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**Funded by
the European Union**

Foresight-Driven Pathways for Circular Economy Integration

Kazakhstan's Food and Tourism Sectors



Acknowledgements

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SWITCH-Asia Programme

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Introduction

The “**Strategic Foresight into Circular Economies in Central Asia in Tourism and Hospitality with a Food Angle**” project is an important step in shaping the future of tourism, the circular economy, and agriculture in the region. Promoting circularity and fostering a transition to more sustainable resources and practices will significantly reduce waste and resource consumption in the tourism and agriculture sectors. As a cross-sectoral project, it focuses on how resources are currently and will be used in the future in the tourism sector, thereby paving the way for more sustainable and efficient development of the industry.

The project was developed using an integrated approach, engaging local and regional experts, government partners, and various stakeholders. This approach ensured the collection of sufficiently objective and verified data. The project was developed in three phases, each of which confirms the rigor of the process (Table 1). 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 practical workshops in Kazakhstan, Kyrgyzstan, Uzbekistan, and Tajikistan. These workshops brought together SWITCH-Asia executives, local experts, government representatives, business representatives, hoteliers, and other stakeholders from the tourism and agribusiness sectors. During the sessions, foresight tools were used to identify signals of innovation and continuity, such as emerging food trends and industry challenges. These signals and trends were used to model alternative future scenarios and identify key ideas for further action to support ongoing government reforms in the areas of the circular economy, tourism, and agriculture. The resulting scenarios and templates for various activities are included in the report.

In the third stage, the project team developed policy recommendations that could significantly accelerate the effective development of a circular economy 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.

Main provisions

SWITCH-Asia Programme presents the project entitled “*Strategic Foresight into Circular Economies in Central Asia in Tourism and Hospitality with a Food Angle*”. This important initiative aims to assist Central Asian countries in their transition to a low-carbon, resource-efficient, circular economy, essential for sustainable development and environmental conservation.

As part of this project, the SWITCH-Asia team developed policy recommendations and proposed institutional changes needed in Kazakhstan’s tourism and hospitality sector, with a focus on food and beverage. The initiative involves the use of strategic foresight, which includes:

- Assessing opportunities and challenges in the tourism and hospitality sector related to the transition to a circular economy in food production and consumption in the Republic of Kazakhstan.
- Developing and assessing strategic scenarios reflecting the potential use of food and beverages in the tourism and hospitality sector.
- Developing recommendations on regulations and regulations, as well as supporting decision-making processes to facilitate the transition to a circular economy.

This report outlines policy recommendations for the Republic of Kazakhstan regarding the transition to circular tourism. The recommendations are based on developed scenarios and consider associated risks, available resources, and necessary interrelationships. The main objective of these recommendations is to develop a practical and feasible plan for the transition to a low-carbon, resource-efficient, and circular economy in the tourism sector over the next 10-15 years, particularly taking into account the food sector in the Republic of Kazakhstan.

Table 1. PROJECT PHASES

Phase 1	Phase 2	Phase 3
Laying the groundwork	Foresight sessions	Recommendations
<ul style="list-style-type: none">• Data collection• Interview and data analysis• Official document and legislation analysis	<ul style="list-style-type: none">• Four republics of Central Asia• Horizon scanning• Trend and signal ranking• Scenario-based planning• Formulating a preferred future	<ul style="list-style-type: none">• Develop a national legislative framework for a circular economy• Create a favourable tax climate for the private sector• Implement circular economy principles in the private and public sectors• Focus on developing domestic potential and capabilities• Create conditions to stimulate intersectoral and intergovernmental coordination

Phase 1. Laying the groundwork

1. Country context overview

Circular economy is an economic model based on the principles of resource renewal, waste minimization, and the maximum use of materials in a closed loop. It offers an alternative to the traditional linear economy, which follows the principle of “take, make, discard.”

The Republic of Kazakhstan is currently taking active steps to implement a circular economy in the country and its businesses, driven by both domestic environmental challenges and global sustainable development trends.

The country's state policy is aimed at developing an appropriate regulatory framework and implementing international waste management standards. The following standards are in effect in the country:

- Environmental Code of the Republic of Kazakhstan (2021). <https://adilet.zan.kz/rus/docs/K2100000400>
- The concept of transition of the Republic of Kazakhstan to a “green” economy. <https://adilet.zan.kz/rus/docs/U1300000577>
- Strategy of the Republic of Kazakhstan on Achieving Carbon Neutrality by 2060; <https://adilet.zan.kz/rus/docs/U2300000121>
- Waste classifier (2021). <https://adilet.zan.kz/rus/docs/V2100023903>
- Government business incentive programmes provide tax breaks and subsidies for waste recycling companies.

Tourism companies, thanks to their tourist turnover, are active waste generators. The implementation of a circular economy and sustainable consumption and production practices in the sector is expected to streamline and significantly reduce environmental pollution. The country has established a legislative framework requiring environmental protection in production, but awareness among tourism companies has become increasingly important in the aftermath of the COVID-19 pandemic. It is recommended to educate entrepreneurs on current regulations, including:

- Law of the Republic of Kazakhstan dated June 13, 2001 No. 211 “On tourism activities in the Republic of Kazakhstan” <https://adilet.zan.kz/rus/docs/Z010000211>
- Order of the Minister of Investment and Development of the Republic of Kazakhstan dated January 30, 2015, No. 80. Registered with the Ministry of Justice of the Republic of Kazakhstan on March 31, 2015, No. 10590. “On Approval of the Rules for the Provision of Tourism Services” <https://adilet.zan.kz/rus/docs/V1500010590>
- On Amendments and Supplements to the Law of the Republic of Kazakhstan “On environmental protection” Regarding Production and Consumption Waste, Law of the Republic of Kazakhstan dated December 9, 2004, No. 8 <https://adilet.zan.kz/rus/docs/Z040000008>
- ENVIRONMENTAL CODE OF THE REPUBLIC OF KAZAKHSTAN, Code of the Republic of Kazakhstan dated January 2, 2021, No. 400-VI ZRK. <https://adilet.zan.kz/rus/docs/K2100000400>
- Law of the Republic of Kazakhstan dated July 7, 2006, No. 175. On Specially Protected Natural Areas <https://adilet.zan.kz/rus/docs/Z060000175>
- Order of the Acting Minister of Health of the Republic of Kazakhstan dated December 25, 2020 No. KR DSM-331/2020. Registered with the Ministry of Justice of the Republic of Kazakhstan on December 28, 2020 No. 21934. On approval of the Sanitary Rules “Sanitary and epidemiological requirements for the collection, use, application, disposal, transportation, storage, and disposal of production and consumption waste” <https://adilet.zan.kz/rus/docs/V2000021934>
- Order of the Acting Minister of Ecology, Geology, and Natural Resources of the Republic of Kazakhstan dated December 28, 2021, No. 508. Registered with the Ministry of Justice of the Republic of Kazakhstan on January 5, 2022, No. 26341. “On approval of municipal waste management rules.” <https://adilet.zan.kz/rus/docs/V2000021934>

- Government Resolution of the Republic of Kazakhstan dated March 28, 2023, No. 262. "On approval of the concept for the development of the tourism industry of the Republic of Kazakhstan for 2023–2029." <https://adilet.zan.kz/rus/docs/P2300000262>

Based on monitoring visits to 50 MSMEs providing accommodation services to tourists in the Almaty region, the international SUSTOUKA project, funded by the SWITCH-Asia programme in Central Asia, revealed that the main challenges to developing a circular economy in Kazakhstan include:

- Insufficient waste recycling infrastructure. The country lacks recycling capacity, especially in the regions, which hinders the implementation of closed-loop principles;
- Low private sector involvement. Unlike EU countries, where waste recycling is a profitable business, Kazakhstan lacks effective economic incentives for businesses implementing circular economy principles;
- Gaps in legislation. Although the Environmental Code contains provisions regarding waste recycling, there are no specialized regulations governing the comprehensive development of a circular economy.
- Limited awareness and a lack of educational programmes. Limited awareness and a lack of educational programmes reduce the level of public and business engagement in sustainable practices.

Strategic framework

The assertion of the importance of the circular economy in the strategic development of Kazakhstan is based on the following documents and initiatives:

- The Strategic Directions for the Development of Eurasian Economic Integration until 2025, approved by the Supreme Eurasian Economic Council (Decision No. 12 of December 11, 2020), includes the circular economy as an element of technical regulation and resource conservation.
- The Recommendations of the Board of the Eurasian Economic Commission of January 29, 2024, No. 4, contain provisions for the implementation of circular economy models in EAEU countries, including Kazakhstan.

Research from the Kazakhstan Institute for Strategic Studies (KISI) also confirms that the country is actively implementing initiatives to adopt CE, drawing on international experience.

Kazakhstan's strengths in the area of circular economy include:

- Political will and international integration. Support for circular initiatives at the EAEU level;
- Basic environmental legislation. The Environmental Code contains provisions regarding recycling and disposal.
- Academic activity. Universities and research centres are beginning to play a role in promoting the digital economy, including training personnel and developing cluster models.

Problems and challenges

- Lack of specialized regulations. A comprehensive legal framework regulating the digital economy is needed;
- Weak business incentives. Lack of tax incentives, subsidies, and extended producer responsibility mechanisms;
- Regional imbalances. Most environmental initiatives are concentrated in large cities, while the regions remain largely untouched.

The circular economy occupies an important place in Kazakhstan's strategic development, which is focused on sustainable development and environmental protection. While challenges remain, the country is actively implementing initiatives to implement circular economy principles, leveraging international experience and adapting it to the specifics of the national economy.

The goal of the SWITCH-Asia analytical group was to conduct an analysis of the agrifood and tourism sectors to determine the current state of circular economy development in the country, conduct a series of interviews, and collect data from organizations influencing tourism development in the Republic of Kazakhstan to subsequently develop scenarios and policies for the development of a circular economy in the country.

2. Interviewing and data collection

To analyse the current situation regarding the development and application of the circular economy in the Republic of Kazakhstan, 15 interviews were conducted with representatives of various sectors closely related to the tourism industry of the Republic of Kazakhstan (Annex 1). A focus group was established from representatives of government agencies, national industry associations responsible for tourism development, hotels, tour operators, universities, food suppliers, environmental activists, and university students (Figure 1).

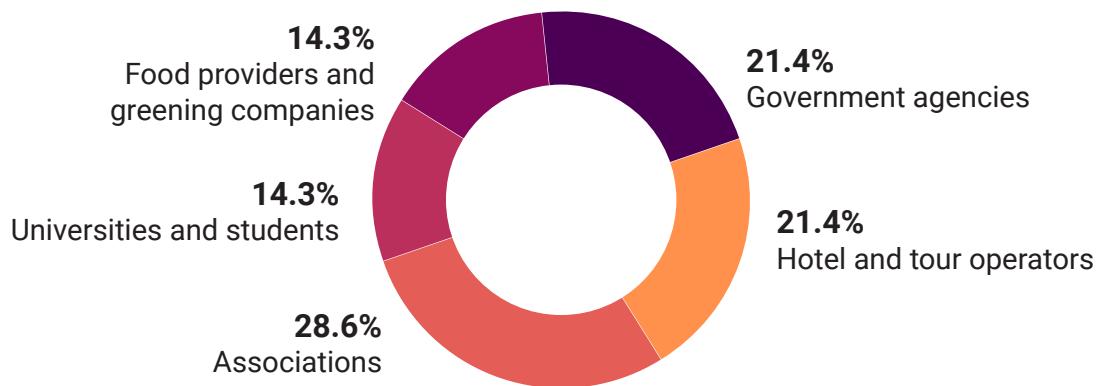


Figure 1. INTERVIEW TARGET AUDIENCE

Interviews were conducted using various methods: responses to questions from government officials were obtained via official letters, while in-person meetings and Zoom recordings were held with other participants (Appendix 2). Based on the responses, conclusions were drawn about the current state of circular economy development in the tourism industry of the Republic of Kazakhstan.

3. Interview findings

The interviews revealed that circular economy principles are already being applied in Kazakhstan's tourism industry. Companies are demonstrating an interest in sustainable practices, with key areas including:

- Consolidating efforts, creating tourism industry councils, discussing sustainable development issues, and supporting local producers.
- Cooperation with JSC NC Kazakhtourism and Akimats, development of souvenirs from recycled materials, and waste management training.
- Implementation of green technologies, development of eco-tourism routes using geoinformation technologies, and creation of a sustainable ecosystem.
- Implementation of waste separation, transition to energy-saving technologies, use of biodegradable materials, and minimization of the ecological footprint.
- Providing environmentally friendly products and services, using solar energy and energy-saving technologies, and conscious consumption of resources.
- Developing a circular economy, supporting environmental initiatives through information campaigns, and engaging businesses and consumers in sustainable practices.
- Addressing waste issues, minimizing waste and natural resource use, and collaborating with restaurants and hotels to minimize waste.
- Portion-sized packaging and sustainable consumption, collaborating with hotels to minimize waste and create products that meet market demands.

- Implementing carbon offset programmes, expanding circular economy practices, and developing recycling and locally sourced, eco-friendly products.
- Cooperating with the government on waste management and legislative regulation, raising awareness of the need for a circular economy and an integrated approach to resource management.
- Developing standards for ecotourism, promoting sustainable practices, and using digital technologies for resource and waste management.

The information collected from respondents demonstrates a high level of awareness of sustainable development principles and covers key aspects of the circular economy—waste management, resource efficiency, renewable energy, local production, and stakeholder engagement. However, most initiatives remain fragmented, focusing on individual practices rather than systemic solutions. A circular economy entails creating resource loops, bringing about systemic change, and capturing value at every stage. This is where a key gap emerges: the lack of an integrated approach that integrates all elements into a unified strategy. This provides the basis for the next section, which proposes a transition from isolated initiatives to the systemic implementation of CE in tourism.

Additional data from the interviews can be found in Annex 3.

4. Analysing information received

As a result of the analysis of the interviews conducted, the following proposals from respondents were identified:

Implementing a circular economy in Kazakhstan's tourism sector requires coordinated collaboration among all stakeholders: the government, the private sector, civil society, and international partners.

The **state** should play a key role in developing a regulatory framework governing sustainable tourism development through:

- Creating national standards for environmental certification of tourist attractions.
- Introducing subsidies and tax incentives for eco-initiatives and supporting green finance.
- Incorporating sustainable tourism principles into educational programmes and government initiatives.

The **business community** is a driver of circular practices, influencing consumer preferences and competitive advantages:

- Waste reduction, efficient energy management, and the introduction of green technologies in hotels and tourism companies.
- Adapting hotels and tourist attractions to international sustainability standards.
- Developing ecotourism routes and raising consumer awareness.

Non-governmental organizations and activists promote sustainable tourism principles and monitor compliance with environmental standards through:

- Promoting eco-initiatives and monitoring compliance with government obligations.
- Conducting seminars, trainings, and public programmes, and engaging local communities in sustainable tourism projects.
- Organizing cleanup events and encouraging responsible tourism behaviour.

International organizations help Kazakhstan adopt best global practices in the circular economy, expanding investment opportunities and sustainability standards through:

- Grant programmes, green financing, and concessional lending for sustainable tourism projects.
- Implementing international practices through educational programmes and research.
- Assistance in the approval of international ecotourism standards.

Stakeholder recommendations represent a constructive contribution to the promotion of sustainability in tourism. They cover important aspects such as environmental certification, raising awareness, and reducing negative environmental impacts. However, as the synthesis shows, most proposals are formed primarily from the perspective of eco-efficiency, rather than a full-fledged transition to a circular economy.

From the perspective of the CE, key elements such as:

- Systemic interrelations of tourism with other sectors (e.g., agriculture, transport, manufacturing).
- Redesign of resource flows and business models, including reuse, recovery, collaborative consumption, and lifecycle extension of tourism products and services.
- Integration of digital solutions for tracking and optimizing material flows in tourism.

Thus, these proposals can be seen as important steps toward greener tourism, but they do not yet fully reflect the systemic transformation envisioned by the circular economy. This highlights the need to move from isolated initiatives to an integrated strategy encompassing the entire lifecycle of tourism services and products.

Tourism in Kazakhstan can become a driving force behind the circular economy with the active collaboration of all stakeholders. The government creates the conditions, businesses implement innovations, society develops a culture of responsible consumption, and international partners help develop standards and funding. This comprehensive approach will create a sustainable, competitive tourism industry with minimal environmental impact.

Phase 2. Foresight sessions: Kazakhstan

Introduction

Data collection and interviews with participants served as the preparatory **phase 1**, aimed at building a knowledge base on current sustainable development practices in the tourism industry, particularly in the context of food sustainability. Interviews with key stakeholders—from the hotel industry to farmers and government agencies—helped identify real challenges, initiatives, and potential for implementing circular economy principles. These data formed the basis for the scenario-building process carried out during **Phase 2**. Interview participants were invited to a scenario-building retreat, which ensured continuity between the empirical analysis and the collective vision for the future.

In a constantly changing world dominated by complexity, chaos, and contradictions, learning to adapt to uncertainty and thrive in chaos is crucial. One tool that can assist in this challenging endeavour is foresight, which has been used by many countries 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.

