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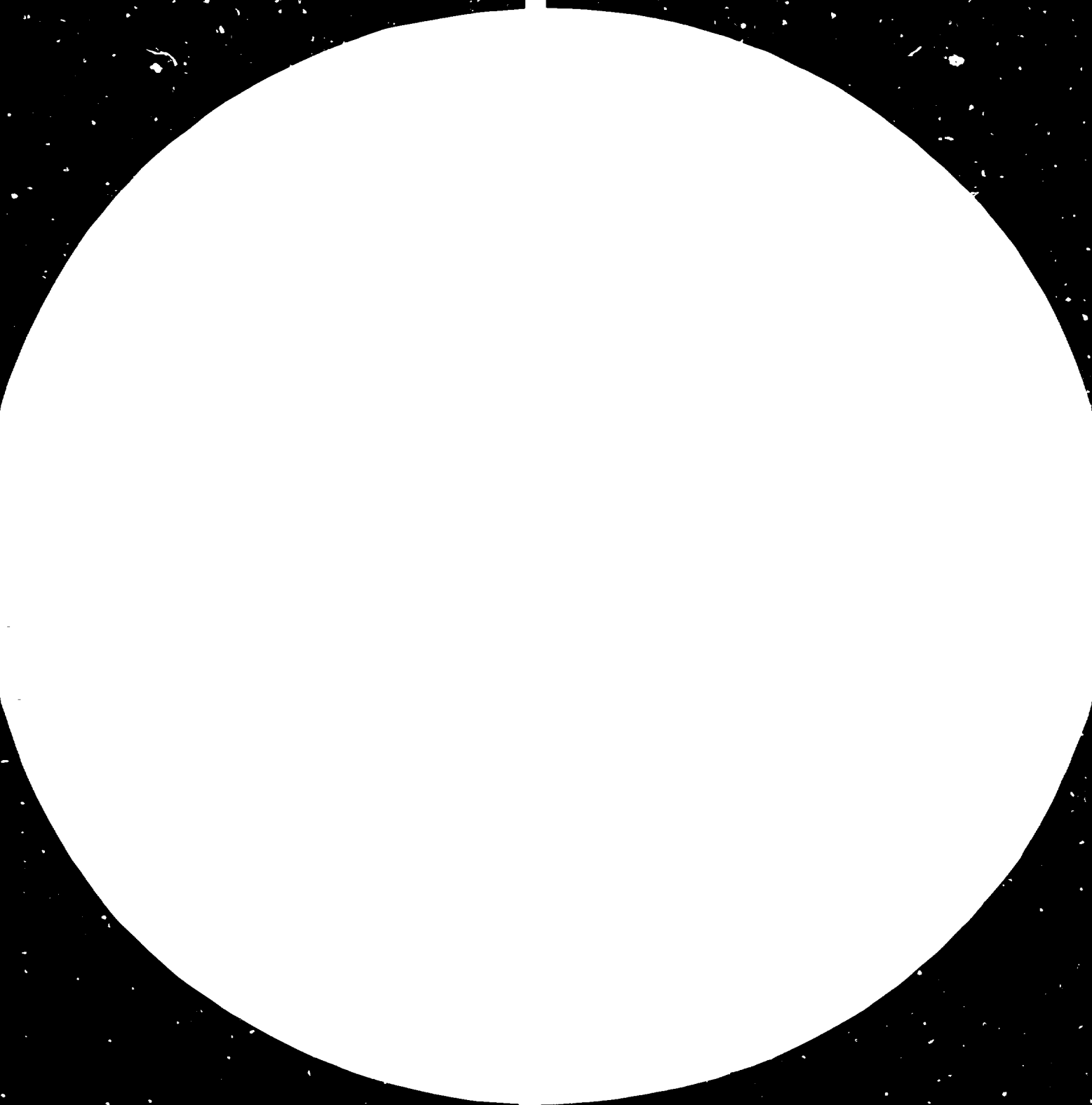
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Non-Metallic Minerals with Special Focus on Building
Materials for the Construction Industry*

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NON-METALLIC MINERALS (BUILDING MATERIALS INDUSTRY)

AND PROCESSING IN TANZANIA**

by

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003078

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1. INTRODUCTION

Since independence in 1961 Tanzania has defined policy guidelines which would disengage herself for colonial economic entanglement. The most historical step taken was the 1967 Arusha Declaration which defined the social and economic objective of the country. These objectives recognised man as the centre of concern of all fields of national endeavours. The main objectives of these measures which were to underly future social and economic development plans were defined as social equity, ujamaa (socialism) development and self reliance. Tanzania development therefore requires the introduction of development activities that are basic need oriented (food, habitat, health, education, communication and transport) taking into consideration indigenous and innovative processes as well as environmental potential limits. This paper attempts to give policy guidelines regarding Non Metallic Building Industry as part of the national industrial development strategy, and how the sector is to be developed further in order to serve our people with their basic needs listed above.

2. INDUSTRIAL DEVELOPMENT STRATEGY

The Over all national social and economic policy objectives set by the Party has at different stages elaborated the industrial strategy for the country. In this context industrial development is seen as one of the key elements in the process of disengagement and struggle for economic independence and consequently self reliance. In order to accomplish the above objectives we have formulated short term and long term industrial strategies. The short term industrial strategy has the following features:

- (a) Increasing production in the existing factories.
- (b) Reducing operating costs for operating companies and holding corporations.
- (c) Increasing productivity in industries.
- (d) Increasing our foreign exchange earnings through exports of some of our locally produced products even if it entails a squeeze on domestic consumption.
- (e) Reducing foreign exchange expenditure and using the available funds with the maximum of restraint. This would include

looking for all possible ways of utilising raw materials machinery and other inputs that are may be available locally. If need be relevant incentives will be instituted to enable industries produce their own raw materials and other inputs in order to improve on their own capacity utilization

The long-term industrial strategies have the following high lights.

