O'ZBEKISTON RESPUBLIKASI
OLIY TA'LIM, FAN VA INNOVATSIYALAR VAZIRLIGI
BUXORO DAVLAT UNIVERSITETI

МИНИСТЕРСТВО ВЫСШЕГО ОБРАЗОВАНИЯ, НАУКИ И ИННОВАЦИЙ
РЕСПУБЛИКИ УЗБЕКИСТАН
БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ

MINISTRY OF HIGHER EDUCATION, SCIENCE AND INNOVATION OF THE
REPUBLIC OF UZBEKISTAN
BUKHARA STATE UNIVERSITY

"O'ZBEKISTONDA INKLYUZIV TURIZMNI RIVOJLANTIRISH ISTIQBOLLARI"
Xalqaro ilmiy-amaliy anjumani

Buxoro shahri, 13-14-iyun 2025-yil

"ПЕРСПЕКТИВЫ РАЗВИТИЯ ИНКЛЮЗИВНОГО ТУРИЗМА В УЗБЕКИСТАНЕ"
Международная научно-практическая конференция

г. Бухара, 13-14-июня 2025 года

"PROSPECTS FOR THE DEVELOPMENT OF INCLUSIVE TOURISM IN UZBEKISTAN"
International Scientific and Practical Conference
Bukhara, June 13-14, 2025

Buxoro – 2025

"O'zbekistonda inklyuziv turizmni rivojlantirish istiqbollari". Xalqaro ilmiy-amaliy anjuman to'plami. 2025-yil 13-14-iyun: - Buxoro :

1. Quyidagi tarkibdan iborat dasturiy qo'mita

1.	O.X.Xamidov	-	Buxoro davlat universiteti rektori, i.f.d., professor, rais;
2.	K.A.Samiyev	-	Ilmiy ishlar va innovatsiyalar bo'yicha prorektor, f-m.f.d., professor, rais muovini;
3.	N.S.Ibragimov	-	Iqtisodiyot va turizm fakulteti dekani v.v.b., i.f.d., professor, loyiha rahbari, a'zo
4.	D.Sh.Yavmutov	-	Yoshlar masalalari va ma'naviy-ma'rifiy ishlar bo'yicha birinchi prorektor, i.f.d, professor, a'zo;
5.	A.T.Jurayev	-	Xalqaro hamkorlik bo'yicha prorektor, i.f.n, dotsent, a'zo;
6.	O.S.Qahhorov	-	Ilmiy tadqiqod va innovatsion faoliyatni rivojlantirish departamenti boshlig'i, i.f.d, professor, a'zo;
7.	B.N.Navruz-Zoda	-	Marketing va menejment kafedrasi professori, i.f.d., psofessor, a'zo;
8.	A.J.Abdullayev	-	Iqtisodiyot kafedrasi mudiri, i.f.d., professor, a'zo;
9.	H.R.Turobova	-	Yashil iqtisodiyot va agrobiznes kafedrasi mudiri, i.f.f.d,
10.	J.R.Toxirov	-	Marketing va menejment kafedrasi mudiri, i.f.f.d, a'zo;
11.	Y.K.Sunnatov	-	Buxgalteriya hisobi va statistika kafedrasi mudiri, i.f.f.d,a'zo;
	2. Quyidagi tarkibdan iborat tashkiliy qo'mita		
1.	K.A.Samiyev	-	Ilmiy ishlar va innovatsiyalar bo'yicha prorektor, f-m.f.d., professor, rais;
2.	O.S.Qahhorov	-	Ilmiy tadqiqod va innovatsion faoliyatni rivojlantirish departamenti boshlig'i, i.f.d, professor, a'zo;
3.	N.S.Ibragimov	-	Iqtisodiyot va turizm fakulteti dekani v.v.b., i.f.d., professor, loyiha rahbari, a'zo
4.	B.N.Navruz- Zoda	-	Marketing va menejment kafedrasi professori, i.f.d., psofessor, a'zo;
5.	A.J. Abdullayev	-	Iqtisodiyot kafedrasi mudiri, i.f.d., professor,a'zo;
6.	H.R.Turobova	-	Yashil iqtisodiyot va agrobiznes kafedrasi mudiri, i.f.f.d,
7.	J.R.Toxirov	-	Marketing va menejment kafedrasi mudiri, i.f.f.d, a'zo;
8.	Y.K.Sunnatov	-	Buxgalteriya hisobi va statistika kafedrasi mudiri, i.f.f.d,
9.	Z.S.Nurov	-	Ta'lim sifatini nazorat qilish departamenti boshlig'i, i.f.f.d,
10.	M.H.Qilichov	-	Turizm va mehmonxona xo'jaligi kafedrasi o'qituvchisi,
11.	K.Sh.Yuldashev	-	Turizm va mehmonxona xo'jaligi kafedrasi o'qituvchisi,
12.	I.O.Davronov	-	Turizm va mehmonxona xo'jaligi kafedrasi o'qituvchisi,
13.	O.O.Radjabov	-	Turizm va mehmonxona xo'jaligi kafedrasi o'qituvchisi,
14.	E.A.Farmonov	-	Turizm va mehmonxona xo'jaligi kafedrasi o'qituvchisi,

