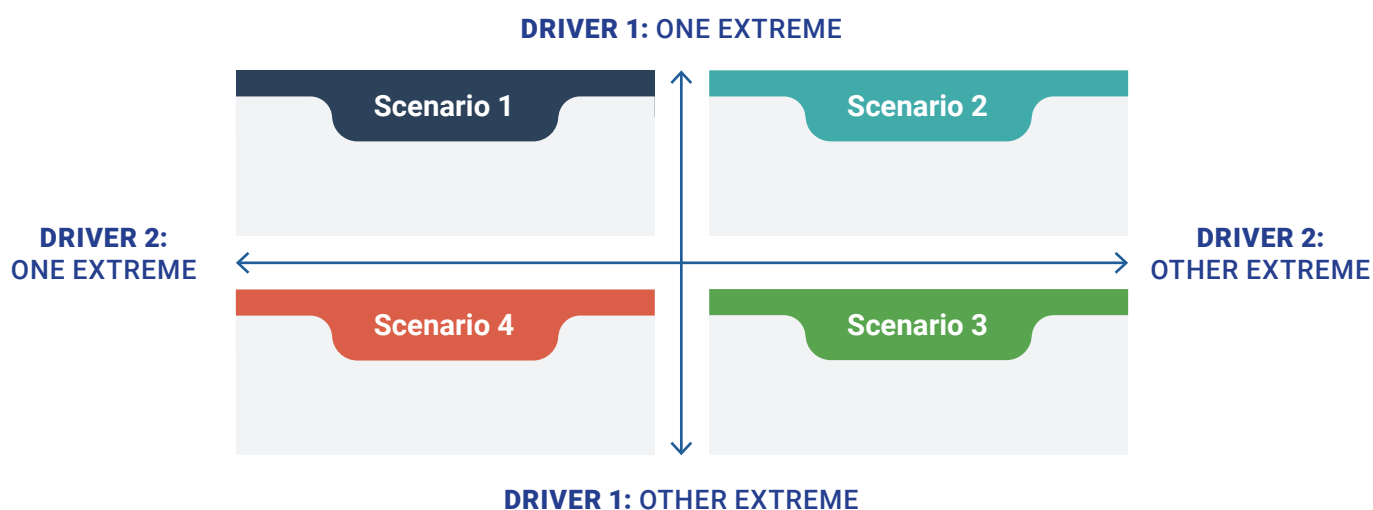


Figure 1. Example of a scenario matrix

## 2. Probable scenarios for tourism development in Uzbekistan in 2040

The foresight sessions in Uzbekistan brought together government representatives, private-sector actors, local experts, NGOs, and hospitality providers to explore how tourism, circular economy (CE) practices, and food systems might evolve by the year 2040. Using trends and emerging signals identified through horizon scanning and interviews, participants explored alternative futures and assessed opportunities and vulnerabilities for the tourism sector. The objective was to identify plausible development pathways and a preferred future that aligned with national priorities for sustainability, resilience, and economic diversification.



During these sessions in Uzbekistan, the participants selected two main uncertainties from the drivers listed for further scenario building using the ‘2x2 Matrix’ method. In their opinion, technological and environmental elements will have the greatest impact on the further development of the tourism sector. The investment climate and environmental conditions were selected from these areas.

Investment climate

Foreign and domestic investments directly determine the tourism sector’s ability to modernise infrastructure, adopt CE technologies, expand green financing, and strengthen supply chains. A weak investment climate will limit modernisation, keep the sector dependent on linear models, and deepen environmental pressures.

State of the environment

Environmental quality – air, water, soil, biodiversity – is central to tourism attractiveness and food-system viability. Healthy environmental conditions support CE models such as short food supply chains, composting, and material recovery. Degraded conditions undermine both tourism competitiveness and the ecological basis for circular practices.

The following matrix was obtained (Figure 2).



Figure 2. Scenario matrix: Uzbekistan

Using the main points of each quadrant diagram, more detailed scenarios were developed that included the characters in the story, the identified trends, and the emerging signals. Workshop participants explored the connections and interactions between drivers and mapped out events, and developed a story that led to the end point of the scenario. The only constraints imposed at this stage were coherence (within the scenario), relevance to the central theme, and reference (directly or indirectly) to the drivers of change. The scenarios below reflect this integrative perspective.

1 Scenario 1. Betting on youth

In previous years, investments in waste treatment plants, air filtration systems, and waste minimisation systems had led to significant improvements in the region’s environment. This ecological transformation became a catalyst for a profound social evolution, as the country could now focus on developing domestic infrastructure. Healthcare and education, which had previously been in decline, experienced a huge revival.

Young professionals are solving various problems and innovating new solutions in agri-food-tourism sectors. These new specialists are actively using foreign experience – and not just finance – to increase the country’s agricultural potential, restore soil previously depleted by the ‘cotton past’, and develop new varieties of plants and animals used in traditional Uzbek cuisine. Cuisine has now become one of the priorities of the republic’s economy, as the flow of tourists has increased to 20 million people a year.

