ENVIRONMENTAL DIVERSITY IN ASIR REGION AND ITS IMPACT ON TOURISM DEVELOPMENT SUSTAINABLITY

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ABSTRACT

Since the world Commission on Environment and Development (WCED) issued "Our Common Future" in 1987, the concept of sustainable development has been increasingly prominent in discussions and debates on development. Reinvigorated by Rio Conference on Environment and Development (UNCED) in 1992, the concept supports a vision in which economic growth complements the environment as opposed to the conviction that more of one means less of the other. Sustainable development refers to sustainable human development because, to state the obvious and oft-repeated wisdom, development is about people. The persistence of human societies is ultimately dependent upon natural environment. To achieve the desired economic growth using tourism as a developmental tool, developing countries need a fast and efficient implementation of proper environmental management principles. Land and other biophysical resources are finite. Therefore, economic growth can only be promoted through better innovations and efficient management of resources. This paper primarily tackles the ecological diversity in Asir, in the Kingdom of Saudi Arabia and its effect on the sustainable development of tourism in the region. The study is based on a comprehensive review of the literature on sustainable tourism studies and environmental diversity in Asir reign in the Kingdom. The findings of the study provided valuable insights into the role of ecological diversity in achieving sustainable tourism. The study examined the interrelationship between sustainable tourism and ecological diversity.

Keywords: Asir Region, Environmental Diversity, Saudi Arabia, Sustainable Tourism Development.

INTRODUCTION

Many cultures and religions have common values and beliefs (Foucault, 2013). Religions around the world have always preached that the existence of a living organism gives it a fundamental right of survival and self-preservation (Hope & Jones, 2014). In the past decades, the concept of nature conservation was advocated as an environmental necessity. This was spurred by increased environmental awareness in terms of the effects of extinction. The cessation of a natural process is not reversible. Organisms that go extinct remain so forever. As much as it is our duty to conserve archaeological sites and rare artistic creations, we are responsible for maintaining environmental diversity at all including levels genetic diversity, species diversity and the diversity of the ecological systems. Besides, nature conservation is in the best interest of humanity considering that the environment is the provider of products and services, which sustain human life (Mooney, Postel, Schneider, Tilman & Woodwell, 1997). It goes without saying that biodiversity is on the vanguard of cultural diversity, economic growth and

environmental sustainability. It generates non-direct benefits and contributes to a larger gene pool (Eshtayeh & Jamus, 2002)

The Concept of Environmental Diversity

Assessment assents that Environmental diversity refers to the diversity of the habitats, the living organisms and the ecosystems (Assessment, 2005). Wanhui believes that the terminology applied to ecological complexes with which living organisms from all sources interact, inter alia, terrestrial, marine and other aquatic ecosystems (Wanhui, 2002). It may also refer to diversity within a certain species and among different species. According to, Balmford et al. environmental diversity describes a collection of disparities among living organisms found in terrestrial and marine ecosystems, as well as other water systems (Balmford et al., 2005). Moreover, the environmental configurations define those ecological systems in which living organisms exist; and it includes the biological disparities within a species and among different ecosystems.

The Case Study of Asir Region

Asir (also transliterated as Aseer) is one of the provinces in the Kingdom of Saudi Arabia. It was named after a confederation of clans that resided in the area (Alzedee, 2004). Asir region is located in the south-western part of the Kingdom between latitudes of 17º 25´ north and 19º 50´ north and between longitudes of 50º 00´ east and 41º 50´ east. Asir stretches from the borders of al-Dareb, al-Shequq and Piech (Jazan Region) in the south-west to the borders of Yemen in the south and the borders of Najran in the east. It is situated between the valley of propellants (Riyadh Region) to the north and Vernier, Qunfudah and the Red Sea (Mecca Region to Al-Baha Region) to the west (Som & Al-Kassem, 2013).