It focuses on exploring various possible futures that may arise, considering and assessing the opportunities and challenges they may present along the way. Foresight is essential for making informed decisions and determining the best course of action.

What will a circular economy 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 we, as members of this sector, can do to prepare for change or to build the necessary forces for positive change? Are our efforts and resources focused in the right direction or is there room for innovation?

These questions prompted the development of the foresight component of this project. Activities at this phase were designed to help organizations improve their awareness of the changing external environment and, therefore, decide what they should focus on to achieve their goals in the face of uncertainty.

By integrating the foresight component into this project, we hoped to:

- Better understand the change trajectory.
- Describe possible futures for the circular economy in the tourism and food industries.
- Form a vision of a preferred future around which businesses, civil society, and policymakers can rally.
- Identify important entry points for change from which actors across the system can begin to act.

The foresight component of the project also created a platform for developing new thinking about strategy, policy, and innovation. It provided workshop participants with information on how they can choose to act in the present to more purposefully shape the future they desire.

Thus, the process included:

- Challenging existing assumptions.
- Striving to avoid the unexpected and anticipating potential threats.
- Creating new prospects.
- Expanding the planning horizon.
- Creating new change stories and rallying stakeholders around them.

Scenario-based planning

Scenario planning is a well-known and widely used tool employed by organizations and companies worldwide. It is particularly effective in uncertain, complex, and rapidly changing environments. This method allows organizations to evaluate their strategies against potential futures, assess the impact of recent decisions, and improve preparedness for unforeseen events. Scenario planning encourages us to abandon the idea of a linear, singular future, confront complex challenges, and ultimately shape the future we desire. In the world full of unpredictability, scenario planning serves as a compass, guiding us and helping us navigate the unexpected challenges we face.

What is scenario-based planning?

- Scenarios take the uncertainty of the future as their starting point.
- Scenarios work in tandem with trends and other forms of knowledge about possible futures.
- Scenarios open up the avenue for multiple futures.
- Scenarios don't predict the future; they help shape and build it.

We must remember that the future is not something singular or predetermined. Scenario planning allows us to go beyond simply considering the best and worst possible outcomes, allowing us to imagine multiple possible futures. Since reality rarely completely matches our expectations, scenario building becomes a necessary process for exploring various possibilities and reducing potential shortcomings.

Scenario planning can bring numerous benefits to any organization and any business.

This includes the following:

1. **Improving the risk management process:** helping to identify potential risks and develop effective strategies to mitigate them, ensuring resilience.
2. **Informed decision-making:** data-driven insights enable leaders to make confident choices that align with long-term goals.
3. **Flexibility and adaptability:** this approach fosters proactive thinking, enabling rapid adjustments to strategies in response to external changes.
4. **Resources for innovation:** Scenario planning encourages creative problem-solving by exploring diverse future possibilities.
5. **Sustainable competitive advantage:** Understanding potential futures allows companies to get an edge over less adaptive competitor.

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

There are various methods for scenario planning.

However, 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 influence a wide range of activities, processes, and perceptions. Strictly speaking, a trend is a historical change occurring 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. They are often readily available and widely recognized.

Emerging signals, on the other hand, are more difficult to tease out.

Emerging signals can be defined as events about which only partial information is available. They may have low probability but high impact. Examples of emerging signals include new technologies, potential public policy issues, and a new concept or idea that may constitute fringe thinking today but may mature and develop into a critical, leading issue in the future or become a major trend in its own right. Robot civil rights could be an example of an emerging signal. Information about emerging signals is scarce, if any. They are not widely discussed and do not form the core of public discourse.

In summary, trends and emerging signals provide the basis for scenario building.

In order to initiate the scenario planning process, one must select a clear topic and direction.

This study, “Strategic Foresight into Circular Economies in Central Asia in Tourism and Hospitality with a Food Angle,” has a clear focus on the circular economy and its integration into the tourism and food industry.

The next step is to identify the dominant trends influencing this topic. The STEEP (social, technological, economic, environmental, and political) approach is commonly used in trend analysis, as it is the most common and effective framework for sorting trends. This methodology serves as a guide, ensuring that trends developing across multiple fields can be identified. Each STEEP category requires at least 5-10 trends.

Analysing emerging signals requires searching unusual resources and finding content from various fields. This process is more art than science, and its goal is not to “predict the future” but rather to “identify” things that are likely to have a specific impact. Not all emerging signals become trends, and the importance of using them is to challenge our thinking and point out any blind spots we may have. The STEEP analysis method can also be used for “horizon scanning” for emerging signals. Social media sites like Instagram, Twitter, and Facebook are excellent sources for finding emerging signals. Typically, collecting 2-3 new signals in each STEEP category is sufficient. Participants at the Kazakhstan workshop (Annex 4) collected over 100 trends and emerging signals, which are included in Appendix 5.

The next step is to move on to scenario planning. The choice of a suitable scenario-building method depends on the chosen topic and the results of the trend and emerging signal analysis.

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 begin working without any foresight experience. Its success can be attributed to its ease of implementation and the creation of highly contrasting scenarios in a short period of time.

This method helps generate up to four scenarios related to a specific area by placing two factors (also called *uncertainties/driving forces/drivers*) influencing the future of the problem under study along two axes. These factors intersect to form four quadrants. To choose the right set of uncertainties, workshop participants analyse and rank the results of their STEEP analysis exercise—that is, trends and emerging signals that can be collectively called driving forces. Some forces, such as demographics, are relatively deterministic or predictable. Others, such as public opinion, are highly uncertain. Workshop participants discuss the importance of each trend/emerging signal 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 (Figure 2).

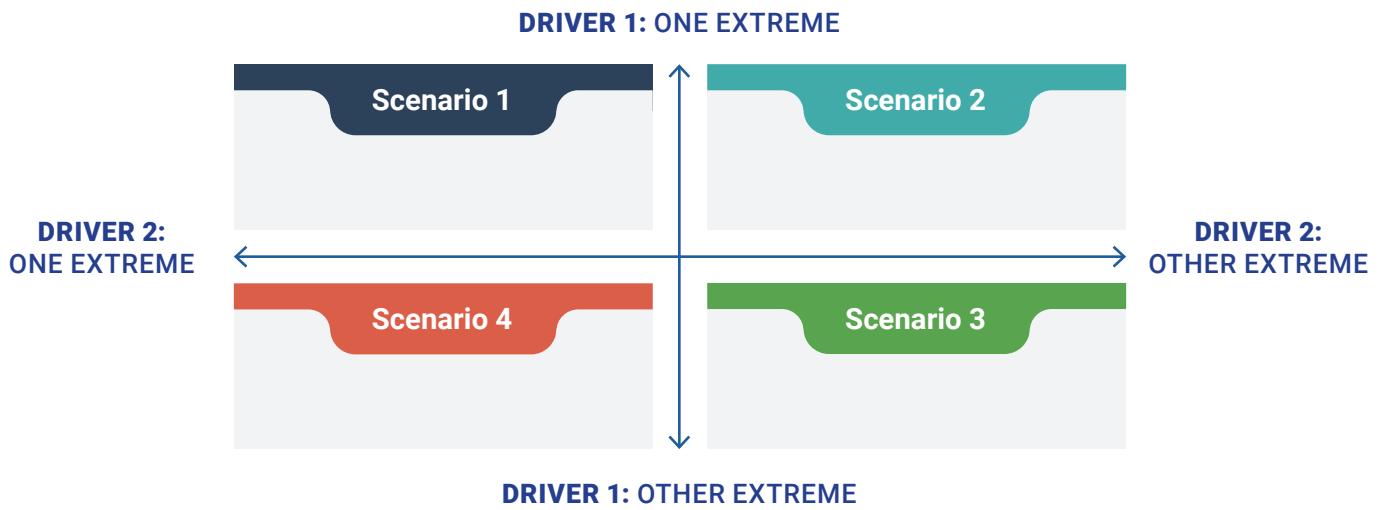


Figure 2. Scenario matrix example

In Kazakhstan, participants selected two uncertainties from the listed drivers for further scenario construction using the 2x2 Matrix method. They believed that the economic and technological sectors would have the greatest impact on the future development of the tourism sector. The following were selected from these areas:

- ***developing digital technologies***
- ***providing state financial support***

The following matrix was the result (Fig. 3)

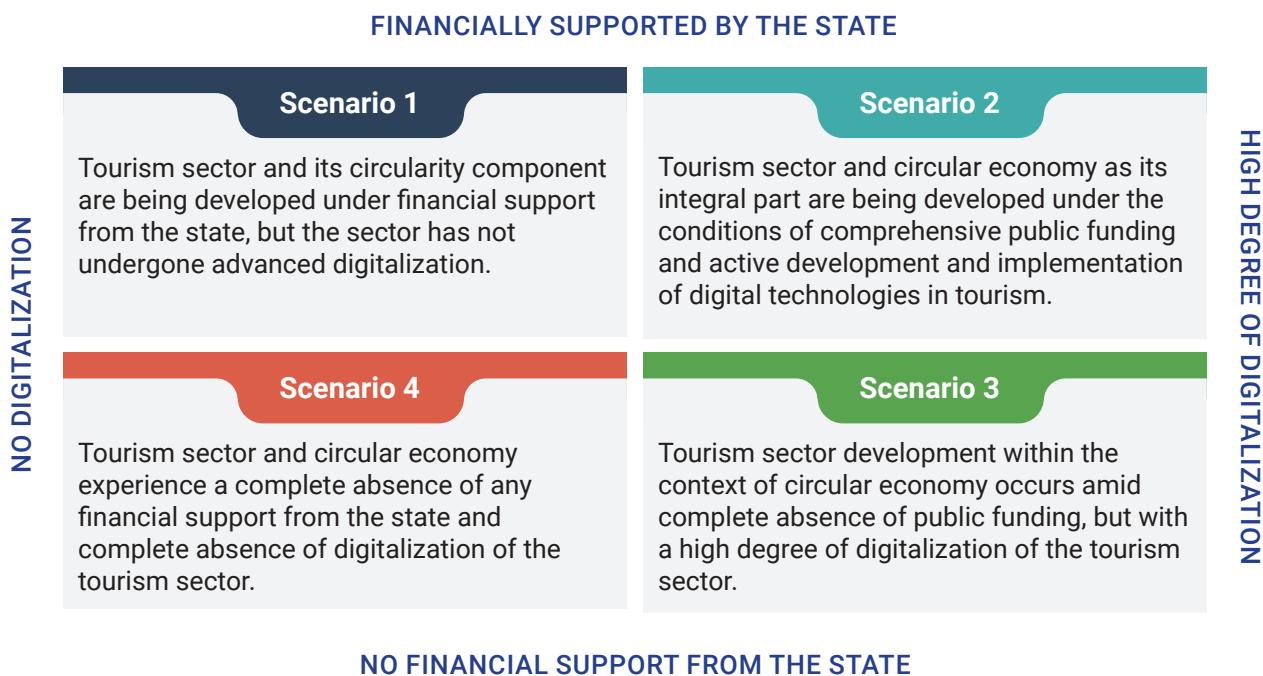


Figure 3. Scenario matrix: Kazakhstan

Using the main points of each quadrant's framework, more detailed scenarios were developed, incorporating narrative actors, identified trends, and emerging signals. Workshop participants explored the connections and interactions between drivers, mapped events, and developed a story leading to the scenario's endpoint. The only constraints imposed at this stage were coherence (within the scenario), relevance to the central theme, and reference (directly or indirectly) to the change drivers.

Probable Scenarios for Tourism Development in Kazakhstan 2040

1 Scenario 1. Sustainable practices amid digital gap

In 2040, internet coverage remains an issue in some regions. As a result, the tourism sector's primary development is taking place in urban and suburban areas.

All financial support is directed toward cities, where the circular economy is developing. Development is slow, but it is underway. Namely, differentiated fees for foreign and local tourists visiting tourist attractions are being introduced.

Financial government support is primarily provided through tax incentives for tourism industry participants who implement circular economy principles at their sites. However, due to the lack of necessary digital platforms for operations, corruption in the tourism industry is rising due to a lack of financial transparency. Many companies have switched to cash payments.

However, the lack of digitalization has also led to a shift toward local producers. New locations and the promotion of existing ones are primarily achieved through lobbying by officials for local interests. Travel agencies have also taken on a key role in promoting remote destinations and tours. Tour operators have opened representative offices in most hotels and advertise their tours.

The urgent need to transfer best practices of successful business models and modern developments has sparked interest in dual education, which allows for closer ties with enterprises. The programme received financial support from the government. Associations and the Atameken Chamber of Entrepreneurs are actively involved in establishing long-term ties between entrepreneurs and universities. The government provides additional compensation to mentors who share their experience. Universities enter into agreements with businesses to accept students at a lower salary than that provided for full-time employees, but the students gain seniority and invaluable practical experience. Upon completion of their studies, businesses receive trained specialists. This approach helps address the labour shortage in the tourism and circular economy sectors.

2 Scenario 2. Green Gateway into the Future of Tourism

In 2040, the e-Qonaq platform became the foundation for tour operators. It is now used to register and track the flow of not only foreign but also local tourists. After modernization, e-Qonaq is also used for paying city taxes. This can be done either online (the programme is freely available for download) or through a separate terminal purchased by the city administration and installed at tourist accommodations. The tax is now differentiated for local and foreign tourists, allowing payment in various currencies. Furthermore, e-Qonaq helps consider the preferences of arriving guests, create their itinerary, book services, and even offers a menu of traditional Kazakh dishes in exchange for bonuses earned by guests through the Sustainable Tourism programme.

The widespread implementation of the e-Qonaq platform has helped tour operators generate significant revenue, and their tax contributions to the budget have increased by 40%. This transparent customer service system, in turn, has provided the opportunity for owners to receive a refund of up to 20%. These funds are actively used to implement circular economy principles in tourism facilities.

Thanks to the internet becoming available throughout Kazakhstan and active government funding, glamping sites are opening up en masse in park areas. Their design is designed from the outset to operate in a closed-loop fashion. A developed logistics system linking tourism sites with waste recycling centres relies on certified private entrepreneurs who actively engage local communities in cooperation. Focusing on local producers has led to another circular economy achievement: reduced packaging, as most production takes place locally and eliminates the need for transportation, further reducing the carbon footprint.

Local producers and artisans have become actively involved in the creation of a new, environmentally friendly and tourism-friendly packaging option. Reusable waterskin-shaped containers for water, locally produced juices, and traditional drinks, as well as traditional crafts made of clay, leather, wood, and even silver (VIP

souvenirs), have become widespread. However, traditional glass containers have not been forgotten. Over the past 10 years, once-familiar glass container collection points in cities and mini-reception points in tourist areas have been reopened. This not only helps protect the environment but also saves on the cost of producing new packaging.

Gastro-tourism has gained a new focus. The increasing flow of tourists has created new demands on food producers: customers prefer fast, national dishes that are compact and easy to transport. Therefore, the Kazakh Academy of Nutrition and several colleges across the country are collecting and developing new recipes, and with the assistance of KAGiR (Kazakhstan Association of Hotels and Restaurants), they are not only developing new standards for restaurants and food service establishments but also conducting staff training. Pilot projects are being tested at visitor centres (Charyn, Butakovka, Altyn-Emel, Turgen, and Batan), which also allows for menus to focus on local vegetables, fruits, and plants.

Seasonal tourism has also seen significant growth over the past 10 years. Tulip-blooming regions and apple orchards in Kazakhstan attract as many tourists as the cherry blossom season in Japan. Widespread internet coverage and a developed digital system facilitate surveillance and control in these areas. Furthermore, restrictions on off-road vehicles (SUVs) have spurred the development of eco-friendly transport, including horse breeding, light aviation, cycling tourism, and the production of electric bikes.

Today, tourists from around the world are accompanied on their journeys across Kazakhstan not only by professional guides and interpreters but also by electronic apps that provide simultaneous translation into all available languages.

3 Scenario 3. The Tandem of Monopolization and Localization

By 2040, the state will completely cease funding the tourism sector. Consequently, demand has increased for existing aggregators such as Kaspi and Freedom. Thanks to their extensive experience in the Kazakhstani market and developed infrastructure, they set lower prices, thereby preventing smaller operators from developing and establishing a kind of monopoly. Under these conditions, a tour operator can only survive by partnering with these digital platforms. Tourists access a wide range of services through marketplaces: booking guides, transportation, audio guides for excursions (equipping excursions with wireless headphones and apps), etc. At the same time, tour operator apps are becoming more customized, with the growth of marketplaces targeting local regions, including Online Travel Agencies (OTA).

The E-gov platform has developed and implemented a separate tab for obtaining simplified permits for border zones and licenses for various types of tourism activities. Furthermore, widespread digitalization has helped local producers enter the global market, attract foreign clients, and thereby expand their capacity, as government financial support is unavailable. The ability for potential customers to place orders in advance—whether for room reservations or the number of dishes and portion sizes—helps develop predictable sales, reduce packaging costs, and reduce the volume of packaging materials.

Under these circumstances, the core of Kazakhstan's tourism industry is individual tourism and small groups focused on gastronomic, ethnic, and nature tourism. However, the main burden falls on existing and established tourism centres, as the lack of government funding leaves the problem of roads and access to other areas unresolved.

