

INTEGRATING CIRCULAR BIOECONOMY PRINCIPLES INTO REGIONAL EVENT TOURISM: STRATEGIC DIRECTIONS FOR ENHANCING DESTINATION ATTRACTIVENESS IN BUKHARA

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Аннотация

В статье рассматриваются международные научные конгрессы как форма MICE-туризма (деловые встречи, инсентив-поездки, конференции, выставки) и предлагается модель их организации на основе принципов циркулярной биоэкономики в историко-культурных дестинациях. На примере III Международной конвенции по биоэкономике (Бухара, 24-25 сентября 2026 г.) применён смешанный исследовательский дизайн, сочетающий анализ документов организаторов, картирование ресурсных потоков мероприятия и сценарную оценку прямых расходов. Полученные оценки носят предварительный (ex-ante) характер и подлежат проверке по данным после проведения мероприятия. Результаты показывают, что пакетная структура взносов направляет расходы иностранных делегатов непосредственно в местную гостиничную сферу и общественное питание, а гибридный формат снижает углеродоёмкость участия. Питание, материалы и транспорт определены как три потока с наибольшим потенциалом цикличности. В качестве инструмента политики рекомендуется внедрение «Зелёного стандарта мероприятий» для Бухары, позволяющего превратить научные мероприятия в регенеративный фактор повышения привлекательности дестинации в межсезонье.

Ключевые слова: циркулярная биоэкономика; событийный туризм; MICE; привлекательность дестинации; Бухара; зелёный стандарт мероприятий

Annotatsiya

Maqolada xalqaro ilmiy anjumanlar MICE (uchrashuvlar, rag'batlantirish sayohatlari, konferensiyalar, ko'rgazmalar) turizmining bir shakli sifatida o'rganildi hamda tarixiy-madaniy destinatsiyalarda ularni aylanma bioiqtisodiyot tamoyillari asosida tashkil etish modeli taklif qilindi. III Xalqaro bioiqtisodiyot konvensiyasi (Buxoro, 2026-yil 24-25-sentyabr) misolida aralash usullarga asoslangan tadqiqot dizayni qo'llanildi: tashkilotchilar hujjatlarini tahlil qilish, tadbir faoliyatidagi resurs oqimlarini xaritalash va bevosita xarajatlarni ssenariy asosida baholash. Baholashlar dastlabki (ex-ante) xarakterga ega bo'lib, tadbirdan keyingi ma'lumotlar bilan tekshirilishi lozim. Natijalar shuni ko'rsatdiki, yig'ma badal tuzilmasi xorijiy delegatlar xarajatlarini bevosita mahalliy mehmonxona va ovqatlanish xizmatlariga yo'naltiradi, gibrid format esa ishtirokning uglerod sig'imini kamaytiradi. Ovqatlanish, materiallar va transport aylanma iqtisodiyot salohiyati eng yuqori bo'lgan uchta resurs oqimi ekanligi aniqlandi. Ilmiy tadbirlarni destinatsiya jozibadorligini mavsumdan

tashqari davrda oshiruvchi regenerativ omilga aylantirish uchun siyosiy vosita sifatida Buxoro uchun “Yashil tadbir standarti”ni joriy etish tavsiya etiladi.

Kalit soʻzlar: aylanma bioiqtisodiyot; tadbir turizmi; MICE; destinatsiya jozibadorligi; Buxoro; yashil tadbir standarti

Abstract

The paper examines international scientific conventions as a form of MICE (meetings, incentives, conferences, exhibitions) tourism and proposes a framework for organising them according to circular bioeconomy principles in heritage destinations. Using the III International Bioeconomy Convention (Bukhara, 24-25 September 2026) as a case, the study applies a mixed-methods design combining document analysis of organiser data, resource-flow mapping of event operations and scenario-based estimation of direct expenditure. The results show that a bundled fee structure channels foreign delegate spending directly into local hospitality, that a hybrid format lowers the carbon intensity of participation, and that catering, materials and mobility are the three streams with the highest circularity potential. A “Green Event Standard” for Bukhara is recommended as a policy instrument for turning scientific events into a regenerative, off-season driver of destination attractiveness.

