

THE INTEGRATION OF FOOD HERITAGE WITH SUSTAINABLE DEVELOPMENT GOALS

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ABSTRACT

This article discusses integrating food heritage with the Sustainable Development Goals (SDGs). Aimed to promote sustainable development, preserve cultural identity, and support local economies. It also addressed the global challenges such as poverty reduction, environmental conservation, and social inclusion when integrating food heritage with SDGs. A food heritage is the cultural, social, and historical influence conveyed by food, and it is important to personal and community identities. It is the traditional knowledge and skill about agriculture, culinary, and biodiversity that is supported in a territory. It is noteworthy that recognition and valorization of food heritage could contribute to food security, improve livelihoods, reduce, and preserve local culture and sustainable traditional ways of food for future generations. Embedding food heritage into the SDGs therefore provides an opportunity to solve global challenges, ranging from poverty eradication to environmental conservation and social inclusion. Long-term socioeconomic opportunities include promoting indigenous crops, culinary practices, and cultural tourism for marginalized communities. Preserving food heritage supports economic development, tourism, cultural identity, and biodiversity conservation. Embracing sustainable agricultural practices with indigenous crops enhances ecosystem health and environmental sustainability. Traditional diets, rich in nutrients and healthy preparation methods, also help prevent diet-related diseases.

Keywords: Food Heritage, Sustainable Development Goals, Cultural Preservation

INTRODUCTION

The associations between food heritage and sustainable development have received increased attention in recent years (Kapelari et al., 2020). Food heritage, which is not just about food but also includes cultural, social, and historical aspects of food, this cultural heritage has a significant impact on both personal, collective and even national identities. The value of this heritage could promote economic, political, and social empowerment in local communities (Zocchi et al., 2021; Mi et al., 2014). Integrating food heritage and associated culture with the SDGs can create a unique opportunity for pursuing pressing global issues. For example, food security, environmental conservation, and social inclusion. However, integrating food heritage within the SDGs involves many aspects, such as recognizing and supporting traditional knowledge, agricultural practices, and biodiversity. This integration helps maintain local ecosystem services, enhances food and livelihood security in local communities, and ensures the preservation or safeguarding of local cultures and traditional foodways for

future generations. A key aspect of this integration is understanding the socio-cultural motives that drive food choices. Outreach activities, such as those demonstrated by Botanic Gardens, acknowledge the importance of food heritage in people's lives, significantly impacting their understanding and engagement with sustainable food systems (Kapelari et al., 2020). Local communities' specific needs and values often shape these locally based initiatives, setting them apart from the globally oriented approaches of organizations like UNESCO (Matta, 2019). The preservation and promotion of agricultural heritage sites designated by the Food and Agriculture Organization (FAO) and UNESCO are also promising avenues for sustainable development. These "living" or "real life" systems, with their distinct ecosystems and cultural practices, necessitate a dynamic conservation strategy that balances preservation and development through carefully planned tourism initiatives. Understanding the intrinsic importance of cultural heritage as the foundation of these agricultural systems ensures the preservation of traditional knowledge,

rural identity, and the welfare of local communities, as well as ecological and landscape resources (Matta, 2019; Mi et al., 2014).

FRAMEWORK ANALYSIS

The integration of food heritage with SDGs is supported through several essential frameworks. The Cultural Sustainability Framework emphasizes the preservation of food heritage as a vital aspect of cultural identity. This framework aligns with SDG 11 (Sustainable Cities and Communities), ensuring that local cultures and traditions are safeguarded and transmitted to future generations. The Agrobiodiversity Framework promotes the conservation of traditional agricultural practices, which enhances biodiversity and fosters sustainable farming. This framework contributes to SDG 2 (Zero Hunger) and SDG 12 (Responsible Consumption and Production) through the support of indigenous crops and local knowledge, improving both food security and environmental sustainability. Additionally, the Sustainable Livelihoods Framework underscores the economic potential of food heritage. Traditional food practices,

when linked with economic opportunities like cultural tourism and niche markets for indigenous products, help address SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth), enhancing livelihoods for marginalized communities through sustainable food systems.