Mazkur to'plamga kiritilgan ilmiy ishlar va g'oyalar mazmuni, undagi statistik ma'lumotlar, sanalarning aniqligiga hamda tanqidiy fikr-mulohazalarga mualliflarning shaxsan o'zlari mas'uldirlar.

Ushbu xalqaro anjuman O'zbekiston Respublikasi Davlat ilmiy-texnika dasturlari doirasida moliyalashtirilayotgan ALM-202403110241-raqamli "Nogironligi bor shaxslar uchun inklyuziv turizm infratuzilmasining interfaol xaritasini yaratish" mavzusidagi loyiha doirasida tashkil etildi.

Statistik hisobotlarda 18–25 yoshli guruhni alohida kodlash talabalar turizmi va unda SDG hamda ESG tamoyillarining amal qilinishini ta'minlaydi

Foydalanilgan adabiyotlar ro'yxati

1. O'zbekiston Respublikasi Prezidenti Qarori PQ–4306, 03.05.2019.
2. O'zbekiston Respublikasi Prezidentining Farmoni, 09.09.2021 yildagi PF-6309-son
3. "Turizm to'g'risida"gi Qonun (yangi tahrir), 18.07.2019 yildagi O'RQ-549-son
4. Davlat statistika qo'mitasi. Ichki va kirish turizmi jamlanmasi 2017–2023.
5. Oliy ta'lim, fan va innovatsiyalar vazirligi. "Akademik mobillik reyestri" 2019–2023.
6. United Nations World Tourism Organization (UNWTO). Global Youth Travel Report, 2024.
7. Richards, G. & Wilson, J. (2019). The global significance of student travel. Journal of Tourism Futures, 5(2), 99-113.
8. Gössling, S., Scott, D. & Hall, C.M. (2021). Pandemics, tourism and global change. Journal of Sustainable Tourism, 29(11-12), 1827-1845.
9. Hunt, C. (2022). Subsidies and sustainable behaviour in youth tourism. Tourism Management, 91, 104432.

MANAGING SUSTAINABLE TOURISM ON A STATISTICAL BASIS: SCIENTIFIC AND PRACTICAL OPPORTUNITIES OF THE SF-MST SYSTEM

Kilichov Mukhriddin
Tourism and hotel management
department, PhD
m.h.qilichov@buxdu.uz

Abstract: This article explores the importance of a statistical approach in the assessment and management of sustainable tourism. It presents the conceptual foundations, structural components, and practical applications of the "Statistical Framework for Measuring the Sustainability of Tourism" (SF-MST), developed by the UN and UNWTO. The framework introduces a set of indicators to measure the economic, environmental, and social impacts of tourism, enabling analysis of sustainability at local, national, and international levels. The article also provides scientific and practical recommendations related to the SF-MST's integration with SDGs, sub-national application, cross-sector coordination, and destination-level monitoring systems.

Keywords: sustainable tourism, SF-MST, SDGs, tourism indicators, environmental impact, economic analysis, social sustainability, SEEA, TSA

Annotatsiya: Mazkur maqolada barqaror turizmni baholash va boshqarishda statistik yondashuvning ahamiyati tahlil qilingan. Jumladan, BMT va UNWTO tomonidan ishlab chiqilgan "Statistical Framework for Measuring the Sustainability of Tourism" (SF-MST) tizimining konseptual asoslari, tarkibiy qismlari va amaliy qo'llanilishi yoritiladi. SF-MST tizimi orqali turizmning iqtisodiy, ekologik va ijtimoiy ta'sirlari bo'yicha indikatorlar majmuasi ishlab chiqiladi va ular orqali mahalliy, milliy hamda xalqaro darajada turizm barqarorligini tahlil qilish imkoniyati yaratiladi. Maqolada, shuningdek, SF-MST tizimining BRMlar bilan bog'liqligi, sub-milliy darajadagi qo'llanilishi, sektorlararo integratsiyasi va mahalliy monitoring mexanizmlari bo'yicha ilmiy-amaliy tavsiyalar keltirilgan.