Keywords: circular bioeconomy; event tourism; MICE; destination attractiveness; Bukhara; green event standard

INTRODUCTION

Uzbekistan's tourism strategy increasingly relies on diversifying beyond monument-based sightseeing towards knowledge-intensive segments, among which scientific and business events are the most resilient to seasonality. Bukhara, a UNESCO-listed historic city whose international arrivals grew from about 13 thousand in 2020 to over 1.7 million in 2024 [17], faces the classic risks of a narrow heritage product: seasonality, crowding pressure on historic sites and short length of stay [11]. Recent studies in the destination show that the quality of events is a strong predictor of tourist satisfaction and, through it, of local economic outcomes [16], and that educational and academic mobility generates measurable economic benefits for host universities and cities [15]. Every international gathering, however, creates a temporary population spike that loads municipal waste, water, energy and food systems. The research gap addressed here is the absence of an operational model that links event tourism to the circular bioeconomy, i.e. to the regenerative use of biological resources and the closing of material loops [3]; [13]. The aim of the paper is to conceptualise academic event tourism as a closed-loop bioeconomic engine and to derive strategic directions for Bukhara on the basis of the III International Bioeconomy Convention.

LITERATURE REVIEW

Event tourism research treats planned events as instruments of destination development, image formation and demand smoothing [9]. Business and academic events are distinguished by high per-capita expenditure, long average stays and low sensitivity to weather [5], which makes them particularly valuable for heritage cities

with pronounced seasonality; in Bukhara, event quality has been shown to explain the bulk of the variation in perceived economic outcomes via tourist satisfaction [16], while sport and event products are being reframed around social sustainability [17]. The sustainability of events has been discussed mainly through the lens of greening - waste reduction and carbon management [14] - and, more recently, through accessibility and smart-city infrastructure for large gatherings in Bukhara [6]; [8]. The circular economy literature offers a more systemic framing based on the reduce-reuse-recycle-regenerate hierarchy [7]; [13], and the bioeconomy strand adds the dimension of biological resources: biomass sourcing, organic waste valorisation and bio-based substitutes for fossil materials [3]. Enterprise-level evidence from the Bukhara region indicates that sustainability expenditure is associated with revenue performance of ecotourism firms [12], and destination-level work has begun to integrate ESG dimensions into tourism assessment through digital tools [2]; [10]. Communication research from the same faculty shows that sustainability messaging and heritage interpretation shape visitor behaviour [18]; [19], and that sustainability competencies are being embedded in local tourism curricula [1]. The Bio-Circular-Green (BCG) model integrates these perspectives into a single agenda; what the literature has not yet done is translate BCG principles to the operational level of a single scientific event in a regional heritage destination, which is the contribution of this paper.

The resulting conceptual framework is shown in Figure 1: a scientific event is treated as an operational platform that converts delegate, biomass, material and energy inputs either into linear outputs (waste, emissions, expenditure leakage) or, under circular design, into regenerative loops; its impacts are assessed along the E, S and G dimensions and fed back into event policy through a Green Event Standard.