Young professionals in the tourism industry are opening new locations, offering not only traditional excursion services, but also quests, family educational tours, and youth camps that acquaint people with the history of the country and the region in an unusual way. Environmental and circular initiatives undertaken by young people are widely supported by the government, as they strengthen the positive image of the country in the international arena. Modern technologies for sorting and recycling various waste streams are increasingly being used; compact installations are widely used at tourist sites, cafes and restaurants, bringing their owners significant income. The tourism business is becoming not only self-sufficient, it also brings in up to 20% of Uzbekistan's GDP.

## 2 Scenario 2. The Magnificent Century

Uzbekistan's independent position among the Central Asian countries and the interest of its Turkic (Turkey) and Asian (China) economies have contributed to a high inflow of investments. Investment growth was also influenced by the creation of a favourable investment climate, which gave preferences primarily to those projects aimed at developing a circular economy in the country. Thanks to financial flows, it was possible to create a sustainable economy, whose priorities were not only profit, but also environmental protection. Uzbekistan is becoming a pioneer in the processing of ore waste in order to extract rare minerals and metals, reducing the need to mine raw ore, thus helping to preserve the environment. The country stops exporting energy resources and metals, using those already available in a closed system of waste-free production.

The favourable ecological situation and high flow of investments into the country allow for the successful development of modern technologies. In particular, the Clean Planet centre for the production of its own neurochips is opening in Fergana. Associated medical and, naturally, tourist services have begun to develop actively, since the influx of specialists working with neurochips and tourists arriving as part of medical tourism has increased fourfold.

The focus on health and healthful eating has led to a shift in agriculture and to the widespread cultivation of organic products that receive international certification. Circular economy principles, especially in relation to water use, help producers save money and generate additional profits.

## 3 Scenario 3: Correcting the mistakes of the past

The surge in investment during the 2020s, especially in the construction sector, fuelled rapid economic growth. However, this prosperity came at a high price: a sharp deterioration of the environment due to emissions from newly launched factories.

The problem required urgent intervention. First, the existing legislation regarding the responsibility of investors and business owners to comply with environmental standards was revised. In addition, the environmental requirements themselves were tightened. Next, the government began to provide significant support to businesses wishing to implement sustainable methods, offering tax breaks and subsidies to those who used clean technologies. Throughout this entire situation, the tourism business and agriculture suffered serious losses. The flow of people wishing to come to a country with an unfavourable ecology has practically dried up. Cultivated areas do not yield the same harvests as before, and the products themselves are not up to normal food standards.

Resolving the catastrophic situation required a deeper solution. Therefore, the government invested heavily in programmes to raise environmental awareness and educate citizens on the principles of a circular economy. This led to a cultural shift, and people began to re-evaluate their lifestyles and consumption habits. Sorting garbage and recycling food waste became commonplace. Therefore, Uzbekistan took the first place among the Central Asian countries where conscious tourists go, seeking not only to have fun, but also to be environmentally friendly.

## 4 Scenario 4. Virtual tours are real investments

The country's relentless pursuit of rapid economic growth pushed environmental concerns into the background. The main investments went into expanding metal mining, while waste disposal systems were neglected. The supply of renewable energy sources was critically inadequate to meet demand. The ban on greenhouses and the subsequent decline in soil quality led to a sharp decline in agricultural production, all of which provoked a massive outflow of investment from the country. In an effort to reduce dependence on fossil fuels, the country switched to electric cars. However, the service life of the batteries was limited to only five years. The huge volume of discarded batteries quickly overwhelmed existing waste management systems, creating huge toxic dumps. Measures to create recycling centres did not produce the desired result. By 2040, the country was faced with a full-scale ecological collapse. Nature was almost destroyed, and investment dried up completely.

Such conditions have led to a crisis in the tourism sector. There were fewer and fewer people wishing to come to Uzbekistan. But interest in the country did not disappear. As a result, tour operators restructured their work and began to offer virtual tours. Not wanting to visit historical places of Uzbekistan in person, 'virtual tourists', nevertheless, are happy to join augmented reality tours offered by Uzbek travel companies in their offices around the world. These places are also quite popular because they have become cultural centres that introduce visitors to Uzbek national cuisine, art, and traditions. They host theatrical performances, for which Uzbekistan is so famous. In addition, such tourist centres have become places for raising funds to combat the environmental disaster in the republic.

Physical tourism infrastructure declines due to lack of maintenance, and circular economy pilot projects fail to scale up because of limited capital and fragile environmental conditions. The food sector faces chronic insecurity, making circular food-system initiatives nearly impossible to sustain. This scenario illustrates the consequences of failing to act on both environmental stewardship and circular economy opportunities.