Kalit so'zlar: barqaror turizm, SF-MST, BRM, turizm indikatorlari, ekologik ta'sir, iqtisodiy tahlil, ijtimoiy barqarorlik, SEEA, TSA

Аннотация: В статье рассматривается значимость статистического подхода для оценки и управления устойчивым развитием туризма. Представлены концептуальные основы, структура и практическое применение статистической модели SF-MST (Statistical Framework for Measuring the Sustainability of Tourism), разработанной ООН и ВТО. Система включает в себя набор показателей, позволяющих измерять экономическое, экологическое и социальное воздействие туризма, что обеспечивает возможность анализа устойчивости на местном, национальном и международном уровнях. В статье также приведены научно-

практические рекомендации по интеграции SF-MST с Целями устойчивого развития, применению на субнациональном уровне, межсекторальному взаимодействию и созданию систем мониторинга на уровне туристических дестинаций.

Ключевые слова: устойчивый туризм, SF-MST, ЦУР, туристические индикаторы, экологическое воздействие, экономический анализ, социальная устойчивость, SEEA, TSA

1. Introduction

Tourism has a multi-layered impact domain, directly and indirectly affecting the economy, the environment, and the social sphere. From an economic perspective, tourism serves as a significant source of foreign exchange earnings, a generator of employment, and a catalyst for small and medium-sized enterprises. For instance, the number of international tourists reached 1.445 billion in 2024, and tourism revenues amounted to 1.6 trillion US dollars (Black and Vernon, 2024). At the same time, tourism becomes a driver of development through the modernization of infrastructure and the stimulation of regional economic growth (Shahid et al., 2025). However, the environmental impact of this activity is also of critical importance. The increase in tourist flows leads to overuse of natural resources, a rise in waste generation, and pressure on ecosystems. Moreover, tourism affects the social structure of local communities — in this process, along with positive aspects (such as cultural exchange and social development), negative consequences (such as social stratification and cultural degradation) can also be observed. Therefore, for the sustainable development of tourism, it is essential to systematically measure and analyze its multifaceted impacts, which contributes to forming a balanced and scientifically grounded approach in tourism policy (Uslu and Gunesh, 2020).

Sustainable tourism is an approach aimed at minimizing the negative impacts of tourism activities and generating long-term benefits.

The concept of sustainable tourism, by its very nature, implies the rational use of natural, social, and economic resources in planning and managing tourism activities to meet the needs of the present generation while safeguarding the interests of future generations. This approach aims to minimize the negative impacts of tourism on the environment, local communities, and cultural heritage, while ensuring social inclusivity and economic sustainability. Compared to traditional mass tourism, sustainable tourism reduces the intensity of resource use, keeps ecological pressure under control, and prioritizes the interests of local populations. This approach is especially relevant in ecologically sensitive areas, cultural heritage sites, and small communities. In the tourism system, sustainability entails not only conservation but also the introduction of innovations, the promotion of local products, and the establishment of positive interaction between visitors and local residents (Quarante and Salvia, 2016). Thus, sustainable tourism is not merely about economic efficiency but represents a conceptual approach that ensures systematic and long-term positive outcomes.

Importance to analyze these impacts through figures and reliable statistical data.

Reliable statistical data with an empirical basis are essential tools for identifying the multifaceted impacts of tourism activities (Elgin and Elveren, 2024) and making effective management decisions. Factors such as environmental pressure, the level of economic efficiency, indicators of social sustainability, or visitor satisfaction can only be determined through systematically collected and analyzed quantitative data. Moreover, observing the positive or negative impacts of tourism across time and space, identifying trends, and making forecasts are only possible through a statistical approach. Especially at the local and national planning levels, information-based decision-making allows for the efficient use of available resources and enables the early assessment of risks and imbalances. Therefore, in measuring sustainable tourism, a statistical approach should be viewed not only as a theoretical criterion but also as an integral component of practical management strategy.

