

Community partnership: An economic aspect in heritage conservation projects

Mohamad Jalal Istanbouli^{1*}

¹Department of Architecture, College of Architecture and Planning, Imam Abdulrahman Bin Faisal University, Damman, Saudi Arabia; mjistanbouli@iau.edu.sa (M.J.I.).

Abstract: Desertification is a natural environmental degradation phenomenon that threatens ecosystems globally. Numerous studies have explored the natural and human factors contributing to environmental degradation. Human activities can potentially accelerate or mitigate environmental degradation, especially in marginal areas. When resources in these areas fail to meet the needs of local populations, human migration occurs, leading to the loss of vital human potential necessary for preserving biodiversity and ecosystems. This migration further accelerates environmental degradation. Therefore, addressing the needs of local residents and improving their standard of living by leveraging the natural environment's potential is crucial. This approach fosters a strong connection between the population and their communities, encouraging efforts to preserve and develop environmental resources as a foundation for sustainability. Consequently, strategies for developing marginal areas and conserving their environmental and human resources should be prioritized in policies aimed at combating environmental degradation and the desertification problems linked to human migration. The discussion includes development projects based on community participation as an approach to growth in isolated areas to protect them from environmental degradation, employing a comparative analysis methodology. This involves examining five case studies from Arab, regional, and international contexts in similar areas. The goal is to identify their characteristics and success factors, emphasizing the role of community partnership in conserving the environment. Various aspects are discussed, including administrative structure, participating parties in financing, strategies, scope of work, and the returns and benefits from these experiences, followed by a deductive approach to extract research results from the outputs of the previous analysis processes.

Keywords: *Community partnership, Desertification, Environmental degradation, Human migration, Marginal areas, Sustainable development.*

1. Introduction

The environment and its problems are topics attracting the attention of various bodies, including communities and social sciences, due to their direct impact on human life. Environmental issues arising from imbalances in ecosystems have prompted international and local efforts to research their causes and mitigate them. Earth suffers dangers and transformations in geology, climate, and the environment, primarily due to negative human behavior, disrespect for biological balance, and pollution from various activities.

The conservation of the natural environment requires both material and human resources, achieved through the creation of resource-generating activities that ensure self-financing. Ecotourism has recently emerged as a highly successful means of economic recovery and facilitating communication with nature. Interest in the degradation of arid environments and desertification began with the international conference organized by the United Nations (1977). Prior to this, scientists had warned of this dangerous type of environmental degradation, but it remained largely unnoticed by the public.

Studies identify several causes of environmental degradation, including drought, poor agricultural management, soil degradation, use of wood fuel, wasteful water practices, windblown sand movement, locust swarms, overfishing, poor environmental management, population growth, and urban expansion. Any one of these factors can significantly accelerate the process of environmental degradation.

2. Desertification

Desertification arises from the interaction between natural and human factors that affect the environment. The Earth Summit in Rio de Janeiro defined desertification as: “land degradation in arid, semiarid, and dry subhumid areas resulting from a number of factors including climate fluctuations and human activities” (UNEP, 1992). Researchers have divided the causes of desertification into two main categories: climatic causes and human activities. Continuous drought is a significant factor in accelerating desertification. However, prolonged rainfall in arid environments can also contribute by increasing livestock herds and expanding agriculture beyond the area’s capacity, leading to deterioration (United Nations, 1977). Human activities contributing to desertification include irrigated agriculture and soil salinity problems, overgrazing and nomadic lifestyles, cutting and collecting wood, overexploitation of groundwater, the effects of wars, migration from rural areas to cities, and increased pollution and global warming.

Dregne (1976) proposed a comprehensive program to combat desertification, emphasizing the need for national commitment from the outset and continuous follow-up until completion. The program advocates directing reform efforts and also stresses the importance of community participation, the establishment of small-scale industries based on agriculture, and the improvement of the national economic and educational infrastructure. Dregne highlights that the stages of the program should be implemented sequentially, as each stage is crucial and indispensable. The research will analyze factors related to community partnerships that contribute to environmental protection. When the host community recognizes the value of their culture and traditions and leverages their local potential, they develop a sense of pride and belonging. This fosters a model of community connection to a sustainable system and way of life.

3. Community Partnership

Citizens play a crucial role in protecting the environment. National programs for environmental protection will not succeed without the full support and conviction of citizens regarding their importance. In third-world countries, where most development is focused on urban centers, migration from remote areas to cities in search of a better life increases. This migration reduces the rural workforce and leaves natural and agricultural resources to gradually deteriorate. Citizen awareness of the importance of environmental conservation is the fundamental pillar in this field.

Community partnership holds an important position in studying and analyzing contemporary environmental problems. Community members, who understand their problems and needs, should be encouraged to participate in local environmental initiatives (Jittangwathana, 2005). Community partnership also provides the community with the opportunity to express their opinions to decision-makers. This principle is based on the acceptance of diverse opinions and coordination with all groups. There are three important conditions for achieving community partnership: freedom, ability, and motivation. Cohen and Abeloff suggested levels of application for the community partnership process to successfully implement related activities at the levels of decision-making, implementation, benefits, and evaluation. Community partnership in developing and implementing activities depends on the quality and levels of activities that the community must contribute to, along with other stakeholders from institutions, governments, the private sector, and individuals. However, the needs of the community must be the primary goal, and the participation of individuals is necessary at all stages of the process (Virojtrairatt, 2010). The types of community partnerships for stakeholders can be divided into three categories: participation of the private sector, participation of non-governmental organizations and individuals, and participation of governmental institutions and the public sector.