4 Scenario 4. The Tourism Sector is Going Underground

The lack of state financial support and digitalization development has led to a trend whereby 90% of tourism will operate in the shadow economy by 2040. For most tourist attractions, it is virtually impossible to identify either the owners or the clients. Therefore, where such a need arises, one has to resort to cadastres and registries, which increases bureaucratic and corruption costs. Illegal seizure of property is becoming widespread.

The lack of funding has led to the commercialization of national parks and protected environmental zones. Principles for implementing a circular economy are not even considered, as there are insufficient funds to pay staff salaries. There is a massive exodus of specialists and widespread destruction of the ecosystem.

Nevertheless, tourist attractions continue to operate, largely thanks to word of mouth. Building a reputation is becoming a priority. The flow of foreign tourists has virtually dried up. To address this situation, efforts are underway to create advertising content for the media with the involvement of local creative industry professionals: videos and documentaries are being produced on various tourism topics. Kazakhstan's chambers of entrepreneurs and associations are promoting these films. Newsworthy events are also being launched to promote tourism.

Foreign brands, having reoriented their marketing to local tourists, are creating serious competition for local producers. Only these companies can be seen adhering to circular economy principles, as their implementation is financially unviable for the local private sector. This, in turn, leads to an increase in waste dumps not only around major cities but throughout Kazakhstan.

The Preferred Future for the Development of Tourism in Kazakhstan

To construct a preferred future, the "*Future Triangle*" was used, which allowed us not only to construct a vision of the desired development but also to assess the legacy of the past and what exists in the present to advance or block our vision. After analysing the identified facts, five possible scenarios can be developed: "Back to the Past," "No Change," "Minor Changes," "Adaptive Changes," and finally, "Radical Changes." Participants' choice of one of the scenarios indicates the changes they believe the industry needs.

Summarizing the responses of the seminar participants in Kazakhstan, the preferred future for tourism development in 2040 looks as follows.

Large Hopes

In 2040, tourism development in Kazakhstan will occur within a context of geopolitical stability in the Central Asian region. Developed infrastructure is focused on creating maximum comfort for tourists, while also upholding the principles of sustainable development. This is facilitated, in particular, by the widespread use of electric transport to reduce noise and pollution, a large-scale transition to renewable energy sources, as well as bio- and eco-certification of food products, and regulations on waste sorting and recycling. By 2040, it is planned to create a complete infrastructure for tourist destinations, with mandatory certification of green practices for hotels and suppliers.

Tourist inflow growth has increased by 20%, and Kazakhstan is positioning itself as a leader in ecotourism and green investment, serving as a key tourism hub on the corridor between Western Europe and China.

The integration of environmentally friendly products into menus, environmental restoration, and sustainable agricultural practices using modern technologies and minimal impact on the ecosystem have become an integral part of the tourism industry. Farms that supply food products are focused not only on producing goods but also on hosting tourists. This type of agritourism demonstrates the process of producing organic food and the principles of a circular economy.

Kazakhstan, thanks to its distinctive culture and nature, is actively developing forms of tourism such as ecotourism, gastrotourism, and ethnotourism, emphasizing traditional hospitality. The expansion of tourism businesses and their initiatives are actively supported by the state: new facilities receive tax breaks and incentives for implementing circular economy principles in their operations. New standards are regularly developed across all areas, and the mechanism for their implementation is well-established.

When choosing options for implementing a preferred future, the audience was divided into two equal groups: those who advocate for radical change and those who opt for adaptation. The changes themselves and the implied actions are as follows:

Establishing a dedicated Ministry of Tourism: Consolidate the efforts of all stakeholders, freeing the sector from unnecessary bureaucracy. This will help streamline the management structure and reduce the number of officials, focusing attention on the real needs of the tourism industry.

Digitalization and implementation of smart facilities:

- Develop a platform for integrating IT technologies that will enable tourism businesses to use digital tools;
- Implement an electronic ticketing system, online booking, and interactive maps to improve the tourist experience.

Education and personnel training:

- Review and modernize educational programmes so that they extend beyond university instruction to specialized courses covering relevant tourism and service topics.
- Invite international experts for training sessions and seminars so that local specialists can benefit from their experience.

Transition to alternative modes of transportation:

- Develop and implement legislation supporting the use of eco-friendly transport (e.g., electric vehicles and e-bikes) for tourism and delivery services.
- Install electric vehicle charging infrastructure and create routes adapted for eco-friendly transport.

Tax preferences for tourism businesses:

- Introduce preferential conditions for small and medium-sized businesses in the tourism sector, such as tax exemptions for the first five years.
- Support startups focused on environmentally friendly and sustainable tourism businesses.

Transformations in infrastructure:

- Implement the “Open Skies” project to create a competitive environment in air travel.
- Upgrade existing transport networks (roads, railways), building new routes, and purchasing modern tour buses.

Supporting farmers and green production:

- Develop a fashion for local products and handicrafts by creating ethnic villages and supporting local traditions.
- Implement programmes to promote greening and improve agricultural sustainability.

State support for volunteer initiatives:

- Support animal and ecosystem care programmes and actively encourage volunteerism through partnerships with NGOs.

Cultural initiatives and traditions:

- Revive authentic elements of national culture through organized tours, local festivals, and traditional craft workshops.
- Create “detox tourism” zones, i.e., gadget-free areas, so tourists can better experience the region’s culture and traditions.

These measures will significantly improve Kazakhstan’s tourism sector, attract more tourists, and create a strong, competitive environment for businesses. Success requires ongoing collaboration between government agencies, the private sector, and communities.

Implementation Risks

The proposed scenarios and changes involve certain risks in their implementation. Risks are minimal not only for the preferred scenario but also for alternatives, as they identify potential barriers, unintended consequences, and trade-offs in various futures. Considering risks in all scenarios ensures preparedness, increases resilience, and helps decision makers avoid blind spots by considering uncertainties beyond their chosen trajectory. They can be grouped into the following categories:

Group 1. Economic risks

- **Lack of Investments.** Radical changes require significant financial investments. Without mobilizing investors or government support, these changes may prove impossible.

Group 2. Social risks

- **Lack of Personnel.** A shortage of skilled workers in the tourism sector could hinder the implementation of new standards and digital technologies, which will impact the quality of services
- **Social Resistance.** Protests may arise from local populations, especially if they perceive the changes as a threat to their traditional way of life and sources of income.

Group 3. Environmental Risks

- **Environmental Load Increase.** If the transition to alternative modes of transport is not properly considered, it can lead to negative consequences for the environment.
- **Threat to Biodiversity.** The growth of tourism infrastructure can threaten local ecosystems and cause degradation of natural resources.

Group 4. Political Risks

- **Challenges in Implementing Reforms.** The need to coordinate new initiatives with various government agencies can slow down the process, leading to bureaucratic delays.
- **Corruption.** In the absence of effective governance and transparency, corrupt practices may continue to plague the tourism sector, undermining trust in reforms.

Group 5. Technological Risks

- **Cyberthreats.** The introduction of digital technologies creates the potential for cyberattacks and data leaks, which can undermine trust in tourism infrastructure.
- **Skill Refresher.** Constantly changing technologies require employees to undergo regular training and adaptation, which can be challenging for both some specialists and tour operators.

Group 6. Cultural Risks

- **Culture Erosion.** A strong focus on tourism and the desire to satisfy guest needs can lead to the erosion of cultural values and the loss of cultural identity.
- **Clash of Cultures.** Largely related to the previous point, attracting foreign tourists can provoke cultural clashes and misunderstandings between local residents and tourists.

To ensure the implementation of the preferred scenario, it is necessary to carefully consider strategies to minimize these risks, which in turn will help create a sustainable and profitable tourism industry that contributes to the development of Kazakhstan as a whole. Successful implementation of radical changes requires in-depth analysis, participation of all stakeholders, and the use of international experience to avoid possible negative consequences.

Recommendations

Based on the initial findings of the scenario participants and an analysis of previous interviews conducted during the first stage of the project, SWITCH-Asia experts have formulated the following recommendations. They are intended to directly address the risks identified in the previous section.

First and foremost, institutional changes are in order. The creation of a *specialized Ministry of Tourism* will eliminate bureaucratic barriers and focus on the industry's real needs. We also recommend establishing a *National Sustainable Tourism Council* to coordinate the implementation of the circular economy, standards, performance indicators, and cross-sector collaboration.

Secondly, a clear strategy for sustainable tourism and waste management is needed. In the short term, this includes developing a *circular economy roadmap* and implementing eco-certification standards for hotels, operators, and facilities. In the medium and long term, this means *banning single-use plastics*, mandatory waste sorting, and recycling.

Digitalization as key to effectiveness. We propose the e-Qonaq platform, which will integrate travel services, e-ticketing, AI monitoring, and forecasting. In the future, this system will track carbon footprints, resource use, and manage tourism loads. *Cybersecurity* and mandatory data protection standards are also essential.

Tourism must become a driver of green infrastructure. We propose mandatory use of *renewable energy* in the tourism industry by 2040, support for electric vehicles, and the creation of *low-emission zones* in national parks. We also propose modernizing roads and implementing *circular economy* and waste management *solutions in construction*.

Education and personnel training: The bedrock for sustainable growth. We propose modernizing curricula, certified circular economy courses, and internships in partnership with businesses.

To combat corruption, we propose electronic processes, blockchain for tracking expenses, and the creation of an independent body to oversee tourism investments.

Financial incentives are one of the most effective tools. We propose *tax breaks*, the *Green Fund*, and *tourism bonds* to attract investment in sustainable projects.

Finally, local community engagement. This includes support for ethno-tourism, equitable revenue distribution, community participation in planning, and the preservation of cultural heritage.

Policy Recommendations for Mitigating Risks and Achieving the Preferred Tourism Development Scenario in Kazakhstan

The recommendations represent a significant step toward integrating circular economy principles into tourism development in Kazakhstan. They include important measures for waste reduction, resource management, education, infrastructure, and support for local value chains, and provide an institutional and regulatory framework for sustainable practices. At the same time, the outlook remains primarily defined by environmental efficiency and sustainability, with less attention paid to aspects such as systemic intersectoral linkages, new business models, and comprehensive CE indicators.

Short-term: 0-3 years | Medium-term: 3-7 years | Long-term: over 7 years

1. Institutional Mechanisms for Sustainable Development in Tourism

Short- and Medium-Term

- Create a specialized Ministry of Tourism to unite the efforts of all stakeholders and free the industry from unnecessary bureaucracy. This will help streamline the management structure, reduce the number of officials, focus on the real needs of the tourism industry, and reduce bureaucratic delays.
- Establish a National Sustainable Tourism Council under the Ministry (or create a national coordinating body as an interdepartmental structure) to coordinate sustainable and circular practices, promote

cross-sector collaboration, monitor circular economy indicators, and accelerate the development of sustainable tourism.

Medium- and Long-Term

Decentralization of tourism governance: Empower regional and local authorities with greater decision-making powers, which will expedite the approval of sustainable tourism projects.

2. Strategy and Regulatory Framework for Sustainable Tourism, the Circular Economy, and Waste Management in Tourism

Short- and Medium-Term

- Develop a National Roadmap for a Circular Economy in Tourism with a focus on local material cycles, reuse strategies, and resource conservation.
- Develop certification standards for food products, packaging, and energy consumption.
- Create a regulatory framework for eco-certification of hotels, tour operators, and tourist attractions.

Medium- and Long-Term

- Introduce strict waste sorting and recycling standards:
- Implement and enforce waste sorting regulations at all tourist attractions, accommodations, and restaurants, with regular inspections.
- Prohibit the use of single-use plastics in the tourism industry and mandate the use of biodegradable alternatives.

3. Digitalization and management of smart and responsible tourism

Short- and Medium-Term

IT integration:

- Develop the e-Qonaq digital platform to integrate IT solutions, enabling tourism businesses to utilize digital tools.
- Implement an e-ticketing system, online booking, and interactive maps to improve the tourist experience and prevent overcrowding.

Implementation of AI to monitor tourist flows and loads:

- Use of AI-based predictive tools to manage seasonal peaks, prevent overtourism, and reduce environmental impacts.
- Development of a smart monitoring system in environmentally sensitive areas to ensure controlled access for tourists.

Protecting the e-Qonaq platform and AI systems from data leaks.

Medium- and Long-Term

Expanding e-Qonaq for sustainable smart tourism:

- Integration of real-time monitoring of tourism impacts (energy consumption, waste generation, carbon footprint) into the e-Qonaq platform.
- Use of e-Qonaq data to assess resource efficiency and circularity metrics for each certified business.
- Using AI to model circular economy scenarios (e.g. closed waste loops, transport optimization) and plan at the destination level.

Introducing mandatory cybersecurity standards:

- Require digital tourism platforms (e-Qonaq, booking systems) to comply with strict data encryption standards and personal information protection laws.

Smart information centres for sustainable tourism education:

- Creating interactive visitor centres at key tourist attractions that educate travellers on the principles of sustainable tourism and Kazakhstan's environmental conservation efforts.
- Using virtual reality (VR) to immerse visitors in Kazakhstan's culture and biodiversity, reducing the need for physical interaction with vulnerable natural sites.
- Placing exhibits and demonstrations on circular solutions in food, design, and travel at the centres.

Supporting agritourism through digital platforms.

Effective and Responsible Management

Short- and Medium-Term

- Implement electronic processes and digital application submission
- Introduce a transparent reporting system based on circular economy criteria.
- Implement independent investment performance assessment.

Medium- and Long-Term

- Digital transparency tools: use blockchain technology to track public spending and investments related to tourism.
- Independent oversight bodies: create an anti-corruption agency specializing in monitoring tourism infrastructure and licensing processes.

4. Education and personnel training:

Short- and Medium-Term

Training Programme Review and Modernization:

- Update curricula not only at universities but also in specialized courses covering current topics in tourism and service industries.
- Engage international experts to conduct trainings and seminars so that local specialists could adopt best practices.
- Integrate circular economy principles and related business models into tourism, hospitality, and culinary programmes.
- Develop certified training courses for specialists in sustainable tourism and destination management.

Implementation of Training Programmes in Tourism and Hospitality:

- Educational courses and online training on the topic of the circular economy in tourism;
- Training hotel staff on food waste reduction methods;
- Training programmes for farmers, chefs, and tour guides;
- Training guides and local residents in sustainable ethno- and ecotourism.

Medium- and Long-Term

- Expanding the vocational education system by integrating digital skills and sustainable tourism practices into curricula.
- Government-business partnerships: collaborating with tourism companies to develop internship programmes and practical training.

5. Green Infrastructure and Sustainable Transport

Short- and Medium-Term

Transition to Renewable Energy in Tourism:

- Introduce mandatory use of renewable energy for hotels and tourist facilities by 2040.
- Provide government grants and subsidized loans for the installation of solar panels, wind turbines, and bioenergy systems in hotels, glamping sites, and tourist farms.
- Encourage the shared use of energy systems in tourist areas (e.g., microgrids, community-owned renewable energy facilities).

Expansion of Electric Vehicle Use:

- Develop and implement legislation supporting the use of eco-friendly transport (e.g., electric vehicles and e-bikes) on tourist routes and for goods delivery.
- Introduce subsidies and tax breaks for hotels, resorts, and tour operators that use electric buses, cars, and bicycles.
- Install charging stations at all major tourist attractions, ensuring convenience and accessibility.
- Introduce low-emission zones in national parks and tourist centres, restricting the entry of vehicles using traditional fuels.
- Promote circular design principles and electric vehicle and battery rental models in the tourism sector.

Infrastructure Modernization:

- Upgrade existing transport networks (roads, railways), build new routes, and purchase modern tour buses.
- Apply circular construction principles (reuse of materials, modularity) to the construction and renovation of tourism infrastructure.
- Develop waste recycling stations in key tourism areas, integrating waste collection with local circular economy initiatives.
- Create stations for recycling, composting, and biodegradation of food waste generated at tourist sites.

Medium- and Long-Term

Environmental Impact Assessment (EIA):

- Mandatory sustainability assessment prior to approval of tourism infrastructure projects.

Continuing the Expansion of Electric Vehicle Use:

- Legislative support for eco-friendly transport (electric vehicles, e-bikes) for tourist routes and logistics.
- Subsidies and tax breaks for users of electric buses, electric cars, and e-bikes in tourism.
- A well-developed network of charging stations at all key tourist attractions
- Restricted zones for fossil fuel vehicles in cities and natural parks.
- Introduction of circular design principles and rental schemes for electric vehicles and batteries in the tourism sector.

6. Biodiversity Protection

Short- and Medium-Term

Zoning for Tourism Development:

- Establish strictly protected natural areas with restrictions on mass tourism in ecologically sensitive zones.
- Introduce limits on visits to protected areas and mandate guided tours.
- Ban the use of non-biodegradable packaging in ecozones.
- Introduce strict regulations on tourism in national parks and UNESCO World Heritage sites.

Medium- and Long-Term

Eco-certification and Visitation Quotas:

- Restrict access to particularly sensitive natural areas through advance booking systems, timed visits, and mandatory guided tours.

Biodiversity compensation programmes:

- Require tourism companies to finance nature conservation projects as part of their operating permits.

