

SHORT COMMUNICATION: SUDAN

REVIEW ARTICLE

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Sudan officially is known as the Republic of the Sudan. It is the third largest country on the African continent (1,861,484 km² or 718,723 mi²) after Algeria and Democratic Republic of the Congo and also the third-largest in the Arab world [1,2,3].

The last Population and Housing Census was carried out in 2008 and, since then, the Central Bureau of Statistics (CBS) extrapolates the country's population size using specific growth rates at State level. The total population in mid-2020 is officially forecast at 44.4 million [4]. Only 25 percent of the population live in cities or towns; the remaining 75 percent are rural [5].

Sudan is located in Northeast Africa and borders on Egypt, Eritrea, Ethiopia, South Sudan, the Central African Republic, Chad and Libya (Fig. 1). Around 580 ethnic groups live in the 18 states [1,2,3], with approximately 70 languages spoken [6], but Sudanese Arabic is the most widely spoken and shared language in the country. Arabic and English both are being the official languages [7,8]. Since 2008, the government in Sudan had adopted the two-day week end, namely Friday and Saturday.



Figure 1. Recent Sudan Map Adopted from: Ritter C. [1].

The history of Sudan dates back to the Pharaonic period as a witness to the Kingdom of Kerma (c. 2500 BC – 1500 BC). In 1821, the Ottoman ruler of Egypt, Muhammad Ali, conquered North Sudan. Although Muhammad Ali is technically the Vali (Viceroy) of Egypt under the Ottoman Empire, he defines himself as the Khedive of a practically independent Egypt [9].

He managed in a long and effective reign to bring to an end Mamluk power in Egypt. He is accepted as the founder of modern Egypt. Moreover, it should be noted that although he was literally Ottoman Vali, he attacked Ottoman Empire and invaded many provinces till Kutahya [10]. When he tried to add Sudan to his domains, he sent his third son Ismail to conquer the country and later integrate it into Egypt. With the exception of Shaiqiya and the Sultanate of Darfur, he was received without resistance. The Egyptian policy of conquest was expanded and intensified by the son of Ibrahim Pasha, Isma'il, under whose rule most of the rest of modern Sudan was conquered [9].

With a length of about 6800 km, the Nile is the longest river in the world. It stretches across a wide range of latitudes (4 S - 31 N) and ecosystems, traverses mountain regions with plenty of moisture towards the lowlands under dry conditions and supplies water to around 238 million people. The Nile basin covers an area of approximately 2.9 million km² or about a tenth of the African surface, which includes 11 neighbouring countries, including Sudan [11]. The Blue Nile and White Nile rivers meet in Khartoum (The capital of Sudan) and form the main Nile river, which flows north through a large area in Sudan and flows to Egypt to flow into the Mediterranean. The Blue Nile route through Sudan is almost 800 km long and connects the Dinder and Rahad rivers between Sennar and Khartoum. The White Nile in Sudan has no significant tributaries, is almost 720 km long and connects Blue Nile in Khartoum to form the main Nile river [12]. The length of main Nile river from Khartoum to the border with Egypt is almost 1885 km [13]. The White Nile provides a regular supply of water throughout the year. During April and May, when the main stream is at its lowest level, more than 80 percent of its water comes from the White Nile [14].

There are extensive plains of iron stone in the south, clay soils in the central plains, and sand in the north and west, with a few mountainous areas in the south, east and west [15].

Education in Sudan is free and mandatory for children ages 6 to 13, although more than 40% of children do not attend school due to the economic reasons. Environmental and social factors also increase difficulty of access to school, especially for girls [16]. Elementary education consists of eight years, followed by three years of secondary education. The old educational scale 6 + 3 + 3 was changed in 1990. Enrolment varies significantly and drops below 20% in some provinces. The literacy rate is 70.2% of the total population, men: 79.6%, women: 60.8% [17]. Sudan has about 30 public universities, and many private universities and colleges. Education at high schools and universities was severely hampered by the requirement that most male students complete military service before completing their education [18]. Recently, the new government trying to make modifications in the educational ladder as well as the development of a new policy regarding military service.

In 2010, Sudan was considered the 17th fastest growing economy in the world and the country's rapid development primarily due to oil gains, even in the face of international sanctions. Due to the secession of South Sudan, which comprised more than 80 percent of the Sudanese oil fields, Sudan has entered a phase of stagflation [19,20]. In addition, US economic embargo which lifted at the end of 2017 and Sudan is still in the states sponsoring terrorism (SST) list of US. These are two other factors, even though the first one is lifted, SST prevents the inter-companies to come and invest in Sudan.

Urbanization, civil wars and ongoing conflicts are causing the demographic pattern in Sudan to change radically. However, between 60% and 80% of the Sudanese practice subsistence farming. Agriculture remains an important industry as an important source of raw materials, food and foreign exchange. It employs the majority of the workforce and serves as a potential means of diversifying the economy as it contributing to 39 percent of the country income [21].