### Preferred scenario for the future development of tourism in Uzbekistan

A *Futures Triangle*<sup>2</sup> was used, which made it possible to build not only a vision of the desired development, but also to assess what will remain as a legacy from the past, and what is here in the present to advance or block our vision. After analysing the identified facts, five possible scenarios can be built:

- Back to the past
- No change
- Minor changes
- Adaptive changes
- Radical changes

The choice of the participants in the discussion of one of the scenarios indicates what changes, in their opinion, the given industry needs today.

Summarising the responses of the participants of the seminar in Uzbekistan, the preferred future for the development of the tourism sector in 2040 looks like this.

### Achieving a comprehensive balance

The tourism sector achieves balanced development due to the widespread introduction of digitalisation, which plays a key role in creating comfortable conditions for visiting guests. For example, the Digital Concierge application is being widely implemented, ensuring the safety of tourists in Uzbekistan and providing all the necessary information upon request. Improved and extensive logistics systems for land and air transport, covering all regions of the country, as well as a visa-free regime with most countries, contribute to the development of tourism. Various types of tourism are developing in Uzbekistan: medical, gastronomic, religious, family, youth, and educational (for schoolchildren). All of them are developing evenly, creating new jobs and contributing to horizontal and social development.

2 <https://www.sitra.fi/en/tool/the-futures-triangle/>

The provision of qualified personnel has reached 100%. Each guide has a license confirming their knowledge and qualifications, and any service worker is ready to provide first aid. Museums are becoming modern centres where history comes to life through interactive exhibits and the latest technology.

The consciousness of the country's citizens has been transformed: more and more people are willing to invest in small farms that supply certified products to large consumers, which leads to improved product quality and the development of the country's economy. Plastic is a thing of the past, replaced by environmentally friendly alternatives. Waste is recycled with an efficiency of 88%, and by 2040 this figure will reach an even higher figure. Inclusivity is a reality, giving every tourist, including people with disabilities, the chance to fully enjoy travel.

Tourism accounts for 25% of Uzbekistan's economy. The Central Asian Tourism Alliance has been created, in which the republic plays a key role. It is a symbol of unity and cooperation. Thanks to the Alliance, travellers can move freely around the region using a single tourist visa, similar to the Schengen zone in the EU.

When choosing the steps to take in order to achieve their preferred future, the audience was divided:

- Minor changes were supported by 25% of the participants. This means that the current situation in the tourism sector is considered quite satisfactory. Only minor improvements need to be made.
- Some 25% of the participants were in favour of radical changes. This group believes that radical changes are the best and only approach, so a complete rethinking of the situation and changes are necessary.
- Adaptive changes were suggested by 50% of the participants. Those in this group believe that the future requires changes, so they advocate that the past should not hold back the movement forward, and that it is necessary to change and adapt.

The following changes and steps were proposed.

#### ***As part of minor changes***

- Continue to implement existing government regulations on tourism development, with increased control and monitoring.
- It is necessary to continue to develop traditional crafts, preserve and popularise them.
- Develop thematic tourist routes and concepts based on the historical and cultural heritage of the Great Silk Road and Turkic history.
- In the agricultural sector it is necessary to continue the selection and introduction of new resistant varieties of fruits and vegetables, as well as to develop floriculture.
- It is important to increase the income of workers in the tourism industry to motivate staff and prevent turnover.
- Adapt tourism infrastructure and services to ensure inclusive tourism.

#### ***As part of adaptive change***

- Revive the concept of the Great Silk Road as a central theme of tourism, positioning it as an alternative to China's 'One Belt, One Road' initiative, which implies development of the scientific research potential of Central Asian countries.
- Launching educational programmes to train qualified personnel for the tourism industry, such as public relations specialists and recruiters.
- Implementation of projects to revive and preserve regional cuisine and unique ecosystems.
- Restoring and developing traditional tourist bases in mahallas, serving as venues for organising events such as Sabantuy and weddings, for thematic advertising and popularisation of historical traditions.
- Negotiate new international agreements aimed at preserving historical monuments included in the UNESCO World Heritage list and actively develop international partnerships to attract investment in tourism infrastructure.

### As part of longer-term change

- Reform the education system in terms of training new professions and adaptation to climate change and integration of sustainable development principles.
- Develop new environmental standards, their state monitoring and control.
- Create a legislative framework for remote work and flexible hours.
- Modernise infrastructure by creating modern 'caravanserais', i.e. comfortable recreation areas and tourist services for collecting and sending them along various routes – the centres should be equipped with information desks and all necessary services.
- Develop and implement new types of tourist services and package tours adapted to various segments of tourists and their interests.
- Improve the transport and logistics infrastructure to ensure comfortable and safe movement of tourists around the country.
- Actively exchange experience with leading tourist countries on the implementation of international standards of quality and service, and adapt their best practices to local conditions.