7. Mandatory “green” Certification of Tourist Attractions

- Develop a National Eco-Certification Programme requiring all hotels, tour operators, and tourist attractions to comply with sustainable development standards.
- Link certification to tax breaks and licensing preferences, encouraging rapid implementation.
- Include circularity indicators in the certification system:
 - volume of waste sent for recycling (including organics);
 - use of recycled materials;
 - implementation of closed food and recycling loops.

8. Government Support, Tax Incentives, and Green Investment Policies

Short- and Medium-Term

Tax breaks for sustainable tourism businesses:

- Introduce tax breaks for companies that meet sustainability criteria, including zero-waste operations, use of renewable energy, and local employment programmes.

Tax incentives for the implementation of circular economy principles in tourism:

- Financial support (tax incentives, grants) for hotels, restaurants, and tourism companies implementing circular practices: composting, waste-to-energy recycling, and sustainable water use.

Support for local producers of sustainable packaging:

- Funding and promoting businesses that produce reusable and eco-friendly packaging (e.g., from clay, wood, or biodegradable materials).
- Encouraging packaging return systems in restaurants and eco-hotels for reuse.

Medium- and Long-Term

Establishing a “Green Tourism Fund” to support projects implementing circular economy and sustainability principles, including financial assistance for:

- Local farms and producers of eco-friendly products and packaging;
- Local producers of sustainable packaging;
- Hotels and restaurants using certified organic products;
- Eco-farms and agritourism initiatives;
- Tour operators specializing in ethno- and eco-tours;
- Companies implementing composting, organic waste recycling, and water-saving technologies;
- Pilot circular economy projects with international partners;
- Projects to transition to a circular economy within tourism clusters;
- Sustainable, low-waste catering systems.

Grants and loans for startups working in eco-friendly accommodation, eco-tourism services, and circular economy solutions.

Expanding tax incentives for companies using rental, sharing and product-as-a-service models.

Public-private partnerships (PPPs): creating investment models in which the state co-finances green

tourism infrastructure projects with private companies based on circular economy principles.

Investments in R&D (research and development):

- Funding universities and research institutes to develop innovative sustainable tourism practices, such as eco-friendly building materials, low-input farming, and water conservation systems.
- Developing pilot projects in collaboration with international organizations to position Kazakhstan as a global leader in sustainable tourism.
- Priority funding for research into circular design in accommodation, packaging, transportation, and infrastructure.

Foreign Investment (FDI) Strategy:

- Presenting Kazakhstan as a key tourism hub in Central Asia, emphasizing unique opportunities for green investment.

Issuing Sustainable Tourism Bonds:

- Attracting institutional and private investors to finance eco-tourism projects.

Incentives for Local Employment:

- Introducing wage subsidies or tax deductions for tourism companies that hire and train local workers.

9. Integrating agritourism and organic products

Short- and Medium-Term:

Organic Certification and Incentives for Sustainable Farming:

- Launching a national organic certification system.

Agricultural Tourism-Focused Programmes:

- Developing agritourism zones where tourists can participate in organic farming, food production, and eco-friendly practices.
- Implementing a national certification system for organic food producers and integrating it with tourist-oriented restaurants and hotels.
- Encouraging stays on farms and in eco-lodges that allow visitors to experience sustainable agriculture firsthand.
- Implementation of mandatory on-site composting and closed-loop food systems in agritourism farms.

Medium- and Long-Term:

Public-Private Partnerships (PPPs) for Gastronomic Tourism:

- Collaboration with local farmers, culinary schools, and travel agencies to create authentic and sustainable culinary experiences.
- Promotion of traditional Kazakh cuisine, prepared with local organic ingredients, as a key component of the tourism industry.
- Development of a national brand for “zero-waste gastronomic tourism” linking food culture and the values of a circular economy.
- Offering financial support to farms implementing agroecological and sustainable practices, such as regenerative agriculture and low-impact farming.

10. Development of Ecotourism and Ethnotourism

Short- and Medium-Term:

Eco-certification for Tour Operators:

- Requiring all tour operators offering nature-based tourism to comply with environmental standards, ensuring minimal impact on ecosystems.
- Implementation of restrictions on the number of visitors and mandating that fragile ecological zones be visited only with a guide, preventing environmental degradation.

• Sustainable Tourism Development in Protected Areas:

- Establishing strict environmental standards for tourism in national parks and UNESCO sites, ensuring a balance between access and conservation.
- Developing smart monitoring systems using artificial intelligence to track tourist impacts and dynamically adjust policies.
- Creating “detox tourism” zones, i.e., gadget-free areas, so tourists can better experience the culture and traditions of the region.

Medium- and Long-Term:

Supporting Experiences with Indigenous Cultures and Local Populations:

- Providing funding for community-led tourism development projects that focus on authentic Kazakh traditions, crafts, and nomadic heritage.
- Ensuring direct economic benefits for local populations through revenue-sharing policies in ethno-tourism enterprises.
- Revival of authentic elements of national culture through organized tours, local festivals and master classes on traditional crafts.
- Promoting the production of recycled handicrafts (e.g., recycling textiles or waste into cultural souvenirs).

11. Engaging with Local Stakeholders to Address Social Resistance and Cultural Conflicts.

Short- and Medium-Term:

- Dialogues with local communities on the benefits of a circular economy (CE).
- Engaging local communities in agritourism and food production.

Medium- and Long-Term:

- Community engagement programmes: Engaging local communities in decision-making processes through forums, surveys, and participatory planning.
- Equitable distribution of benefits: Ensure a certain percentage of tourism revenues is reinvested in local infrastructure, healthcare, and education.
- Implementation of authenticity standards for cultural tourism: Developing nationally recognized cultural tourism standards to ensure that tour operators and businesses promote authentic traditions rather than their commercialized versions.
- Provision of grants for cultural tourism: Providing funding for local museums, traditional craft workshops, and folklore performances to support cultural preservation.
- Cultural awareness programmes for tourists: Requiring incoming tourists to take short online courses on cultural etiquette through the e-Qonaq platform.
- Requiring a local guide for visits to sensitive sites: Foreign tourists visiting sacred or culturally significant sites must be accompanied by local guides.

Reaction to the Project Findings

The results of the project “Strategic Foresight into Circular Economies in Central Asia in Tourism and Hospitality with a Food Angle” have generated a strong response among stakeholders in the Republic of Kazakhstan. Representatives from businesses, government agencies, educational institutions, and civil society expressed appreciation for the opportunity to participate in interviews and scenario sessions, noting the importance of a systems approach to sustainable tourism development.

Many participants emphasized that the presented scenarios and analytical findings helped them gain a fresh perspective on the potential of the circular economy—not only as a tool for environmental efficiency but also as a foundation for business model transformation, cross-sector collaboration, and sustainable growth. Suggestions were made for continuing the dialogue, expanding educational programmes, and developing pilot projects based on the scenario ideas.

Thus, the project not only facilitated data collection and analysis but also served as a catalyst for developing a shared vision for the future of circular tourism in Kazakhstan. The next logical step is to have these recommendations inform policy and practice, factoring in intersectoral links, the local context, and international experience. Only through coordinated action by all stakeholders—government, business, society, and international partners—is it possible to build a sustainable, competitive, and environmentally responsible tourism industry.

ANNEXES

Annex 1: List of Respondents for Stakeholder Interviews

No.	Organization	Person Responsible
1	Tourism Industry Committee of the Ministry of Tourism and Sports of the Republic of Kazakhstan	BAYAGYN Sanya Almazkyzy Chief Expert
2	Ministry of Agriculture of the Republic of Kazakhstan	Y. Kenzhekhanuly Vice Minister
3	Ministry of Ecology and Natural Resources of the Republic of Kazakhstan	-
4	Department of Tourism, National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken"	KUNANOVA Damilya Bekhitkereyevna Managing Director, Department Director
5	ALE "Kazakhstan Tourism Association"	SHAIKENOVA Rashida Rashidovna Director
6	Kazakhstan Association of Hotels and Restaurants in the form of an association of legal entities	SHAIKENOVA Rashida Rashidovna President
7	Almaty Restaurateurs' Club Association	LEBEDEVA Irina Maratovna Financial Director
8	Discover Almaty LLP, a tour operator and DMC for receiving foreign tourists in Kazakhstan	AKNAZAROV Aleksandr Seitmukhambetovich Director
9	Ibis Almaty Jetisu Hotel	SCHREINER Yevgeniy General Manager
10	Tahar Hotel	FILIPPOVA Nina Mikhailovna Director
11	Local wine supplier "Arba Wine"	ZUL Sevastian Sales Manager
12	IP "Stepanenko", manufacturer and supplier of natural honey and jams.	STEPANENKO Sergei Ivanovich Director
13	Narxoz University	ABENOVA Yelena Anatoliyevna Head of the Scientific and Educational Department "Tourism"
14	Student majoring in Hospitality Management at Narxoz University	NURZHAKYP Meruert
15	ECO Network Company – greening and promoting sustainable development principles in business	KABULDINOVA Dina Manager

Annex 2: Stakeholder Interview Questions

Public Sector Representatives Interview Questions

Aim: The aim of interviews with public sector representatives is to obtain information on existing or planned policies, strategies, laws and regulations, projects or activities that promote the development of a green economy, sustainable production and consumption (SPC), resource efficiency, the development of a circular economy in the tourism/hospitality sector, as well as the short-, medium- and long-term prospects for such development in the countries participating in the study.

Respondents: Questions for public sector representatives should be addressed to mid-level officials (e.g., heads of policy development units or legal departments) of ministries responsible for various aspects of the tourism/hospitality sector, such as:

- a. general economic development policy or SCP policy, including the development of regulations;
- b. the development and monitoring of tourism development policies/strategies/legal frameworks;
- c. environmental protection and natural resource management (climate change, energy efficiency, renewable energy, waste management, recycling, water management, etc.);
- d. food safety regulations.
- e. issuance of eco-labels and quality certificates for various activities, including tourism/hospitality, or products, including, for example, food products.

These may include ministries, committees, agencies, or departments of economics, tourism, hospitality, environmental protection, agriculture, food safety, etc.

Interviewer: National, non-lead experts (hereinafter referred to as “local experts”) on sustainable consumption and production (SCP) for the SWITCH-Asia ITCH ASIA project in Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan. National experts are expected to compile lists of institutions and, preferably, potential interviewees.

Interview Guidelines:

- Introduction: The local expert/interviewer introduces him/herself;
- Introduction of the SWITCH-Asia project objective: The local expert/interviewer briefly introduces the SWITCH-Asia project;
- Introduction of the purpose of the interview: The purpose of the interview and the information requested are discussed.

Participants: Interviewers collect information about each interviewee, including the country and organization they represent, their position, and their relevance to the research.

Instructions:

- At the beginning of the interview, introduce the concept of sustainable consumption and production (SCP), cleaner production, resource efficiency, green economy and circular economy. Try to explain them as simply as possible;
- If some questions seem irrelevant to specific situations, skip them;
- If necessary, rephrase questions to make them more understandable to respondents;
- Adapt the interview guidelines and questions based on the interviewee’s specific position and experience;
- Questions should be left open-ended to allow for detailed responses;
- Interviewers should seek more detailed answers by asking the following questions: Could you give specific examples? Could you elaborate on this? Can you provide more information on this?

Conclusions: Ask if the respondent would like to share their thoughts and recommendations for this study. Thank them for participating in the interview, their time, and their ideas. Reiterate that this conversation is an important contribution to the research, and ask if they would like to receive a report on the results.

Confidentiality: Maintain the confidentiality of responses and the anonymity of data in reports.

Documentation Methodology: The interview will be documented either by taking notes or by audio recording, with the consent of the respondents. In the latter case, the interviewer must provide a transcript of the audio recording as a separate document. Take notes during the interview on key topics and ideas.

Example of an interview introduction

Variant 1: Thank you for agreeing to participate in our project "*Strategic Foresight into Circular Economies in Central Asia in Tourism and Hospitality with a Food Angle*". Your role is crucial in our cross-sectoral initiative aimed at shaping the future of tourism, the circular economy, and agriculture. The project focuses on how resources are used today and will be used in the tourism sector, with a particular focus on food systems. This includes improving material efficiency, promoting circularity in resource use, and promoting a transition to more sustainable resources and practices.

We want to hear your views not only on current practices in this sector, but, more importantly, on practices that can shape the future, especially in light of various events that will impact both the Central Asian region and our country in particular. Your insights will contribute to the development of circular economy scenarios in the tourism sector, which, in turn, will help inform decision-making for both the government and the private sector in each of the participating countries.

This project is part of a larger initiative supported by SWITCH-Asia, spanning four Central Asian countries, where experts in each country collaborate closely with regional specialists in the field of circular economy and foresight.

For us, you are co-authors of these scenarios, and your ideas will directly contribute to their development. Rest assured, we will not quote you directly. Should we ever need to reference your opinions in the future, we will always ask your permission in advance.

Finally, to capture all your valuable feedback, could we record our conversation? This will help us ensure we don't miss any important details.

Variant 2: Thank you for agreeing to participate in our project "*Strategic Foresight into Circular Economies in Central Asia in Tourism and Hospitality with a Food Angle*". Initiated by SWITCH-Asia, this project covers four Central Asian countries. Your role is crucial in our cross-sectoral initiative aimed at shaping the future of tourism, the circular economy, and agriculture. The project focuses on how resources are currently and will be used in the tourism sector, with a particular focus on food systems, their efficiency, the development of circularity, and the promotion of a transition to more sustainable resources and practices.

Your insights on existing practices, and in particular, on possible future changes, will help develop circular economy scenarios in the tourism sector and shape the decision-making process for both government and private sector representatives. The interview will be anonymous, and should we need to reference your opinions in the future, we will seek your consent beforehand.

And in order to record all your valuable answers and comments, may I record our conversation? This will help us ensure we don't miss any important details. Thank you!

Interview Questions for Representatives of Ministries/Committees Responsible for Tourism Development in the Country

Introduction

What is the role of your organization in the tourism/hospitality sector?

General Strategy and Legislation

1. Does the country have a strategy/policy/programme/plan for the development of the tourism and hospitality sector?

- a. If so, could you provide a brief summary of the main goals/objectives related to tourism development mentioned in this document?
- b. Does the strategy promote a low-carbon, green economy, sustainable production, resource efficiency, energy efficiency, and a circular economy?
- c. Are there plans to develop documents aimed at developing the tourism and hospitality sector in the country?

2. Does the country have a strategy/policy/programme/plan for the development of a sustainable/environmental tourism/hospitality sector?

- a. If so, could you provide a brief summary of the main goals/objectives related to tourism development mentioned in this document?
- b. Does the strategy promote a low-carbon, green economy, sustainable production, resource efficiency, energy efficiency, and a circular economy?
- c. Are there plans to develop documents aimed at developing the tourism and hospitality sector in the country?

3. Are there national laws, regulations, standards, or guidelines for the tourism and hospitality sector regarding food safety, energy efficiency, the use of renewable energy sources (e.g., solar heating, solar power), waste management, packaging, water management, etc.?

- a. If so, can you provide a link to the document—the title or an electronic/hard copy/website link?
- b. Are there any plans, projects, discussions, or campaigns in the country that promote SCP, cleaner production, resource efficiency, energy efficiency, the green economy, and the circular economy?
- c. If yes, can you provide more detailed information?

Examples and Case Studies

4. Do you have any examples/champions in the tourism and hospitality sector who are implementing cleaner production, resource efficiency, and circular economy practices (e.g., energy efficiency, renewable energy, waste recycling/composting)?

5. Does your country offer awards/certificates/letters of appreciation, for example, for companies in the green tourism/hospitality sector?

- a. If so, could you provide more details, such as which organization issues them? What are the general criteria for receiving these awards/certificates? etc.

6. Do you think the tourism/hospitality sector is currently primarily supported by: 1) food from local producers; 2) food from remote regions of the country; 3) imported food?

- a. Could you please provide more information on this? For example, are there incentives for purchasing food from local producers, or do tourism/hotel businesses prefer to use local products because they are cheaper and of higher quality?
- b. Are there any local food products that are promoted? If so, how?

7. Do you believe that investing in and implementing low-cost methods for reducing food waste, recycling/composting, saving energy and water, etc., could be beneficial for businesses in the tourism and hospitality industries?

8. Government's efforts and role in promoting more sustainable and environmentally friendly development in the tourism and hospitality sector

General Question

What actions does or could your government take to create a more sustainable and environmentally friendly tourism and hospitality sector, to minimize waste and maximize resource efficiency, promote recycling, etc.?

8.1. Regulations/Resolutions

- a. Are there any specific requirements for hotels, restaurants, or tour operators regarding waste minimization, energy consumption, and carbon emissions?
- b. How does the government regulate waste management (e.g. food waste, single-use plastics) in the tourism and hospitality sector? Please share information on this issue.

8.2. Financial incentives

- a. What financial incentives (e.g., tax breaks, grants, subsidies) are available to tourism and hospitality businesses implementing a circular economy?
- b. Does the government provide financing or low-interest loans to help the sector transition to more sustainable business models?

8.3. Awareness and training

- a. What steps is your government taking to raise public awareness of the importance of a circular economy in tourism?
- b. Are there any government initiatives or programmes aimed at educating/training tourism businesses and consumers on sustainability and resource efficiency, waste management, and resource optimization?