Sources differ widely in estimates of livestock numbers. Actual figures can be disputed but there is no doubt that Sudan's vast multitude of domestic animals represent a large proportion of all African livestock. Based on FAO data, the country sits at the very top of the league table of African countries with respect to its animal populations. The country ranks first to third among all African countries in the number of cattle, sheep, goats and camels. Official sources in Sudan estimated cattle numbers at

41.653 million, sheep 51.555 million, goats 43.270 million and camels 4.521 million [22].

Climatic conditions are diverse, with average rainfall varying from less than 25 mm in the north to 1500 mm in the south. The main rainy season is between July and September. Mean daily temperatures vary from a maximum of more than 40°C in the north to a minimum of 6°C in Jebel Marra in the west [15]. During early April two cold fronts moves from the northwest in over the Sudan and this accompanied by dust storms [23].

About 3.1 % of Sudan's economy is generated by its tourism industry. Tourism development has been negatively affected by the long-standing conflict in Sudan, and the country remains one of the lesser visited destinations in Africa [1]. Due to recent political changes and cessation of the wars, there are incentives for the tourism process, as in different regions there are various historical and attractive places. In examples not in all, the National Museum in Khartoum (Fig. 2a, 2b) [24], the Dinder National Park located in the North-eastern Blue Nile State adjacent to the Ethiopian border (Fig. 3a, 3b) [25], the volcanic highlands of Jebel Marra (Fig.4) [26], and the Red Sea Coast including Suakin and Sanganeb islands (Fig. 5a, 5b) [27] are regularly frequented by tourists. The variety of attractions is complemented by archaeological sites, such as the pyramids of Meroe (Fig. 6) [28], and the Karmah tombs (Fig. 7) [29]. New discoveries stated that the oldest pyramids in the world are Meroe pyramids of Sudan, and they are 2000 years older than Egypt's pyramids. More than 250 small pyramids, along with graves are arranged in clusters close together in the north of the country [30].

All modes of transport are available in Sudan, the major ones being roads, railways, river transport, air traffic and seaports. The transport sector not only serves Sudan but also the neighbouring land-locked countries: Chad, the Central African Republic and the Republic of South Sudan. Such a network made Sudan an important gateway for international merchandise between these countries.

Port Sudan has been the sea entry point for Sudan for over one hundred years and is located on an inlet of the Red Sea. It is the country's most important port and the only one with a deep-water harbour [31].

There are many hotels that attract tourists, between three and five stars (Fig. 8), e.g., the Grand Holiday Villa Khartoum, is a 5-star Hotel located strategically in the heart of the Khartoum centre and overlooking the famed Nile River. Formerly known as The Grand Hotel, the building was constructed in 1902 by the British Thomas Cook in collaboration with the French [32].

Music and dance are central to Sudanese culture and serve many purposes, both recreational and religious. In the north, music reveals strong Arabic influence. In the south, the indigenous music relies heavily on drums and complex rhythms.

Tea and coffee are both popular drinks. Coffee beans are fried, then ground with cloves and spices. The liquid traditionally called "Jabanah" is strained through a grass sieve and served in tiny cups [5].

No doubt one of the hardest journeys on offer, the 280 km trip by camel across the Bayuda desert is designed to take tourist back in time, and so into the world of the nomad, for whom the camel has always been the only means of travel in this one of the world's harshest environments (Fig. 9). The journey will take the tourist through a range of desert environments, including acacia forest, savannah, sand fields and rocky outcrops, the remains of prehistoric volcanic activity [33].

In order for the visitor to enjoy Sudan with all these picturesque tourist and archaeological areas, he can use all public transportation methods, including buses and trains. In addition, for those who are inspired to hunt animals, there are hunting and hunting trips in the Dinder Reserve and other areas, it requires permission to do so from the Wildlife Protection Police.

Finally, truth and reality say that, the Six A's of tourism: Attractions, Accessibility, Amenities, Ancillary services, Available packages and Activities [34], all are represented in Sudan.



Figure 2a. Sudan National Museum in Khartoum. It had been constructed in 1971 near the confluence spot of the Blue and White Niles. The Sudan National Museum houses the most important collection of Nubian antiquities in the world. Adopted from: Kormyševa ĖĖ [24].



Figure 2b. Traces of the Nubian era presented in Sudan National Museum. Adopted from: Kormyševa ĖĖ [24].



Figure 3a. Animals in Dinder National Park. Adopted from Tourism in Sudan 2017 [25].