Economic development can significantly contribute to environmental protection when it is tailored to the local environment and community through proper planning and management. This is particularly effective in areas with natural beauty, interesting terrain, abundant wildlife, clean air, and clean water, which support the establishment of development projects. Respecting the physical and cultural environment and promoting nondestructive and nondegrading forms of tourism can provide financial contributions to the protection of natural environments and cultures.

Goodwin also emphasized the economic dimension in his definition of ecotourism: Ecotourism is tourism with a low impact on nature that contributes to the conservation of species and customs. This can be achieved either directly, by contributing to conservation efforts, or indirectly, by providing the local community with sufficient income.

4. Case Studies

4.1. Expeditions (*Pamirs of Tajikistan*)

The Eastern Pamir region of Tajikistan is located in the high deserts, in the southern part of the Republic of Tajikistan, and is considered a very remote and economically degraded region (Watanabe, Anarbaev, Ochiai, Izumiyama, & Gaunavinaka, 2009). This area boasts a unique landscape and a rich local cultural environment. It features some of the highest mountains in the world. The Murgab Ecotourism Association (META) was established in 2003 with UNESCO's support to develop and promote sustainable, community-based tourism in the region. In 2012, META became a largely self-sufficient tourism development agency based on its members. META members offer a variety of activities, all based in the Alishor, Murghab, Rangkol, and Karakol regions along the Pamir Highway. They include 40 homestays, 20 tented accommodation operations, 35 tour transport companies, and 12 tour guide companies. META generates revenue from membership fees and annual calendar sales, which it uses to support a range of training courses, business services, and social programs in collaboration with social enterprises, etc.

To promote tourism, META and etc4CA have provided training courses covering tourism market analysis, understanding and achieving visitor satisfaction, and maintaining attractive tourist destinations. These two social enterprises have also provided direct business support through individual consultations, development and maintenance of web-based tourism resources, and social media marketing. META has supported small tourism businesses in the remote Pamir Mountains by purchasing camping and trekking equipment, which it rents to local drivers and guides during the tourist season. This program has enabled local guides to generate economic income by organizing mountain treks. META's social programs directly address poverty and promote social justice. META markets handicrafts such as embroidery, carpet mats, and other mat products, helping to sustain traditions and crafts while diversifying economic opportunities for women. These social programs benefit the entire community, not just tourism entrepreneurs.

The integration of training courses, business support services, and social programs has enhanced the region's capacity to receive visitors, improved livelihoods, and increased social, economic, and environmental benefits. Such as the establishment of garbage dumps in villages, improved health and sanitation conditions for people living in villages, and wind energy research to enhance access to renewable energy for villages without electricity. This resulted in a 50% increase in tourist numbers in 2013 compared to 2012, with a 72% increase in revenue for META members (see Figure 1 and Table 1) (Shokirov & Dear, 2014).



Figure 1.
Yurt and activities in the Eastern Pamir region.
Source: Nomadex (2017).

Table 1.
Exploratory trips in the Eastern Pamirs, Tajikistan (researchers).

| | | |
|---|------------------------------------|---|
| 1 | Participating parties in financing | META Association consisting of: <ul style="list-style-type: none"> - 40 houses for accommodation and 20 mat tents - 35 tourist transport companies - 12 tourist guide companies - Social enterprise (etc4CA) |
| 2 | Case study strategy Coordination | With the social enterprise in providing: <ol style="list-style-type: none"> 1- Training courses 2- Direct support for businesses 3- Social programs to address poverty and promote social justice 4- Activating the economic role of women 5- Marketing through social media |
| 3 | Field of work | <ul style="list-style-type: none"> - Training courses in the field of: <ol style="list-style-type: none"> 1- Labor market analysis 2- Understanding how to achieve and raise the level of visitor satisfaction 3- Maintaining attractive tourist destinations - Business services: <ol style="list-style-type: none"> 1- Individual consultations 2- Development and maintenance of tourism resources on the Internet 3- Marketing in social media - Purchase of a set of camping equipment for trips to rent to guides and drivers - Social programs: <ol style="list-style-type: none"> 1- Marketing handicrafts via the Internet and brochures 2- Encouraging tourists to visit producers and shops for local products 3- Supporting economic opportunities for women and all community 4- Services: Landfills, improving the visual environment with aesthetics for visitors, improving the health conditions of local people, and renewable energy for villages without electricity. - Organizing mountain trips efficiently and safely. |
| 4 | Return | <ul style="list-style-type: none"> - Economic income for local guides. - Increase in the number of visitors - -Achieve growth in revenue |

| | | |
|---|----------------------------|--|
| 5 | Benefits of the experience | <ul style="list-style-type: none"> - Diversity of community groups. - Participation is material and practical, such as providing services. - Every social, economic, environmental, and service return for the local site as a whole, not for companies. - The integration of training courses, business services, and social programs enhances the local community's ability to receive visitors. - Marketing handicrafts and encouraging tourists to visit producers help sustain traditions and handicrafts. |
|---|----------------------------|--|