8.4. Certification and standards

- a. Are there government-approved certifications and standards (e.g. eco-certification) that tourism and hospitality businesses can obtain to demonstrate their operations as environmentally friendly and circular?

8.5. Waste management programmes

- a. What measures has the government taken to promote waste reduction, reuse, and recycling in the tourism and hospitality sector?
- b. Are there initiatives to address specific waste streams, such as single-use plastics, food waste, or packaging materials, in hotels, resorts, and on-site tourism facilities?

8.6. Support for sustainable tourism

- a. How does the government encourage sustainable tourism practices, such as promoting eco-friendly destinations or experiences from industry players who prioritize low environmental impact?
- b. Are there any government initiatives that educate tourists about responsible consumption and the circular economy?

8.7. Tourism and Community Engagement

- a. How does the government ensure that circular economy initiatives in tourism benefit local communities (e.g., by supporting local suppliers or developing local tourism)?
- b. Are there any initiatives that engage local communities in waste reduction, sustainable tourism development, and circular economy practices?

8.8. Measurement and Reporting

- a. How does the government measure the impact of circular economy initiatives in the tourism and hospitality sector (e.g., waste reduction, resource efficiency, and carbon emissions reduction)?
- b. Does the government encourage companies to report on their sustainability efforts and progress toward circular economy goals?

8.9. Innovations and Technologies:

- a. Are there any R&D grants or incubators focused on circular economy innovation in tourism?
- b. Anything else? If so, please describe.

9. Prospects:

- a. What steps does the government plan to take in the future to implement green/circular economy practices in tourism?
- b. What are the potential facilitators/impediments to these plans?
- c. On a 10–15-year horizon, what three external factors are likely to be the most influential on the implementation of circular economy principles in the tourism sector?
- d. What internal factors do you think will most influence the implementation of circular economy principles in the next 10-15 years?

Questions exploring the role and position of the Ministry of Economy in promoting the circular/green economy in business and tourism

Overview: Policy and Strategic Focus

- What national policies and strategies has the Ministry of Economy developed to promote the circular economy in the country?
- Can you describe the key policy initiatives and regulations aimed at ensuring business sustainability, particularly in the tourism sector?

Interaction with the business sector

- How does the Ministry engage with businesses to encourage sustainable practices?
- Are there any incentives, support programmes, and partnerships to promote the adoption of circular economy models in business?

Challenges and Opportunities for Business

- What are the main challenges businesses in the country face in transitioning to circular economy models?
- What specific benefits can businesses derive from implementing sustainable practices?

Success Stories and Case Studies

- Are there any examples of successful businesses that have implemented circular economy principles? What support has the Ministry provided to them?

Monitoring and Evaluation

- Does the Ministry monitor and evaluate the impact of green economy initiatives on the business sector?

(The following questions are only relevant to the Ministry of Economy if it is also responsible for the development of the tourism sector. Otherwise, you can skip these questions)

Involvement in the Tourism Sector

- How is the Ministry of Economy integrating circular/green economy concepts into the tourism sector?
- Are there any industry-specific guiding principles and standards for sustainable tourism development?

Incentives and Regulations:

- What incentives, funding, and policies are in place to encourage tour operators to implement circular economy practices (e.g., waste reduction, energy efficiency)?

Sustainable Tourism Development Goals

- What are the Ministry's long-term goals for promoting sustainable tourism?
- How does the Ministry collaborate with tourism businesses to achieve these goals?

Partnership Between the State and the Private Sector

- How does the Ministry work with private enterprises and other public institutions to promote the development of a circular economy in tourism?

Cross-Sectoral Cooperation and Stakeholder Engagement

- How does the Ministry of Economy collaborate with other ministries (e.g., the Ministry of Environment) to promote a circular/green economy? For example, are there inter-ministerial coordination structures in the country to promote the green/circular economy? If so, which organizations are involved?
- Are key stakeholders, such as private businesses, NGOs, and local communities, involved in the development and implementation of circular economy policies? If so, how?

Prospects and Recommendations

- Does the Ministry have long-term (15-20 year) programmes for the implementation of the circular economy in business, including the tourism and hospitality sector? Please share these (links, title, brief description).
- Are there any initiatives or strategies planned for the near future in this area that you can share?
- What are your recommendations for businesses or tour operators seeking to integrate more sustainable practices into their operations?
- What would you recommend to modernize in the Ministry's work to accelerate the adoption of circular economy principles?
- What internal factors do you think will most influence the implementation of circular economy principles in the next 10-15 years?
- What external factors do you think will most influence the implementation of circular economy principles in the next 10-15 years?

Interview Questions for Ministry of Ecology / Environmental Protection Representatives

1. What is the role of your Ministry/Committee in the tourism/hospitality sector? For example, is your Ministry/Committee responsible for the following:

- a. Developing environmental and resource-saving regulations and standards for the tourism/hospitality sector?
- b. Developing ecotourism strategies and plans?
- c. Promoting energy efficiency, renewable energy resources, water efficiency, or material efficiency among SMEs?
- d. Promoting a green/circular economy?
- e. Developing waste management policies and regulations, including municipal and industrial waste management?

- f. Overseeing environmental pollution controls implemented by SMEs?
- g. Food safety standards?
- h. Eco-labelling of food and other products, as well as green certification for SMEs

Please provide more details on the Ministry's responsibilities related to the above points.

2. Has your Ministry developed and adopted any national laws, regulations, standards or guidelines on food safety, energy efficiency, use of renewable energy (e.g. solar heating, solar power), waste management, packaging, water management, etc. for SMEs that may be relevant to tourism/hospitality services?

- a. If so, can you provide a link to the documents/regulations or the title and website link of the document/regulation?
- b. Are there any companies, discussions, projects, or initiatives in the country promoting the green economy, sustainable production and consumption (SPC), cleaner production, resource efficiency, energy efficiency, and the circular economy for SMEs and in the tourism sector?

If so, could you provide more detailed information?

3. Has your Ministry developed a national waste management strategy or action plan?

- a. If yes, can you provide a link to the document?
- b. Does this document include a strategy for preventing waste growth, focusing on minimization, reuse, recycling, etc., for SMEs?

4. Does your Ministry have programmes on environmental protection, resource efficiency, and the circular economy for SMEs?

- a. If yes, could you provide more detailed information?
- b. What specific steps, if any, is the Ministry taking to promote the development of the circular economy in the tourism and hospitality sector?

5. Are there any donor-funded projects on environmental protection and resource efficiency for SMEs, particularly in the tourism/hospitality sector?

- a. If yes, could you provide more detailed information?

6. Ministry and Government's Efforts and Role in Promoting More Sustainable and Environmentally Friendly Development in the Tourism and Hospitality Sector

6.1. Policies and Regulations

- a. Are there specific policies and regulations that encourage businesses in general, and the tourism and hospitality sector in particular, to implement circular economy practices?
- b. Are there relevant standards/regulations/guidelines that companies in the sector must follow (e.g., requiring businesses to implement sustainable practices such as waste reduction and resource efficiency)?
- c. How does the Ministry enforce environmental standards, particularly in terms of reducing the use of single-use plastics, energy consumption, and food waste in the sector?

6.2. Financial incentives

- a. Are there tax incentives, grants, or subsidies for businesses implementing green/circular economy practices?

6.3. Education and Training

Does your Ministry and government have programmes in the following areas:

- a. Educating stakeholders, including businesses and consumers, on the benefits of the circular economy, resource efficiency, cleaner production, etc.

- b. Programmes and projects to raise awareness of circular economy principles in the tourism/hospitality sector.

6.4. Innovation Support

Is the Ministry investing in research and the development of sustainable technologies and practices in the SME sector and in tourism and hospitality in particular?

6.5 Sustainable Tourism Initiatives

Does your Ministry and government have environmental certification programmes in place: developing certification schemes for hotels and tour operators that meet sustainability criteria?

6.6. Local Product Promotion

Do your Ministry and Government encourage the use of locally sourced resources in the hospitality sector, including using local food, reducing transport emissions and supporting the local economy?

6.7. Waste Management Programmes

- a. Are there recycling and composting programmes or projects at tourism facilities?
- b. Are there programmes or projects aimed at reducing waste and promoting, for example, zero-waste practices?

6.8 International Cooperation

- a. Do your Ministry and Government collaborate with international organizations and other countries to promote circular economy principles in global tourism?
- b. Are there any global best practices that the Ministry has adopted and adapted for the local tourism sector?

6.9 Monitoring and Reporting

- a. Does the Ministry monitor the impact of circular economy initiatives on the business sector in general and the tourism sector in particular? For example, by collecting data on resource use, waste generation, and sustainable development practices in the tourism sector to inform policy decisions.
- b. Is the business sector encouraged to report on its sustainability efforts and progress toward green/circular economy goals?
- c. Are any key performance indicators or metrics used?
- d. Are there awards for commitment to green business ideas?

6. 10. Interaction with Local Communities

- a. Does the Ministry engage with local communities and tourists to increase their awareness of the importance of sustainability and the circular economy?
- b. Are local communities involved in tourism planning and decision-making to ensure that development benefits them and promotes sustainable practices?

7. Green Economy Champions

Can you share success stories or examples of how circular economy principles have been effectively implemented in the business sector in general and in tourism in particular?

8. Challenges and Opportunities

- a. What are the most significant challenges businesses face in implementing circular economy principles, and how is the Ministry addressing these challenges?
- b. In your opinion, what opportunities does the circular economy offer for tourism and hospitality businesses in terms of cost savings, innovation, and customer satisfaction?

9. Future Plans and Goals

- a. Does the Ministry have long-term programmes (15-20 years) for the circular economy in business, including the tourism and hospitality sector? Please share them (links, title, brief description).
- b. What internal factors do you believe will most influence the development of the tourism and hospitality sector over the next 10-15 years?
- c. Which external factors do you believe will have the most significant impact on the development of the tourism and hospitality sector in the next 10-15 years?

Interview Questions for Representatives of the Ministry/Committee Responsible for the Development of Agriculture and Food Sector

Ministry's Role in Agriculture

1. General Policy Framework

- a. What role does the Ministry of Agriculture play in promoting sustainable development in the tourism and hospitality sector?
- b. Are there any specific policies and strategies developed by the Ministry to promote the implementation of circular/green economy principles such as cleaner production, energy efficiency, water conservation, recycling and reuse of materials, organic farming, etc.?

Current Initiatives and Programmes for Cross-Sectoral Collaboration

2. Circular Economy in Agriculture Aimed at Tourism

- a. Does the Ministry collaborate with other industry agencies (e.g., tourism, environmental protection) and the private sector to promote circular economy principles? How?
- b. Can you share examples of joint initiatives or programmes with representatives from the tourism and hospitality sector?
- c. What key initiatives has the Ministry implemented to support the development of the circular economy, particularly in tourism-related agriculture? How have these been implemented?
- d. How have these initiatives impacted the food supply chain for hotels, restaurants, resorts, etc.?

3. Food Waste Reduction and Resource Efficiency

- a. Are there any ongoing projects aimed at reducing food waste and improving resource efficiency in the agriculture sector that supplies tourist destinations?
- b. How does the Ministry encourage tourism businesses to implement these practices?

4. Sustainable Supply Chains

- a. What has been done to promote local food products and materials for the tourism and hospitality sector?
- b. Does the Ministry collaborate with farmers or producers to meet the needs of the tourism sector in a sustainable manner?

Challenges and Opportunities

5. Success Stories

Can you share examples or studies of how the Ministry's efforts have had a tangible impact on promoting sustainability and a circular economy in tourism?

6. Barriers to Implementation

- a. What challenges have you encountered in promoting a circular economy in the tourism and hospitality sector?

- b. Are there any specific barriers related to stakeholder support, resource constraints, or the regulatory framework?

7. Opportunities for Growth

- a. What opportunities do you see for expanding the implementation of the circular economy in this sector?
- b. Are there new technologies, innovations, or partnerships that the Ministry is exploring?

Looking Ahead

8. Future Prospects

- a. What 10-15-year plans/programmes/initiatives does the Ministry have for integrating circular economy principles into the tourism and hospitality sector?
- b. What are the potential facilitators/impediments to these plans?
- c. On a 10–15-year horizon, what three factors are likely to be the most influential on the implementation of circular economy principles in the tourism sector?
- d. What impact might the development of local product supplies to tourism businesses have in 10-15 years?

9. Policy Recommendations

Based on your experience, what policy changes could further facilitate the adoption of circular economy practices in tourism and hospitality?

Conclusion

- a. Is there anything else you'd like to add to our discussion that you think is important for understanding the Ministry's role in this area?
- b. Do you have any final thoughts or recommendations on how other stakeholders can contribute to the advancement of the circular economy in tourism?

Interview Questions for Business Association Representatives

These questions are designed to provide detailed answers on how business associations contribute to the development of a green economy, particularly in the business and tourism sectors, while also revealing the challenges, opportunities and their role in advancing the sustainable development process.

Section 1: Role and Prospects of Business Associations

1. Advocacy and Influence

- Does your business association promote green/circular economy approaches among its members?
- Does your organization influence government policies and decisions related to the green economy? If so, how exactly?

2. Motivation and Priorities

- What motivates your business association to focus on the circular/green economy (e.g., member demand, regulatory changes, public pressure)?
- How important is sustainability compared to other priorities in your business association's work?

Section 2: Promoting the Development of a Circular/Green Economy in the Business Sector

1. Support for Businesses

- What initiatives, if any, has the business association implemented to help member businesses transition to more sustainable circular economy practices?
- Does the business association provide resources, education, or training programmes to businesses seeking to transition to a green/circular economy?

2. Barriers and Issues

- What challenges do your member businesses face in implementing circular/green economy models (e.g., financial, technological, market-based)?
- How does the business association help businesses overcome these challenges?

3. Incentives and Benefits

- Does the business association offer special incentives (e.g., certification, awards) to encourage sustainable business practices?
- What are the most significant benefits that businesses have achieved or can achieve by implementing circular economy principles in their operations (e.g., cost savings, market expansion, increased competitiveness)?

4. Success Stories and Practical Examples

- Can you share examples of businesses within your association that have successfully implemented circular economy practices?
- What role has the business association played in supporting these businesses during the transition period?

Section 3: Implementing the Circular/Green Economy in the Tourism Sector

1. Sustainability in Tourism

- Does your business association collaborate with representatives of the tourism and hospitality industry (hotels, tour operators, cafes, restaurants, etc.) to implement circular economy practices in their operations?
- What specific initiatives or programmes does your business association implement to promote sustainability in the tourism and hospitality sector?

2. Sector-Specific Challenges

- What unique challenges does business in general, and tourism and hospitality in particular, face when seeking to implement green/circular economy practices (efficient use of water and energy, cleaner production, waste minimization, recycling, emission reduction, etc.)? For example, this could include a lack of financial resources, knowledge of new technologies, or resource-efficient practices.
- Do you believe the regulatory framework is inadequate to support green/circular economy practices in the tourism and hospitality industry?
- Does the business association help tourism and hospitality businesses mitigate their environmental impact by reducing waste, lowering energy consumption and reducing carbon emissions?

Section 4: Collaboration and Expanding Influence

1. Partnerships and Networking

- Are there any international networks or forums in which your business association participates to advance global circular economy goals?

2. Interaction with the Government Agencies

- How does your business association interact with the Ministry of Economy and other government agencies to influence and align with circular economy policy developments?
- What are the results of this collaboration, particularly in the areas of business and tourism?

3. Members' Involvement and Awareness

- How does your business association raise awareness among members and inform them of the latest trends, technologies, and regulations related to the green/circular economy?
- How have your members responded to the business association's adoption of green economy practices?

Section 5: Future Plans and Recommendations

1. Future Initiatives

- Does your business association have future plans and strategies for promoting the circular/green economy in the business and tourism sectors?
- What do you think could impact them (both positively and negatively) in the next 10 years?
- What practices, innovative methods, or technologies do you believe will become particularly relevant in the business and tourism sectors within the context of the circular economy in the next 10 years?

2. Recommendations for Businesses

- What practical advice or best practices could your business association impart on businesses interested in transitioning to a circular economy model?

Closing Thoughts

- Do you have any final comments or additional ideas on the role of business associations in promoting a circular/green economy?

Interview Questions for Tourism and Hospitality Business Associations

Tourism and hospitality associations can be powerful drivers of change in promoting the circular economy in the tourism and hospitality sector. They can support their members by providing resources and facilitating collaboration. The following questions can help explore how tourism and hospitality associations can or are already promoting the implementation of the circular economy in the sector.

1. Advocacy and Policy Influence

- Does your association advocate for public policies that support green/circular economy principles in the tourism and hospitality sector? If so, how exactly?
- How actively is your association involved in policy initiatives to implement and improve sustainability regulations, waste reduction, and resource efficiency?

2. Guidelines and Best Practices

- Has your association developed guidelines and frameworks to help tourism and hospitality businesses implement circular economy principles (e.g., waste reduction, resource efficiency)?
- Are there industry best practices and tools for hotels, restaurants, and tour operators to help them implement circular business models?

3. Training and Capacity Building

- Does your Association offer training programmes or workshops to help tourism and hospitality businesses understand and implement circular economy practices?