Integrating food heritage with SDG 1: No poverty

Integration of food heritage with the SDGs can reduce poverty, specifically in rural areas. The use of food heritage as a community initiative by integrating the background helps in creating sustainable opportunities for marginalized groups from a socio-economic perspective. The program involves training, promotion of the local foods, and an equitable market regarding the products (Bessière, 2013).

For example, in South Africa, academic institutions have played a key role in developing community-led cultural heritage tourism projects that focus on preserving and promoting food heritage (Shabalala, 2023). The programs engage senior citizens in teaching visitors and youth traditional culinary skills, such as preparing indigenous dishes

like umngqusho (samp and beans) and chakalaka (spicy vegetable relish). They ensure the continuation of their food heritage by passing on these culinary traditions. The program also offers advice to policymakers on matters related to the preservation of cultural and culinary heritage. These interventions create income and employment through food tourism, instill pride and ownership among locals, and contribute to achieving SDG 1 by empowering communities economically through their food heritage. Encouraging the cultivation of indigenous crops and traditional culinary practices can create niche markets, offering more value than conventional crops (Trolio et al., 2016). These unique, nutritious foods can boost farmers' incomes. Additionally, culturally sustainable tourism, featuring food heritage through cooking classes or agritourism, is an effective way to generate new income for communities.

Food heritage can also underpin heritage and sustainability through consumption and agriculture, increasing local tourism attractiveness. Moreover, value addition to indigenous crops and culinary practices, for example through processing, label creation, or other means

to enhance indigenous crops, can raise income for communities even more, if traditional food is adequately branded (Trolio et al., 2016). Finally, community capacities and knowledge can be developed and enhanced to ensure that production activities, post-harvest practices, and value-adding, for example, are managed effectively to create sustainable local businesses from differentiated food heritage – training refers to these and other capacity-building activities. Charles Aworh's (2015) study provides compelling evidence that adding value to indigenous crops can boost both nutrition and community income. Underutilized crops such as African star apple, African mango, and hog plum are high in essential nutrients such as vitamin C, provitamin A, and minerals, all of which play a key part in improving rural diets. Additionally, value-added processing, such as the production of jams, juices, and fruit leathers, can help smallholder farmers reduce post-harvest losses while increasing income. This demonstrates the ability of traditional foods, when properly processed and branded, to contribute to both economic development and improved food security.

Integrating food heritage with SDG 3: Good health and well-being

Human societies have established rich culinary traditions and have tapped locally adapted, nutrient-dense crop varieties showcased in the designation of many traditional food systems, providing a variety of balanced and diverse diets (Zocchi et al., 2021). Accordingly, various policies and initiatives can promote the consumption of traditional foods, inherently recognizing their nutritional and health propensities. This is particularly a beneficial development for public health, especially when considering the challenge of malnutrition or various other forms of micronutrient deficiencies or diet-related burdens of non-communicable diseases. It can also add to the well-being of communities and societies through the enhancement of people's sense of identity and self-esteem, the bonding of generations, and strengthening of cultural continuity, and an increase in community cohesion and solidarity. Consequently, traditional food systems can contribute to SDG 3 in the following ways:

1. Diverse Diets: One of the advantages of traditional foods is that

they often represent a great diversity of nutrient-rich foods that promote a balanced diet, which protects people from malnutrition and specific culture-related moderating nutrient deficiencies. In this regard, Kennedy et al. (2017) point to the fact that traditional foods are crucial for maintaining a healthy diet. The nutritious nature of traditional foods often implies that these dishes do not usually lead to an under consumption of more nutritious foods and, thus, promote a healthy lifestyle. Balanced, whole-food-based dishes such as a mixture of fresh fruit, vegetables, whole grains, legumes, and some lean protein serve as a perfect way to obtain all the necessary vitamins and minerals and promote well-being. Overall, it can be concluded that the diversity and balance of traditional dishes equals the diversity of micronutrients consumed. As Frison et al. (2006) points out, agricultural biodiversity and traditional diets are important in combating malnutrition and micronutrient deficiencies. Traditional diets, which include a diverse range of indigenous and nutrient-dense foods, can provide essential micronutrients like vitamin A, iron, and zinc, as well as other health-promoting compounds. The

