

Opportunities and Challenges for the Construction Industry in Tanzania

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To point up the international characters of the CIB Membership we are pleased to feature a contribution from our Members in Tanzania.

This originates from a Seminar organised by the National Construction Council (NCC), a CIB Associate Member in Dar Es Salaam, on 26th and 27th February 1997 for the national construction industry.

The objective was to bring together Consultants, Contractors, R&D Institutes, Professional Associations, Educational Institutes and Representatives from Government Ministries and in this it was successful.

The first article is the Welcoming Address by the Executive Secretary of the National Construction Council who takes a searching look at the perspectives for the industry as well as charting the impressive achievements of the NCC to date.

In the second article, Mr. C.J. Batalia acquaints readers with the nature of the human settlement problem. This is done through reproducing an abridged version of the paper which he presented at the seminar dealing with the Tanzanian construction industry's demands to provide a meaningful solution to the problem.

CIB's Secretary General Dr. Wim Bakens also took part in the Seminar where he had the opportunity to discuss the benefits of CIB membership in detail.

I. Welcoming Address



By Kesogukewele M.I.M. Msita
Executive Secretary
National Construction Council

Ladies and Gentlemen, allow me to introduce the National Construction Council for the benefit of those who are not quite familiar with its status and mandate. The National Construction Council was established through an Act of Parliament No. 20 1979 and commenced operations two years later, in August 1981. The primary role of the Council is to promote the development of the local construction industry. Its mandate is implemented through functions which include: planning and co-ordination; advisory services, research, documentation and information services, and establishment of tendering guidelines. In view of the nature of this seminar, I will provide an overview of the implementation of the Council's functions based on the demands of the National Construction Industry Development Strategy (NCIDS).

The strength of the Council has especially been with regard to: Legislative mandate; continued support from the government and the International donor community particularly the World Bank; its well trained cadre of technical staff, and the recognition by the industry of its leadership role.

The Corporate Mission of the Council for the plan period has been to develop and sustain an effective Construction Industry in Tanzania, to enable the economical development and maintenance of infrastructure.

The Council's main objectives for the plan period have been as follows:

- a) Advise the government on all matters relating to the Construction Industry;
- b) Provide advisory services and technical assistance to actors in the industry;
- c) Provide and facilitate training of persons involved in the development of the Construction Industry;
- d) Issue and facilitate technical guidelines;
- e) Establish and promote adoption and usage of appropriate technologies and local resources;
- f) Establish a Management Information System (MIS) for the Industry;
- g) Improve the Council's capacity to execute its activities pursuant to its Corporate Mission;
- i) Co-ordinate and monitor the implementation of the NCIDS;
- h) Generate at least 60% of the recurrent budget by the end of the plan period.

The status of implementation of the Corporate Objectives has been generally satisfactory.

Examples of successful implementation are as follows:

Advisory Services

Advisory Services to the Government have included issues related to: Registration of Road Contractors; Development of Contractor and Consultants; Equipment and credit support to small contractors; and Training needs assessment for the private construction firms in roadworks and in relation to irrigated agriculture.

Advisory Service and Technical Assistance to other actors in the industry continued to be one of the most successful services provided by the Council. They cover a broad range of issues including: resolution of disputes, contract administration, selection of consultants and packaging of works. Advisory services have been given to a wide spectrum of clientele who have included local and foreign firms.

Training

Several types of training programmes have been implemented. They have covered all the key players, that is: Contractors, Consultants, and Employers. Areas of training have included: labour-based road rehabilitation and maintenance, contract administration, procurement, construction and consultancy agreements, settlement of disputes, claims management and estimating. Labour-based road contractor training programmes have been implemented for the Kilimanjaro and Shinyanga Regions. In each region 12 contractors have been trained.

Currently training programmes are in progress in Arusha, (12 contractors), Morogoro (12 contractors), and Mwanza (18 contractors). A training programme to cater for the whole country has been put together and it will involve 156 local contractors. A training programme on bridge maintenance has also been

prepared. The Council has also devised development and training needs for local consultants. Funds are being sought to design the courses and implement this training programme. Subjects to be covered will include: Business Practice and Management, Project Management, Technical Engineering, and Computer Technology. Institutions who have financially supported the NCC training programmes are: UNDP through the National Income Generation Programme (NIGP), the World Bank, GTZ, CIDA, USAID, SDC, and ODA.