4. Certification and Standardization

- Does your Association promote sustainability certification and standardization programmes that encourage tourism and hospitality businesses to implement circular economy models?

5. Incentive Programmes

- Are there any incentive programmes or initiatives created by associations to reward businesses that demonstrate high performance in adopting circular economy practices?

6. Cooperation and Networking

- Does the Association facilitate collaboration between tourism and hospitality businesses to share knowledge, resources, and innovations related to the circular economy?

- Does the Association foster partnerships between tourism and hospitality businesses, government agencies, and NGOs to advance circular economy initiatives?

7. Awareness Raising Initiatives

- How do Associations raise awareness among their members about the importance of the transition to a circular economy?
- Are there initiatives or communication strategies that inform both service providers and consumers about circular economy initiatives in the tourism and hospitality sector?

8. Waste Management Initiatives

- How are associations implementing waste management solutions, such as recycling, composting, or energy recovery, for hotels, restaurants, and tourism facilities?
- Are there specific initiatives led by associations to manage the main waste streams in the tourism and hospitality sector (e.g., single-use plastics, food waste, and packaging materials)?

9. Innovation Centres and R&D

- Does the Association support innovation aimed at developing new technologies and solutions to circular economy challenges in the tourism and hospitality sector?

10. Sustainable Tourism Development

- Does the Association promote sustainable tourism practices that align with circular economy values, such as reducing resource consumption, supporting the local economy, and minimizing environmental impact?
- Are there initiatives to promote ecotourism and “responsible traveller” experiences that emphasize the importance of sustainability and circular economy practices?

11. Funding and Financial Support

- Does the Association connect its members with financial institutions, donors, and government programmes that provide grants and low-interest loans for investing in sustainable development and resource efficiency?
- Does the Association advocate for changes in government procurement policies to promote the implementation of circular economy practices in the tourism and hospitality sector?

12. Future Plans and Recommendations

- Does your Association have future plans and strategies to promote the circular economy in business and tourism?
- What do you think could impact them (both positively and negatively) in the next 10 years?
- What practices, innovative methods, or technologies do you believe will become particularly relevant in the business and tourism sectors within the context of the circular economy in the next 10 years?
- What practical advice or best practices could the Association recommend to businesses in both sectors interested in moving towards a circular economy model?

Conclusion - Closing Thoughts

What else can you add to our conversation and what ideas can you share about the role of associations in promoting the circular economy?

Interview Questions for Tourism and Hospitality Business Representatives

The suggested questions below are divided into several sections that can be used in any order. Each section begins with a general question that invites respondents to share their thoughts freely. The interviewer may ask follow-up questions to clarify the answer, gather more detail, or introduce topics not yet covered. Attentive listening is essential, as respondents may touch on several topics simultaneously. After completing the interview, it is crucial to accurately document the responses obtained.

When speaking with tourism and hospitality industry representatives about the circular economy, it is important to focus on their current operations, challenges, and opportunities related to developing sustainable businesses. Here are some key questions that can help understand how businesses are integrating circular economy principles. Start the conversation with a more general question about each area, then move on to specific ones, asking for clarification on specific aspects as needed.

1. On Business

- Can you briefly describe your business, including its core activities, products and services provided, number of employees, market, and customers?
- What are your plans for future business development? For example, are you planning to expand?

2. Business Practices and Operations

The following questions explore how businesses apply sustainable practices in their operations, with a particular focus on waste prevention, resource management and efficiency, and reducing environmental impacts.

General Question

- How does your business integrate circular economy principles into its daily operations to reduce pollution, reduce waste, and minimize the associated impacts of packaging materials, water, and energy consumption?

Specific Questions

- What do you do with waste, especially food waste? Do you separate food or other waste for composting? How do you manage excess food (e.g., donate to various organizations, monitor portion sizes, compost)?
- What steps do you take to reduce the use of single-use plastics (e.g., plastic plates, cups, etc.), packaging (e.g., plastic or glass bottles, aluminium cans), and other non-recyclable materials?
- Do you use any renewable energy sources or energy-efficient technologies to minimize energy consumption and reduce greenhouse gas emissions?
- How do you manage water use and ensure water conservation in your operations?

3. Procurement and Supply Chain

This section focuses on sourcing organic, more environmentally friendly, and local products, which helps reduce transportation emissions, supports the regional economy, prioritizes the use of environmentally friendly, sustainable, and recycled materials in procurement, and promotes suppliers' adherence to circular economy principles to ensure sustainability.

General Question

- What influences your decision-making when selecting suppliers and products? For example, good product quality, compliance with food safety regulations, price, transportation distance, organic or eco-friendly?

Specific Questions

- What actions, if any, have been taken to source goods—such as food—locally, so as to reduce transportation emissions and support the regional economy?
- Are there any local food suppliers who could supply good quality organic food for your business?
- Do you prioritize eco-friendly, sustainable, and recycled products in your purchasing? How is that done?

- Do you ensure your suppliers implement circular economy principles, such as using recycled materials, including for packaging?
- What new food supply sources have emerged in the last 5 years?
- Should local food supplies become unavailable, where will you turn? Who could become your partners? Rank them by level of priority.

4. Waste Management and Recycling

This section examines how businesses manage waste, including recycling materials such as glass, paper and food scraps, and disposing of furniture, appliances and equipment. It also explores the challenges of implementing effective waste management and recycling systems.

General Question

- How do you manage waste/what are your waste management practices?

Specific Questions

- What do you do to recycle or reuse waste (e.g., glass, paper, food waste) generated by your business?
- How do you manage the disposal and recycling of furniture, appliances, and other equipment when they are decommissioned?
- What challenges have you encountered in implementing effective waste management and recycling systems in your business?
- Are there any innovations/technologies that are useful for recycling/waste management in your business?

5. Customer Engagement and Awareness

This section examines how companies engage and educate customers on sustainability practices, including recycling and storage, and collects customer feedback on these efforts.

General Questions

- How does your business collaborate with and educate customers to encourage sustainable behaviours while staying at their destinations (e.g., saving water/energy), and what feedback have you received on your initiatives?
- Do you provide information to your customers about your sustainability efforts and circular economy practices? If so, how?
- Have you received feedback from guests regarding your sustainability initiatives and circular economy practices? If so, how?

6. Cooperation and Partnership

This section examines partnerships to expand circular economy practices and improve sustainability in the tourism and hospitality sector.

General Question

- Who are your key partners in expanding circular economy practices in food? What partners are missing but could be helpful?

Specific Questions

- Do you collaborate with other businesses, government agencies, or NGOs to advance circular economy practices in the tourism and hospitality sector?
- Do you collaborate with local waste collection and recycling companies to strengthen sustainability efforts?
- Which key partners can help transform your practices?

7. Financial, Economic, and Market Considerations

This section examines the financial impact, including cost savings, incentives, and challenges associated with implementing circular economy practices.

General Question

- Have you seen cost savings by implementing resource-based practices and what can make these practices more profitable?

Specific Questions

- Has it become clear that implementing circular economy practices leads to long-term cost savings? Could you provide examples?
- What financial incentives or challenges have you encountered in transitioning to a circular economy model?
- Have you benefited in any way from specific government incentive programmes, grants, or tax breaks when implementing sustainable practices?

General Question

- Do you think there is growing demand for environmentally friendly products and services in your country, and are you benefiting from this?

Specific Question

- How can the market trend toward wider adoption of the circular economy be further stimulated (e.g., through the introduction of certain regulations, increased customer awareness, etc.)?
- What signals are you and your business seeing regarding environmental compliance (among your competitors/customers)?

8. Certification and Reporting

This section examines business participation in the green certification process and the company's prospects for participating in similar activities in the future.

General Question

- Do you participate in any sustainability certification programmes (e.g., Green Key, EU Travelife) that recognize your efforts to implement circular economy principles? If so, please elaborate on that.

Specific Question

- Do you measure the environmental impact of your circular economy initiatives, and which metrics are most important for your business in this area?

9. Innovations and Future Plans

This section deals with future strategies and long-term sustainability goals, with a particular focus on new technologies, improved resource efficiency, and the integration of circular economy principles into the business's future vision.

General Questions

- What trends do you foresee emerging in the future in the field of sustainability and the circular economy?
- Which trends do you expect to fade away and which trends do you expect to gain strength in the future in sustainability and the circular economy?
- What step will your business need to take to succeed in a future shaped by these trends?

Specific Questions

- What new technologies and strategies do you foresee that can help improve resource efficiency and reduce pollution?

- What technologies and strategies are you missing to improve resource efficiency and reduce environmental impact?

10. Barriers and Issues

- What barriers have you encountered in implementing circular economy practices, particularly in the food sector? For example, do current food safety regulations limit the use of locally sourced products? Is there general awareness of food waste reduction options among your employees and are specific training programmes needed?
- What could make it easier for your business to implement circular economy principles (e.g., government support, city administration support, regulatory requirements, consumer demand, technological solutions, improved waste management infrastructure, transportation, and cold chains)?
- Do you believe circular economy principles can benefit your business in the future, and what steps should be taken to achieve this? For example, raising awareness among managers, training employees, obtaining donor support, participating in green projects, accessing funding and certification for green tourism operations, developing new regulations to support circular economy practices, introducing tax incentives, etc.
- What issues do you constantly mention and draw attention to, but to no avail?
- What events, seemingly unimportant now, could lead to disruptive changes in the future?

11. The Need to Develop Circular Economy Practices in Business

Which of the following is important for promoting a circular economy in business:

	Yes	No
Special training programmes to increase employee knowledge about options for reducing food waste		
Improving managers' expertise and awareness		
Donor support and participation in donor-funded green projects		
Access to loans from local banks		
Government support		
Support from local governments		
Certification of green tourism activities		
Regulatory changes to support the circular economy		
Tax breaks		
Uninhibited access to new technological solutions		
Improving waste management, transportation, and cold chain infrastructure		
Other		

12. Opportunities

Which of the following circular economy practices could be implemented in your business now or in the near future without creating a significant financial burden on the company:

		Yes	No
1	Procuring food from local suppliers or farmers to reduce transportation distances		
2	Changing portion sizes to reduce food waste		
3	Composting food waste		
4	Donating leftover food to those in need		
5	Doing away with all single-use plastics		
6	Using refillable shampoo bottles		
7	In-house delivery of organic food and fruit and vegetables from local markets		
8	Waste reduction		
9	Minimizing plastic use		
10	Recycling plastic bottles, aluminium cans, and other inorganic materials		
11	Using solar energy to heat water and generate electricity		
12	Reusing wastewater for irrigation		
13	Using rainwater for sanitation or gardening		
14	Collaborating with NGOs and local authorities to develop recycling processes		
15	Using garden areas for planting trees and foliage to restore biodiversity		
16	Using eco-friendly shower heads		
17	Using LED lights		
18	Saving unfinished toiletries for subsequent clients to use		
19	Encouraging guests to reuse towels		
20	Other (please specify)		

Conclusion

What else can you add to our conversation and what ideas can you share about implementing a circular economy in the tourism and hospitality sector?

Interview Questions for Food Suppliers

Food suppliers play a vital role in supporting the circular economy in the tourism and hospitality sector by helping reduce waste, improve resource efficiency, and promote sustainable sourcing practices. To explore how suppliers support or can support the circular economy in this sector, consider the following key questions.

General Awareness

- Are you familiar with the concept and principles of sustainable “green” tourism?
- Are you familiar with the concepts and principles of the circular/green economy?

1. Sustainable Sourcing and Local Supply Chains

- Do you or other food suppliers work with local farmers or producers to minimize emissions during transportation and promote shorter supply chains?
- How do you or other food suppliers encourage the use of local, seasonal, and sustainably grown produce in the tourism and hospitality sectors?
- What factor will be decisive for food suppliers when choosing customers over the next 10-15 years? (e.g. price, organic nature, legal requirements, customer preferences, etc.)

2. Food Waste Reduction

- Are there any systems in place for food suppliers to work with businesses to reuse leftovers, donate surplus food, or prevent food waste from going to landfills?
- What measures can food suppliers take to help hotels, restaurants, and catering services reduce food waste (e.g., improve inventory management, optimize portion sizes)?
- What trends and signals have you noticed in food waste reduction over the past five years? Which of these trends will increase, and which will decline in 10 years or longer (15-20 years)?

3. Green Packaging

- Are there any alternatives, such as biodegradable or reusable packaging, offered by food suppliers to minimize waste?
- How are food suppliers supporting the reduction of single-use plastics and non-recyclable packaging in the tourism and hospitality industries?
- In your opinion, what is holding people back from making a more decisive shift to sustainable packaging?

4. Closed-loop Supply Chains

- Are food suppliers implementing closed-loop systems in which packaging materials or other resources are returned, recycled, or reused to reduce waste in the supply chain?
- How can food suppliers partner with hospitality businesses to establish systems for returning used packaging or organic waste for recycling or composting? What can facilitate this process?

5. Organic and Regenerative Farming

- Do food suppliers offer organic or regenerative locally farmed products that align with green economy principles, promoting soil health, reducing chemical use, and enhancing biodiversity?

6. Collaborating with Hospitality Businesses

- How are food suppliers collaborating with hotels, restaurants, and other tourism-related businesses to align their operations with circular economy goals? For example, do food suppliers work with chefs and kitchen staff to plan menus that minimize waste, utilize every part of the produce, and adapt to seasonality?
- Who are the main proponents of the circular economy in hotels, restaurants, and other tourism-related businesses?

7. Sustainable Development Certifications

- Do food suppliers offer products with recognized sustainability certifications (e.g., organic, certified food) to help hospitality businesses meet circular economy standards?

8. Energy and Water Efficiency

- Are there any initiatives in place to ensure that food production, storage, and transportation are carried out in an energy-efficient and sustainable manner? For example, do food suppliers support resource efficiency by minimizing the water and energy footprint of their operations (e.g., by reducing water use in food processing or using renewable energy sources)?
- Do suppliers promote a shift to sustainable, locally sourced foods, which often have a smaller carbon and water footprint?
- What innovations can you name that will improve this area in 5-10 years?

9. Composting and Biogas Production Initiatives

- Are food suppliers composting and producing biogas, using food waste to generate energy and create natural fertilizers that can be reused in agriculture?
- How can suppliers partner with hospitality businesses to collect organic waste for composting and other circular economy solutions?

10. Waste and Recycling Partnerships

- Can food suppliers offer solutions to close the waste loop, such as returning used cooking oils for biofuel or collecting food scraps for animal feed?
- Are suppliers working with businesses to create closed-loop systems where waste from one part of the supply chain can become a resource for another? For example, do food suppliers support the zero-waste goals of restaurants, hotels, and resorts by offering products that can be fully reused or recycled?
- If you were working to change this, what improvements and innovations would you highlight?

11. Innovations and Future Plans

General Questions

- What trends do you see emerging in the future regarding sustainability practices and the circular economy in your business?
- Which trends do you see fading and which gaining momentum in the future in the field of sustainability and the circular economy?
- What strategies might your business need to adopt to succeed in a future shaped by these trends?

Specific Questions

- What new technologies or strategies are you considering to improve resource efficiency and reduce pollution?
- What technologies and strategies are you missing to improve resource efficiency and reduce environmental impact?

Conclusion

What else can you add to our conversation and what ideas can you share about implementing a circular economy in the tourism and hospitality sector?

Interview Questions for Tour Operators

These questions are designed for tour operators and focus on their role in promoting the circular economy and reducing food waste in the tourism and hospitality sector. The questions are designed to uncover both current practices and future strategies used to integrate sustainability and circular economy principles, with a particular focus on food waste management.

General Awareness

1. Are you familiar with the concept and principles of sustainable green/circular tourism?
2. What role do you think the tourism sector, and tour operators in particular, play in the development of the circular economy?

General Questions Regarding Circular Economy Implementation Examples

1. Can you describe any examples of circular economy or sustainability initiatives your company is currently implementing in your travel packages or services (e.g., material and energy conservation, waste minimization, reuse, recycling, etc.)?
2. What motivated your company to implement circular economy principles, and how does it benefit both your business and the environment?
3. How do you communicate to your customers that you are implementing circular economy principles in your operations, and do you feel they support and participate in these efforts?
4. Have you encountered any challenges or barriers in implementing circular economy practices in your business? How were you able to overcome those?

Specific Questions on Reducing Food Waste

1. What specific actions have you taken to reduce waste, especially food waste, during tours or accommodations?
2. What steps has your company taken to address the problem of food waste, either directly or through partnerships with hotels, restaurants, and other service providers?
3. How do you address food packaging and other waste during tours? Are there any efforts to minimize single-use plastics or promote biodegradable alternatives?
4. Do you employ any circular economy practices in your operations, such as composting food waste or using locally sourced, renewable resources?
5. Are there any specific technologies you use to minimize food waste included in your service package?
6. Do you implement any measures during your tours (e.g., mealtimes) to monitor or minimize food waste? Could you give specific examples?
7. Do you educate your clients about the importance of reducing food waste while traveling?
8. Have you noticed any trends or signals in client behaviour toward reducing waste? Do travellers expect or demand eco-friendly services?