transition from diverse traditional diets to simplified cereal-based diets has exacerbated widespread nutrient deficiencies, particularly in developing countries. Traditional diets can improve dietary diversity by encouraging the consumption of locally sourced, biodiverse foods, thereby reducing malnutrition and micronutrient deficiencies.

In addition to this, traditional foods often help their roots and demonstrate a wide range of manifested nutritional benefits. The seasonal traditional foods represent a combination of various aspects that will guarantee the health and happiness of our bodies. Supporting the consumption of the products grown locally and supporting local farmers and food producers will ensure biodiversity and sustainably grown food. Finally, adopting a diet that is more like a traditional one, is possible to protect from being malnourished or micronutrient deficient (Frison et al., 2006).

2. Combatting Malnutrition: Malnutrition can be combated with traditional food policies, which promote the utilization of locally appropriate, nutritionally dense crops that are grown in lower resource-intensive systems. For

example, according to Mabhaudhi et al. (2018), African leafy vegetables such as amaranth, Chinese cabbage, and black nightshade are high in vitamins, fiber, and iron. These can be useful for improving the quality of rural diets. Furthermore, these crops are more resistant to environmental stressors, which can improve the sustainability of local food systems. Policies that encourage the cultivation and consumption of indigenous crops can empower smallholder farmers, particularly women, open new market opportunities, and promote economic development (Zondi et al., 2022). Despite their nutritional benefits, indigenous crops such as cowpea and bambara groundnut have been marginalized, but they are now gaining popularity due to their potential to alleviate malnutrition and promote sustainable agriculture.

3. Reducing Non-Communicable Diseases: A return to ancestral plant-based diets may significantly decrease the incidence of diet-related noncommunicable diseases like type two diabetes, obesity, and heart disease by capitalizing on their diverse and nutrient-wealthy profiles. As Sarkar et al. (2020) have demonstrated, these foods contain

beneficial phenolic bioactive, antioxidants, and other health-promoting compounds shown to aid in blood sugar management, lower hypertension, and improve cardiovascular health. Furthermore, their research unveiled that the traditional Native American “three sisters” - corn, beans, and squash - boast robust antidiabetic, antihypertensive, and antioxidant properties. Incorporating traditional foods back into current diets can offer a powerful dietary strategy to battle the escalating noncommunicable disease epidemic, especially among indigenous populations who have experienced considerable changes to both nourishment and lifestyle due to modern industrial agriculture’s ubiquitous commodification of eating.

4. Cultural Identity: A community’s heritage, ethics, and lifestyle are inextricably linked to conventional dietary knowledge and culinary customs, making conservation critical for nurturing a sentiment of cultural individuality and continuity. For example, among the Nuxalk Nation in British Columbia, Canada, the eulachon fish and its grease are considered profoundly meaningful (Kuhnlein & Chotiboriboon, 2022). Although problems like overfishing and ecological degradation present

challenges, carrying on rituals like customary angling and rendering the grease honors the fish’s historical and nutritional significance. More than maintaining important cultural information, these events also strengthen communal bonds and guarantee these practices will be passed down to coming generations, preserving cultural character and linearity.

5. Community Cohesion: Shared culinary traditions can strengthen community bonds and improve social well-being by encouraging a sense of belonging, cultural continuity, and social interaction. The Mediterranean diet exemplifies how a culturally embedded dietary pattern can provide social and health benefits (Meybeck & Gitz, 2017). This traditional diet nourishes more than one’s stomach. It cultivates a cultural fabric stitched together by communal breaking of bread, collaborative cooking, and congregate dining. Through group grubbing and gustatory gatherings, bonds are forged as fellowship and feelings of togetherness thrive while loneliness and disconnectedness fall away. A community fortifies itself and interlaces interpersonal threads by cherishing and partaking in shared savoring of savories - sustenance for the soul that

enriches existence and elevates each individual's experience of living (Wondirad et al., 2021).

