

Political Economic Role in Natural Quality Management and its Impact on Plant Ecology: Why Arar-Juniper Plants Disappeared

Sameer Mohammed Majed Dandan¹, Adel Abdullatif Ahmad Hamed², SHAIMA A. KH. BARAKAT³, Amira Awad Hassan Farah⁴ and Mohamed Ben Ammar⁵

Abstract

Wadi-Arar is a unique region that has lost some of its most important natural features within 200 years, including plants, geographical lakes, and valleys. The study aimed to investigate the disappearance of the juniper plant, a vital species in Saudi Arabia, in recent decades. The research highlighted various factors influencing the quality of life for the juniper plant and its habitats. It sought to identify the primary factors causing changes in the natural conditions of the plant and those influencing its growth. The findings indicated a significant impact of the Suez Canal on the Arar region, the sole connection between Africa and Asia, and Europe. This influence extends beyond geopolitical factors in the surrounding area, as the existence of the Suez Canal disrupted the natural life cycle of many animal species over thousands of years of migrations and coexistence across Earth's continents. These animals previously provided natural organic fertilizer to the soil, supporting plant growth. However, due to low rainfall resulting in low natural nutrients and high salinity, the plants' viability has diminished, reflecting a history of administrative and geopolitical decisions.

Keywords: Politics, Economics, Geopolitical, Quality, Suez Canal.

INTRODUCTION

The region's most vulnerable part to multiple climatic factors is experiencing a bio shift in the living system of the population based on the conditions that nature provides them with. However, many regions of the world are markedly moving towards agriculture and livestock breeding as a new but old alternative to compensate for the sharp shortage of resources in these areas. The Middle East is one of these areas, which has emerged within 50 years as an area with abundant natural resources such as oil, minerals, and other resources (Rosser, 2006; Ulfelder, 2007).

However, Colino-Rabanal, Rodríguez-Díaz, Blanco-Villegas, Peris, and Lizana (2018) discussed in his study that the high cost of living and simple living costs of the population has made the population shift towards agriculture and livestock breeding. East Africa as presented by Baba, Masiga, Sang, and Villingner (2016), is also Saudi Arabia particularly one of these areas which population concentrate on breeding sheep, goats, and camels (Mahmoud, 2010). Meanwhile, a region is located in the northern part of Saudi Arabia, the eastern part of Jordan, the south-eastern part of Syria and the southwestern part of Iraq, which are historical areas where historians have conducted in-depth studies about their water reserves and rare migratory bird species and trees such as juniper plant (Allan, 2002; Danin, 1999; Gophna, 1979). Hence, there is an urgent need to identify the extent to which the region needs high-quality agricultural services in a number of agricultural

¹ Assistant Professor - Quality Management, Faculty of Business Administration, Northern Border University, Box: 1321, Arar, P.O. 91431 Saudi Arabia, Email: samotoom@hotmail.com, (Corresponding Author), 00966541558544, Ministry of Higher Education & Scientific Research, 138 AL-Jubaiha, Amman 11941, Hashemite Kingdom of Jordan, 00962790209524, <https://orcid.org/0000-0003-0140-312X>

² Assistant Professor - Supply Chain Management, Department of Management Information Systems, Faculty of Business Administration, Northern Broder University, Box: 1321, Arar, P.O. 91431 Saudi Arabiam, Email: Adel.hamed@nbu.edu.sa, Email: Adel_mis@hotmail.com, <https://orcid.org/0000-0001-9443-3939>

³ Assistant Professor, Department of Human Resources Managemeny, Faculty of Business Administration, Northern Broder University, Box: 1321, Arar, P.O. 91431 Saudi Arabia, Email: Shaymaa.barakat@nbu.edu.sa, Email: barakat.shaima@yahoo.com, <https://orcid.org/0009-0002-6075-7294>

⁴ Assistant Professor, Department of Management Information Systems, Faculty of Business Administration, Northern Broder University, Box: 1321, Arar, P.O. 91431 Saudi Arabia, Email: amira.hassan@nbu.edu.sa, <https://orcid.org/0009-0006-5284-3829>

⁵ Northern Border University, Faculty of Computing and Information Technology, Department of Information Systems, Rafha, Saudi Arabia, Email: Mohammed.Ammar@nbu.edu.sa, <https://orcid.org/0000-0001-8990-3924>

disciplines, including agriculture, veterinary medicine, water resources management, and soil (Chen et al., 2018; Wall, Nielsen, & Six, 2015).