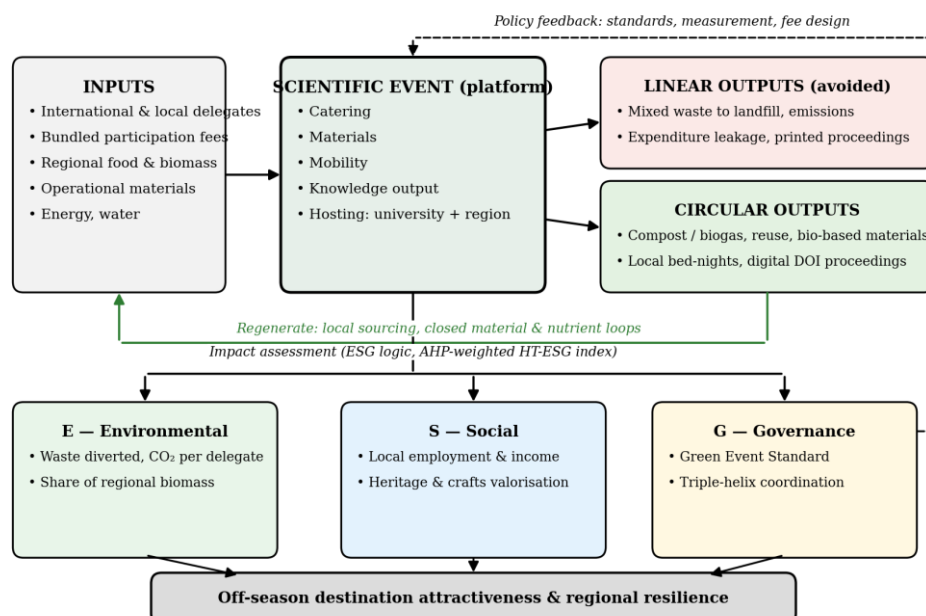


Figure 1. Conceptual framework of the bio-circular-green (BCG) event tourism model for a heritage destination¹

¹ Source: developed by the author.

Figure 1 shows that the same scientific event can follow two alternative trajectories. Along the linear trajectory, the inputs leave the destination as mixed waste, emissions, expenditure leakage and printed proceedings. Along the circular trajectory, catering, materials, mobility and knowledge output are redesigned so that biomass returns to the system as compost or biogas, materials are reused, delegate spending is retained as local bed-nights and proceedings are issued in digital DOI-indexed form. The environmental, social and governance blocks translate these outcomes into measurable indicators, and the dashed feedback line shows that standards, measurement and fee design return to the event platform as policy levers. The final outcome of the model is off-season destination attractiveness and regional resilience.

METHODOLOGY

A mixed-methods case-study design is used. First, the official information letter and organisational documents of the III International Bioeconomy Convention were analysed to extract the event's structural parameters (dates, venue, participant composition, fee structure, publication outputs) [4]. Second, event operations were mapped as resource streams (catering, materials, mobility, knowledge output) and each stream was compared with linear and circular practice. Third, a scenario-based estimation of direct local expenditure was performed using the organiser's fee structure; because the event takes place after the submission deadline of this paper, the estimates are ex-ante and are to be verified with post-event registration and hospitality data. The analytical categories follow the ESG logic (environmental, social, governance) so that the results can later be integrated into a regional tourism sustainability index, with indicator weights derived through expert pairwise comparison [20].

ANALYSIS AND RESULTS

Economic footprint. The fee design is the first circularity lever. Because the foreign in-person fee of USD 180 already includes three hotel nights and a meal [4], the largest share of each delegate's outlay is captured by Bukhara hotels and caterers rather than by intermediaries; each foreign in-person delegate therefore generates at least three commercial bed-nights in late September, a shoulder period for leisure demand. With the planned 30 local participants, the local fee alone yields UZS 6.0 million of organisational revenue, while the optional Scopus Q3 publication channel (USD 450) monetises the knowledge output of the event. The USD 20 remote track widens the geographic reach of the gathering without air travel, which is the single largest carbon item of international events. These mechanisms are consistent with the satisfaction-mediated pathway from event quality to economic outcomes documented for the region [16].

Circularity of resource streams. Table 1 contrasts linear and circular practice for the four principal streams identified in the mapping exercise.