4.2. Conservation of Vegetation Cover: Reviving the Rare Mangrove Trees in Senegal

A few kilometers from the city of Saint Louis in northern Senegal, there is a strip of land covered with genetically isolated mangrove trees. These trees are crucial for the livelihood of local people and the environmental health of the area. However, due to deforestation, only 400 hectares of mangroves remain out of the original 1,200 hectares. In 2003, the UNDP, the Global Environment Facility, and the Government of Senegal partnered to fund the establishment of 26 community national reserves across Senegal, including one for the Saint-Louis mangroves. This reserve covers 12 villages with a population of about 1,200. For the program to succeed, it required residents to take full responsibility and ownership of the reserve. The project included awareness campaigns with visits, outreach meetings, and radio spots explaining the initiative. Five new hydraulic motors were installed to manage the area's water, ensuring the mangroves remained healthy. As a result, a rare species of mangrove, *Avicennia Africana*, was restored using a special planting technique by women in the village of Gandon, within the community national reserve. Women have led the reforestation of 2,000 hectares of mangroves, which are now attracting back carp, oysters, and honeybees that had previously disappeared. In Saint Louis, the program helped villagers set up and manage a Takaful savings and lending account. In 2011, the account had a balance of \$323,000, benefiting 1,140 beneficiaries. It also provided people with 171 beehives and a motorized fishing boat for ecotourism tours. See Figure 2 and Table 2. (UNEP, 1992).



Figure 2.
Rare Mangrove trees in Senegal.

Table 2.

Conservation of the vegetation cover (reviving rare mangrove trees in Senegal) (researchers).

| | | |
|---|----------------------------------|---|
| 1 | Participating parties Funding | <ul style="list-style-type: none"> - United Nations Development Program. - Global Environment Facility. - Government of Senegal |
| 2 | Case study strategy | <ul style="list-style-type: none"> - Financing the establishment of 26 community reserves that included 12 villages with a capacity of 12,000 people. - Assigning full responsibility to the residents for reviving the trees and granting them full ownership. |
| 3 | Scope of work | <ul style="list-style-type: none"> - Providing awareness campaigns and arranging communication meetings with project leaders. - Water management and reservation to preserve trees. - Women's participation primarily in the tree planting process. |
| 4 | Return | <ul style="list-style-type: none"> - Financial return and the establishment and management of a savings and mutual lending account. - Encouraging ecotourism in the region. - Reviving a rare type of mangrove and re-attracting oysters and honeybees to the region, along with the accompanying biodiversity. - Enhancing the flow of environmentally friendly living for the population. |
| 5 | Benefits of the Experience | <ul style="list-style-type: none"> - Empowering local people in management and ownership. - Effective participation of women. - Integrating democratic decision-making in forming cooperatives. |

4.3. Sports and Camping Activities: National Park in Mount Kenya

Mount Kenya is one of the least visited national parks, with an average of 25,600 visitors per year. Tourism in the area has been characterized by low levels of visitor activity and accommodation, with activities and lodging largely limited to a few commercial tour operators and hotel chains based in Nairobi. Although these companies employ some local porters, such tourism contributes little to the region's economy or sustainable development. However, community-based tourism has the potential to stabilize the livelihoods of rural households and contribute to community wellbeing, with 5,000 people employed as guides and porters in the national park. Each visitor is provided with two porters to carry personal belongings, sleeping bags, tents, ropes, and utensils for preparing food.

The Guides and Porters Safari Club (GPSC) is one of twelve similar cooperatives around Mount Kenya. As a nonprofit organization with a democratically elected structure, GPSC ensures that the benefits of the project are distributed equitably among all community members. Working as a guide or porter is a significant source of income in the area. The requirement for visitors to be accompanied by a licensed guide and a certain number of porters necessitates a large workforce.

Most of the profits are invested in improving the human capital of households. A welfare and support fund for needy individuals enhances social welfare, with a high proportion of expenditures paid directly to members as salaries and other benefits. However, expenditures for welfare services have sometimes exceeded revenues, causing GPSC to depend on external support for major investments, such as those from international cooperation and development institutions.



Figure 3.
National Park in the Kenyan Mountains.

Source: UNESCO (2017).

Table 3.

Sports and camping activities (National Park in the Kenya Mountains) (researchers).

| | | |
|---|----------------------------|--|
| 1 | Participating Funders | - External support for major investments (from international cooperation and development institutions) |
| 2 | Case Study Strategy | - Improving sustainable community tourism through the establishment of - A fund for the care and support of needy individuals - Supporting cooperatives, which are democratic organizations elected by all members of society. |
| 3 | Scope of Work | - Participation in the Safari Club for guides and porters - Investing profits in supporting human capital in the family - Relying on a fair distribution of the project's benefits to the entire community |
| 4 | Return | - Financial return - Enhancing social welfare - Empowering individuals |
| 5 | Benefits of the Experience | - Integration of democratic decision-making in forming cooperatives - Using international cooperation institutions, especially in poor countries - Strengthening the role of local entities in carrying out tourism-related work away from entities in major cities. - Mountain tourism requires a larger number of workers compared to tourism in non-mountainous areas. |

4.4. Livestock Conservation (Seasonal Settlements in Turkey)

The Eastern Black Sea Region, located in Turkey's northeastern corner, is characterized by mountainous terrain and agricultural activities. Historically, animal husbandry and breeding have been the most important economic activities. However, since the 1980s, there has been a significant increase

in rural tourism, particularly in traditional seasonal settlements on mountain pastures known as yaylas. These yaylas were traditionally used to house herds during the summer months and have been an integral part of the nomadic cultures of Turkey for centuries. In June, as the coastal and plain areas begin to warm up, families move to these yaylas with all their household items, including livestock. They spend the summer producing cheese and yogurt from milk, enriched by Alpine flowers and herbs. Many residents continue to practice traditional herding and prepare local foods, while also welcoming guests from other parts of Turkey and the world. Visitors can enjoy locally produced cheese and experience staying in preserved rooms within traditional houses.