## 3. Implementation risks

Implementing the proposed actions within the framework of minor, radical and adaptive changes may face a number of risks. Here are some of them.

### Risks related to minor changes

1. Some traditional crafts need financial investment to revive and preserve them. There may not be funds for this. In addition, old artisans need students who will learn their art.
2. Lack of *proper* control and monitoring can lead to inefficient use of public resources and inadequate implementation of tourism development initiatives.
3. Professionals are needed for selection work, and farmers need to be encouraged to introduce new agricultural crops.
4. Staff turnover cannot be solved by raising salaries alone: continuous training and the creation of decent working conditions are also necessary.
5. It is difficult to adapt infrastructure without the participation of people with disabilities themselves, and this will not happen unless inclusive conditions for discussing such projects are created.

### Risks related to radical change

1. Not everyone is ready for the revival of the Great Silk Road concept.
2. The development of new educational programmes and projects requires additional financial and human resources, which are not always available.
3. The conclusion of new international agreements may encounter opposition as a result of political or economic factors.

### Risks related to adaptive change

1. Any change requires financial investment and skilled workers, and both of these inputs can be seriously limited.
2. Changing the education system may face risks because of a shortage of qualified teachers as well as a problem of outdated approaches to teaching.
3. New environmental standards may encounter resistance from businesses, and may be faced with a lack of technical resources and necessary equipment.
4. Not all employers are ready to provide their employees with the opportunity to work remotely. Creating a legislative basis for this type of work may be fraught with legal difficulties.



## General risks

- **Economic instability:** Changes in the economic situation may affect the funding and implementation of proposed initiatives.
- **Political instability:** Political changes may make it difficult to implement plans, or stop them altogether.
- **Climate change:** Adverse climate change may impact tourism and agriculture, requiring additional adaptations.

These risks require careful analysis and the development of strategies to minimise them in order to ensure the successful implementation of the proposed initiatives.

# Stage 3. Policy Recommendations

## Pillar 1. Enabling governance and policy

This first pillar is the most interdependent; nearly all the other recommendations rely on the success of Pillar 1.

### *Policy, institutional and regulatory frameworks*

- **Coordinate sustainable tourism development:** Establish a national coordinating entity as an interministerial body, e.g. a council, to facilitate cross-sector collaboration for sustainable tourism development, including the development of relevant strategies and action plans as well as a legal framework; then monitor, report on and fast-track sustainable tourism development.
- **Harmonise Circular Economy (CE) and tourism policies:** Establish a cross-ministerial working group under the coordination body to align CE goals with tourism development strategies, integrating CE into tourism-specific legal documents and regional development plans.
- **Integrate Alternative Tourism into law:** Update the national legislation (including the law 'On Tourism') to clearly define and recognise alternative tourism types (e.g. agritourism, ecotourism, medical, educational, gastronomic tourism), so as to ensure consistent policy implementation and statistical monitoring.
- **Phase out plastics and promote waste recycling:** Create a regulatory framework to support waste recycling and the transition from plastic to eco-friendly alternatives across the tourism sector.
- **Support SME legislation:** Strengthen policies supporting small and medium-sized enterprises (SMEs) in tourism, including simplified licensing, tax incentives for green investments, and dedicated CE grants.

### *Monitoring, evaluation, and knowledge sharing*

- **Develop CE Performance Indicators:** Mandate data collection from tourism operators on waste, energy use, local sourcing, and food loss as part of licensing or incentives.

### *Stakeholder engagement and governance*

- **Foster Multi-stakeholder Collaboration:** Institutionalise regular forums between government agencies, tourism businesses, civil society, and academia for CE policy shaping and implementation.
- **Empower Women and Youth:** Provide targeted support for women entrepreneurs and youth-led startups in eco-tourism, green catering, and sustainable food tech.
- **Establish a Sustainability Task Force:** A public-private coordination body should oversee the rollout of CE initiatives, provide feedback loops, and adjust national strategies.
- **Localise CE Actions:** Decentralise planning and resource allocation to enable regional tourism offices and municipalities to implement location-specific CE solutions.

## Pillar 2. Green infrastructure and investment

This pillar both depends on Pillar 1 and enables Pillars 3 and 4.

### *Sustainable infrastructure and innovation*

- **Promote Green Tourism Infrastructure:** Expand investment incentives and subsidies for eco-lodging (modular hotels, eco-houses, glamping), energy-efficient transport, and solar-powered facilities, especially in rural and ecologically sensitive areas.
- **Expand the logistics network** to ensure the use of green transport modes and low-carbon connectivity between remote tourist spots.

- **Modernise Waste and Water Systems:** Scale up smart waste separation, recycling, and water reuse systems at tourism facilities. Public-private partnerships can support waste-to-compost initiatives and promote reusable food containers in hospitality.
- **Introduce Smart Logistics and E-transport:** Encourage e-vehicle use in food delivery and tourist transport through subsidies and infrastructure development.