Total financial commitment from these institutions to-date amounts to about US \$ 7 million. About 40% of this amount has already been spent.

Technical Guidelines

Technical Guidelines that have been formulated have included: Conditions of Contract for Building Works, 21 Contract Administration Manuals, and the Code of Procedure for Tendering.

Adoption and Usage of Appropriate Technologies and Local Resources (Materials)

Initiatives towards this objective have comprised: Publication of a Directory of locally produced construction materials, organisation of three promotional seminars and exhibitions geared towards the use of local materials, promoting the use of timber culverts in roadworks, and coordinated research on the viability of bamboo housing construction. A pilot bamboo housing project has been accepted for implementation, initially under the co-ordination of the Council.

Establishment of an MIS for the Construction Industry

In 1993, the Council engaged a consultant to establish a computer-based Management Information System (MIS) for the construction industry. Completion is expected this year.

This will serve as an authoritative reservoir of data and information related to the construction industry. While awaiting the full establishment of the MIS, the following data bases have already been established: Construction Materials, Research Projects, Productivity and Cost Data, Civil Works Contractors and Consultants.

A Reference Library for Industry

In addition to the MIS, the Council is currently finalising arrangements to establish a reference library for industry which will be stocked with current titles. Within the plan period 1082 titles were acquired and more titles are awaiting delivery.

Participants should also note that the NCC has been publishing a Newsletter and this year has commenced publishing a Journal. The two publications will assist in disseminating relevant data and information to the industry.

Generation of the Recurrent Budget

The Corporate Plan envisaged the Council generating at least 60% of its recurrent budget by the financial year 1995/96. It is heartening to report that the 1995/96 Audited Accounts indicate that the Council generated 66% of its recurrent budget (up from 23% in 1990/91.) It is the intention of the Council to generate all the recurrent budget within the next two to three years.

It can be stated that the NCC has made great strides in striving to strengthen its capacity for the purpose of providing a professional and relevant service to the construction industry. We are not yet completely through with the development process. The major inhibition confronting the Council and the development of the construction industry continues to be the high dependence on foreign resources, particularly donor funds for the implementation of construction projects and developmental needs of the

industry. For example, the contractor development programme already cited is centred on donor support to the tune of 80%. There is need as an industry to reverse this trend through internal arrangements. However, this in turn calls for a higher level of involvement by the local firms in locally and foreign funded projects. Such an involvement would allow the actors to contribute materially to their own development through the proceeds of the projects they execute.

Another problem is that the industry continues to be too risky for investors particularly equipment suppliers, due to the reduced government expenditure on infrastructure projects. Erratic payment to consultants and contractors is part of the evidence testifying to the risky nature of the industry.

I am confident that during this Symposium, we will come up with ideas as to how we can extricate ourselves from this situation.



II. Human Resources Demands on the Construction Industry in Tanzania



by C.J. Batalia

Tanzania Human Settlement Profile

Introduction

Although Tanzania is one of the least urbanised countries in Africa, the rate at which she is currently being urbanised is very high. Together with fast urban growth, the administrative machinery has been unable to provide for a planned shelter delivery system at a time when demand for new housing has been growing rapidly resulting in 40-70% of the urban population in Tanzania living in unplanned housing with inadequate environmental services. Planned urban land is difficult to acquire a situation which favours informal land marketing. House construction is financed principally from individual savings and it takes longer time to have a decent house (URT, 1996).

Tanzania Population Profile

Tanzania National Population Growth

Tanzania is one of the most rapidly growing countries in Africa. Rapid population growth began to be experienced in the late colonial period, after World War II, and has continued since independence in 1961. According to national census figures, the population size tripled between 1948 and 1988, from about 7.7 million people to about 23.2 million people respectively. Estimates of the overall national population growth rate vary between 2.8% to 3.6% per year. The Tanzanian population is projected to increase to 39 million people by the year 2000; 50 million people by the year 2010; 75 million by the year 2020; and will reach 90 million people by the year 2050 (URT, 1996).