2. Importance of SF-MST.

SF-MST is a statistical framework for measuring the economic, environmental, and social dimensions of tourism impacts.

"Statistical Framework for Measuring the Sustainability of Tourism" (SF-MST) is a conceptual statistical framework developed in 2024 by the United Nations Department of Economic and Social Affairs (UN DESA) and the World Tourism Organization (UNWTO), with its final draft presented to the United Nations Statistical Commission. This system stems from the need to analyze

the multidimensional nature of modern tourism — namely its economic, environmental, and social impacts — through a unified and coordinated statistical approach. Today, SF-MST is considered an international standard for measuring tourism sustainability (Dwyer, 2024).

It is closely integrated with existing statistical systems, particularly incorporating approaches from IRTS 2008 (International Recommendations for Tourism Statistics), TSA: RMF 2008 (Tourism Satellite Account: Recommended Methodological Framework), and the SEEA (System of Environmental-Economic Accounting). Through this approach, both the direct and indirect impacts of tourism — such as foreign exchange earnings, employment levels, use of natural resources, waste generation, visitor flows, and social pressure on local communities — can be measured systematically and in a comparable format.

The practical application of SF-MST is broad, as it can be used by national statistical offices, tourism authorities, research institutions, and local governance bodies (Yusoff et al., 2024). This system contributes to the achievement of the United Nations 2030 Agenda for Sustainable Development Goals (particularly Goals 8, 12, and 14). SF-MST also serves as a necessary foundation for destination-level analysis, enabling sub-national monitoring of sustainability.

Thus, the SF-MST, developed in 2024, is regarded not only as a tool for systematizing statistics but also as a vital global instrument for steering tourism towards healthy and long-term development. Its international implementation creates broad opportunities for evidence-based tourism policymaking.

A common language for international comparison, policy formulation, local planning, and management of tourism sites.

SF-MST serves as a key tool for establishing a unified "statistical language" for measuring tourism sustainability at the international level. This approach enables decision-makers at national, regional, and local levels to analyze changes in the economic, environmental, and social dimensions of tourism based on a consistent methodology. Especially in the process of policy formulation, an integrated approach across different sectors — such as infrastructure, environmental protection, employment policy, and cultural heritage preservation — becomes essential. SF-MST addresses this need by creating a coordinated and comparable statistical data base for all sectors.

At the international level, SF-MST allows for the comparison of sustainable tourism development among countries, which in turn plays a vital role in shaping international investment policies, environmental initiatives, and regional strategies (Hernández et al., 2024). At the national and sub-national levels, SF-MST provides the empirical foundation needed for planning local tourism destinations, allocating resources, and managing tourist flows. Moreover, the indicators and reports developed within the SF-MST framework play an important role in the effective management of tourism sites — particularly historical monuments, natural areas, or hotel infrastructure. Thus, SF-MST is an international tool that expresses tourism sustainability in a form that is comprehensible, inclusive, and integrative for various stakeholders. Through its statistical concepts, it strengthens the essential link between science, policy, and practical governance.

SF-MST, with its modular approach, can be adapted to the specific context of each country or tourism destination.

One of the key advantages of SF-MST is its modular, step-by-step implementation approach. This approach allows for individual adaptation based on the resources, statistical infrastructure, stage of tourism development, and policy priorities of different countries or regions. In other words, each country or tourism destination can gradually implement the relevant components of SF-MST according to its specific needs and capacities. For instance, developing countries may initially focus on economic dimensions of tourism (such as its contribution to GDP or employment figures), while countries with a high level of institutional development may establish in-depth monitoring systems for tourism's environmental burden or social impacts.

Such a modular approach makes SF-MST universally applicable — meaning it does not require a complex and complete statistical system from the outset but can be developed progressively within the scope of available resources. For this reason, SF-MST is valued as a practical tool that is relevant and applicable even for small island states, developing economies, or tourism zones at the sub-national level. This approach also serves as a clear methodological

roadmap for collaboration with donor organizations, international agencies, and academic institutions that support the development of tourism statistics.

2. Measurement Dimensions Based on SF-MST

Economic Dimensions: tourist flows, expenditures, employment, tourism's contribution to GDP.

The SF-MST system places particular emphasis on economic dimensions in assessing tourism sustainability. According to this framework, the primary indicators for determining tourism's economic impact include: visitor flows (inbound/outbound/domestic), tourism-related consumption expenditures, employment levels, and tourism's share in GDP. As stated in the official recommendation (UNWTO, 2024, p. 32), data on tourism flows are collected through statistics on both domestic and international tourist arrivals. These data allow for the identification of tourism pressure levels, seasonality, regional disparities, and service segmentation.