### *Investment and financing for green transition*

- **Expand CE Credit Lines:** Build on existing credit facilities by adding CE-specific components (e.g. waste reduction tech, low-carbon food systems).
- **Encourage Impact Investment:** Collaborate with international financial institutions to support investment in climate-resilient tourism and agri-food value chains.
- **Streamline Subsidies:** Expand and extend VAT refunds, import duty exemptions, and profit tax reductions to tourism businesses implementing certified CE practices. Ensure that these subsidies are automatically accessible to businesses certified under the Yashil Belgi scheme.

#### **Short-term/Medium-term**

- Introduce subsidies for small farms adopting circular agriculture practices, promoting the local supply of sustainable food products.

#### **Medium-to-long-term**

- Establish a green investment fund to support startups focused on innovation for sustainable tourism.

## **Pillar 3. Value chains and community**

This pillar focuses on capacity and supply chains, and has a two-way relationship with the other pillars.

### *Support for local food systems and circular food practices*

- **Promote farm-to-table and short supply chains:** Support culinary tourism through farm visits, organic food experiences, and partnerships between tour operators and local producers.
- **Encourage sustainable food innovation:** Incentivise the use of biodegradable or edible packaging (e.g. soup served in bread bowls), composting programmes, and food waste tracking technologies.
- **Incentivise local procurement:** Offer tax reductions or recognition for tourism businesses that source food locally or reduce food miles.
- **Support green certification:** Institutionalise the 'Yashil Belgi' (Green Mark) eco-label for tourism businesses to encourage adherence to international environmental standards and improve consumer trust.

### *Promote niche tourism*

#### **Short-Term/Medium-term**

- **Agrotourism:** Develop programmes that allow tourists to engage with organic farming practices. Promote rural tourism that highlights sustainable agriculture.
- **Gastrotourism:** Protect and promote traditional cuisine through culinary festivals and workshops. Support small businesses producing certified local food products.
- **Develop initiatives** encouraging local ownership of sustainable tourism projects, fostering community-driven economic growth.
- **Implement projects** to revive, preserve and popularise traditional crafts.

#### **Medium-to-long-term**

- Develop thematic tourist routes and concepts based on the historical and cultural heritage of the Great Silk Road and Turkic history.

- Promote cultural heritage preservation by integrating digital storytelling in museums and cultural centres.
- Continue the selection and introduction of new resistant varieties of fruits and vegetables, as well as to develop flower growing to attract agritourists.

### *Resilience and risk management*

- **Integrate Climate Risk in Tourism Planning:** Support scenario-based planning and infrastructure investments to address climate threats (e.g. droughts, heatwaves, supply chain disruptions).
- **Disaster Preparedness for Food Systems:** Develop contingency strategies for food supply in tourism-heavy areas, including emergency storage and climate-resilient crops.

## **Pillar 4. Skills, innovation and digitalisation**

This pillar leverages the foundations laid by the other pillars to create scale and efficiency.

### *Education, training, and awareness*

- **Revise the tourism curricula:** Introduce CE, green standards, and sustainable food systems into vocational and university programmes in tourism, hospitality, and agribusiness.
- **Develop qualification standards:** Establish national qualification requirements for tourism professions in line with private sector needs, and implement a dual education system integrating practical training.
- **Raise awareness among tourists:** Encourage tour operators to include sustainability education (e.g. food waste, recycling, local sourcing) in tourist materials and programmes.
- **Develop certification programmes** emphasising eco-friendly service provision, first aid, and inclusive tourism.
- **Implement training programmes** for specialists in the field of 'green' tourism, waste management and ecological agriculture.
- **Support knowledge platforms:** Create an open-access knowledge base for tourism stakeholders to share best practices, case studies, and CE success stories.

### *Digitalisation and smart tools*

- **Use digital platforms for sustainability tracking:** Develop apps and tools that allow tourists to find certified eco-friendly services and rate sustainability practices.
- **Support E-commerce for local producers:** Help farmers and food artisans to access tourism-linked markets via digital platforms with integrated traceability and logistics solutions.
- **Expand the use of the Digital Concierge application** to include circular economy tips for tourists, such as waste management and sustainable consumption practices

#### **Short-term/Medium-term**

- Expand the use of the Digital Concierge application to include circular economy tips for tourists, such as waste management and sustainable consumption practices.

#### **Medium-to-long-term**

- Implement a centralised digital tourism management system to monitor sustainability metrics, visitor numbers, and resource consumption in real-time.

## Pillar 5. Regionalisation

Demonstrated progress on the four pillars can enhance Uzbekistan's credibility in promoting regionalisation among the other Central Asian countries.