Materials and Methods

LITERATURE

Most studies covering different research over the past years until to date have revealed a major shift in the farming techniques, veterinary medicine, and the development of methods and concepts of agriculture and veterinary treatment of animals according to studies done within the last two decades (Lathers, 2003; Olgui, x, & n, 2003; Picker & Griffiths, 2017; Pinson, Staelens, & Webster, 2013; Yanik & Aslan, 2018; Zieger et al., 2017). This shift has necessitated putting a clear distinction among disciplines like agriculture and veterinary science (Lathers, 2003). These transformations took place due to the difference like climate and weather in most of the regions where agriculture is the main source of life (Roder, Dorji, & Gratzner, 2003). This has led to carrying out research, experimentations and developing their findings into recommendations for having the best agricultural practices and veterinary treatments based on the experience of breeding animals and growing plants. The clear impact of soil biotransformation in the middle area located between Syria, Kuwait, Iraq, and Jordan has forced many farmers and cattle and camels, breeders, to move to the northeast near the rivers in Iraq or the south near the underground water wells near the east coast of the Red Sea (Zyoud & Fuchs-Hanusch, 2017). It has become evident that climate change is associated with an organic change in the soil composition in the region (Al-Adamat et al., 2007). This is evidenced by several testing tools like laboratory tests that have been carried out by mining companies and the laboratories of the Northern Border University, which proved that there is a chemical change in the composition of several types of rocks and a variation in the radiation level of many radioactive minerals (Abu-Khader, Shawaqfeh, Naddaf, Maity, & Bhattacharya, 2018; Darwish & Fadel, 2017; El-Din, Madany, Al-Tayaran, Al-Jubair, & Gomaa, 1993). In addition and according to Mahdhi, Tounekti, and Khemira (2017) the high salinity is due to low rainfall. There has been an obvious rise in overfishing and a variation in the percentage of the organic matter produced by the animals living in this region, especially in the last century, compared with the 18th and 19th centuries (Al Qaesi, Abbas, & El-Jubouri, 2016; Meister et al., 2017). Since a long time ago, scholars and studies proved a strong correlation between the Suez Canal and animal lives as well as biotransformation issues according to Fox (1924); Por (1971); Zakaria (2015) may be one of those huge negative effects that have led to preventing the migration of animals in Africa, Asia Minor, and Asia. Snousy et al. (2017); van Rensburg, Barnard, du Preez, and Bennie (2017) found that after animal mobility limitation increased it has reduced the availability of animal organic residuals for soil, which has interrupted the most important nutrient source for the soil where several types of herbs and plants are grown especially the juniper plant (Hegazy & Lovett Doust, 2016).

METHODOLOGY

The study relies on the analytical approach in interpreting the findings of the previous research and studies to reach the best information on the subject of biotransformation and its relationship with climate quality. This has been implemented through the following:

A theoretical review of the previous studies.

Verifying the results and eliminating similar results from other studies of the same context.

To verify the validity of the study assumptions using a cause and effect approach and based on the theoretical review of much historical research, and to reach many facts through which we could find a good interpretation for the erosion of the plant cover in Arar.

RESULTS AND DISCUSSION

Quality of Climatic Conditions

The climatic conditions surrounding our planet are one of the most important causes of biotransformation. This is what is confirmed by Olgui et al. (2003) it is worth mentioning the subject of global warming

(Rodríguez-Iturbe, 1986), and fluctuation in rainfall (Hsieh, Hsu, Liao, & Chiueh, 2015) (Boykoff, Maldonado, & Nacu-Schmidt, 2018). See figure 1 below:

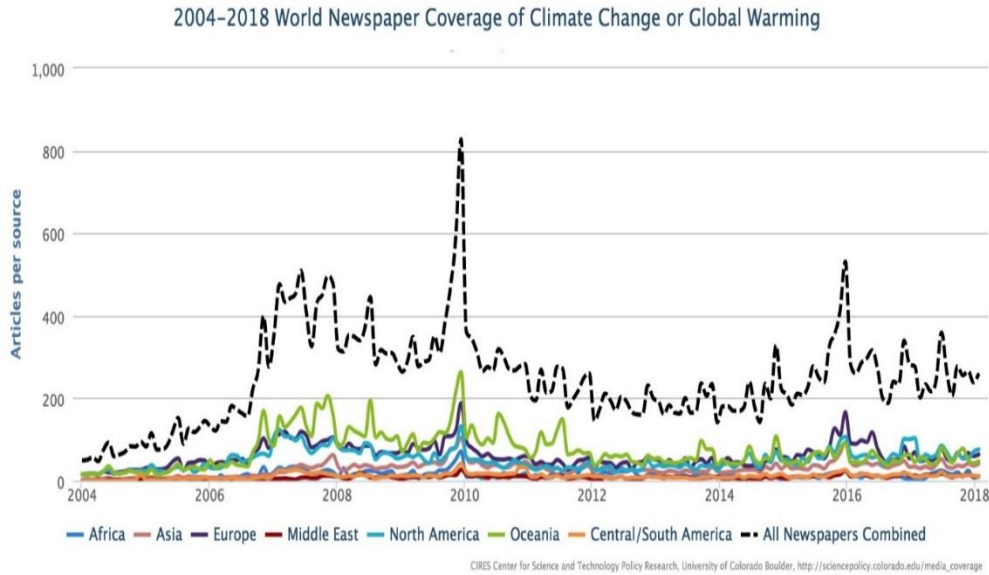


Fig. 1 Global Warming Change between (2004-2018). (Boykoff et al., 2018)

Moreover, the effect of radioactive materials on water (Goronovski, Joyce, Björklund, Finnveden, & Tkaczyk, 2018). In addition, to high salinity in soil (Yuan, Feng, Wang, Huo, & Ji, 2018). This proves the fact that the last 50 years have decreased the quality of biological properties of the plants that organisms feed based on Ficotola et al. (2018); B. Zhang et al. (2018); S.-Y. Zhang, Williams, Luo, and Zhu (2017); Zimdahl (2018). Williams (2018) showed that this will force the ecology system to a bio shift to be able to adapt to climate and its adverse conditions in a manner that increases the quality of life and its natural components as well as Foden et al. (2019); Maestri et al. (2017). See figure 2 below:

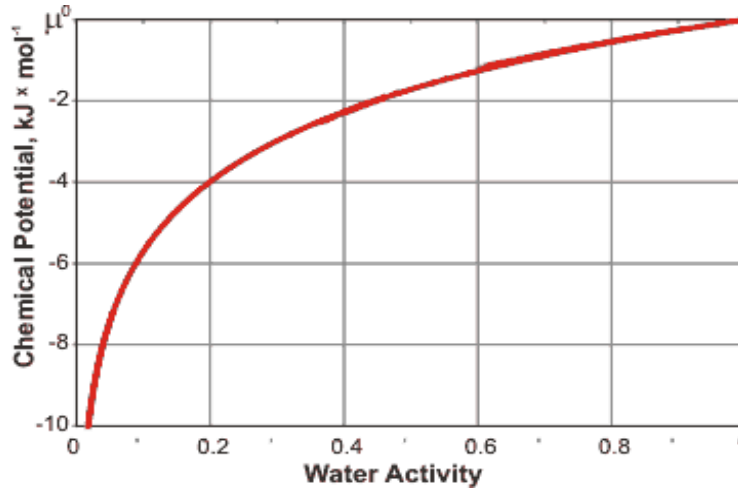


Fig. 2 Normal water activity.(Bonavigo, Zucchetti, & Mankolli, 2009)

Meanwhile, this slop of water activity will be affected by radioactivity that changes the natural behaviour of chemical materials inside the water to split the slop into different ways that meet the material reaction due to time of radiation (Kattan, 2018; Maestri et al., 2017). See figure 3 below:

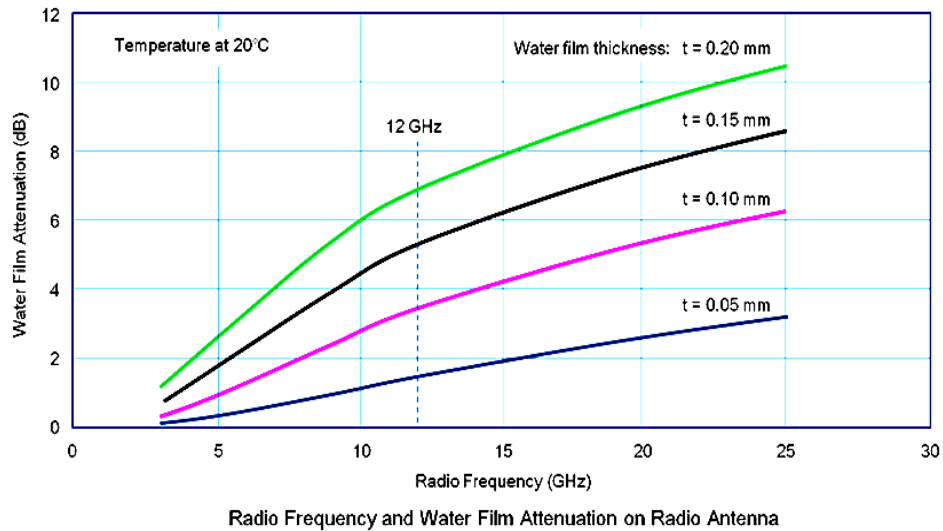


Fig. 3 Water activity after radioactivity performance. (Takaya et al., 2018)