Tanzania Urban Population Growth

Accompanied by a rapid population growth, Tanzania is also being urbanised at a high rate. In 1948, the urban population of Tanzania comprised 3.2% of the national total. This proportion increased to almost 4.8% in 1957 and to about 6.2% in 1967.

Independence in 1961 opened the doors of migration to urban areas and urban residents are putting considerable investment in urban areas. Attitudes towards "going back home" are changing at the same time as rural ties are diminishing. Conditions are therefore ripe for more involvement of the urban residents in shelter development and in the provision and maintenance of services in their areas (URT,

1996; Sawio, 1993).

In 1978 and 1988 the proportion of the urban population was 12.7% and 26.8% respectively. Originally, urban growth was seen entirely as being a result of rural to urban migration. However, there is an increasing awareness that natural growth is becoming a major factor in urban growth. For example, the analysis of the 1988 Tanzania population Census shows that nearly half (48%) of the population of Dar Es Salaam City was actually born in the City itself (Kironde, 1995).

Between 1980 and 1991 the annual urban population growth rate of Tanzania was 10.1%. This was the highest among the low income economies (Kombe, 1995: 3 citing World Bank 1993: 298). The current population is put at 42% while by the year 2000, it is estimated that about 50% of the population will be living in urban locations (Kironde, 1995; URT, 1996) (see Figure 1).

Rapid urban growth has been taking place within a situation of national economic hardship, especially since the mid 1970's. The results of this phenomenon have been varied but have included the failure by the public authorities to provide new, or to expand existing, infrastructure to cope with the demand, while the stress on existing services, coupled with lack of maintenance, has led to the breakdown of the greater part of the infrastructure in urban areas (Kulaba, 1989; Kyessi et al., 1995).

Urban Growth, Poverty, Environment and Sustainable Human Settlements

The above situation has resulted in considerable stress on the human habitat and the environment. Some 40-80% of the urban population lives in unplanned areas, while 56% of the total employment is generated in what is generally referred to as the "informal sector". Houses constructed in unplanned settlements account for 65% of all urban housing development. Rapid urbanisation is to some extent an outcome of rural poverty and also results in increased urban poverty. Recent assessments show that 51% of the total population actually lives below the poverty line, while 20% of the urban population and 74% of the rural population lives below the poverty line (Kironde, 1995).

Inadequacy in the provision of basic services such as water supply, power supply, planned housing, transport and communication, sanitation and drainage is characteristic of most urban centres in Tanzania.

Economic Challenges Facing the Construction Industry

National policies and strategies pursued until recently have resulted in limited economic growth in urban centres in a situation of rapidly increasing populations existing in an environment of poverty. Existing policies have also created negative economic growth by (for example) preventing the operation of a formal land market and by severely restricting mortgage facilities for the construction of housing and for the development of the small scale business sector.

Moreover:

- Most shelter is self-financed. This results in limited shelter production as a result of the failure to start or complete construction, or to complete construction slowly over a long period of time. The quantity and quality of shelter suffers, and high house rents and overcrowding take place.
- Urban development is financed generally by the central government with hardly any system of effective and adequate cost recovery, or of incorporating the public into provision of infrastructure and other urban services. This results in a shortage of planned and serviced land; poorly maintained or non existing infrastructure; the growth of unplanned settlements; speculation in the limited planned land that is available; and the edging out of the poor from planned land.
- Although local governments were re-established in 1982, and although effective decentralisation is the official policy, local governments are still weak particularly in terms of democracy and resources; and are generally controlled by and dependent on the central government.
- There is considerable concern with environmental management but concrete undertakings are hampered by a number of factors including poor institutional set ups; inadequate, ineffective, and

uncoordinated legislation; limited resources; and limited public participation. Thus the state of the environment in human settlements remains poor.

Affordable and Adequate Housing

What is Adequate Shelter?