### *Regional cooperation and visa policies*

#### **Short-term/Medium-term**

- **Strengthen partnerships within the Central Asian Tourism Alliance** to coordinate sustainable tourism policies and joint circular initiatives.

#### **Medium-to-long-term**

- **Revive the concept of the Great Silk Road** as a central theme of tourism and conclude new international agreements aimed at preserving historical monuments included in the UNESCO heritage list and actively developing international partnerships to attract investment in tourism infrastructure.
- **Promote the single tourist visa as a green tourism initiative**, encouraging low-impact travel throughout the region.
- **Strengthen the Central Asian Tourism Alliance** by standardising sustainability criteria across member countries.
- **Enhance Regional Cooperation** by promoting shared standards and CE-focused regional tourism circuits across Central Asia, especially around shared ecosystems (e.g. the Aral Sea).

## Implementation of risk mitigation strategies

### *Economic risk mitigation strategies*

- Implement gradual changes to taxation for small tourism businesses to mitigate financial strain.
- Establish an economic resilience fund to cushion the tourism sector against economic and political instability.

### *Social risk mitigation strategies*

- Create community engagement programmes to build support for sustainable tourism practices.
- Address potential resistance to digitalisation through targeted digital literacy programmes.

### *Environmental risk mitigation strategies*

- Conduct environmental impact assessments for all new infrastructure projects, particularly in sensitive areas.
- Integrate sustainable materials and eco-design in public spaces and tourist facilities.
- Utilise AI-driven applications to optimise tourist flows, reducing environmental strain on popular destinations.
- Develop adaptive tourism strategies to address climate change impacts, including diversification of tourism types and seasons.

### *Technological risk mitigation strategies*

- Establish a digital innovation hub to support the development and testing of smart tourism applications also relevant for sustainability practices.



### **Risks related to minor changes**

- Allocate funds to revive traditional crafts through public-private partnerships and community-led initiatives.
- Facilitate knowledge transfer by connecting old artisans with apprentices through craft schools.
- Enhance control and monitoring by establishing local oversight committees.
- Develop incentive programmes for farmers to introduce new climate-resilient crops, including flower cultivation for agrotourism.
- Combine salary increases with training and improved working conditions to reduce staff turnover.

### **Risks related to radical changes**

- Engage stakeholders in discussions to build consensus on the Great Silk Road revival concept.
- Secure funding from international organisations to support educational programmes and projects.

### **Risks related to adaptive changes**

- Secure investments from climate finance initiatives to fund adaptive changes.
- Upgrade teacher training programmes to focus on modern, sustainability-focused curricula.
- Engage businesses in co-developing environmental standards to ensure practicality and compliance.

# Stage 4. Stakeholder engagement

After the development of the scenarios was completed, the results were presented to key tourism stakeholders through dedicated consultations. Their feedback and analysis further verify the validity of the results in the context of Uzbekistan, and their recommendations, also informed by stakeholder priorities and operational insights, are presented in this section.

## From an environmental perspective

### 1. Integration of local culture and traditions

- **Creation of cultural routes:** Include visits to traditional craft workshops, folk architecture museums, and regional festivals in tourism programmes to highlight the uniqueness of the region, enhance tourist interest, and support the preservation of cultural heritage.
- **Support for folk crafts:** Develop a programme to assist local artisans, including training in modern marketing tools as well as the creation of online platforms for selling handicrafts.

### 2. Use of renewable energy sources

- **Development of wind and hydropower:** Promote the implementation of wind and mini-hydroelectric power plants in regions with favourable natural conditions to supply energy to tourist areas and reduce environmental degradation.
- **Expansion of solar energy use:** Encourage the installation of photovoltaic modules on the roofs of hotels and public buildings to decrease dependence on centralised electricity networks.

### 3. Environmental education and awareness

- **Educational tours and seminars:** Organise educational activities for schoolchildren and students to raise awareness about environmental protection and sustainable development principles.
- **Information dissemination:** Publish booklets, posters, and videos promoting responsible consumption and environmental stewardship.

### 4. Local community participation

- **Civic engagement:** Involve local residents in the design and implementation of projects aimed at improving the environment and developing sustainable tourism.
- **Volunteer initiatives:** Establish volunteer programmes focused on maintaining natural areas and restoring forests and recreational zones.

## From a tourism perspective

### 1. Policy and support for small and medium-sized enterprises

- Recognise guesthouses and hostels within tourism legislation and ensure simplified access to CE incentives.
- Provide tax benefits, environmental certification, and small grants to encourage environmentally friendly practices.

### 2. Environmental infrastructure and innovation

- Support the installation of solar energy systems, water-saving technologies, and affordable green construction solutions.
- Promote waste separation, composting, and local food procurement initiatives.

### **3. Capacity building and awareness raising**

- Conduct training for guesthouse and hostel owners on topics such as sustainable consumption, digital tools, and sustainable food systems.
- Implement joint awareness campaigns to encourage responsible consumption among tourists.