In the 1990s, during a period of increased investment in tourism infrastructure, the Ministry of Tourism began promoting rural tourism. In this context, 16 yaylas were declared "tourism centers" by the Council of Ministers. The Ministry of Tourism encouraged tourism companies to invest in these areas, leading to the transformation of many yaylas in the Eastern Black Sea region into tourism centers, as a strategic target, referring to this mountainous region as "Tourism Yaylas" and highlighting the region's objectives in the Turkey Tourism Strategy 2023 planning document.

Sustainable rural tourism has provided new sources of income for villagers and created new types of work related to the service sector. One positive impact of tourism development has been the increased employment of women. Local women have started their own tourism projects, significantly expanding their roles beyond domestic work and agricultural activities.

The demand for recreation and tourism in the corridor has increased, along with the need for tourism companies and services. Improved accessibility has encouraged the growth of tourism in the corridor, despite the poor infrastructure that does not extend to these communities, which is only used for three months each year. Electricity, sewage, water, and cable TV lines do not reach these homes. Instead, water is sustainably sourced from natural mountain springs. Homes are heated using chopped wood and wood stoves, and all organic household waste is reused as fertilizer. (see Figure 4 and Table 4) (Somuncu, 2014).



Figure 4.
Sustainable mountainous area development in Türkiye.
Source: Ecot (2017).

Table 4.
Preservation of livestock (seasonal settlements in Turkey) (Researcher).

| | | |
|---|------------------------------------|--|
| 1 | Participating parties in financing | <ul style="list-style-type: none"> - The State. - Tourism companies from the local community. |
| 2 | Work strategy | <ul style="list-style-type: none"> - Reusing and investing in old facilities in a different function. - Considering these buildings as part of the strategic planning for tourism in Turkey, within the Ministry of Culture and Tourism. - Involving tourism companies in the development plan. - Activating the role of women economically. |
| 3 | Scope of work | <ul style="list-style-type: none"> - Encouraging tourism companies to invest. - Providing new types of work related to the service sector. - Employing women in projects for their families. |
| 4 | Return | <ul style="list-style-type: none"> - Financial return. |
| 5 | Benefits from the experience | <ul style="list-style-type: none"> - Including the local plan within the national plan. - Women's participation. - The importance of state participation. - Securing access to mountainous areas helps tourism development. |

4.5. Conservation of Biodiversity and Ecosystem (Santawani Reserve)

Santawani Resort is located in Botswana, one of the small countries in Africa in terms of area and population, with an area of 600,370 km² and a population of about 2 million people. Santawani Resort is situated approximately 80 km from Maun, near the southern gate of Botswana, in the heart of the Okavango Delta, which covers an area of 8,000 hectares (Wikipedia, 2011). Botswana was chosen because it is a renowned country that applies sustainable development principles worldwide, having signed numerous international agreements supporting biodiversity conservation and sustainable tourism.

Tourism development in Botswana is focused on wildlife and the wildlife experience, and the policy in Botswana is one of high-cost, low-volume tourism with the aim of maximizing income from a minimum number of visitors, minimizing the risk to the country's fragile ecosystems, while maximizing value through the scarcity of tourism offerings.

Several local and international nongovernmental organizations work directly with community organizations in Botswana. These collaborations help ensure that tourism development does not harm biodiversity conservation. They also support environmental and ecosystem conservation, wildlife tourism, and the sustainable use of natural resources. Additionally, these efforts aim to alleviate poverty, address environmental degradation, and raise awareness of biodiversity and ecotourism (Kalikawe, 2001). Built in a nature reserve using local building materials and employing local labor (Kalikawe, 2001), this is the first ecotourism destination to be fully managed by the local community. The resort is owned by the community and managed by the Sankuyo Tshwaragano Management Trust (STMT), which comprises 400 local families. This marks the first instance of a community-based organization directly benefiting from tourism in the area. The resort employs around 20 community members who have gained hospitality management skills from working in other resorts and camps in the Okavango (Sampéré, 2004). The project aims to alleviate poverty by providing financial incentives to the local community and encouraging participation in sustainable development (AWF African Wildlife Foundation, 2005). It utilizes indigenous knowledge and traditional land management systems (see Figure 5 and Table 5).



Building with local building materials and traditional methods at Santawani Resort



Santawani Nature Reserve - Okavango Delta



Wildlife and safari trips in Santawani Resort



Using local labor in the tours

Figure 5.

Conservation of biodiversity and ecosystem (Santawani Reserve).

Table 5.