Tourist expenditures are measured in terms of both direct and indirect spending. SF-MST pays special attention to the consumption structure of tourism-related services (accommodation, transportation, cultural activities) (UNWTO, 2024, p. 37). This enables the evaluation of tourism's multiplier effect on other sectors.

In terms of employment indicators, SF-MST considers not only the direct jobs created within the tourism sector but also those in supporting service networks (e.g., food services, transportation, handicrafts). For effective statistical monitoring in this area, the system introduces the concept of "tourism-related employment" (UNWTO, 2024, p. 39).

To determine tourism's contribution to GDP, the system uses indicators integrated with the Tourism Satellite Account (TSA). Through TSA, it becomes possible to assess the sector's share in overall economic processes, the value of goods and services, and the economic benefits generated for domestic and international markets. Such an integrated approach makes the SF-MST system a crucial statistical foundation at both international and national policy levels.

Environmental Impact: greenhouse gas emissions, water and energy consumption, volume of waste.

The SF-MST system evaluates the environmental sustainability of tourism by analyzing its impact on the environment through three main dimensions: greenhouse gas (GHG) emissions, the use of water and energy resources, and the volume of waste. These indicators are defined based on the SEEA (System of Environmental-Economic Accounting) standards and are integrated into existing environmental monitoring systems (UNWTO, 2024, pp. 40–43).

Tourism's GHG-related impact is primarily determined by transportation (air travel, road vehicles, and cruises), hotel infrastructure (heating, cooling, lighting), and overall energy consumption. In this context, SF-MST proposes the indicator "GHG emissions per tourist night," which enables the measurement of the carbon footprint generated by each tourist.

In terms of water resource use, average water consumption per tourist is calculated based on accommodations, swimming pools, gardens, and general hygiene services. SF-MST refers to this indicator as "water consumption per guest night," which helps measure the environmental load of tourist facilities (UNWTO, 2024, p. 42).

Waste volume is assessed in two stages: first, the total amount of solid waste generated by tourists and tourism facilities; second, the level of recycling of this waste. In this regard, SF-MST designates "solid waste per tourist" as a key indicator. Particular attention is paid to the degree of waste separation, recycling, and disposal, which are essential for environmental sustainability.

These environmental indicators not only serve as a statistical foundation for determining the real impact of tourism on the environment, but also support the development of policies and management measures aimed at reducing these impacts. Furthermore, they make it possible to monitor the environmental load at the destination level and formulate effective sustainability strategies.

Social Factors: Guest and Local Resident Perceptions, Working Conditions, Impact on Cultural Heritage, and Governance

The SF-MST system employs a set of interrelated indicators to determine the social sustainability of tourism. These include the perceptions of tourists and local residents, working conditions of tourism sector employees, anthropogenic pressure on cultural heritage sites, and the

degree of inclusiveness in governance. These indicators are developed in accordance with the SEEA and the United Nations Sustainable Development Goals (UNWTO, 2024, p. 45).

First and foremost, within the SF-MST framework, "perception indicators" are used to assess how tourism activities affect the lives of local communities. These surveys capture the social acceptance of tourism, its perceived benefits and drawbacks, safety levels, and impacts on local identity. Special attention is given to how tourism influences local customs, lifestyles, and overall well-being.

Indicators on working conditions cover aspects such as wages, working hours, occupational safety, and social protection mechanisms. In this regard, SF-MST recommends the indicator "decent work in tourism." This allows tourism employment to be evaluated not only quantitatively but also qualitatively (UNWTO, 2024, p. 46).

The impact on cultural heritage sites is assessed based on tourist flows and usage intensity. This includes monitoring the number of sites of historical, architectural, and religious significance, the extent of their use, the level of protection, and their physical condition. SF-MST recommends using the indicator "tourism pressure on heritage sites" for this purpose.

In terms of governance, SF-MST proposes evaluating the level of local community participation in decision-making processes at the destination level. Cooperation among civil society, the private sector, and government institutions is considered a key indicator in tourism planning.

Through these social indicators, SF-MST enables an in-depth analysis of tourism's impact on human development, community resilience, and cultural values.