### **4. Local food and community integration**

- Strengthen partnerships between small hotels and local producers following the 'farm-to-table' principle.
- Promote the use of seasonal, traditional, and climate-resilient food products.

### **5. Digitalisation and visibility**

- Develop a national platform to promote certified eco-friendly guesthouses and hostels.

## **From a food and agriculture perspective**

- Support e-commerce and logistics systems that connect accommodation providers with local farmers.
- Establish consumption-based and timely procurement of food products from farmers.
- Promote the use of reusable bottles (e.g. refillable water bottles in guest rooms).
- Encourage the culture of reusing plastic bottles among tourists through the installation of water refill stations.
- Conduct farm-level training on food supply planning and management to ensure consistent and sustainable sourcing.

## Concluding remarks

---

The scenario development exercise summarised in this report has provided a structured and forward-looking lens to examine how Uzbekistan's tourism sector can evolve toward greater sustainability and circularity, with a particular focus on food systems. Unlike conventional planning tools, the scenario approach explores multiple plausible futures rather than projecting a single expected pathway. The approach thus allows stakeholders to test ideas against different conditions, reveal hidden assumptions, and identify robust solutions that remain valuable across various contexts. Its participatory nature also generates a more deeply shared understanding of risks and opportunities, especially in areas where tourism, food provision, and environmental stewardship intersect.

By using this tool, stakeholders were able to highlight practical measures that preserve cultural identity, enhance environmental performance, and strengthen linkages between tourism, local communities, and agriculture. The exercise proved particularly effective in identifying opportunities for local food sourcing, waste reduction, renewable energy, and community-based innovation – areas in which circular approaches can deliver both immediate and long-term benefits.

The recommendations emerging from the consultations reflect a common recognition that sustainable tourism in Uzbekistan must integrate cultural traditions, efficient resource use, responsible food provisioning, and modern digital and institutional support systems. Taken together, these insights point to a coherent direction for policy and practice, positioning Uzbekistan to develop a tourism model that is competitive, resilient, and aligned with global trends in circular economy and sustainable food systems, while demonstrating the added value that scenario-based thinking brings to strategic decision-making.

# Appendix A. Findings from stakeholder interviews

The key findings from stakeholder interviews and desk research have been synthesised in this appendix. They are organised thematically to provide the evidence base for the conclusions of the main report. The data are presented to be directly useful for policymakers and stakeholders seeking to understand the on-the-ground realities of integrating circular economy (CE) principles into Uzbekistan's tourism and food sectors.

## Theme 1. Growing awareness and adoption of CE principles

Stakeholders across the sector increasingly view sustainability not just as an environmental imperative but as a market advantage.

Finding / Quote	Source	Implications for policy & practice
'The circular economy principles will be adopted and will open up new markets for sustainable tourism, which will attract travellers interested in eco-friendly travel and will help travel companies reduce operating costs.'	Feruza Nazarova, Advantour Tour Company	Demonstrates private sector recognition of CE as a competitive driver  Supports main report claim of CE as a 'market advantage'
'We have plans and initiatives in place to engage and train all staff in the principles of the circular economy...on topics such as recycling, food waste reduction, and implementing energy-saving technologies.'	Aleksey Svitlitskiy, NGO Eco Maktab	Shows that awareness is translating into concrete internal capacity-building actions within civil society and affiliated businesses
'Visitors and tourists are demanding sustainable tours and tourism products that include eco-friendly modes... minimising plastic usage, reducing the food waste, and supporting...local producers and communities.'	Interview analysis	Confirms the main report's finding of customer demand as a key market driver for change

## Theme 2. Practical measures and innovations in hospitality and tourism

Businesses are actively implementing measures to reduce waste, improve efficiency, and consume sustainably.

Finding / Quote	Source	Implications for policy & practice
'We work with our suppliers to minimise food waste at all stages of the supply chain. We also participate in various food waste reduction programmes and share experiences with other hotels.'	Shakhnoza Buribaeva, Wyndham Garden Zomin	Illustrates the main report's point on 'practical implementation measures' such as food waste reduction and cross-sector learning
'[We are] trying to minimise food waste by offering portions that match actual consumption, and we design menus that make the most of food to avoid leftovers.'	Feruza Nazarova, Advantour Tour Company	Provides a specific example of operational changes being made by tour operators to address food waste



Finding / Quote	Source	Implications for policy & practice
'Some restaurants use paper-based dishes for takeaway, and some types of soups are served in the bowls made from bread. Also, some cafes offer free coffee in case the carrying case is brought back.'	Interview Analysis on CE-oriented food	Shows grassroots innovation in sustainable packaging and waste reduction, supporting the main report's focus on circular food practices
Business associations support separate waste collection, recycling projects, and food waste composting programmes in hostels and guesthouses.	Interview analysis	Highlights the role of business associations as enablers of CE practices, as mentioned in the main report

### Theme 3. Policy, institutional developments, and incentives

The government has created a supportive policy environment, although implementation and legal definitions need strengthening.