Conservation of biodiversity and ecosystem (Santawani Reserve) (Researcher).

| | | | |
|---|----------------------------|---------|---|
| 1 | Participating Entities | Funding | <ul style="list-style-type: none"> - The Government of Botswana has leased the resort to local community members. - Local community members. - African funding institutions: Africa Wildlife Foundation (AWF), African Development Foundation (ADF). - International funding institutions: United States Agency for International Development (USAID). |
| 2 | Case Study Strategy | | <ul style="list-style-type: none"> - Conducting a survey of the site, a comprehensive study of the local population, and an environmental impact assessment of the project before its implementation. - Using local building materials produced by the local community, which achieve economic returns in addition to preserving the natural environment. - Using only local labor, with their development through training courses, to enhance their administrative and planning skills necessary to manage their new businesses. - Creating income for local communities through tours and tourist visits, where cultural tours and food are provided, thus directly benefiting their communities. - Using part of the profits from Santawani Lodge to develop local facilities within the community and improve the standard of living. - Distributing part of the proceeds of Santawani Resort to local community services such as health, education, the social center, training tourism courses for local students, and orphanages. - Motivating the local community to preserve the natural environment, cultural heritage, and sense of belonging. |
| 3 | Scope of Work | | <ul style="list-style-type: none"> - Encouraging tourism companies to invest - Using local labor - Employing women in projects for their families |
| 4 | Return | | <ul style="list-style-type: none"> - Financial return - Preserving wildlife and lands |
| 5 | Benefits of the Experience | | <ul style="list-style-type: none"> - Using part of the profits to develop local facilities and community services. - Women's participation |

| | |
|--|--|
| | <ul style="list-style-type: none"> - The importance of state participation - The presence of the resort helps to preserve life and wildlife in Africa - Awareness, training, and involving local people in tourism activities, and making part of the financial return go to them, will have the greatest impact in increasing the sense of belonging to the local community, which helps to preserve the project more. - Achieving direct economic benefits to the local community by using only local labor and members of the local community (Bushman tribes) to conduct tours within the village to learn about the cultural heritage and display traditional local products. |
|--|--|

4.6. Conservation of the Natural, Cultural Heritage, and Environmental Life (Dana Reserve in Jordan)

This reserve is located in Jordan and is considered one of the most diverse areas in the country in terms of ecosystems and plant patterns (ar.wikipedia.org). The reserve is also characterized by a unique and extensive diversity of wildlife. The differences in the region's geology, soil, and rocks have contributed to the presence of diverse plant life, accompanied by a variety of vertebrates and invertebrates as well (Jordanian Ministry of Education, 2009). The project aims to conserve the natural heritage and cultural heritage of the region, exploit the natural and cultural resources in the region in a way that maintains their sustainability, benefit from ecotourism to stimulate and develop society, and promote cooperative work within society (Al-Khawaldeh, 2001) 98 archaeological sites have been recorded in this reserve, some of which date back to the Stone Age through the Roman and Byzantine periods until the early Islamic era (Jordanian Ministry of Education, 2009).

The current architectural heritage dates back 500 years, and this architectural heritage is characterized by its components from the local environment, such as local stone, clay, and wood used in construction. This village is the only witness to the construction style that prevailed in most Jordanian villages until the end of the nineteenth century (Al-Khawaldeh, 2001). In 1989, the first steps to establish the Dana Nature Reserve were taken by the "Royal Society for the Conservation of Nature," a voluntary non-governmental association. In 1994, the association developed the first plan to manage the Dana Nature Reserve to preserve the biodiversity found there and to make the Dana Biosphere Reserve an integrated model for environmental conservation, in addition to socio-economic development. This was done with funding from the "Global Environment Fund."

The association determined the plan, objectives, strategies, and priorities that ultimately seek to find a balance between protecting the nature reserve and meeting the needs of the local population. This strategy is based on the concept of dividing the reserve into areas, with the identification of areas where recreational activities can be held and others where no activities should be held, and maintaining them as they are. (ar.wikipedia.org). The project to preserve the architectural heritage of the reserve included all types of partnerships, as various sectors of society participated, especially youth who played a major role, while women participated in an intermediate role due to customs and traditions, and the poor educational level in particular. Several parties participated in planning, financing, and implementing some programs that require financing or technical expertise, especially those involving investment projects, such as governmental and non-governmental bodies, international financing institutions, the private sector, international agencies, and local initiatives (Al-Khawaldeh, 2001).

The project included several main axes that were applied for the first time in Jordan: field environmental studies of the characteristics and natural advantages of the reserve. It included 16 comprehensive studies of all the vital and environmental components of the reserve, in which dozens of young Jordanian researchers participated. The studies included surveys of animals, plants, soil, and water, as well as the economic and social characteristics of the local population. These studies provided comprehensive information that helped in preparing the modern administrative plan for the reserve, which was the first of its kind in its comprehensiveness and precise details, and became a model for all administrative plans for reserves in Jordan (Arab Environment Website, 2002).

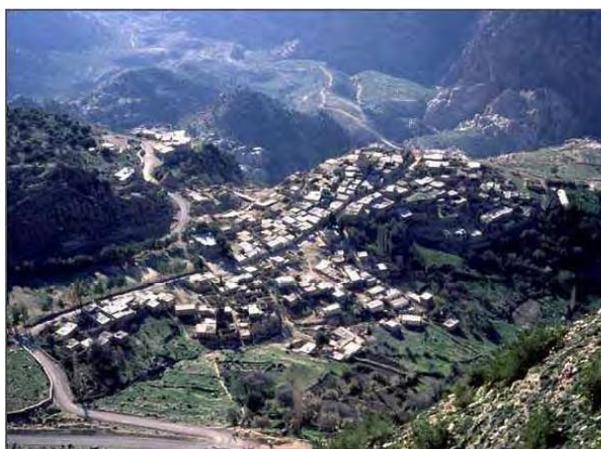
Ensuring sustainability for the project: The association focused on qualifying local residents and finding sources of income that contribute to raising the standard of living in the village and encouraging its residents to return to it. This was achieved through Ecotourism, where tourist facilities were built