Interaction with Suppliers and Partners

1. Do you ensure that local suppliers (hotels, restaurants, etc.) align with your sustainability goals, especially in terms of waste reduction?
2. Do you select accommodation, food, and transportation providers based on their sustainability expertise and commitment to the circular economy?
3. Do you engage with local communities to support circular economy principles, such as sourcing food or materials from local producers, which reduces transportation emissions?

Problems

1. What challenges have you encountered in implementing circular economy principles, particularly in dealing with food waste or other waste streams?
2. Are there any regulations or policies that support or hinder your efforts to promote a circular economy in the tourism industry?

Looking Ahead

1. What opportunities does the implementation of a circular economy bring to the tourism sector, and how can your company benefit from it?
2. How do you see the future role of tour operators in promoting sustainable tourism and the circular economy?
3. What innovations or trends might emerge in the tourism and hospitality sector that could accelerate the transition to a circular economy?

Conclusion

What else can you add to our conversation and what ideas can you share about implementing a circular economy in the tourism and hospitality sector?

Annex 3: Stakeholder Interview Conclusions

1) Tourism Industry Committee of the Ministry of Tourism and Sports of the Republic of Kazakhstan

International hotel chains, which are required by their brand standards to implement eco-friendly solutions such as waste sorting, the use of renewable energy, and food waste reduction, were cited as positive examples. Also, in Kazakhstan's regions, the practice of sourcing products from local suppliers is developing—it's more cost-effective and logically sustainable.

Practical measures include training local residents: they are taught not only how to host tourists and develop guesthouses but are also engaged in the overall ecotourism agenda. Waste separation is being implemented in pilot areas, although the country still faces a severe shortage of recycling plants, which is hindering development.

The importance of fostering a culture of responsible consumption among both tourists and local residents was emphasized. This should begin in schools and be supplemented by fines and enforcement measures, including digital monitoring. The contribution of international projects in Kazakhstan, such as SUSTOUKA and MOST, which have conducted training sessions on waste management and efficient resource use among local entrepreneurs working in the tourism industry, such as accommodation providers and travel companies, was also mentioned.

National awards for sustainable practices are not yet available, but international recognition already exists: for example, Katon-Karagay was included in the Green Destinations list, and the village of Saty was recognized as one of the best tourist villages. This demonstrates that local communities can become drivers of sustainable tourism.

Finally, agency representatives noted that the circular economy will gradually be integrated into legislation and development programmes. New environmental standards are currently being developed, including Standard 2993 on ecotourism, which will form the basis for official certification.

2) Ministry of Agriculture of the Republic of Kazakhstan

The response from the Ministry of Agriculture of the Republic of Kazakhstan emphasizes the importance of food security and reducing dependence on imports, which is directly linked to sustainable practices. The Ministry monitors 19 socially significant food products: for many of these items (flour, bread, meat, vegetables), Kazakhstan is completely or almost completely self-sufficient. However, import dependence remains for products such as poultry, fish, cheese, sausage, and sugar.

As part of its import substitution strategy, the Ministry is implementing 780 investment projects worth 2.3 trillion tenge by 2027 aimed at developing domestic production. This creates the foundation for localizing supply chains—an important element of the circular economy, especially in the context of food tourism and sustainable supply.

The key focus is on:

1. Developing local processing and production (dairy farms, fish farms, poultry farms);
2. Creating infrastructure for sustainable food production, which could potentially be used in tourism to provide tourist attractions with local, sustainable products;
3. Reducing food risks is an important aspect in strategic forecasting for sustainable tourism.

Therefore, the Ministry's policy can be seen as institutional support for sustainable consumption in Kazakhstan. It creates the foundation for implementing circular economy principles in the regions, including tourism and agritourism destinations.

3) Ministry of Ecology and Natural Resources of the Republic of Kazakhstan

Kazakhstan's state policy on waste management is defined by the Concept for the Transition of the Republic of Kazakhstan to a "Green Economy" and is aimed at introducing separate waste collection and developing the recycling sector to produce products from recycled materials.

Goals are set for phased and circular waste management: minimizing generation, recycling and reuse, disposal, and burial.

By the end of 2024, separate waste collection had been implemented at various stages in 179 of the republic's 211 cities and districts, and sorting had been implemented in 113.

One method for implementing separate waste collection is the installation of collection points and modern reverse vending machines in public places (bus and train stations, airports, shopping and business centres, etc.).

The installation of appropriate reverse vending machines for collecting plastic bottles and aluminium cans will undoubtedly have a positive impact in addressing certain waste management issues.

To date, approximately 100 reverse vending machines have been installed across the country in the cities of Astana (42 units), Almaty (40 units), Aktobe (9 units) and Ust-Kamenogorsk (9 units) for collecting plastic and aluminium waste, which are owned by Sparklo and ZQ 2021 LLP. Work in this area will continue.

We also note that, in order to improve waste collection, sorting, and recycling, the procedure for paying special waste collection companies through recycling fees, known as EcoKoldau, has been resumed this year.

Furthermore, to improve the waste management infrastructure situation, the Government of the Republic of Kazakhstan approved a mechanism for preferential financing of infrastructure projects (purchase of garbage trucks, sorting, and recycling of solid waste) using recycling fees. The interest rate is 3%, and the loan term through JSC Industrial Development Fund ranges from 3 to 15 years.

4) Department of Tourism, National Chamber of Entrepreneurs of the Republic of Kazakhstan "Atameken"

The Atameken National Chamber of Entrepreneurs views sustainable development and the circular economy as key areas for the future of tourism in Kazakhstan. According to Damilya Kunanova, businesses are already beginning to consider such practices themselves, from the use of alternative energy to waste separation. However, bottom-up initiatives require systemic support from above.

Today, the Atameken National Chamber of Entrepreneurs is part of a working group under the Senate, which discusses measures to support enterprises implementing environmentally friendly technologies. Proposals range from preferential financing to land allocation, tax breaks, and other incentive mechanisms. The main goal is to make sustainability profitable for business.

The chamber does not yet offer any direct training programmes on the circular economy, but the idea is relevant: various training formats are needed for executives, managers, and hotel frontline staff. Plans for 2025 also include developing preventative awareness-raising programmes and promoting effective practices.

Among existing successful examples, Kunanova cites the Wyndham Garden Burabay hotel, which has implemented energy-saving technologies. Initiatives promoting local products are also supported, for example, through shopping tourism and the "Buy Kazakhstani" and "One Village, One Product" programmes.

However, the real problem, in her opinion, is the lack of infrastructure. Without sewerage, a stable power supply, and a waste disposal system, it's difficult to talk about implementing green standards. Therefore, investment in infrastructure foundations should be a priority.

The Atameken National Chamber of Entrepreneurs sees its role as an intermediary between business and the government: it collects proposals, identifies innovative cases, and promotes them through various government platforms, from the Council of Domestic Entrepreneurs to the Senate and the Majilis. The chamber interfaces with entrepreneurs across the country through a network of regional branches.

The importance of economic incentives is also emphasized: if businesses see savings from energy conservation, they will act. This requires not only support and access to funding, but also clear rules, instructions, and step-by-step routes for implementing sustainable practices locally.

As for the future, Kunanova is confident that sustainable development will become not just a trend, but the foundation of a competitive advantage. Hotels and tour operators will promote themselves through environmental friendliness, as tourists increasingly want to be assured that their vacations are environmentally friendly. This will become a key factor in their choice, especially for international guests.

5-6) ALE "Kazakhstan Tourism Association", Kazakhstan Association of Hotels and Restaurants in the form of an association of legal entities

The core idea behind applying the circular economy to tourism is a consistent transition to sustainable practices through government support, the implementation of standards, training, and business participation.

The government is gradually adapting sustainable development principles, taking into account international trends. Collaboration with the Ministry of Ecology and the Tourism Industry Committee plays a key role in implementing standards and green financing mechanisms. Active engagement with government agencies is essential to addressing waste management and resource consumption challenges.

Tourism companies are starting with simple but effective steps: eliminating single-use plastics and using recycled materials. Tour organizers strive not only to reduce waste but also to foster environmentally responsible behaviour among tourists. A participatory approach is crucial, with local residents seeing a positive example and beginning to follow environmental standards.

Visual information alone is insufficient; a deep understanding of circular economy methods and tools is essential. The tourism and hospitality sectors require concrete, practical solutions for effective resource management.

national environmental certification standard based on the UNEP project enables systematic monitoring. Guesthouse certification plays a role in fostering a culture of sustainable tourism.

Certifying tourist offices as "green" incentivizes implementation of eco-friendly practices. European tourists influence the requirements for accommodation facilities, encouraging them to meet sustainable tourism standards.

Tourism and hospitality are interconnected sectors that require a comprehensive approach to implementing circular economy principles. Strengthening ties between businesses, government, and NGOs is essential to building sustainable infrastructure.

7) Almaty Restaurateurs' Club Association

The Almaty Restaurateurs' Club Association actively promotes the idea of the circular economy, but openly admits that its capacity as a public association is insufficient to achieve large-scale impact. The association's primary contribution is outreach: the leadership shares knowledge, educates members about eco-friendly solutions, advises on waste sorting, minimizing packaging, and engaging in local initiatives. However, without financial and institutional resources, further progress is impossible.

Irina Lebedeva emphasizes that sustainable development is primarily a cultural matter, not just a technological one. Until society as a whole recognizes the importance of recycling and careful resource management, it is difficult to talk about a systemic transition. She cites personal examples: she sorts waste, collaborates with activists, and conducts joint educational campaigns, for example, with Yevgeny Mukhamedzhanov, one of the few in the city who actually collects sorted waste and recycles it.

The association does not have the authority to introduce economic incentives or awards, but is willing to serve as a channel of communication between restaurants and the government. Proposals include:

- subsidies and grants for the purchase of waste processing equipment,
- tax incentives for "green" restaurants,
- support for eco-friendly startups and pilot projects.

Barriers include a lack of infrastructure (no one knows where the waste goes after collection), a shortage of recycling facilities, consumer mistrust of reusable containers, and a lack of systematic educational efforts.

Lebedeva names the following as key actions for business:

1. Auditing the current situation—analysing waste, packaging, and resource consumption;
2. Training staff on circular economy principles;
3. Developing a waste reduction plan and engaging with recyclers.

The association is open to collaboration with the hotel and tourism sector, but notes that large-scale changes cannot be achieved without government support and coordination. The creation of a unified online app that would highlight “green” restaurants and hotels is proposed, similar to how electric vehicles navigate charging stations.

Finally, Lebedeva emphasizes that the association needs partners to promote a culture of conscious consumption. The circular economy is not a fad, but a necessity, but for it to become a reality, teamwork is needed—between the government, businesses, and society.

8) Discover Almaty LLP, a tour operator and DMC for receiving foreign tourists in Kazakhstan

Alexander Aknazarov, head of the tour operator Discover Almaty, emphasizes that sustainable and circular tourism is not a fad, but a necessity, especially amid mass tourism and Kazakhstan’s fragile environment. The company is actively implementing sustainable consumption practices, starting with small steps—removing plastic tableware and packaging, switching to artisanal materials, energy-efficient lighting, using dispensers instead of single-use containers, waste sorting, and embedding environmental behaviour into the norm for both employees and clients.

The company is particularly proud of the transition from diesel to electric heating in one of its guesthouses located in Shymbulak National Park—an example of a tangible contribution to reducing its carbon footprint. Such solutions are not only environmentally friendly but are also presented as part of the tourism product, enhancing the company’s image in the eyes of environmentally conscious clients.

Alexander emphasizes the importance of educating tourists. Visual reminders and posters about sustainability principles are displayed throughout the office. During tours, waste is sorted directly on buses or on site—this is especially important for nature excursions. Tourists (especially Europeans) are asked to bring their own reusable mugs and thermoses. He notes that the overwhelming majority of European guests are already aware of and follow SCP principles, while tourists from Asian countries, he says, do not yet have a well-established culture of eco-friendly behaviour.

Educational efforts were also conducted internally; at first, employees were resistant to the idea of eliminating plastic and sorting waste, but through workshops, training, and repetition, they were able to change the internal culture.

Among his collaborations and partnerships, Alexander highlights interaction with EcoNetwork, participation in cleanups, waste delivery for recycling, and visits to eco-centres with tourists and interns. When selecting hotels and partners, the tour operator prioritizes those who also adhere to sustainability principles—this is especially important for meeting the expectations of international clients.

Looking to the future, he is confident that the circular economy is the path to a more conscious society. The tour operator can serve as a link between tourists, local communities, and the natural environment. He notes positive trends: more recycling containers, more biodegradable packaging, and more responsible individuals. However, he notes that infrastructure is still incomplete—there is a lack of recycling capacity, accessible transportation solutions, and government support.

9) Ibis Almaty Jetisu Hotel

Evgeny Shrayer, General Manager of ibis Almaty Jetisu and Novotel Living.

At the Accor group, of which both hotels are a part, the circular economy and sustainability are not just trends, but commitments. The decision to eliminate single-use plastics from all operations was made back in 2021. Everything from bottled water to individually packaged food and disposable hygiene products was eliminated. Instead, we have bamboo brushes, FSC-certified paper packaging, hot and cold-water dispensers on floors, and carafes in rooms. This is standard package, not an add-on.

Green Key certification has confirmed that this approach is working. First, it was awarded to Novotel City Center, then to both hotels in Almaty-Zhetysu.

Regarding waste, we have a systems approach in place. Paper is collected and recycled (for example, by Karina Paper). Bed linen, if discarded, is donated to shelters or volunteer organizations. During floods, several tons were sent. Food waste, if possible, is given to farmers to feed animals. However, this depends entirely on HASP and hygiene standards—what is and isn't allowed.

Plastic packaging and utensils are prohibited. Any food left uneaten by guests is recycled: croissants are turned into puddings, eggs into salads. Uneaten food is constantly analysed, and menus are adjusted accordingly.

Hotels use energy-efficient lamps, motion sensors, and water-saving technologies (no more than 5 litres per minute in showers). Rooms automatically turn off power and ventilation when guests leave. There's a system that turns off the air conditioning when a window is open. All this reduces resource consumption.

Suppliers are carefully considered, with local suppliers being a priority. Accor requires at least 60% of its products to be locally sourced. The problem lies elsewhere—certification. Many farmers and producers are unwilling or unprepared for international certification, especially if they don't plan to export.

Furniture and appliance recycling has not yet been an issue—the hotels are new. Anything that is written off is either repaired or donated to organizations. The main thing is not to throw it away.

The main barrier is the unpreparedness of the infrastructure. They wanted to organize the return of glass bottles to producers, but no one was interested. The lack of recycling, certification, and standards—all of this slows down the process. The business itself is ready, but there's no support—neither from the government nor from suppliers. We have to find solutions ourselves or turn to partners like HelloEco for help.

In terms of energy sources, renewable ones are not yet used. For Kazakhstan, it's expensive, complicated, and unstable. But there are BMS (Building Management Systems) that regulate air supply and exhaust depending on the temperature and occupancy of the building.

Guest reviews? At first, it was negative, especially after they stopped using disposable cosmetics and bottled water. Now, on the contrary, there is gratitude and respect. International clients are now choosing hotels specifically for their eco-responsibility. Companies are requesting certificates, and this is becoming an advantage. They plan to implement a carbon offsetting system by 2025.

There are also savings: fewer containers, less solid waste, and reduced water purchases. Although in some cases, the opposite is true: when expensive, certified consumables must be purchased from abroad. Ultimately, some practices pay for themselves, while others are unprofitable, but strategically, they are an investment in sustainability and reputation.

10) Tahar Hotel

A key practice is the reuse of textiles. The hotel has its own sewing workshop and takes full care of its own upholstery: linens, curtains, and pillows are not thrown away but resewn, repaired, and reused until they wear out. This not only reduces waste but also results in significant savings.

The hotel recycles paper, plastic, and metal—it has bins and a contract with a recycler. Guests are encouraged to participate: they drop off sorted waste and read informational letters about sustainable consumption principles. According to the manager, this is a small but important response.

To reduce single-use plastic, they've eliminated plastic tableware, used ceramics, and purchased all chemicals in bulk (25-liter containers), which also reduces packaging. Drinking water is offered in pitchers, using a filter instead of plastic bottles.

For energy efficiency, we use high-end energy-saving appliances, LED lighting, and motion sensors. Renewable energy sources are not currently being considered due to technical limitations of the city's infrastructure, but there are plans to install solar panels and insulate the building.

When selecting suppliers, we prioritize local, certified manufacturers. This applies to both textiles and household cleaning products. Emphasis on sustainability: by requiring certificates confirming safety and biodegradability.

An interesting case: another company sold food waste to farmers and shelters as animal feed. This isn't directly implemented at Takhar, but it is being considered as a potential model.

They also actively repair appliances and furniture and donate them for spare parts if they are beyond repair. Paper is reused, and cardboard is recycled.

The business also participates in certification programmes—the hotel has received certificates from Sustok and Travel Life. The main challenges are the lack of recycling facilities, the complexity and expense of installing more advanced technologies (for example, converting food waste into methane), and the poor adaptation of urban infrastructure.

Among future trends, the manager notes the growth of conscious consumption—when guests use only what they really need. The main motivator is not only economics, but also a deep sense of responsibility. Moreover, all development essentially proceeds through self-education and grassroots initiative: "the main thing is training."