4. Advantages of SF-MST

Aligned with International Standards: Based on existing statistical systems such as TSA, SEEA, and SNA.

One of the main advantages of the SF-MST system is its high degree of alignment with existing international statistical standards. Specifically, the system is developed in accordance with internationally recognized methodological foundations such as the Tourism Satellite Account (TSA: RMF 2008), the System of Environmental-Economic Accounting (SEEA), and the System of National Accounts (SNA 2008) (UNWTO, 2024, p. 7). This integration ensures consistency and comparability between SF-MST indicators and other statistical information systems.

For example, while TSA serves as the primary tool for measuring tourism's economic dimensions — such as its contribution to GDP, employment, and its share in the goods and services market — SF-MST builds upon TSA results by incorporating environmental and social indicators. SEEA, as a global framework for environmental accounting — covering indicators such as energy and water consumption, waste, and biodiversity — enables SF-MST to assess tourism's environmental footprint in an integrated manner. Additionally, the SF-MST system is harmonized with the SNA, the System of National Accounts, allowing for the inclusion of tourism's impact within official national macroeconomic statistics.

By relying on these standards, SF-MST facilitates the adaptation, comparison, and consolidation of statistical data. This ensures a high degree of reliability and accuracy in monitoring tourism sustainability not only at the national but also at the international level. Such methodological compatibility allows SF-MST to be seen not merely as a new statistical initiative, but as a functional extension of existing international systems.

Policy Foundation: Directly Linked to SDGs (8, 12, 14)

The SF-MST system serves not only as a tool for collecting and analyzing statistical data, but also as a reliable scientific basis for policymaking aimed at developing sustainable tourism. One of its most significant advantages is its direct connection to the United Nations Sustainable Development Goals (SDGs), particularly Goal 8 (decent work and economic growth), Goal 12 (responsible consumption and production), and Goal 14 (life below water) (UNWTO, 2024, p. 12).

Within the scope of SDG 8, SF-MST enables the measurement of economic indicators such as sustainable employment created through tourism, its contribution to GDP, and the quality of employment. These indicators are essential for policymakers to identify opportunities for achieving socio-economic stability through the tourism sector.

In relation to SDG 12, SF-MST develops specific indicators on resource use efficiency, waste volume, and environmental impact within tourism activities. In particular, indicators addressing

energy efficiency, rational water use, and waste reduction directly support SDG targets 12.6 and 12.b.

Under SDG 14, SF-MST allows for the assessment of tourism pressure in marine and coastal areas, its impact on ecosystems, and the risk posed to biodiversity. Such indicators are especially relevant for managing tourism sustainability on islands and in coastal destinations.

In this way, SF-MST functions not only as a statistical foundation for policy decisions but also as a functional system for monitoring and analyzing progress toward global sustainability goals. It serves as a crucial tool for cross-country comparisons related to the SDGs, evaluation of national strategies, and participation in international accountability mechanisms — thereby strengthening policy integration.

Sub-national (local) application: crucial at the level of tourism centers and destinations

The SF-MST system supports not only strategic analyses at the national level but can also be effectively applied at sub-national levels — that is, within regional and local tourism destinations. This approach is particularly valuable in locations with high tourism pressure, such as cities, historical centers, nature reserves, and resort areas, as it helps assess the economic, environmental, and social impacts of tourism with greater precision (UNWTO, 2024, p. 48).

Within the SF-MST framework, indicators for sub-national application are adapted to measure tourist flows, service quality, resource use, waste volume, and interaction with local communities. Based on this data, local authorities can make informed decisions on tourism infrastructure planning, set sustainable visitor capacities, and foster the creation of safe and environmentally responsible tourism environments.

The SF-MST system also proposes a set of "destination-based indicators" for this level. These include metrics such as tourism's impact on the local budget, anthropogenic pressure on cultural sites, environmental load (carbon/sustainability footprint), and the composition and quality of local employment — all of which enable deep monitoring of tourism centers.

Such a regional approach is especially useful for piloting advanced strategies in sustainable tourism management, conducting rapid impact assessments, and establishing inclusive governance systems with active participation of local stakeholders. Moreover, when sub-national statistical data are integrated with national indicators, the overall monitoring of sustainability at the state level becomes more accurate and comprehensive.

In this regard, SF-MST holds critical significance not only for measuring sustainability at the global or national levels, but also as a tool for deeply understanding and integrating the real impacts of tourism at the local level into governance processes.