inspired by heritage and compatible with the environment. The village was rebuilt with its original stones and in its old construction method to preserve its character and heritage. Sixty-five houses were constructed in the village and converted into economic tourist homes. The main street of the village was paved with stones, and the village mosque was built in the same style to imitate the old design. Additionally, a cold and fresh water spring was established for the valley, and many young men from the area were trained to work as tourist guides or in the administrative sites of the reserve. The initiative was successful, attracting tens of thousands of visitors annually. Al-Rummanah Camp in Dana Reserve exemplifies ecotourism within the reserve, utilizing and preserving environmental resources from encroachment. The campsite includes facilities for bird and wildlife observation, as well as stargazing at night. Al-Rummanah Camp offers visitors 20 tents for a maximum of one day, accommodating up to 75 visitors, with the visiting season from March to October each year. In 1997, income from ecotourism was sufficient to cover the costs of maintaining the reserve's operations (Tafilah Electronic Portal). The skills of the local population, especially women, were invested in producing traditional handicrafts and pottery, using local designs and sourced from local materials such as clay, mud, and silver jewelry. Organic farming was also promoted, producing honey and jam from organic crops without pesticides. The income generated from these activities contributed to covering all current expenses in the reserve. This economic activity led to reverse migration to the village, providing job opportunities and fostering economic growth (Arab Environment Website, 2002).

A group of local youth volunteers studies the area in terms of its social, economic, and urban conditions and characteristics, in addition to studying the potential, needs, opportunities, and obstacles. The residents participated in the restoration of old houses, and the youth contributed individually and collectively as volunteers in planning, implementing, and supervising the various development programs. This means that the first and primary role in planning and implementing the project fell on the local community (Al-Khawaldeh, 2001). One of the factors in the sustainability of this project lies in promoting it as a tourist economic center with local management. The promotion was developed by the association, signing an agreement with the "Eco-Hotels Company," which manages the Feynan Lodge in compliance with the conditions of eco-tourism, in order to involve the private sector in managing the tourist sites in Dana. The magazine "National Geographic Adventure" classified the Feynan Lodge as one of the 50 best eco-lodges in the world (Royal Society for the Conservation of Nature, 2009). In the end, the Dana project succeeded in involving the local community from the first planning stage, which created a sense of belonging. By exploiting the skills of the local community, an economic return was achieved for the local community, and the architectural heritage was preserved, and traditional crafts were revived, which contributed to sustainable development.



Dana Nature Reserve



Architectural Heritage in Dana Reserve



Guest House in Dana



Rummaneh Camp Dana



Investing in the skills of local people in making local handicrafts

Figure 6.

Conservation of the natural heritage, heritage, and environmental life (Dana Reserve in Jordan).

Table 6.

Conservation the natural heritage, heritage, and environmental life (Dana Reserve in Jordan) (Researcher).

| | | |
|---|-------------------------------------|---|
| 1 | Participating parties in financing | The Royal Society for the Conservation of Nature is responsible for the project, which included the following: financing through contributions from the local community, borrowing from the World Bank to finance investment projects, the United Nations Development Programme (UNDP), contributions from international bodies such as the French travel agency Arvel, and the Ministry of Planning and International Cooperation. |
| 2 | Case study strategy Coordination | Raising the capacity of the association and training cadres of employees and volunteers, women participated in an intermediate role due to customs and traditions, and the weak educational level in particular. Building tourist facilities inspired by heritage and compatible with the environment, rebuilding the village with its stones and old construction methods while preserving its character and heritage, involving tourism companies in the development plan, activating the role of women economically, improving environmental tourism by building tourist facilities inspired by heritage and compatible with the environment, and promoting tourism for the reserve as an economic and tourist center with local management through: <ol style="list-style-type: none"> 1- Signing agreements with environmental hotel companies. 2- Involving the private sector in managing tourist sites with environmental tourism conditions. |
| 3 | Field of work | Conducting environmental and field studies of the characteristics and natural advantages of the reserve, in which dozens of local researchers and others participated, conducting surveys of animals, plants, soil, and water. As well as the economic and social characteristics of the local population, training the local population to work in: <ol style="list-style-type: none"> 1- Tour guides 2- Exploiting the skills of the local population in making local products 3- Organic farming without the use of pesticides, as well as producing honey and jam from the produce of these organic crops. 4- Benefiting from the local population in restoring old houses and rebuilding them with traditional |

| | | |
|---|----------------------------|--|
| | | building materials and methods. - Preserving attractive tourist destinations. - Business services: 1- Converting 65 houses into economic tourist homes. 2- Building camps to increase the attraction of visitors to the reserve |
| 4 | Return | Economic return to the local community, increase in the number of visitors, achieve growth in revenue, preserve the natural and heritage of the region, and exploit the natural and heritage resources in the region to maintain its sustainability, and organic crops and products. |
| 5 | Benefits of the experience | Involving dozens of young volunteers in conducting a comprehensive study of the region for all vital and environmental components, as well as the social and economic characteristics of the local population, created a sense of belonging to the project, eliminated unemployment by exploiting the skills of the local population in making local products, restoring old houses, and rebuilding the village. The project emphasized the importance of awareness, training, and involving the local population in tourism activities, with a portion of the financial return allocated to the local community, thereby enhancing the sense of belonging to preserve the project, every social, economic, and environmental return, and service to the local community as a whole, not just to companies. Marketing handicrafts and encouraging tourists to visit producers help sustain traditions and handicrafts, empowering the local population in management and ownership, and ensuring the effective participation of women. |

4.7. Comparative Analysis

By analyzing the previous case studies, the general characteristics of development projects in the study areas can be deduced, as shown in Table 7.

