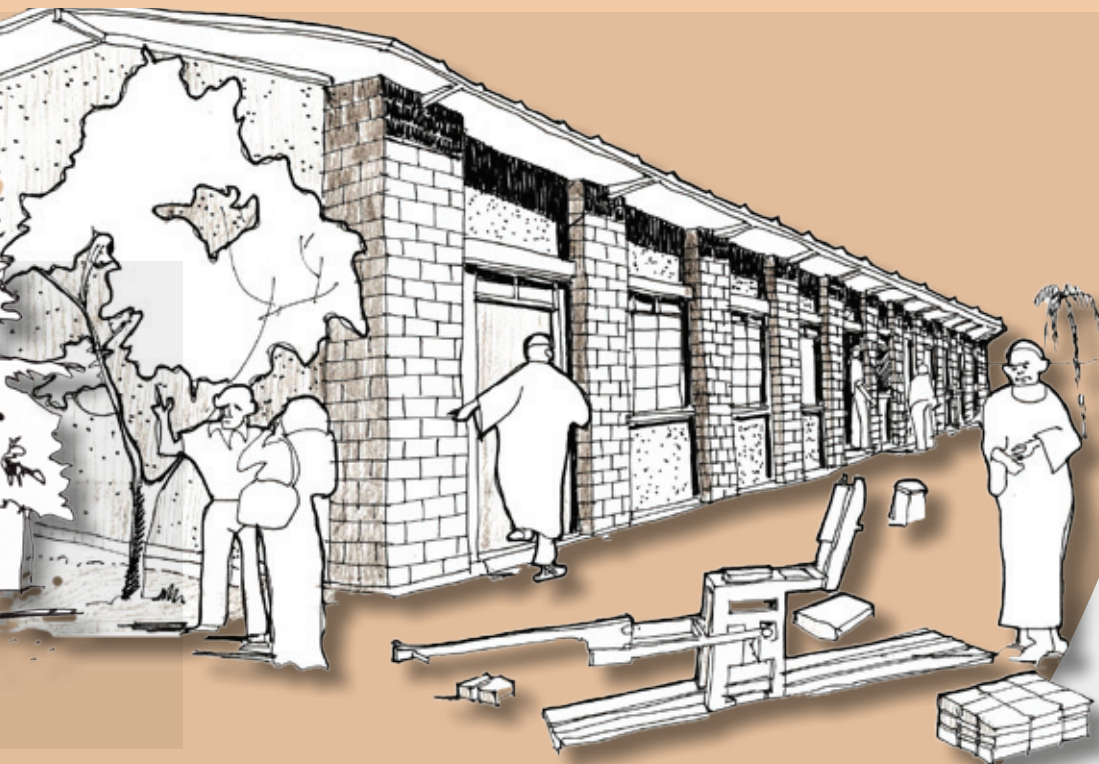




DARFUR EARLY RECOVERY, STABILIZED SOIL BLOCKS FOR SUSTAINABLE URBAN GROWTH



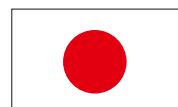
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Development

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Darfur Early Recovery, Stabilized soil blocks for sustainable urban growth

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HS/107/10E
ISBN Number: 978-92-1-132219-4

ACKNOWLEDGEMENTS

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Editor: Edward Miller and Tom Osanjo

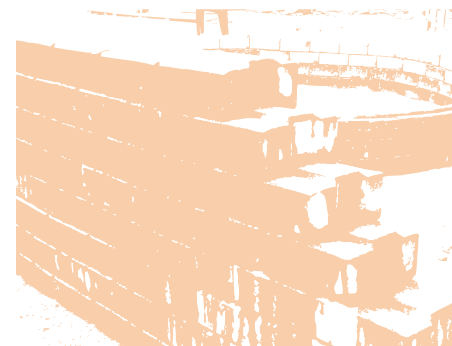
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Layout: Godfrey Munanga

Printing: Publishing Services Section, Nairobi, ISO 14001:2004 - certified.

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1. HISTORICAL BACKGROUND

Darfur (“land of the Fur people”) is in the western region of Sudan, divided into three states: North, South, and West (figure 1). It has an area of 493,180 kilometres² (196,555 miles²). It is largely an arid plateau, with the Marra Mountains (Jebel Marra), a range of volcanic peaks rising up to 3,000 metres (10,100 feet), in the centre of the region. North Darfur is a sandy desert, while South Darfur is a bush forest (*source: Wikipedia*).

FIGURE 1. MAP OF SUDAN, SHOWING DARFUR



Its history is rich and fascinating, linked to remote kingdoms and civilizations that flourished in an environment in which humans have always struggled to survive.

FOLLOWING IS A SHORT HISTORICAL TOUR:

- 14th century.** Islam is introduced. First Tunjur King, Ahmed el Makur, reduces many chiefs to submission.
- 1791.** Abd er Rahman establishes a new capital in El Fasher and in 1799 cooperates with Napoleon to defeat the Mamluks.
- 1856.** Al Zubayri Rahma starts trade operations in the south of Darfur, selling slaves and ivory bound for Egypt. Natives from Bahr El Gazal (southern Sudan) pay tribute to Darfur.