11) Local wine supplier "Arba Wine"

Production is based on locally sourced ingredients: grapes are grown in their own vineyards without pesticides or herbicides, and harvested by hand. Grape residue (pomace) is used as fertilizer—an example of a closed-loop approach that eliminates food waste.

For cider production, the company collaborates with neighbouring farmers who also use environmentally friendly methods. All raw materials are sourced with minimal logistical costs—literally "from the field nearby."

Glass containers remain a serious problem: ArbaWine collects about 50% of the bottles, but there's nowhere to recycle them—no industrial-grade solutions have been implemented in Kazakhstan. Recycling bottles is prohibited by law, and melting them down isn't an option. As a result, the company has accumulated large stockpiles of glass containers, which are currently simply stored. This situation is presented as one of the key barriers to a circular economy in the industry.

Packaging is another issue. Although glass is an environmentally friendly material suitable for recycling, the lack of infrastructure makes this an advantage only on paper. Cardboard boxes are used, and ArbaWine is trying to offer craft bags for retail sales, but is encountering mistrust from consumers who request plastic ones.

The company emphasizes the importance of an organic approach not only in production but also as a philosophy. Despite the lack of official "green" certifications (obtaining them in Kazakhstan is expensive and complex), ArbaWine is committed to sustainability and openly demonstrates its methods through winery tours.

Potential solutions cited by the respondent include:

- creating a glass recycling system at the state level
- stricter packaging regulations, and a ban on excess plastic
- educational campaigns—starting with kindergartens
- infrastructure initiatives such as mobile bottle collection from restaurants and hotels.

He emphasizes that sustainability requires a systems approach: not only businesses, but also customers and the government must take part. For now, everything is based on the company's enthusiasm and internal choices.

Overall, ArbaWine is an example of a business that effectively embraces the principles of a circular economy, but lacks formal systems support: no processing capacity, no legislative incentives, and no widespread consumer demand. Nevertheless, the belief in the development of this sector and the willingness to participate are clear.

12) IP "Stepanenko", manufacturer and supplier of natural honey and jams.

A honey and jam supplier from the Yenbekshikazakh district is building sustainable practices that are close to ideal for its niche: locality, seasonality, and environmental friendliness are all respected. Raw materials are sourced exclusively from local farmers, directly from the field, without intermediaries or markets. All products (berries and sugar) are processed without preservatives, and the honey is sourced from its own apiary, without any added fertilizers or additives.

The "minimal waste" principle is implemented through precise portion packaging—from 28 grams for individual consumption to 500–600 grams. Hotels order precisely these quantities to avoid excess supply. As a result, food waste is virtually eliminated.

All packaging is glass; plastic is deliberately excluded. However, the issue of glass return and recycling, like other market participants, remains unresolved: Kazakhstan lacks sufficient recycling capacity, and there are no organized return systems with glass container suppliers. The supplier hasn't yet seen any initiatives to create a closed-loop supply chain, but notes that if hotels and tourist centres are interested, they could organize the collection of leftovers—it is more of a logistical issue, really.

Certification is mandatory: the supplier obtains certificates of conformity (including in Moscow and from the Sharmanov Institute of Nutrition), as they work with five-star hotels, which have high quality and safety standards.

Organic farming is the basis for their interactions with farmers: farmers in the region have largely switched to European-produced organic products, abandoning the use of pesticides. This reflects a shift toward regenerative methods and a sustainable approach at the agricultural level.

Collaboration with hotels is direct, working with purchasing departments and chefs. The respondent references a Rixos Hotel practice where the chef personally tests products and discusses portioning options—a lively, daily dialogue. This approach allows for precise tailoring of packaging and quantities to the client's needs.

Looking ahead, the supplier expects standardization of packaging and consumption standards to be a key focus. People are already focusing on portion control, especially in tourism, where mobility and ease are important. At the same time, old approaches—bulk purchasing and surpluses—are being replaced by an understanding of precise consumption.

It is noted that direct supplier-customer communication, without intermediaries, is essential for sustainability. Only in this way, in his opinion, can one ensure fair pricing and product compliance with customer requirements.

13) Narxoz University

In the interview with Elena Anatolyevna Abenova, Head of the Tourism Department at Narxoz University, important ideas and practices related to sustainable consumption practices and elements of the circular economy were discussed. The university actively promotes sustainable development principles both in its academic programmes and in its daily operations. For several years, the university building has had a separate waste collection system in place for three categories: paper, plastic, and mixed waste. Waste is recycled, allowing students to gain not only theoretical but also practical insight into eco-friendly behaviour.

Considerable attention is paid to landscaping: tens of thousands of plants have been planted around the campus, significantly reducing air pollution. These results have been confirmed by research conducted by the university's Institute for Sustainable Development.

On the academic side of things, the university has renamed its master's programme into "Tourism and Sustainable Development," reflecting its strategic focus on the greening of tourism. Students learn not only through lectures but also through interaction with practitioners, participation in real-world projects, and research. Previously, for example, graduates prepared diploma projects aimed at optimizing waste in the restaurant industry.

The importance of an interdisciplinary approach is also emphasized: the university actively promotes collaboration between the fields of ecology, tourism, sustainable development, and even business. According to the respondent, such connections in educational and project work need to become more widespread.

It is especially important that both business representatives and government agencies be involved in the development of sustainable practices.

Suggestions include creating a new profession, “tourist-ecologist,” (tourist-environmentalist) developing a mentoring system, and developing practice-oriented startups at the university. Another idea is to create a unified calendar of scientific events on sustainable development to facilitate the exchange of experience and collaboration between universities, NGOs, and businesses.

The issue of waste management culture—both in society at large and in the educational environment—is particularly highlighted. Elena Anatolyevna believes that without targeted promotion of waste sorting habits and the creation of a comprehensive infrastructure (including recycling plants), it is difficult to talk about a true circular economy. She is also confident that the university can become a pilot site for testing and implementing innovative sustainable consumption solutions if it establishes effective collaboration with businesses and international partners.

14) Student majoring in Hospitality Management at Narxoz University

Meruert Nurzhakyp, a third-year student at Narxoz, majoring in Hospitality Management. The circular economy is a way to use resources as efficiently as possible and avoid creating unnecessary waste. In tourism, this can mean everything from waste sorting to water recycling and the implementation of energy-efficient technologies. In Kazakhstan, this is still in its infancy. While large hotels like the Ritz Carlton are already taking the first steps—sorting waste, conserving water, and minimizing plastic—most small hotels and restaurants lack the knowledge and resources to implement sustainable practices.

During my internship at the hotel, I was able to see how these things work firsthand: eco-friendly detergents, optimized laundry, and resource management in the laundry and housekeeping departments. All of this has a real impact on efficiency and, if implemented correctly, reduces costs.

Technology plays a huge role here. AI systems are already available that can analyse food balances and suggest what and how best to purchase to avoid excess. In 10-15 years, such solutions will become the norm: smart refrigerators, freshness sensors, tracking systems—there will be less waste and businesses will be better off.

Food waste is a separate issue. The problem begins with overproduction, especially in hotels with buffets. Menus are prepared with extra supplies, and leftovers are often thrown away. But there are solutions: composting, biogas plants, and residue analysis apps. All of this is part of the circular model.

It's important not only to implement technology but also to educate people. Currently, there are practically no courses on sustainable tourism at universities. Yes, the topic is addressed in certain courses, but systematic training is lacking. It would be great to add courses on environmental management to the programme and conduct practical training specifically at companies that are already accomplishing something to this end.

If I had my own business, the first thing I'd do would be to implement waste sorting, switch to green energy, and regularly train my staff. Without this, I won't get anywhere. And, of course, I'd engage guests through simple tools: instructions, apps, and master classes.

As for the government, a lot depends on incentives: tax breaks, grants, and regulations. These are currently lacking. And without external support, it's especially difficult for small businesses to get started.

The future lies in eco-friendly, digital tourism. And it's crucial that students, guests, and business owners are on the same page. Only then can we truly make a difference.

15) ECO Network Company – greening and promoting sustainable development principles in business

ECO Network actively promotes sustainable practices among businesses throughout Kazakhstan. Its core product is the “Green Office” programme, which includes training employees in the basics of responsible consumption, waste sorting, resource conservation, and the implementation of separate collection systems directly in the workplace. As a result, clients gain access to a digital dashboard where they can track their impact: how many resources have been saved, how many trees have been “saved,” and how energy consumption has changed. This data forms a company's environmental profile, stimulating its sustainable development.

Dina emphasizes that their work is built not only around consulting but also around the implementation of specific solutions. For example, the company helps clients connect with recycling companies, organize cleanups, tree plantings, educational team building events, and even creates souvenirs from recycled plastic. They also work with the tourism sector, including hotels, restaurants, and visitor centres.

An interesting practical solution was the launch of an eco-hub in Almaty, where waste sorting, recycling, and reuse processes are demonstrated. Students are involved in the project, and recycled materials (such as coloured glass) are transformed into souvenirs or candles.

Particular attention is paid to organic waste. ECO Network teaches its clients how to properly manage food scraps—they can be donated to farms, animal shelters, or composted. They also recommend avoiding the use of non-recyclable materials and switching to reusable tableware and eco-friendly packaging.

They develop local recommendations based on what waste can be recycled in a particular region. This helps adapt to the actual capabilities and infrastructure of each city.

The company actively collaborates with government agencies such as Kazakhtourism and local governments, develops training programmes for businesses, and participates in environmental campaigns and certification initiatives such as TravelLife and Green Destination.

One such creative approach has been the introduction of an eco-coin system—plastic coins that guests at cafes and restaurants receive for eco-friendly behaviour, for example, by bringing their own thermos. These coins can be exchanged for eco-friendly products at a special store. This gamification makes sustainable behaviour trendy and attractive.

Among the difficulties, Dina cites the human factor—not everyone is prepared to sort waste, some people ignore the rules or even spoil the material already collected. There is also a shortage of high-quality local food products, forcing hotels and restaurants to order imported goods.

Nevertheless, the sustainability trend is on the rise in Kazakhstan. While previously only international companies with corporate standards commissioned them, now local businesses are increasingly taking the initiative. ECO Network believes that the main path to a circular economy is education: from kindergartens to universities, we need to raise conscious people who care.

Annex 4: Foresight Session Agenda

Day 1

09.00-09.30	PARTICIPANT REGISTRATION
09.30-09.40	Official welcome speech (Ministry of Economy/Tourism/Leading Association – depending on the country)
09.40-10.00	Research Programme Presentation (Zinaida Fadeeva)
10.00-10.20	What is the Circular Economy? (Regional Expert)
10.20-10.40	Presentation of Regional Survey Results (Malkhaz Adeishvili)
10.40-11.00	Coffee Break
THE FOLLOWING TIME SLOT IS ENTIRELY DEDICATED TO FORESIGHT	
11.00-12.00	<p>INTRODUCTION: GAME “What is the Snapshot of the Present?”</p> <p>Participants choose from the proposed images the one they believe best illustrates the present. After a group discussion, they justify their choice.</p> <p>WORLD WE LIVE IN: WHAT IS POSTHABITAL TIME (PHT)?</p> <p>Introductory material laying the foundation for further work with the new tool and helping to understand the need for foresight and future prospects research.</p>
12.00-13.00	<p>WHEEL OF INTERCONNECTIONS</p> <p><u>Group work:</u></p> <ol style="list-style-type: none"> 1. The selected problems will indicate what truly needs to change; 2. Participants will build complex relationships that will help them understand the current state of the sector. <p>HOW ARE PHT AND FORESIGHT LINKED?</p> <p>The introductory material presents the concept of foresight, its definition, characteristics, areas of application, its application, and distinctive features in comparison with traditional planning.</p>
13.00-14.00	LUNCH BREAK
14.00-14.40	<p>FUTURE STARTS TODAY</p> <p><u>Group work:</u> Participants are to critically assess the current state of the industry by answering three key questions:</p> <ol style="list-style-type: none"> 1. What doesn't work today? 2. What are the barriers to change? 3. What do most people overlook? <p>Come up with a metaphor that can best illustrate the present.</p>
14.40-15.40	<p>A MENAGERIE OF POSTHABITAL TIME: BLACK ELEPHANTS, BLACK SWANS, BLACK JELLYFISH</p> <p><u>Group work:</u> Participants focus on identifying elements in the current socio-political and economic environment that could serve as drivers of change in the sector in the future.</p>

15.40-16.00	Coffee Break
16.00-17.00	<p>TRENDS AND SIGNALS</p> <p><u>Group work:</u> Participants learn to identify trends and their life cycles, as well as signals that could influence the sector's future development. The S-curve is used as a tool. Participants learn to create graphs to evaluate various phenomena.</p> <p>DAY'S TAKEAWAYS</p>

Day 2

09.00-09.30	Registration
09.30-10.00	<p>POLAK'S GAME</p> <p><u>Group work:</u> Participants construct scenarios of probable futures according to given parameters</p>
10.00-11.20	<p>PREFERRED FUTURE: TOURISM 2045.</p> <p><u>Group work:</u> Participants are given a description of the sector as they would like it to be in 20 years.</p>
11.20-11.40	Coffee Break
11.40-13.00	<p>PREFERRED FUTURE: TOURISM 2045.</p> <p><u>Group work:</u> continued</p>
13.00-14.00	LUNCH BREAK
14.00-15.00	<p>FUTURE TRIANGLE.</p> <p><u>Group work:</u> Using the "Future Triangle" foresight tool, participants evaluate the sector's past and present and identify possible scenarios for its development: "Back to the Past," "No Change," "Minor Changes," "Major Changes," and "Radical Changes."</p>
15.00-16.00	<p>RETROPOULATION: WHAT'S NEXT?</p> <p><u>Group work:</u> Participants discuss the risks, resources, and connections necessary to realize the future vision.</p>
16.00-16.30	Debriefing: Discussion of the resulting scenarios

Annex 5: Trends and Signals Collected During Foresight Sessions

Trends

Policy:

1. Negligence and indifference of government agencies
2. "Here and now," everything for the media attention, box-ticking / performative
3. Dependence on government support measures
4. Political instability
5. Danger of regional conflicts
6. Competition for water resources
7. Corruption
8. Weak political position on the global stage
9. Bureaucracy
10. Taza-Kazakhstan – a policy for environmental support

Economy:

1. Increasing competition from China
2. Rising food prices
3. High household debt load
4. Chinese and EU economic corridors
5. Growth of invisible intermediaries in the supply chain, leading to higher prices for goods
6. Growth of shell companies taking out cheap loans
7. Financial support for sustainable tourism
8. Financial illiteracy
9. Outflow of local products for export
10. Import dependence, resource dependence
11. Availability of preferences for SMEs
12. Investments in AI and crypto
13. Energy crisis

Technologies:

1. Food Sharing apps for redistribution of surplus food
2. Spyware for collecting personal data
3. Implementation of AI systems for assessing food demand to reduce waste
4. Information accessibility
5. Development of digital infrastructure (transportation, hotels, restaurants)
6. Digital fraud
7. Growth of AI
8. Optimization of systems through the implementation of AI

Social:

1. Universalization of culture, including food
2. Urbanization
3. Unstable mental health of the population (depression, bullying, abuse)
4. Promotion of eco-movements and volunteering
5. Infantilization of society

6. Reels-based thinking
7. Clash of generations
8. Support for higher and secondary vocational education
9. Increasing influence of radical religious movements
10. The language question
11. Increasing competition for social grants by specialty
12. Stratification of society by material wealth
13. Support for gambling and ludomania (shadow business)

Environment:

1. Development of GMO production
2. Unpredictability of climatic conditions (crop yields)
3. Waste problems, lack of recycling
4. Gasification of thermal power plants
5. New plant and animal diseases
6. Air and vehicle emissions monitoring
7. Climate change
8. It's trendy to be "green" and to communicate one's concern for the environment
9. Development of nature conservation areas
10. Regulation of decarbonization
11. Environmental issues (water, air, natural resources)
12. Air pollution

Signals

1. Lifting sanctions, outflow of funds
2. Promotion of eco-friendly apps with cashback
3. Increased migration in the event of military action or its cessation
4. Plastic credit and banks encouraging eco-friendly habits
5. Electronic interpreters
6. Multilingualism
7. Handmade is becoming a brand trend
8. Promotion of tree planting Carbon certificate
9. Eco-teambuilding
10. Decreased customer loyalty
11. Sorting centres
12. Use of craft takeaway tableware
13. Promotion: planting trees near your yard + "send a photo - get free seedlings"
14. Replacing women with robots
15. Carbon certificate: the company purchases it for you and uses your money to carry out eco-promotions
16. Eco-promotions, prizes, composting at the legislative level
17. Training eco-specialists
18. Problem with the reliability of incoming information
19. Use of biodegradable consumables (chemicals)
20. Recycling some food waste into dish décor and flavour enhancers
21. Problems with stray animals
22. Digital "allergies"

23. Accumulation of electronic waste
24. Breaks and grants for eco-activism
25. Introduction of fines for failure to sort waste
26. Use of cryptocurrency
27. Eco-movements in the form of a “bottle turn-in” challenge in the media
28. Low fines for environmental violations
29. Introduction of special Eco-criteria for suppliers
30. Rewarding guests with points for circular habits
31. Using low-polluting building materials



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