4.8. Parties Involved in Financing

The financing parties varied among three main groups:

- The Local Community: This includes cooperatives and local tourism companies. Examples are: The Meta Association (Case 1), The Safari Club and cooperatives (Case 3), local tourism companies (Case 4), and local community members (Case 5).
- Governmental Bodies: These include the government of Senegal (Case 2), the government of Turkey (Case 4), and the government of Botswana (Case 5).
- International Institutions: These include: The United Nations Development Program (Case 2), The International Cooperation Foundation for the Poorest Countries (Case 3, Kenya), and The African Development Foundation (AWF) (Case 5).

It is noted that these parties worked jointly rather than individually, with the local community playing a fundamental role in all cases, often in the form of general or specialized women's cooperatives.

Table 7.
Comparative analysis of the case studies.

| Case Studies | | 1 | 2 | 3 | 4 | 5 | 6 | | |
|---|--|---------------------------------|---|---|--|---|---|---|---|
| | | Expeditions (Pamir, Tajikistan) | Vegetation conservation, mangrove restoration | Sports and camping activities (Kenya Mountains National Park) | Animal conservation (Seasonal settlements in Turkey) | Biodiversity and ecosystem conservation (Santawani Reserve) | Conservation of the natural heritage, and environmental life (Dana Reserve in Jordan) | | |
| 1 | Participating parties in financing | 1 | Local community from cooperatives, local companies, or individuals. | ● | ● | ● | ● | | |
| | | 2 | Government agencies | | | ● | ● | | |
| | | 3 | International institutions | | ● | | ● | | |
| 2 | Development strategies used in case studies | 1 | Human Capital Support | Professional training courses | ● | ● | ● | | |
| | | | | Educational courses such as language education. | | ● | ● | | |
| | | 2 | Financial Support | Direct local support | | | ● | | |
| | | | | Equipment supports and service provision | ● | | | | |
| | | | | Wildlife and land conservation | | ● | | ● | |
| | | 3 | Providing direct contact between locals and tourists | | ● | | | ● | |
| | | 4 | Exploiting the strengths of the region | Re-employing old facilities | ● | | | ● | |
| | | | | Exploiting heritage sites | | | | | ● |
| | | | | Exploiting traditional crafts | ● | | | ● | |
| | | 5 | Traditional exploitation of natural resources | | ● | | | ● | |
| | | 6 | Providing investment opportunities | Investment projects related to tourism | ● | | ● | ● | |
| Projects related to service facilities. | ● | | | | | ● | ● | | |
| 7 | Activating the economic role of women | ● | ● | | ● | | | | |
| 8 | Opening international, regional, and local communication channels for advertising and marketing. | ● | ● | | | ● | | | |

4.9. Development Strategy in Case Studies

1. Supporting human capital: Vocational training courses, literacy courses, language courses, and these initiatives aim to develop the capabilities of the local community.
2. Direct financial support: Support for equipment and commercial services, as seen in the first case in Tajikistan, financial support from internal or external sources, such as international investments in the third case in Kenya.
3. Providing direct contact between local residents and tourists: This fosters cultural exchange, increases self-confidence, and enhances the sense of belonging among the local population.
4. Exploiting the region's heritage strengths: Reuse old buildings. For example, the use of yaylas in Tajikistan (first case) and Turkish yurts (fourth case).
5. Exploiting Traditional Crafts: Such as making mats and tents in Tajikistan. All cases emphasized the importance of reviving and preserving traditional crafts as major tourist

attractions. The sustainable development plan is linked to the site's ancient heritage, focusing on re-exploiting, employing, and reviving it.

6. Utilizing the site's natural resources in a traditional way: Preserving traditional methods of preparing local products, which serve as a key driver for development. This is the fourth case in Turkey, where cheese and yogurt are made from milk and alpine flowers.
7. Providing investment opportunities in development tourism projects: This appeared in all cases of projects related to the movement of tourists to the site; we find guides, porters, drivers, traders, producers, coordinating visits to cooperatives, organizing tourist tours, and preparing products and foods.
8. In the field of services: It is necessary to direct part of the investments into improving local services for residents and tourists alike, such as renewable energy sources, ease of access to the site, infrastructure services, and cleanliness.
9. Activating the role of women: Women played a fundamental role in the tourism development strategy, and this was exemplified in the cases of Tajikistan and Turkey. Their involvement was evident through direct intervention in cultural, economic, and social development, including active participation in family-specific tourism economic projects, direct contact with tourists, and capacity building through learning languages, crafts, and traditional products unique to their regions.
10. Opening international, regional, and local communication channels for advertising and marketing: This confirms the importance of transferring the local experience to the global level through the optimal use of social media channels in search engines on websites of local projects, to ensure the dissemination of the local potential of the place on the international level, attracting more tourism, whether domestic or foreign, and marketing products.