Asir has an area of 81,000 km² and an estimated population of 1,913,392 (Kenawy, Al Ashry & Shobrak, 2014). The capital of the province is Abha. The region is situated on a high plateau, which receives more rainfall than the rest of the Kingdom. It has the highest peaks in Saudi Arabia. Some of these packs rise to almost 3,000 meters (Mount Soodah near Abha). Although data is exceedingly sparse and unreliable, the average annual rainfall in Asir's highlands ranges from a high of 300 millimetres (12 inches) to a low of 500 millimetres (20 inches). The region has two rainy seasons. The main season one lasts from March to April. Despite the occasional rains, it is extremely hot in summer. The diurnal temperature ranges (DTR) in the highlands are considered the largest in the world. In the mornings, it is extremely frosty and foggy that visibility may be reduced to almost 0%, However it is common for temperatures to exceed 30 °C (85 °F) in the afternoon, (Som & Al-Kassem, 2013). Such variations make Asir a region of more natural vegetation than any other part of Saudi Arabia. Some sheltered areas even have dense coniferous forests, albeit the exposed ridges still being very dry. Asir is home to many farmers, who mainly grow wheat and fruit trees. Recently, an expansion in the irrigated land has greatly increased the agricultural productivity of the province (Heritage, 2015).

Environmental Diversity in Asir

Due to the strategic location of Asir, which gives the region a high level of biodiversity, residents of the province enjoy relatively good atmosphere throughout the year. The high plains

of Asir support the growth of many high-altitude trees, such as juniper and AL-Taleh. Medium elevation ranges (800-1,500 m) support coffee trees, as well as AL-Salam, AL-Sidr and olive trees. On the other hand, AL-Dome and al-Arak trees grow in abundance in the coastal plains of the province. According to AL-Wadee (2010), Saudi Arabia has more than 2243 wild plant species. Approximately 70% of the floras of Asir have medical uses and include many aromatic plants, which can generate revenues and contribute to the economy of use. However, these species are concentrated in different parts of the province, especially in the forests of AL-Fraa, Suda and AL-Serma, which cover an estimated area of about 457,780 hectares. Therefore, Asir can be ecologically being divided into four main areas as follows:

The Eastern Area

AL-Sarawat Mountain descends steeply towards the east of Asir (Powers, Ramirez, Redmond & Elberg, 1966). This area has a semi-desert climate. The region is of low rainfall and filled with magnificent rock formations, interspersed with Al-Talah, tamarisk and Acacia trees. The flat terrace sloping eastward has allowed villages to prosper for many years. The agricultural fields in the area depend on the precipitation levels in the valleys or are watered directly from wells.

The Central Area

One of the main tourist attractions in the region is the mountain Shelf. The mountain is one of the prominent geographic elements of the Arabian Peninsula and the Middle East in general (Glennie et al., 1973). Late Cretaceous napes in Oman Mountains and their geologic evolution. According to AAPG Bulletin, the area becomes sharp near AL-Sarawat and stretches across the central region of Asir. Rock fractures are dominant in AL-Hablah area. It was named after the old village people who used descend to their village and ascend to AL-Sarawat Mountain using ropes on a daily basis.

The Western Area

Tehama coast narrows significantly at certain areas. Some rocky mountains near the coast feature a number of evergreen trees, like AL-Doom tree, which can also be found scattered here and there around the small bays. The region has some of the most beautiful scenery around the Red Sea. In the north, the sandy coasts expand substantially and steadily as dunes migrating to the sea. However, due to low rainfall and rising temperatures, western Asir lacks vegetation. The landscapes mainly mimic their counterparts on the west side of the Red Sea, They are characterized by the environmental and cultural movement to the sea (Algahtany, 2000).

Ridah Natural Reserve

This 9-km^2 area is located about 20 kilometres north-west of the city of Abha.Ridah is situated on the cliff of the Arabian shield, which mainly consists of igneous rock sediments. The region features a steep slope with a dense vegetation cover, dominated by juniper trees (Saudi wildlife Authority, 2015). A large number of tributaries descend from the top and pour into Shoaib Ridah. This natural reserve is characterized by heavy vegetation and biodiversity. Juniper trees create forests in the higher landscapes, whereas AL-Atem trees, wild olive trees, acacias and several species of cactus cover the lower areas. Moreover, the Wadis region has a rich green

cover. Among the most common animals in Ridah are monkeys, Arabian wolves, foxes, striped hyena, lynx and mongooses. The reserve is home to nine species of birds endemic to the Arabian Peninsula. The most important species include the Arab Cyclist Red Leg, woodpeckers Arabian Wood, Magpie Asiri among others Additionally, A number of species of East-African origins can also be found in Ridah, including Abu pick Ramadi, the African AL-Sbd, hammerhead, Roller Ethiopian and Small Green Bees.