According to the Habitat Agenda, adequate housing or shelter means more than a roof over one's head. It also means adequate privacy; adequate space; physical accessibility; adequate security; security of tenure; structural stability and durability; adequate lighting, heating and ventilation; adequate basic infrastructure, such as water-supply, sanitation and waste-management facilities; suitable environmental quality and health-related factors; and adequate and accessible location with regard to work and basic facilities: all of which should be available at an affordable cost. Adequacy should be determined together with the people concerned, bearing in mind the prospect for gradual development.

Higher Shelter Demand than Supply

There has been a failure on the part of the administrative machinery to provide for planned shelter delivery system at a time when demand has been growing sharply caused by rapid urban growth.

The gap between the supply and demand for housing has been widening with time. For example, the first Five Year Development Plan (1964-1969) estimated the demand for housing to cater for the urban population at 517.619 units, while the housing stock then was 217.575 units or 42% of the housing requirement. This indicates that there was a housing deficit of 300.104 units. The estimated cumulating current annual demand is about 800.000 housing units while the supply of housing is below 20% of the requirements. It is estimated that by the year 2000 there will be about 10 million urban dwellers demanding 2.4 million dwelling units out of which 1.8 million are new demands (URT, 1996).

The growing housing shortage is confirmed by overcrowding levels found in the urban areas. On the understanding that an occupancy rate of more than two persons per room is overcrowding, the percentage of families in overcrowded homes is 34.4% in Dar Es Salaam City, 34% in Mwanza, 37.5% in Arusha, 37.2 in Moshi, 38% in Dodoma, 24.7% in Kigoma and 28.7% in Kilosa (URT, 1996).

The most recent statistics show that homelessness was also emerging and has already reached 0.2% and 0.1% in both Dar Es Salaam and Arusha respectively, a phenomenon not experienced just a few years back.

Most housing is constructed without reference to planning authorities even in planned areas, and this has resulted in the construction of sub-standard structures. Only 35% of all houses in urban Tanzania are in compliance with existing regulations. In an urban and housing indicator study of 1995 it was revealed that housing in compliance in Dar Es Salaam, Mwanza, Arusha and Mbeya were 36%, 50%, 30% and 25% respectively. Poor facilities and infrastructural services for most neighbourhoods is an added impediment against proper housing development (Kyessi et al., 1995).

The significance of this seminar lies in the shortage and present shelter conditions of our urban and rural settlements. It has been realised that shelter provision to our town residents is declining and there are many unfinished houses while many people are living in poor structures in both urban and rural areas (Kyessi et al., 1995).

The Government owns houses and apartments directly and indirectly through public corporations like the National Housing Corporation and Ministry of Works. This housing stock is very small (about 2% of all houses) and nearly all the units are old and poorly maintained. Very few Government houses have been constructed since independence when compared to the growth in the civil service.

The Government assists the Private Sector through the provision of building plots, infrastructure and

policies related to the production of building materials, however at an insufficient level. At the same time, due to non-enforcement of building and planning standards, private individuals have been able to construct houses in unplanned areas. This has had a serious impact on the quality of urban housing, environment and is likely to entail serious future financial ramifications, since the provision of infrastructural facilities in unplanned developed areas will be much more expensive than providing the same on undeveloped land.

Although the rural dwellers do have houses to stay in, there is a pre-dominance of poor structures built with temporary building materials.

The demands for adequate shelter indicate that major efforts are needed to arrest the situation.

Housing Construction Technologies

Housing construction for especially the low-income groups in Tanzania most often concerns self-help building. The future owner organises the building process and is also directly involved in the construction activities. He/she is assisted by unpaid relatives and/or hired craftsmen. A contractor is seldom hired, since this increases the costs by some 50% to 100% (Egmond et al., 1996). Construction takes place based on experience. Official drawings are seldom prepared especially when building in unplanned settlements.

Adequate Shelter is also clearly related to the issues of "Agenda Twenty-one" and embedded into the Habitat Agenda which is one of the main thrusts of development planning in the 1990's and towards the 21st century.

It is therefore evident that the issue of housing is vital in domestic economic policy because it is a key instrument in the creation and distribution of national wealth.