Through the theoretical and applied study of the previous cases, the important role played by community partnership in development becomes clear. For community participation to effectively reduce environmental degradation, it must have the following characteristics:

1. Pivotal role of the local community: The local community, in all its categories, must play a central role in the development process, either independently or in partnership with governmental or international bodies.
2. Integration into national strategy: the local community development plan should be included in the national development strategy.
3. Focus on marginal areas: Strategies for developing marginal areas and preserving their environmental and human resources should be prioritized in policies to combat environmental degradation and the resulting desertification problems associated with migration from these areas.
4. Community participation as a development entry point: Community participation should be considered a key approach for development in remote areas to protect them from environmental degradation.
5. Balanced system: Adopt a balanced system that integrates the local community, the environment, and visitors, ensuring benefits and protecting the rights of all.
6. Democratic organizational structure: The local community should be organized on a democratic basis through public or specialized cooperatives.
7. Development of human capital: It is essential to develop local human capital through various professional, training, and language courses, preparing them for direct engagement with tourism activities without intermediaries, and relying on local labor.
8. Preservation of traditional crafts: Traditional crafts and methods of preparing local products should be preserved as fundamental components of economic development.
9. Attention to services and infrastructure: Services and infrastructure should be developed alongside environmental conservation projects.

10. Role of women: Emphasize the role of women as key players in economic, cultural, social, and environmental development plans.
11. Utilizing social media and search channels: Leverage social media and search engines to market eco-tourism sites, attract more visitors, and promote traditional craft products and the natural environment of the site.
12. Preserving vegetation: Focus on preserving vegetation, especially rare species such as mangrove trees.
13. Promoting eco-tourism: Encourage eco-tourism by organizing exploratory trips, camping, and sports activities.

Providing an economic base in remote communities based on their natural human potential, meeting the needs of their diverse populations, and raising their standard of living is the cornerstone that ensures the connection of man to his society, motivates him to preserve his environment, ensures his stability in it, and prevents it from being exposed to environmental degradation and the desertification that follows.

Transparency:

The author confirms that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Copyright:

© 2026 by the author. This article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

References

- Al-Khawaldeh, K. (2001). *Community-based tourism development in Dana, Jordan*. Amman, Jordan. Unpublished Manuscript/Report.
- Arab Environment Website. (2002). *Jordanian reserves: Comprehensive administrative planning*. Arab: Arab Environment Website.
- AWF African Wildlife Foundation. (2005). *Community owned and run: A case study of Santawani Lodge, Ngamiland, Botswana, African Wildlife Foundation (AWF), Working Papers, August*. Retrieved from <https://www.awf.org/>. [Accessed 01/09/2025]
- Dregne, H. (1976). *Desertification of a crisis*. In P. Paylore & R. Haney, Jr. (Eds.), *Desertification: Process, problems, perspectives*. London, UK: Harper & Row.
- Ecot. (2017). *Eastern Turkey's yaylas: Uber community-based tourism. EcotravellerGuide*. London, UK: EcotravellerGuide.
- Jittangwathana, B. (2005). *Sustainable tourism development*. Bangkok, Thailand: Academic Center, The Tourism Authority of Thailand.
- Jordanian Ministry of Education. (2009). *Natural and cultural heritage of Jordan: Educational report*. Amman, Jordan: Ministry of Education.
- Kalikawe, M. C. (2001). *Botswana: Integrating biodiversity into the tourism sector*. Paper presented at the UNEP – Biodiversity Planning Support Program, Mexico City, Mexico. Department of Tourism, P/Bag 0047, Gaborone, Botswana.
- Nomadex. (2017). *Yurt experience at Aydar Lake, Bukhara, Samarkand*. Uzbekistan: Nomadex.
- Royal Society for the Conservation of Nature. (2009). *Annual report 2009*. Amman, Jordan: RSCN.
- Sampéré, E. (2004). Botswanan communities cash in: Conservation is good business at new Botswana lodge. *The African Journal. Cape Town, South Africa*.
- Shokirov, Q., & Dear, C. (2014). *Community-based tourism in the Eastern Pamirs, Tajikistan*. Retrieved from Sustainable Mountain Development Series, Tourism in Mountain Regions: Hope, Fears and Realities (pp. 38–39). United Nations Environmental Program; University of Geneva; University of Bern. Geneva, Switzerland:
- Somuncu, M. (2014). *The success of the state and local people in the development of sustainable mountain tourism in Turkey*. Retrieved from Sustainable Mountain Development Series, Tourism in Mountain Regions: Hope, Fears and Realities (pp. 80–81). United Nations Environmental Program; University of Geneva; University of Bern:
- UNEP. (1992). *Status of desertification and implementation of the united nations plan of action to combat desertification, GCSS.III/3*. Nairobi: UNEP.
- UNESCO. (2017). *World heritage list: Kızılcahamam–Çamlıdere natural site*. Paris, France: United Nations Educational, Scientific and Cultural Organization.

- United Nations. (1977). *Desertification: Its causes and consequences*. New York: Pergamon Press.
- Virojtrairatt, V. (2010). *Community pre-empowering for tourism: Sustainable tourism management guideline, Amphoe Mae Chaem, Chiang Mai, Thailand*. Master's Thesis, Silpakorn University, Graduate School, Program of Architectural Heritage Management and Tourism) (pp. 6–15). Bangkok, Thailand.
- Watanabe, T., Anarbaev, M., Ochiai, Y., Izumiyama, S., & Gaunavinaka, L. (2009). Tourism in the Pamir-Alai Mountains, Southern Kyrgyz Republic. *Journal of Geographic Studies*, 84(1), 3–13.
- Wikipedia. (2011). *Botswana*. In *Wikipedia*. Retrieved from <https://en.wikipedia.org/wiki/Botswana>