Integrating food heritage with SDG 8: Decent work and economic growth

The preservation and promotion of agricultural heritage sites can help achieve SDG 8 by generating employment and income through tourism, which highlights the cultural and ecological value of these systems (Mi et al., 2014). However, success relies on constructing proper policies and balanced markets to ensure equitable benefit distribution among all stakeholders. Productive communication and collaboration among policymakers, heritage professionals, and local communities are critical for balancing conservation and development (Han et al., 2016). Integrating food heritage with SDG 8 could involve numerous tactics, such as establishing education centers that promote agricultural methods to attract tourists and spur economic growth in rural territories. Furthermore, developing exclusive labels for indigenous crops can heighten consumer awareness of their cultivation and elevate the revenue of smallholders.

1. Creating Community-Based Enterprises: Local communities have opportunities to develop food-based businesses rooted in traditional knowledge, such as small manufacturing centers, cultural culinary experiences, and home-based industries. According to research by Aaltonen et al. (2015), a community's entrepreneurial heritage associated with nourishment empowers locals to leverage their inherited sagacity and assets to conceive food-related companies, consequently building sustainable benefits. Highlighting one-of-a-kind cultural roots, conventional recipes, and edible customs can attract customers seeking authentic experiences. Places provide a compelling value proposition by demonstrating their legacy through small-scale processing, culinary travel and home industries.

2. Local Value Chain Strengthening: While all members of local food networks can mutually benefit, marginalized smallholder farmers tend to see the fewest rewards. However, building linkages between growers, processors, and customers has the potential to redistribute value more equitably (de Zegher et al., 2019). According to Vos, R., & Cattaneo's (2021) research, models like cooperatives

and producer organizations are effective at connecting small farms with additional market players, broadening access, and ensuring fair payment for goods. Smallholders are allowed to engage in value-adding activities, such as preparation and packaging, by fortifying these relationships. This promotes a balanced distribution of financial profits across the supply chain and expands occupations in processing. Localized food systems enable direct interactions between producers and consumers, increasing transparency, reducing intermediaries, and ensuring growers retain a larger share of the final price. This direct connection can boost producers' earnings, improve food quality, and promote financial growth while creating new, decent job opportunities.

Integrating food heritage with SDG 12: Responsible consumption and production

Consumers can be encouraged to make more informed decisions that promote sustainable and ethically sourced food products by emphasizing the cultural and ecological importance of traditional food systems. For instance, the Slow

Food movement and other initiatives that acknowledge and protect traditional food heritage have played a critical role in increasing awareness of the significance of preserving local food cultures and promoting sustainable food production practices (Mariani et al., 2021). This symbiotic relationship between consumers, producers, and policymakers in the pursuit of responsible consumption and production patterns can be achieved through these grassroots efforts, which can complement top-down policy initiatives (Signori & Forno, 2019). Additionally, the studies of Trolio et al. (2016) and Mariani et al. (2021) could suggest strategies for aligning food heritage with SDG 12 as follows.

1. Promote GIs and Protected Designations of Origin (PDOs): The GIs and PDOs are intellectual property rights that identify products as originating from specific regions, where their unique qualities, reputation, or other characteristics are intrinsically linked to their geographical origin. These designations are increasingly recognized for their potential to drive local economic growth while simultaneously preserving cultural heritage. GIs can promote rural development and offer economic opportunities to local

communities by establishing niche markets and enhancing the value of products (Zografos, 2008). Moreover, GIs help safeguard cultural heritage by protecting traditional knowledge, practices, and expressions, and by acknowledging the sacred beliefs of indigenous peoples (Gangjee, 2012).