Finding / Quote	Source	Implications for policy & practice
Presidential Decree № УП-5 (04.01.2024) 'On measures to improve the waste management system...' grants businesses the right to install public sanitation points and aims to minimise landfill waste.	Desk Research	A key 'supportive policy instrument' cited in the main report, creating a regulatory push for better waste management
Implementation of the 'Yashil Belgi' (Green Mark) Ecolabelling System in September 2024, aligned with international standard ISO 14024.	Desk Research	Directly supports the main report's mention of the 'Yashil Belgi' scheme as a tool to incentivise and signal environmental compliance
Creation of a USD 200 million tourism credit line and a USD 50 million credit line for tour operators at preferential rates to develop green infrastructure (eco-houses, glamping, etc.).	Desk Research, N. Rakhimov, ADB	Evidence for the main report's discussion on 'subsidy programmes' and 'green financing,' crucial for de-risking private investment in CE
'The lack of definition of alternative types of tourism in the national legislation' (e.g. agritourism) limits targeted support and measurement.	Working Group Findings	Directly corroborates the main report's identified challenge of 'legal ambiguities' and the need to 'Integrate Alternative Tourism into Law'

## Theme 4. Education, capacity building, and skills gaps

A significant mismatch exists between the skills needed for a circular tourism economy and the current educational offerings.

Finding / Quote	Source	Implications for policy & practice
'The system of dual education is poorly implemented...due to the lack of interest of employers, and there is also a problem of practical training. There is a lack of staff with appropriate qualifications, training and experience.'	Hospitality Association Conference Summary	A clear statement of the 'capacity building gap' and 'mismatch between educational curricula and industry needs' as highlighted in the main report
'In the next 10 years, the Association plans to expand educational programmes, introduce new environmental standards and promote innovative circular economy solutions.'	Umed Burkhanov, CBT Association	Shows that capacity building is recognised as a priority for future development, aligning with the main report's recommendations on education and training
A working group recommended establishing minimum qualification requirements for tourism professions based on private sector needs to modernise curricula.	Working Group Findings	Provides a specific, stakeholder-driven proposal to address the skills gap, supporting the main report's call to 'Develop Qualification Standards'

## Theme 5. Collaboration and multi-stakeholder engagement

Effective transition to a circular model requires coordinated action across government, private sector, and civil society.

Finding / Quote	Source	Implications for policy & practice
'Cooperation between business and public organisations will increase to solve environmental problems.'	Shakhnoza Buribaeva, Wyndham Garden Zomin	Indicates a perceived future trend and a current need for closer collaboration, as stressed in the main report
'In all projects, we necessarily try...to collaborate with government, business, and local communities by developing strategies, conducting trainings, implementing pilot projects, promoting changes in legislation...'	Aleksey Svitlitskiy, NGO Eco Maktab	Exemplifies the 'multi-stakeholder cooperation' model that the main report concludes is essential for a successful transition
'I have memorandums with the Agency for Youth Affairs, Ministry of Ecology, Suv Taminot (Water Authority), Universities.'	Nargiza Kasimova, EcologUz NGO	Shows existing frameworks for cross-sectoral collaboration that can be built upon, as recommended in the main report's policy section

## Theme 6. Vision and expected future trends

Stakeholders anticipate a shift towards eco-tourism, gastronomy, and technological innovation, driven by sustainability.

Finding / Quote	Source	Implications for policy & practice
'Future trends are probably eco-designed materials and goods that are [more easily] recyclable, repaired; and wide use of biomaterials or derived from waste instead of traditional materials.'	Tazabay Utiuliev, Aral Sea Discovery	Aligns with the main report's expectation of 'broader use of biomaterials' and 'eco-design in tourism infrastructure'
'Rise in popularity of eco-tourism: more people will choose tours aimed at exploring nature and culture and are ready to put up with some restrictions on comfort for the sake of preserving the environment.'	Shakhnoza Buribaeva, Wyndham Garden Zomin	Supports the main report's forecast of a 'pronounced rise in eco-tourism'
'Development of new technologies to reduce wastes, energy saving and using renewable energy sources'	Shakhnoza Buribaeva, Wyndham Garden Zomin	Indicates the industry's expectation that technological innovation will be a key part of the solution, informing the main report's recommendations on digitalisation and green infrastructure



**switchasia**



**Funded by  
the European Union**



**[www.switch-asia.eu](http://www.switch-asia.eu)**



**EU SWITCH-Asia Programme**  
**@EUSWITCHAsia**



**SWITCH-Asia**  
**@SWITCHAsia**



**SWITCH-Asia Official**  
**@switch-asia-official**