5. Scientific and Practical Recommendations

Developing Indicator Sets for Each Tourism Segment

While the SF-MST system serves as a universal foundation for assessing sustainable tourism, each tourism segment — such as cultural, ecological, wellness, gastronomic, pilgrimage, beach, mountain, or urban tourism — requires a specific set of indicators. This is due to the differences in the scope of tourism impacts, the level of resource use, and interactions with local stakeholders in each segment. Therefore, within the main indicators recommended by the SF-MST system, customized sub-indicators must be developed for each tourism type (UNWTO, 2024, p. 49).

For instance, in the case of ecotourism, key measurements include water consumption, impacts on biodiversity, and the rate of waste separation. For cultural tourism, the main indicators are visitor pressure on heritage sites, preservation of cultural identity, and indicators of social balance with local communities. For wellness and spa tourism, the determining factors are hygiene and sanitation standards, the quality of health infrastructure, and the consistency of safety measures.

These tailored indicators enable not only the assessment of overall sustainability but also in-depth analytical decisions regarding the specific risk factors within each tourism segment and the necessary policy or management interventions. Additionally, these indicators serve as critical tools for tourism planning, service quality standardization, adaptation of marketing strategies to regional contexts, and protection of local resources.

Therefore, the development of differentiated indicator sets by tourism type is a strategic necessity at both scientific and managerial levels to ensure the effective implementation of the SF-MST system in practice.

Establishing Local-Level Monitoring Systems (e.g., Based on the INSTO Observatory Model)

To assess sustainable tourism in real time and provide an evidence-based foundation for management decisions, there is a growing need to establish sustainability monitoring systems at the local level. In this regard, the SF-MST framework promotes the INSTO (International Network of Sustainable Tourism Observatories) model. This model, developed by the UNWTO, enables systematic observation of changes occurring in the environmental, economic, and social spheres at tourism destinations (UNWTO, 2024, p. 50).

Observatories operating under the INSTO model monitor 11 key groups of indicators: number of visitors, their average length of stay, residents' perceptions, energy and water consumption, volume of waste, climate impact, status of cultural heritage, transportation and accessibility, employment, impact on the local economy, and more. Each observatory tailors these indicators to its specific regional context and publishes the results in open statistical reports.

Drawing inspiration from the INSTO model, the SF-MST system enables the collection, analysis, and integration of indicators at the destination level in alignment with local conditions and decision-making structures. In particular, cities with intensive tourism activity, historic centers, or ecotourism zones benefit from such observatory systems, which help identify critical weaknesses in sustainability.

When the data collected through local monitoring systems are synchronized with national statistical frameworks, national-level strategies can be formulated with greater precision, timeliness, and relevance. Moreover, this system enhances transparent information exchange and promotes a responsible approach to sustainable tourism among local governments, civil society, and the private sector.

Strengthening Collaboration Between National Statistical Offices and Tourism Committees

One of the most crucial conditions for the successful implementation of the SF-MST system at the national level is the strengthening of institutional cooperation between national statistical offices and tourism-related authorities — particularly Tourism Committees and Ministries. This is because the indicators used to measure sustainable tourism span multiple sectors — including economy, environment, employment, regional governance, and culture — and the relevant data are typically held across different institutions (UNWTO, 2024, p. 53).

Tourism activity is often either insufficiently represented or fragmented within national statistical information systems. For this reason, SF-MST calls on national statistical services to develop tourism-related data in a continuous and integrated manner based on international systems such as the Tourism Satellite Account (TSA), SEEA, and SNA. In this context, the operational data provided by Tourism Committees — such as tourist flows, occupancy rates in tourist zones, and service sector performance — must be effectively linked with official statistics.

In practice, this collaboration is implemented through the following directions:
- harmonization and formal approval of statistical methodologies;
- continuous data exchange on key indicators;
- preparation of joint reports on shared platforms;
- implementation of capacity-building programs focused on sustainability monitoring.

Through such cooperation, sustainability indicators related to the tourism sector become not only high-quality but also reliable and readily usable for policymaking. This, in turn, accelerates the institutional integration of the SF-MST system and strengthens the country's position in international reporting on the tourism sector.

6. Conclusion

In today's global context, the comprehensive and systematic assessment of tourism's economic, environmental, and social sustainability has become an urgent priority. The Statistical Framework for Measuring the Sustainability of Tourism (SF-MST) is a scientifically grounded and internationally standardized approach developed in response to this need. This framework integrates tourism-related statistical data with global systems such as SEEA, TSA, and SNA, creating effective opportunities for monitoring and governance at both national and local levels.