Tourism Development in Asir

Since the establishment of the General Authority for Tourism and National Heritage in 2000, Saudi Arabia has sought to facilitate the aggressive development of tourism on at the national level. The efforts so far are likely to bring about massive tourism expansion in the upcoming years. Development in the Saudi tourism sector has rather focused on areas of high potential to be mass markets, i.e., sites of natural beauty and mild climate. However, the impact of tourism development on the environment has not been properly assessed (Briassoulis, 2000). Tourism activities have already resulted in degradation of the natural resources on which the industry depends. The National Commission for Wildlife Conservation and Development (NCWCD) was created in 1986 to manage wildlife reserves (Seddon & Khoja, 2003). Due to their natural elements, good infrastructure, hospitality and historic sites, regions included in the National Tourism Plan, such as Asir region, have become tourist destinations on national and international scales. Domestic tourism has soared in the recent years. More than four million domestic trips were recorded in 2010, of which nearly 430,000 involved Asir (Heritage, 2015). Domestic tourism's revenues increased by 80% between 2013 and 2014, which is an increase of 18.5 billion Saudi Riyal (US $4.93) (ALMamony, 2015). Asir is now considered as the main tourist attraction in the Kingdom of Saudi Arabia. Hundreds of local, Arab and international tourists annually visit the region. Asir is currently one of the most popular tourist destinations in the Arab World and has been selected to be the Capital of Arab Tourism in 2017 (Arab Tourism Organization, 2015).

Environmental Diversity Impacts on Tourism Development Sustainability

As tourism moved into the 21st century, the enterprises have made the environment a priority. Tourism now is the world’s largest industry, Therefore the environment is taking the centre stage in tourism development (Muhanna, 2006). Tourism is not only a powerful economic force but also a factor in the physical environment. Any form of industrial development brings about an impact on the physical environment in which it takes place. In view of the fact that tourists have to visit the place of production in order to consume the output, it is inevitable that tourism activity is associated with an environmental impact. For this reason, some authors have traditionally pointed out that tourism can lead to environmental negative consequences. The highly polarized nature of development also generates intense environmental problems. This reduces the quality of life for the locals, as well as the tourists and may ultimately threaten the viability of the tourist industry itself (Williams & Shaw, 1991). Depletion of natural resources can result in water shortages; creating a great pressure on other local resources like energy, food, etc. That might be in short supply already or destroy beautiful scenic landscapes. Pollution from tourists has an impact at the global level, which disturbs the local population of the caused community. Solid waste and littering in the nature despoil the natural environment. Physical effects can include degradation, loss of wildlife habitats and of scenery and disturbance and

erosion of the local ecosystem caused by clearing forested land and construction of tourism facilities and infrastructure (UNEP, 2001). However, tourism can be positive for the preservation of natural areas. In many tourism projects, the conservation of the natural, cultural and built environment is an important motivation for the initiation of the project. Moreover, some projects deter local communities from illegal use and overuse of natural resources. They also integrate protected natural areas in regional and local development plans and programs. Therefore, tourism should positively contribute to environmental preservation. This can be more meaningful when we think about tourist motivation in visiting one specific place. The benefits and costs of environmental impacts are highlighted below.

Table 1
ENVIRONMENTAL PROTECTION VS. HUMAN ACTIVITY: A COMPARISON

Costs	Benefits
▪ Loss of aesthetic values ▪ Noise ▪ Generation of waste . ▪ Deforestation to build accommodations. ▪ Cutting down trees to obtain firewood resulting in water and air pollution. ▪ Disturbance of ecosystems and disruption of animal breeding patterns and habitats. ▪ Destruction of beaches, dunes, coral reefs and many national parks and wilderness areas through trampling and/or use of vehicles. ▪ Change of landscapes-permanent environmental modification. ▪ Seasonal effects on populations' densities and structures. ▪ Overuse of resources.	▪ Conservation of natural areas and wildlife. ▪ Re-evaluation of environmental policies to respond to tourism growth. ▪ Increased environmental awareness and respect for nature among tourists. ▪ Rehabilitation and occasional transformation of old buildings and sites into new facilities. ▪ Introduction to planning and management. ▪ Tourism may be less damaging to nature compared with human activities involving agriculture and forestry.

