

Researches, Studies and EIAS

Research, Studies and EIAS Projects

Name of Assignment:

Preparing a Design Manual for the design and Construction of Khartoum Stormwater Drainage System and Protection Against Land and River Floods

Client: Khartoum State Ministry of Infrastructure

Country: Sudan **Location:** Khartoum State

Value of the contract:

**Project Description:**

Khartoum State is in a vital need for a Storm Drainage Manual to be used by their technical staffs who is undertaking the tasks of executing a storm drainage system to protect Greater Khartoum against rainstorms and floods. The Programme is meant to (1) prepare an Atlas/Manual that assists the technical staff and consultants by providing them with the design data required for performing their design assignments (2) strengthening the skills of Khartoum State technical staff namely through training of engineers and technicians

Start Date:

Completion Date:

Duration: 18 months

Consultancy Services:

Gathering of original data and training of engineers

Name of the Assignment: Khartoum State Environmental Strategic Assessment and Evaluation Project (KSESAE)

A comprehensive study to evaluate and assess the existing condition of Khartoum State environment and the formulation of Khartoum Environmental Strategy

Client: Khartoum State Higher Council for Environment

Country: Sudan

Location: Khartoum State


Brief of the Assignment:

The study focuses on the environment of Greater Khartoum, the Capital of Sudan which is the hardest hit by intensive urbanisation and the consequential physical distortions primarily caused by incessant waves of displaced people and migrants who accumulated in Greater Khartoum and transformed it into unique mixture of nationalities, traditions and customs and made it both multi-cultured and multi-ethnic. The scope of works include studying and evaluating the major components of the urban environment, namely, water, land, air, air, energy and the living creatures. The text report of the evaluation study incorporated a lengthy part on water, wastewater and stormwater drainage systems giving a detailed account of the prevailing conditions of these systems and proposal for their upgrading for the purpose of environmental enhancement.

The KSESAE study has assessed and evaluated the overall impact on the environment and the results of the critical evaluations of all analyses conducted both in the field and at the desk have been displayed wherever appropriate in the Report which includes:

Description of the existing environmental conditions considering both urban and rural environments and their components: water, air, soil, energy, human, animals, vegetation, etc

Prediction of environmental impacts and highlighting the stresses on the environment
Recommendation for mitigation measures to minimize or eliminate negative environmental impacts; and
Institutional and legislative reforms including the tools used for sound management

Start Date: 2011

Completion Date: 2014

Duration:

Consultancy Services:

Provide professional services in environmental consultation and namely assessing and evaluating Khartoum State environment. BANNAGA CONSULT commenced the consultation task by availing a team of talented experts who discharged total ability in undertaking their duties. The study text comprises five volumes

Name of the Assignment:

Environmental Impact Assessment for Khartoum Ring Road, *Kassala wayer road, Dongla Egypt Road, Halfa and Silaim, Umm Altiyour Bridge, Merowe Road, Nile Avenue*

Client: Different clients

Country: Sudan **Location:** Nile River State, ALshimaliya State, Khartoum State, Kassala State

Date: 2003 - 2004

**Brief of the Assignment:**

The studies focus on the environmental impacts that may happen as a result of human interventions - due to physical development - for mitigating their effects and identifying the required remedial actions.

These studies are required for complying with the Environmental Protection Law and the contents of each study Included:

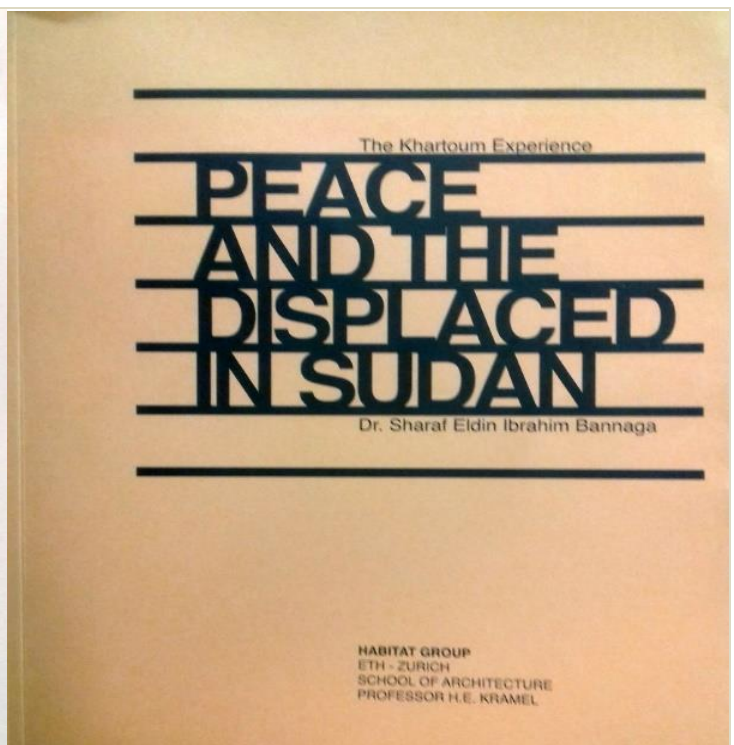
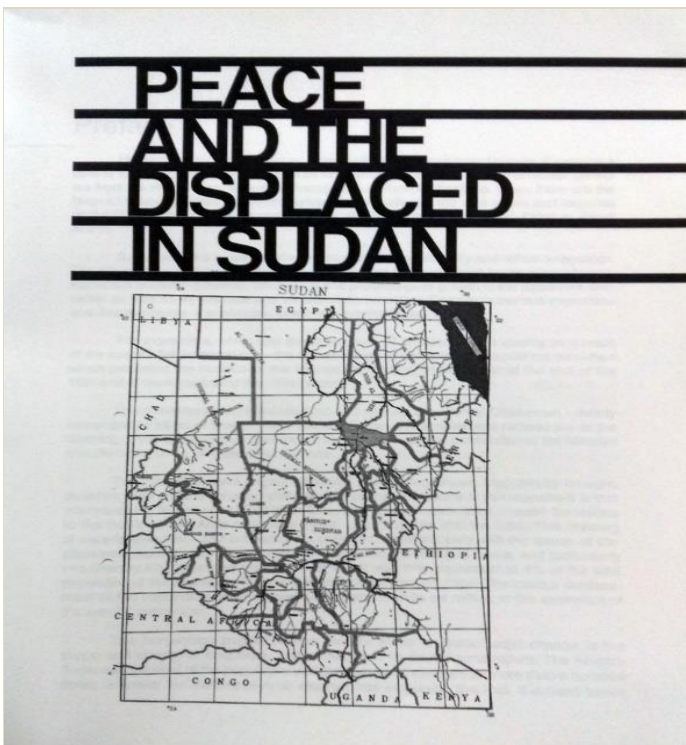
- Production of a comprehensive environmental assessment and evaluation report for each project
- Quantifying the impacts of the developmental projects on the environment during the different stages of design, execution and operation
- Giving a sound basis for effective measures, strategies and policies to address environmental problems and mitigate their impacts

Consultancy Services

BANNAGA CONSULT staff performed socio-economic analyses and field visits to assess the status of the environment and anticipate the environmental changes that may happen during the construction and operation phases. After gathering all information pertaining to the climate, geology, soils and landuse, fauna and flora, water resources, transportation, natural drainage and vegetation, energy, social services, economic activities, etc the experts identify the areas of environmental mitigation and formulate the monitoring plan and specify the measures to be taken by the contractor and the owner.

Name of Research:

Peace and Displaced in Sudan

Client:**Country:** Sudan**Location:** Khartoum State**Date of Publishing:** 2002**Brief of the Research:**

This research was conducted by Dr. Bannaga immediately after he left office when he was Minister of Housing and Engineering Affairs, State of Khartoum and the research findings are presented in a book entitled:

Peace and Displaced in Sudan

Foremost of the problems facing Khartoum and exemplified in the book at the time was the crisis of the displaced who caused a nightmare to the communities and their successive governments?. Their predicament created a demographic and economic defect, which called for an urgent intervention and action, despite the difficulty of rehabilitating and integrating them into the community and the need to provide services, especially water and sanitation at a time when Sudan faced a serious economic depression and harsh social conditions that prevailed for a lengthy period.