- 1881.** Under Egyptian rule and after many popular revolts, Gordon appoints Sir Rudolf von Slatin as Governor of Darfur, instead of the royal family as requested.
- 1899.** Ali Dinar is declared by the Anglo-Egyptian authority as Sultan of Darfur.
- 1916.** The English invade Darfur and incorporate the region into Sudan again to prevent it from falling under the influence of Turkey.



Landscape in Nyala

- 1956.** Sudan achieves independence.
- 1960.** Darfuri groups question the neglect of the region by the central government.
- 1969.** Tension with the Government of Chad after military activities on the Darfur border.
- 1972.** The first Sudanese civil war ends.
- 1983.** The second Sudanese civil war starts.
- 1994.** Darfur is divided into three states: North, South, and West.
- 2003.** The Justice and Equality Movement and Sudan Liberation Movement agree on accusing the central government of oppression in Darfur. The government retaliates by attacking these groups.
- 2006.** The Sudan Liberation Movement signs a peace agreement with the government.
- 2009.** The International Criminal Court issues an arrest warrant for Sudanese President Omar Al Bashir on counts of war crimes and crimes against humanity, but rules that there is insufficient evidence to prosecute him for genocide.



Aerial view of Darfur

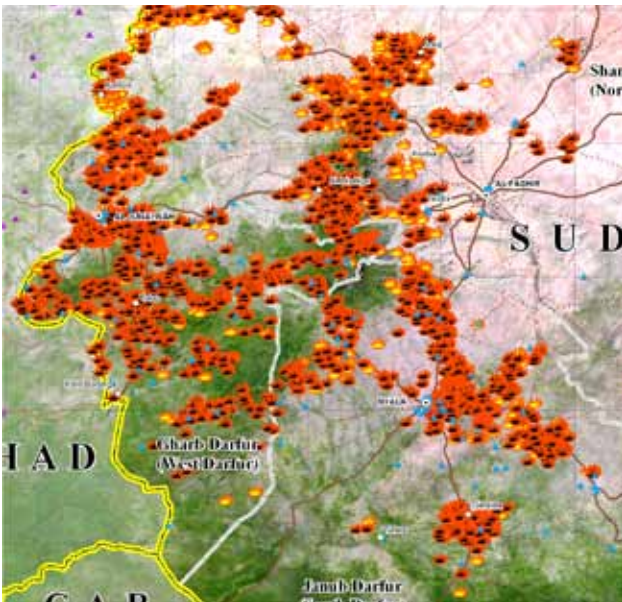
2. CONTEXT

KEY STATISTICS:

- 6 million people inhabit the three states of Darfur
- 2 million (one-third) are internally displaced persons (IDPs)
- 4 million (two-thirds) depend on humanitarian aid
- Humanitarian aid reaches only 1 million people

(Source: World Vision UK)

FIGURE 2. MAP SHOWING CONFIRMED ATTACKS IN DARFUR CITIES AND VILLAGES



Source: www.unsudanig.org

FIGURE 3. MAP SHOWING THE LOCATION OF IDP AND REFUGEE CAMPS



Source: Medecins sans Frontieres msf.ca/blogs/StevenC/2007/11/2/



IDP squatter area in Nyala

Sudan has the largest population of displaced persons in the world today. Nearly two million are in Darfur, in large settlements such as Abu Shouk IDP camp in El Fasher, North Darfur, where exponential population growth and related environmental stress have created the conditions that trigger conflict, which is then sustained by political, tribal, or ethnic differences. This can be considered a tragic example of the social breakdown that can result from ecological collapse. Long-term peace in the region will not be possible unless the underlying and closely linked environmental and livelihood issues are resolved.

Source: UNEP, *Post-conflict Environment Report for Sudan, 2006*



Forced migration and the fragile environment of Darfur

It is estimated by different sources that a third of the forests in Darfur was lost between 1973 and 2006. The population is very aware of the problem; maintaining forests is a priority of the local population. However, fired bricks continue being the preferred construction material in Darfur and are widely used, with serious environmental and social consequences. UN agencies are aware of the importance of facilitating the shift from

fired brick to stabilized soil blocks. However, current limitations on stabilized soil block production (lack of machines and skilled labour) still tend to increase the price, meaning the product cannot compete with fired bricks as a permanent construction material.



Protection of trees using burnt bricks and typical IDP temporary dwellings using wooden materials

Both dry and rainy seasons create a serious threat to human survival in the region. During the dry season, drought very much affects agricultural activities and, of course, the production of building materials. But rainy seasons are characterized by torrential raining, followed by frequent flooding. In both cases, the need for water resistant building material is of paramount importance.

Desertification is pushing the Sahel further south and this encroachment creates a shortage of grazing areas and induces migration. This natural phenomenon suggests that drought, famine, migration and internal displacement have environmental roots and are historical. It is the combination of these and other factors that make Darfur such a vulnerable and unique area. But it will be shown that despite these frailties, the resourcefulness of the population is tremendous as they work hard to eke out a living in a sea of adversity.

Source: UN-HABITAT, 2009

THE COMBINATION OF SEVERAL FACTORS

Brick making provides a livelihood to many IDP camps residents but also contributes to severe localized deforestation. If it were properly managed, however, the forestry sector could represent a significant opportunity for economic development and sustainable north-south trade.

Source: UNEP, Post-conflict Environment Report for Sudan, 2006



Evidences of environmental threats: Water distribution, wooden transportation and burnt bricks oven.

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