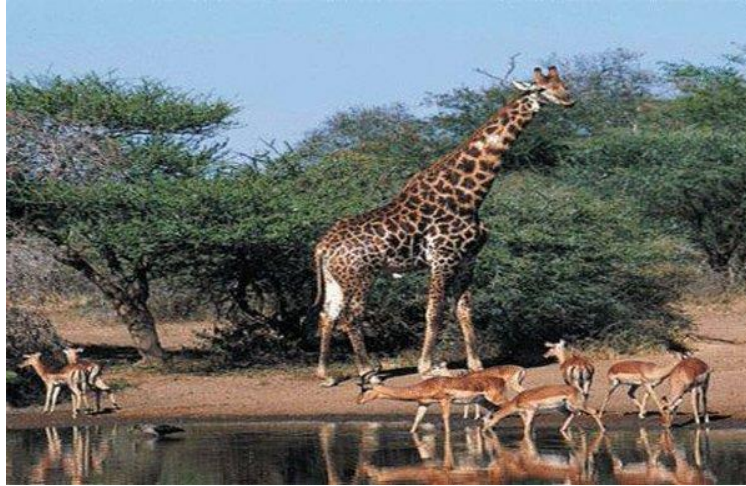


Figure 3b. Animals in Dinder National Park. Adopted from Tourism in Sudan 2017 [25].

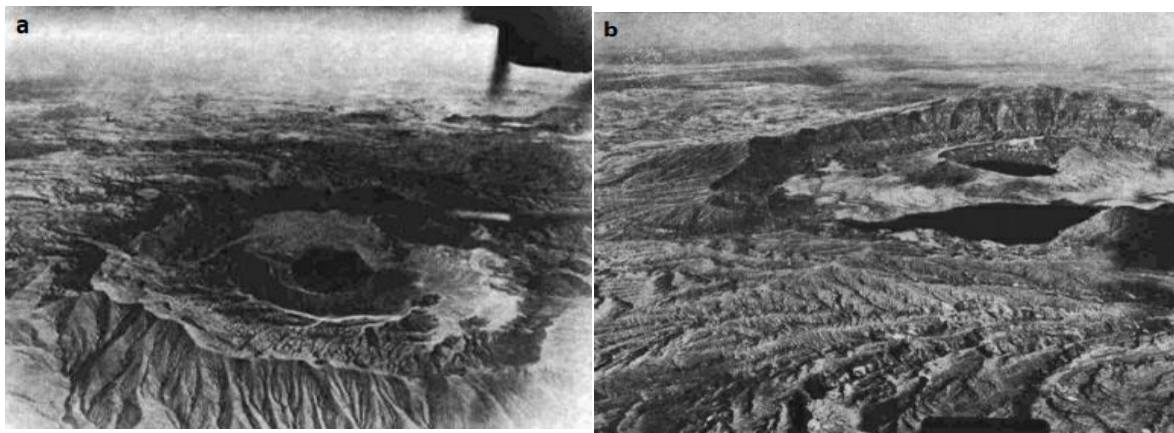


Fig. 4a & b: Jebel Marra is the name given to a very large complex of volcanic rocks, about 100 km north of the town of Nyala in Darfur Province, which extends for over 200 km to the north. It is 80 km wide at its broadest part. The southern area of the volcanic rocks is generally known as Jebel Marra after the highest ground, while the northern parts are centred around Jebel Gurgei. Adopted from: Vail JR [26].

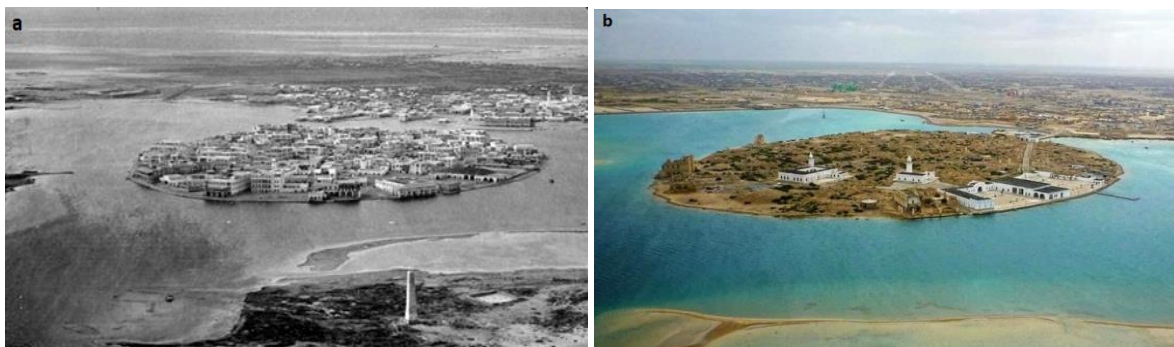


Figure 5a, 5b. a; Aerial photograph of Suakin in 1930 (Durham University, Sudan Archive). Since this photograph was taken the condition of the buildings on the island has deteriorated considerably and most have now collapsed. b; New photograph of Suakin, adopted from: Breen C, et al. [27].



Figure 6. Meroitic royal pyramids of the first century BC at Jebel Barkal, North Sudan. Adopted from: Edwards DN) [28].



Figure 7. Kush pyramids, Bagraywiah area. Adopted from: Nayer A, et al. [29].



Figure 8. **a**, The Grand Holiday Villa Khartoum, is a 5-star Hotel, **b**, Corinthia Hotel Khartoum, near the confluence of Blue and White Nile



Figure 9. Trip by camel across the Bayuda desert, Sudan [33].

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