The nature of Dr. Bannaga's assignment, his proximity to the problem and his search for containing the difficulties encountered by the IDPs in Khartoum State infused him with a yearning desire to explicate this problem in order to identify probable solutions. The research has been published in a book by the Zurich University, Switzerland, under the title: "Peace and the Displaced in Sudan".

The book has been divided into eight chapters, each elaborates on one of subjects in detail.

It is to be noted that the book was promoted by the Sudanese Council of Ministers.

Name of Research:

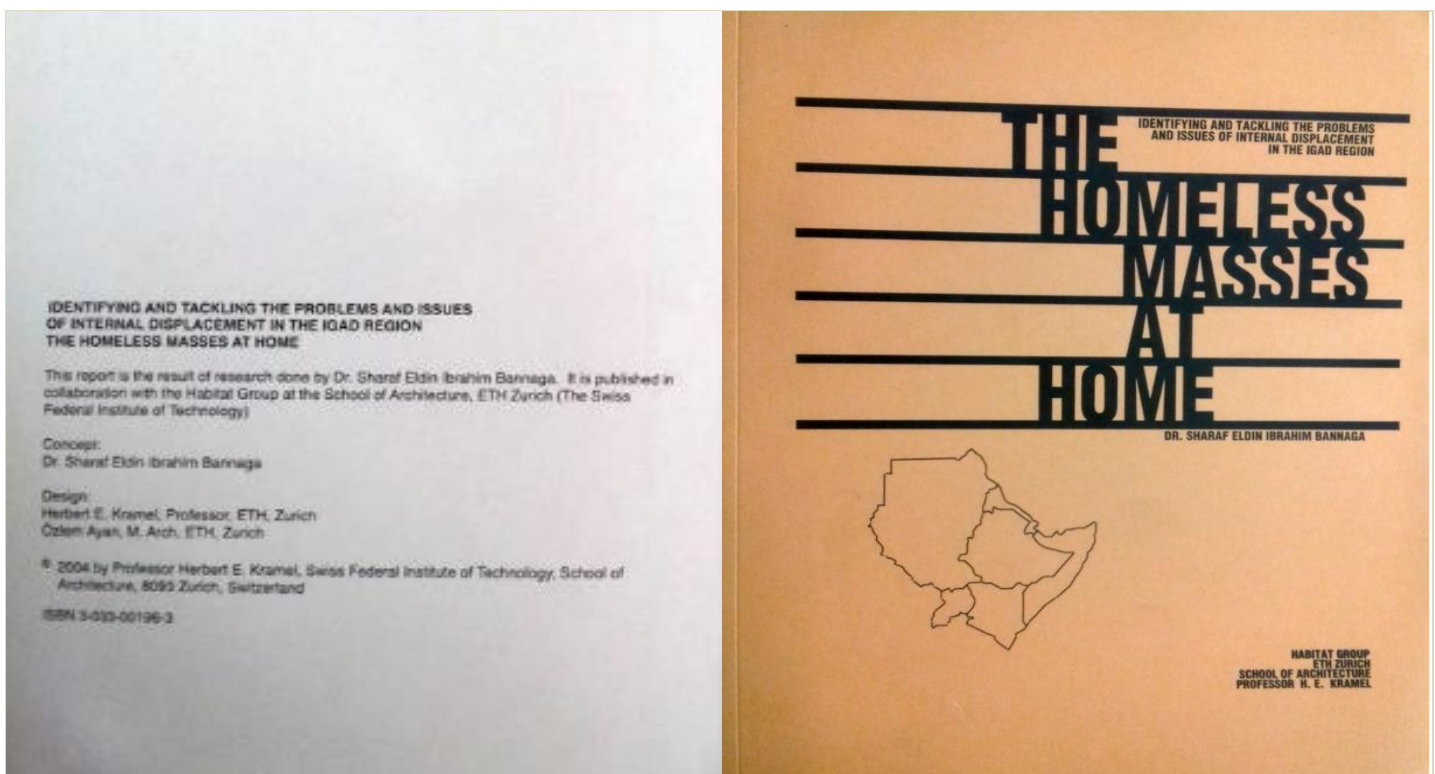
The Homeless Masses at Home: Identifying and Tackling the Problems and Issues of Internal Displacement in the IGAD African Region

Client: IGAD

Country: Sudan

Location: Khartoum State

Date of Publishing: 2004



Brief of the Research:

This research is made for IGAD region and endorsed by the IGAD Council of Foreign Affairs Ministers (Sudan, Kenya, Eritrea, Djibouti, Somalia, Ethiopia and Uganda). It has also been published in a book by Zurich University, Switzerland, under the title: "The Homeless Masses at Home: Identifying and Tackling the Problems and Issues of Internal Displacement in the IGAD Region".