Table 1

Linear versus circular organisation of the event's resource streams¹

Resource stream	Linear event practice	Circular practice recommended for the event
Catering	Imported inputs, mixed waste to landfill	Regional agricultural sourcing; separate collection of organic waste for composting/biogas
Materials	Plastic badges, printed programmes, single-use packaging	Reusable/biobased badges, QR-based programme, local artisan gifts
Mobility	Individual taxi transfers	Shared shuttles, walkable venue-hotel cluster in the historic centre
Knowledge output	Printed proceedings	DOI-indexed digital proceedings, hybrid (online) track
Offsetting	None	University-led tree planting / restoration linked to delegate numbers

The mapping shows that catering and materials are the streams where biological resources are directly involved and where the bioeconomy dimension is strongest: regional sourcing of food shortens supply chains and supports the Bukhara agricultural economy, while organic waste can be diverted to composting or small-scale biogas units instead of landfill. Mobility and knowledge output depend mainly on design choices (venue clustering, hybrid format, digital proceedings) that require little investment; GIS-based optimisation of public transport in the historic centre [8] provides a ready basis for shuttle planning. The joint organisation of the event by a university, a regional ecology department and an applied research centre is itself a governance asset that aligns stakeholders around one green agenda and offers a channel for the strategic sustainability communication recommended by Radjabov et al. [18].

CONCLUSION AND SUGGESTIONS

International scientific conventions can be reconceptualised from resource-consuming gatherings into regenerative bioeconomic platforms that strengthen destination attractiveness in the off-season. On the basis of the case analysis the following recommendations are proposed:

1. Adopt a regional “Green Event Standard” jointly by Bukhara State University and the Department of Ecology and Climate Change, with mandatory criteria for local sourcing, organic-waste separation, paperless proceedings and a hybrid track.
2. Institutionalise measurement: collect delegate expenditure, bed-nights and waste data at every scientific event so that the ex-ante estimates of this paper are replaced by audited indicators and fed into a regional tourism ESG index.
3. Bundle circular services into the fee: extend the current accommodation-inclusive model to shuttle transport and locally produced meals, guaranteeing that delegate spending stays within the regional economy.

¹ Source: compiled by the author based on the resource-flow mapping of the event [4].

4. Link events to restoration: tie an offset action (tree planting, riparian or oasis restoration) to the number of in-person delegates, creating a visible ecological legacy of each event.

Future research should apply the framework after the September 2026 event to obtain empirical values for the indicators, and should test the transferability of the model to other heritage destinations of Uzbekistan.

REFERENCES

1. Akhrorova, N., Omonova, N., Alimova, S., Bukharova, N., & Spulber, D. (2026). Embedding sustainability competencies in tourism education through UN Tourism TedQual certification: A curriculum model from a Silk Road heritage destination. *Frontiers in Education*, 11, 1934838. <https://doi.org/10.3389/feduc.2026.1934838>
2. Back, K.-J. (2024). ESG for the hospitality and tourism research: Essential demanded research area for all. *Tourism Management*, 105, 104954. <https://doi.org/10.1016/j.tourman.2024.104954>
3. Bugge, M. M., Hansen, T., & Klitkou, A. (2016). What is the bioeconomy? A review of the literature. *Sustainability*, 8(7), 691. <https://doi.org/10.3390/su8070691>
4. Bukhara State University. (2026). III International Bioeconomy Convention: Information letter. Bukhara State University, ESGCA Centre.
5. Davidson, R., & Cope, B. (2003). *Business travel: Conferences, incentive travel, exhibitions, corporate hospitality and corporate travel*. Pearson Education.
6. Dushanova, Y., Kadirova, S., Kurbanova, M., & Khaydarova, D. (2025). Smart and inclusive tourism in Bukhara: Towards accessibility in heritage city. *Frontiers in Sports and Active Living*, 7, 1624663. <https://doi.org/10.3389/fspor.2025.1624663>
7. Ellen MacArthur Foundation. (2013). *Towards the circular economy: Economic and business rationale for an accelerated transition*. Ellen MacArthur Foundation.
8. Farmanov, E., Omonova, N., Ibragimov, N., Juraev, A., Zoltán, B., & Dávid, L. D. (2026). GIS-based public transport network optimization in UNESCO World Heritage cities in the example of Bukhara, Uzbekistan. *Frontiers in Sustainable Cities*, 8, 1782977. <https://doi.org/10.3389/frsc.2026.1782977>
9. Getz, D., & Page, S. J. (2016). Progress and prospects for event tourism research. *Tourism Management*, 52, 593-631. <https://doi.org/10.1016/j.tourman.2015.03.007>
10. Jafarova, K., Farmanov, E., Kadirova, S., Makhmudova, N., & Khodjaeva, F. (2026). Integrating ESG dimensions through digital technologies for sustainable tourism development: Evidence from heritage destinations in Uzbekistan. *Frontiers in Sustainability*, 7, 1784778. <https://doi.org/10.3389/frsus.2026.1784778>
11. Karimov, M., Jeong, J. Y., & Okmullaev, R. (2025). Sustainable tourism development: The case of Silk Road cities in Uzbekistan. *Current Issues in Tourism*, 28, 1453-1472. <https://doi.org/10.1080/13683500.2025.2509081>
12. Karimova, F., Qodirov, A. A., Akhrorova, N., Mamatov, D., Boqiyev, S. O., & Toxirov, B. B. (2026). Sustainability expenditure and ecotourism enterprise