Natural Biotransformation

As a result of chemical changes to the region's soil caused by natural factors, particularly the rainfall and water reservoirs decline according to (C. U. Emenike, B. Jayanthi, P. Agamuthu, & S. Fauziah, 2018); Sparks (2018). In addition to a well-developed agricultural system in the north of the region, especially in Syria, as the main water reservoirs pass through this region and the use of insecticides by farmers (Gawwad & Mostafa, 2018; Kattan, 2018). Soil ingredients for plants (Iqbal, Parveen, Parveen, Parveen, & Aref, 2018). Also, following a tailored farming system over the years in which a single crop is planted in a given area for a given period according to Lalani (2018), and led to a higher salinity in the soil composition which means a concentration of a certain type of chemical materials and when the water canals flow through Arar valley it de-concentrates all materials and carries them to the water sources (Brakstad et al., 2018).

According to Li and Loh (2015), This leads to concentrating on a certain type of chemical material, which lead to a total bio difference in the live environment of both birds and animals (Matsushima, 2018). Based on results of a study conducted by C. U. Emenike, B. Jayanthi, P. Agamuthu, and S. H. Fauziah (2018); Panic, Elenkov, Roje, Bubalo, and Redovnikovic (2018), the last conclusion may be the main reason for a negative bio shift that has led to a mass migration of animals and birds seeking alternative sources, especially as such chemical compounds have led to such biotransformation in the growth of the plant and its inability to survive (S.-Y. Zhang et al., 2017).

This will destroy plants being another food source for birds and animals because of the change and scarcity of water resources (Lee, 2017)

Geopolitical Factors

Since the 18th Century, the Middle East map has been the most vibrantly changing region in history (Bayat, 2013). However, changes are not limited to borders only, but also included a revolution in the sea freight, which led to establishing the Suez Canal, the only hub connecting Africa with Asia Minor, Asia, and Europe (Huber, 2013). Therefore, the natural migration of animals from and into Africa is subject to interruption according to the winter and summer seasons of natural migrations (Yanik & Aslan, 2018). This was accompanied by a lack of organic materials from animal dung and the decomposition of animal components in the water pools of Arar. This has lessened the possibility of balancing chemical materials among each other and weakened the vegetation, which is another source of migratory birds (Collins, 1969; Geriesh, Balke, El-Rayes, & Mansour, 2015; Negm, 2017), and this has been associated with the scarcity of water sources and low rainfall and the high concentration of chemicals composition. This may be another reason that has turned

Arar into an unsuitable environment for the growth of the original plant, which is Juniper. According to the description provided by orientalists see appendix 1 figure 4. It is a verdant plant that has a hard stem with an average height and gnarled branches. In addition, this description applies only to plants that grow in high-quality climatic conditions but it still unclear results which appeared when scientists tried to plant that Juniper trees and these plants could not live for a long time after many attempts done by El-Juhany (2008) for some conservative planting reservations.

CONCLUSION

Chemical and radiological change processes are the main cause of different climatic conditions and are accompanied by a turbulent variation of terrestrial temperatures. This could lead to a low-quality environment that may be caused also by agricultural human practices or the use of pesticides and stimulating chemical compounds for both livestock and plants (Larios, Pearson, & Maron, 2017). Based on the theoretical review of local and international studies of El-Din et al. (1993); El-Juhany (2008); Mahdhi et al. (2017) and Greenville, Wardle, and Dickman (2017), the Arar region was affected not only by the surrounding geopolitical factors but also by the existence of the Suez Canal, which deprived many animal species of animals of their natural life cycle through thousands of years of massive migrations and coexistence between the continents of the Earth, depending on the weather variations between winter and summer times. According to Zieger et al. (2017), this has made adapting to this sudden bio change difficult in about 200 years compared with over 4,000 years of normal life for animals, birds, and plants. This has deprived Arar of its natural environmental life as in the case of the original plants that lived in it, such as the Juniper plant [Arabic transcription: Arar]. Based on Papaioannou and Frankema (2017) Vitousek, Loope, and Westbrooks (2017) conducting an in-depth analysis of the quality of climatic conditions, it proved that the quality of climatic conditions is a major cause for biotransformation in any environment on the planet and the existence or extinction of a natural environment. It is just as if the danger siren has become a thing from the past because we are already living amid the danger itself without the need for a warning siren and we do not know where we end up living (Ricciardi et al., 2017).

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APPENDIX
The Juniper Tree



Figure 4. The Juniper Tree. (weebly, 2018)