This book gives detailed information about the IDPs in the IGAD region. It documents experiences in quantifying and tackling their problems and overcoming the effects of internal displacement with a special reference to the Sudan experience where the majority of IDPs are amassed. One of the objectives of the study is to produce a document that discusses all aspects of internal displacement reflecting the huge scale of displacement and in particular the problems and the challenges facing the IGAD region. IGAD region is next to none with respect to the masses of the displaced population in continuous flight, their effect on the community and the physical environment and the effect of the community upon them.

Name of Research:

Provision of Housing for Poverty Alleviation – (housing means shelter and municipal services)

Client: Ministry of Finance and National Economy for Poverty Eradication Project**Country:** Sudan**Location:** Khartoum State**Date of Publishing:****Brief of the Research:**

The research confirms that a dwelling is not only confined to the sheer site to house a family but has also become an instrument contributing to tapping revenue resources for an individual or a family as it may provide an appropriate environment for production and economic activity along the lines of productive families and consequently, home constitutes an extra resource to create additional revenue tapping resources to both the individual and the productive family. It also represents a secondary resource contributing to the national products even though at a small scale... Housing is not only important from an economic and social point of view but it exceeds this concept to contribute in creating employment opportunities as it provides transitional and permanent employment for the building market and also contributes to the gross national product as it provides a principal market for the building materials. Preliminary studies indicate that more than 25% of our national wealth is composed of houses and real estates in the different towns and villages of the Sudan and that more than a quarter of a family's income is spent on housing as a minimum requirement in natural and normal economic conditions. Accordingly, concern over the housing problem and solving its bottlenecks becomes urgent and essential issues for tackling in the Poverty Eradication Project.

Name of Research:

Internal Displacement Impacts on Sudanese Towns with Special Reference to Greater Khartoum

Client: Ministry of Finance and National Economy for identification of JAM projects**Country:** Sudan**Location:** Khartoum State**Date of Publishing:****Brief of the Research:**

This research has come on the verge of an epoch that the Sudan is promised with peace, which hopefully implies an end to the internal displacement episode. Planning and development of these IDPs settlements is then become a central issue and of concern for the governmental authorities in affected towns. The report highlights the urgent needs of the IDPs to integrate gradually with the settled communities considered in a sectoral manner. Generally, eight sub-sectors have been identified. These are: environmental protection, linkages, drinking water supply and sanitation, shelter and protection against floods, education, health, community development and electricity supply. The natural environment has been harmed by the practices of the displaced who used land for settlement indiscriminately and go searching for fire wood for cooking and forage for their few animals besides cutting the scattered trees for building their shacks, using the grass for roofing, thus they disturb the characteristics of the soil layers. The soil is consequently subjected to weathering beyond remedy. Hence, enhancing the urban structure via spatial organisation and providing renewable energy is vital.

Without paved road linkages, it can be said that these shanty dwellings are difficult to access because they are not connected with made or half made transportation lines. Public transport system is one of the worse public utilities. It is sufficient to say that some people the IDPs commuted in long vehicles best used for livestock and meat marketing. As an urgent plan for relieving the situation, construction of 83 km of roads is deemed necessary.

The water supply system in the irregular settlements depends on groundwater abstraction through boreholes and hand pumps. Distribution of water is almost via water vendors with prices higher than the KSWC charges, which provide regular supply via its ailing network. As an urgent plan, it is thought that more wells should be drilled and piping network should be introduced.

Consultancy Services

The above research reports have been prepared by Bannaga Consult with the valuable assistance and collaboration of a large number of experts, consultants, various concerned officials from state and federal ministries and institutions. And in order to render the contents of the Report as clear and informative as possible, Bannaga Consult employed a Revision Team of profound and outstanding experts to review the Reports and advice on the Report substances.