performance in the Bukhara region of Uzbekistan: A descriptive mixed-methods analysis, 2018-2024. *Frontiers in Sustainable Tourism*, 5, 1880125. <https://doi.org/10.3389/frsut.2026.1880125>

13. Kirchherr, J., Reike, D., & Hekkert, M. (2017). Conceptualizing the circular economy: An analysis of 114 definitions. *Resources, Conservation and Recycling*, 127, 221-232. <https://doi.org/10.1016/j.resconrec.2017.09.005>

14. Mair, J., & Jago, L. (2010). The development of a conceptual model of greening in the business events tourism sector. *Journal of Sustainable Tourism*, 18(1), 77-94. <https://doi.org/10.1080/09669580903291007>

15. Omonova, N., Juraev, A., Makhmudova, N., Utevskaia, M., & Zhanabay, A. (2025). University reputation, support, and security: Explaining changes in educational tourism and economic benefits. *Frontiers in Sustainable Tourism*, 4, 1712220. <https://doi.org/10.3389/frsut.2025.1712220>

16. Omonova, N., Juraev, A., Makhmudova, N., Isokova, G., Hamroyeva, S., Shodieva, M., Davronov, I. O., Kadirova, S., & Farmanov, E. (2026). Tourist satisfaction as a mediator between event quality and economic outcomes: Evidence from a Silk Road heritage destination. *Frontiers in Sports and Active Living*, 8, 1805388. <https://doi.org/10.3389/fspor.2026.1805388>

17. Qodirov, A. A., Urakova, D. B., & Usmanova, A. B. (2026). Innovative principles for sport and event tourism development: A framework for improving the value of the destination while considering social sustainability. *Frontiers in Sports and Active Living*, 8, 1789278. <https://doi.org/10.3389/fspor.2026.1789278>

18. Radjabov, O., Davronov, I. O., Boltayeva, M., Ashurova, M., & Navruz-zoda, L. (2025). Prospects of using strategic communication in sustainable tourism promotion. *Frontiers in Sports and Active Living*, 7, 1623121. <https://doi.org/10.3389/fspor.2025.1623121>

19. Radjabov, O., Vilčeková, L., & Gubíniová, K. (2026). Sustainability communication through interpretation in built cultural heritage sites: A comparative assessment of the Ark Palace (Bukhara, Uzbekistan) and Bratislava Castle (Slovakia). *Frontiers in Sustainable Tourism*, 5, 1895823. <https://doi.org/10.3389/frsut.2026.1895823>

20. Saaty, T. L. (1980). *The analytic hierarchy process*. McGraw-Hill.



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