Source: Muhanna (2006)

CONCLUSION

In order to achieve sustainable tourism development in Asir, it is prudent to analyses the environmental diversity in the region. An understanding of the relationship between domestic tourism and sustainable regional development in Saudi Arabia is crucial. Preserving of environmental diversity contributes to sustainable tourism socially and economically as it operates on a platform of nature conservation and community awareness. Apart from the issues, which are raised in this paper regarding the environmental policy, Asir region is a unique tourist destination. It has considerable unrealized ecological potential. The government policy on domestic tourism should be reviewed. Tourism product and market diversification in the region is possible, considering that the province has many distinct geographical areas. Tourism development projects are massive undertakings. They affect many sectors and involve many stakeholders. Hence, it is critical that the government adopts multi-hierarchical, inclusive and well-coordinated development strategies. Good tourism policies should promote resource diversity and respond to challenges facing the tourism sector in a manner that advocates sustainability. Environmental impacts on ecosystems, whenever negative effects on the natural environment are dealt with, should be consider that these impacts rarely effect on entity only. The ecological impacts of tourism usually affect the ecosystems as a whole. The impacts on the

natural environment do not only affect pristine natural areas, but also cultivated land, which is an important part of the natural and cultural heritage of the region. It is ecologically valuable because it is the habitat of many species. Environmental impacts of tourism occur at the local, regional and global level. Climate change and the depletion of the ozone layer are two major effects of the increasing global traffic and industrial development, in which tourism plays an important role. Environmental impacts at the local and regional level effect the environment globally in the end. The loss of biological diversity is a major consequence of these impacts.

REFERENCES

Algahtany, H. (2000). Southwest Arabia: The privacy of the place and the building of biodiversity and climate in Asir. *AL-HAYAT, 13597*, 1.

ALMamony, M. (2015). KSA offers diversity in domestic tourism. *Saudi Gazet.*

Alzedee, M. (2004). *Encyclopedia of the history of Saudi Arabia: Modern and contemporary.*

Arab Tourism Organization. (2015). *Al-Watan*.

Assessment, M.E. (2005). *Ecosystems and human well-being.* Washington, DC.

Balmford, A., Bennun, L., Ten-Brink, B., Cooper, D., Côté, I.M., Crane, P. & Green, R.E. (2005). The convention on biological diversity's 2010 target. *Science, 307*(5707), 212-213.

Briassoulis, H. (2000). Environmental impacts of tourism: A framework for analysis and evaluation. *Tourism and the Environment.* Springer.

Brundtland, G.H. (1987). *Report of the World Commission on environment and development:"Our common future"*. United Nations.

Eshtayeh. & Jamus, M.R. (2002). Biodiversity: It's importance and methods of preservation it. *Biodiversity and Environmental, 1*, 1-38.

Foucault, M. (2013). *Religion and culture*: Routledge.

Heritage, S.C.F.T.N. (2015). *(Integration) success story in human resources development and localization of tourism professions*. Saudi Arabia: General authority for tourism and national heritage.

Hope, A.L. & Jones, C.R. (2014). The impact of religious faith on attitudes to environmental issues and Carbon Capture and Storage (CCS) technologies: A mixed methods study. *Technology in Society, 38*, 48-59.

Kenawy, M., Al-Ashry, H. & Shobrak, M. (2014). Synanthropic flies of Asir province, southwest of Saudi Arabia. *Journal of Entomological and Acarological Research, 46*(3), 123-128.

Mooney, H.A., Postel, S., Schneider, S.H., Tilman, D. & Woodwell, G.M. (1997). Ecosystem services: Benefits supplied to human societies by natural ecosytems. *Issues in Ecology, 2*.

Muhanna, E. (2006). Sustainable tourism development and environmental management for developing countries. *Problems and Perspectives in Management, 4*(2), 14-30.

Powers, R., Ramirez, L., Redmond, C. & Elberg, E. (1966). Geology of the Arabian Peninsula. *Geological Survey Professional Paper, 560*, 1-147.

Seddon, P.J. & Khoja, A.R. (2003). Saudi Arabian tourism patterns and attitudes. *Annals of Tourism Research, 30*(4), 957-959.

Som, A.P.M. & Al-Kassem, A.H. (2013). Domestic tourism development in Asir region, Saudi Arabia. *Journal of Tourism & Hospitality*, 2167-0269.

Wanhui, X.K.Y. (2002). Ecosystem health and biodiversity. *Ecologic Science, 21*(3), 279-283.