Beyond cultural preservation, GIs help maintain biological and cultural diversity, including animal breeds, plant varieties, and ecosystems. They also promote sustainable development by encouraging responsible practices and fostering social, economic, and environmental progress. Integrated into public policy, GIs can meet regional and product-specific needs, aligning with SDGs. However, their success often relies on state involvement, which empowers small farmers. The effectiveness of GI protection varies across countries, depending on institutional support and infrastructure.

2. Traceability and Transparency Systems Development: The development of traceability and transparency systems in the food supply chain is crucial for ensuring greater accountability and promoting traditional food items. With the increasing complexity of global food

supply chains, traditional systems often fall short in providing the necessary transparency and traceability. Emerging technologies, particularly blockchain, offer promising solutions to these challenges. Blockchain technology provides a secure, immutable, and transparent system for tracking food products across the supply chain, ensuring total control over their traceability from origin to consumer (Ellahi et al., 2023). Blockchain-based systems can improve the traceability performance by providing full transparency and security, which is difficult to achieve with traditional IoT systems that rely on centralized paradigms (Feng et al., 2020). Despite the benefits, there are challenges in implementing blockchain-based traceability systems, including high costs, standardization issues, and the need for regulatory frameworks (Nurgazina et al., 2021). Effective implementation requires addressing these challenges through collaborative efforts among stakeholders and continuous technological advancements.

3. Celebrate and Valorize Neglected or Underutilized Crops and Traditional Foods: Upscale the status of neglected or marginalized food crops and traditional culinary practices, diversifying long-term

food systems, breaking the cycle of unsustainable industrial agriculture, and encouraging the consumption of nutritionally adaptive foods (Frison, 2016).

4. Implement Sustainable Packaging and Distribution Strategies: To mitigate waste and environmental consequences in conventional food systems, it is imperative to establish environmentally sustainable packaging and efficient food distribution networks. When adopting these approaches, food heritage could facilitate the shift towards more conscientious production and consumption patterns necessary to accomplish SDG 12 (Frison, 2016).

CONCLUSION

SDG 1: No Poverty - The preservation of food heritage can effectively mitigate poverty, especially in rural and indigenous populations. Through the promotion of traditional food systems, indigenous crops, and cultural tourism, it is possible to establish sustainable income prospects and specialized markets, so offering essential economic assistance to marginalized communities.

SDG 3: Good Health and Well-being - Traditional food systems offer diverse, nutrient-rich diets that can prevent

malnutrition and diet-related illnesses. Promoting these foods can improve public health and well-being, while also preserving cultural traditions and fostering a sense of continuity across generations.

SDG 8: Decent Work and Economic Growth - Specifically through cultural tourism and local businesses, the preservation and promotion of food heritage has the capacity to stimulate sustained economic development. Facilitating the development of community-based enterprises rooted in traditional culinary methods can stimulate employment opportunities and enhance local economies, all the while safeguarding cultural heritage.

SDG 12: Responsible Consumption and Production - Encouraging the use of traditional foods and sustainable farming methods is critical for responsible consumption. The GIs and PDOs are initiatives that help to protect traditional knowledge promote biodiversity and ensure food production systems' transparency and sustainability.

RECOMMENDATIONS

1. Policy Implementation: Governments and international

organizations should prioritize the enactment of policies that support the preservation and promotion of traditional food systems. This may include the development of incentive programs for sustainable farming practices and the establishment of legal frameworks to protect traditional knowledge through intellectual property rights.

2. Community Engagement: Empowering local communities is key to preserving food heritage through

community initiatives and education on traditional culinary practices and sustainable agriculture. Communities can actively preserve traditions by fostering ownership and pride in local food.

3. Public Awareness Campaigns: Raising awareness of food heritage's value is vital for its preservation. Campaigns should emphasize the cultural, health, and environmental benefits of traditional food systems and educate consumers on making informed choices that support

sustainable, ethically sourced products.

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