SF-MST offers a system of indicators that enables the measurement not only of tourism's economic metrics, but also of its environmental footprint, social impact, the state of cultural heritage, and governance effectiveness. Through these indicators, countries can transform tourism

into a beneficial and adaptive system aligned with society, the environment, and the economy. Notably, its strong linkage to the Sustainable Development Goals (SDGs) allows SF-MST to play a central role in policymaking, local planning, and international reporting.

In this regard, SF-MST is not only a method for measuring tourism sustainability — it is also a vital tool for achieving sustainable development in the tourism sector.

Foydalanilgan adabiyotlar ro'yxati

1. Black, S., Parry, I., Singh, S., & Vernon-Lin, N. (2024). *Destination Net Zero: The Urgent Need for a Global Carbon Tax on Aviation and Shipping*. International Monetary Fund.

2. Dwyer, L. (2024). Measuring the Sustainability of Tourism (SF-MST): New Wine in an Old Bottle?. Sustainability, 16(14), 5867.

3. Elgin, C., & Elveren, A. Y. (2024). Unpacking the economic impact of tourism: A multidimensional approach to sustainable development. Journal of Cleaner Production, 478, 143947.

4. Hernández-Martín, R., Padrón-Fumero, N., & Padrón-Ávila, H. (2025). The Local Turn in Tourism Statistics Within the Statistical Framework for Measuring the Sustainability of Tourism 2024. Sustainability, 17(4), 1430.

5. Quaranta, G., Citro, E., & Salvia, R. (2016). Economic and social sustainable synergies to promote innovations in rural tourism and local development. Sustainability, 8(7), 668.

6. Shahid, M. A., Razzaq, A., Afzal, K., & Maftoon, A. S. (2025). Governance, Infrastructure, and Sustainability, Key Drivers of Tourism Development and Economic Diversification in a Global Context. *Review Journal of Social Psychology & Social Works*, *3*(1), 66-81.

7. UNWTO. (2024). Statistical framework for measuring the sustainability of tourism (SF-MST): Advancing the measurement of sustainable tourism. World Tourism Organization (UNWTO). https://doi.org/10.18111/9789284425037

8. Uslu, A., Alagöz, G., & Güneş, E. (2020). Socio-cultural, economic, and environmental effects of tourism from the point of view of the local community. Journal of Tourism and Services, 11(21), 1-21.

9. Yusoff, Y. M., Zul, A., Ponnusamy, M., & Director, P. A. (2024) Implementation of Measuring the Sustainability of Tourism (MST) in Malaysia: Challenges & Initiatives.

THE ROLE OF CULTURAL HERITAGE AND CREATIVE TOURISM IN THE SUSTAINABLE DEVELOPMENT OF TOURISM

Kurbonova Zebiniso Azimovna
Tourism and hospitality department
Bukhara state university

Abstract: *sustainable tourism increasingly integrates cultural heritage and creative tourism as key drivers of economic growth, community development, and environmental stewardship. This paper analyzes how the strategic promotion of tangible and intangible cultural assets, alongside creative industries, contributes to resilient tourism development. We adopt Uzbekistan as a core case study leveraging its rich Silk Road heritage while drawing on international examples from Italy, South Korea, and Georgia to provide comparative insights. Through a qualitative mixed-methods approach, we examine policy initiatives, UNESCO and UNWTO frameworks, and empirical data. We find that cultural heritage and creative tourism can diversify tourist experiences, support local livelihoods, and promote place branding. However, challenges include infrastructure needs, community inclusion, and environmental pressures. We discuss how creative tourism complements heritage preservation by generating unique, authentic experiences. Finally, we propose recommendations for policymakers, including enhancing community participation, integrating cultural policies with tourism planning, and investing in creative industries. These measures aim to balance cultural and economic objectives, ensuring tourism development benefits local societies while respecting heritage values.*

MUNDARIJA

3-SHO'BA. BARQAROR TURIZM: EKOLOGIK, MADANIY VA IQTISODIY MUVOZANAT SARI YO'L 92

4-SHO'BA. RAQAMLI TRANSFORMATSIYA VA INNOVATSIYALAR TURIZM SOHASIDA: IMKONIYATLAR VA ISTIQBOL 149