- (a) Industrial rehabilitation through solution of present machinery problems and adjusting the structure and lay out of some of the existing industries in order to improve on capacity utilization or productivity.
- (b) Expansion of existing factories in order to meet the local demand.
- (c) To establish new factories designed to improve on productivity or to alleviate structural constraints facing the existing ones. For example, the ceramics factories should be complemented by factories producing fittings and those of bottles should be complemented by other producing caps/corks in order to effect supportive industrial structure and hence improve on production performance.
- (d) To establish export markets for our products and establish or expand production units for these markets in order to earn the nation foreign exchange.
- (e) To more meaningfully deal with the growth of the small scale industries especially those requiring little foreign and local funds at the same time ensuring better regional distribution of these industries in order to ease distribution problems.
- (f) To establish primary industries that are vital for the effective and efficient implementation of the long-term industrial development sector.
- (g) To give top priority as far as possible, in establishing industries that utilize, or assist in the utilization of locally available raw materials.
- (h) To strengthen and develop technological services that are essential for industrial productivity in the different facets of industrial development.

In order to implement the above we have established corporations to deal with specific sectors as follows:

- (i) - National Development Corporation (NDC) - Metal and Engineering Industries.
- (ii) - National Textile Corporation (TEXCO) - Textiles.
- (iii) - Tanzania Saruji Corporation - Non Metallic Building Materials.
- (iv) - Tanzania Leather & Associated Industries (TLAI) - Leather and leather products.
- (v) - Tanzania Karatasi & Associated Industries (TKAI) - Wood and Paper products.
- (vi) - Tanzania Breweries Ltd. - Beer and distilleries.
- (vii) - National Chemical Industries (NCI) - Chemical products.
- (viii) - Small Industries Development Organisation (SIDO) - Small Scale Industries.
- (ix) - Tanzania Cigarettes Co. - Cigarettes.

Other corporations not under the Ministry of Industries are

- Tanzania Wood Industries (TWICO) - wood products.
- State Mining Corporation (STAMICO) - mining activities.

Having elaborated on our industrial development strategy we should now deal specifically with Non Metallic Building Industry and its distribution to the entire industrial sector.

3. NON - METALLIC BUILDING MATERIALS

- 3.1. As indicated above building materials sector has been accorded priority in the industrial strategy after metal and engineering, chemicals, and Textiles sectors. The Non-metallic industries include cement and allied products, glass and ceramics and associated clay products.
- 3.2. The importance of the non-metallic building materials is very much related to implementation of national projects. shortage of supply of cement for example has delayed implementation of many national projects and in many cases it has been necessary to import the same.

3.3. In order to implement the national plan of producing non-metallic or mineral based building materials, Tanzania Saruji Corporation was established in 1976 under Presidential Order No. 128 which was issued under Public Corporation Act No. 17 of 1969. In accordance with this objective the corporation was required to manage the relevant projects as follows:

- (i) Expansion of the cement and related industry.
- (ii) Setting up of sheet glass and container glass factories.
- (iii) Setting up factories for the production of ceramics, Sanitary ware, table ware, burnt bricks and other clay products.
- (iv) Ensuring that distribution of all these products is carried out to the best interest of the masses through the proper national institutions.

3.4. In compliance with the above objectives Tanzania Saruji Corporation under the Ministry of Industries has made good progress in carrying out its tasks as follows:

3.5 The Cement Group

Under the cement group we started with only one factory known as Tanzania Portland Cement Company Ltd. capable of producing 340,000 tons per annum. After Phase III commissioning in 1979 this factory increased its installed capacity to 600,000 tons per annum. As cement demand is estimated to be about 1.0 million per annum, another factory, Tanga Cement Company with a capacity of 500,000 tons was commissioned in 1980. This makes a combined installed capacity of 1.1 million tons and therefore compares favourably with demand besides ensuring equitable distribution in the country.

3.5.1 Another sister company (Mbeya Cement) is to be commissioned before the end of 1982 subject to the availability of electric power, a problem which was not foreseen during the project implementation. This delay in commissioning which was scheduled to be in 1980 entails heavy costs as time goes by. Mbeya Cement Company has an installed capacity of 250,000 tons per annum and when operational it will bring the national capacity to 1,350,000 tons per annum.

3.5.2. The corporation (Saruji) has immediate plans of setting up mini cement plants in the Lake Victoria Zone and later elsewhere where distribution problems under our present efforts to render them unsatisfactory. To date it has been difficult to ascertain raw material reserves of the required quantity and quality. However, efforts are being made to justify the setting up of a small to medium-scale cement factory especially in the Shinyanga and Musoma areas where raw material investigations are underway. Together with the expansion of the existing factory the Corporation is also studying the possibility of setting up a large cement factory in Kilwa where all the necessary raw materials (limestone, gypsum and red clay) abound in the same area. The aim of setting up this factory is to meet the growing national demand as well as for export in order to earn foreign exchange.

4. THE CERAMICS GROUP.

- 4.1. The Ceramics factory which will produce bath tubs, toilet seats, sanitary ware and table ware is under construction in Morogoro and it will have a capacity of producing more than 2,000 of these products per year. This factory is scheduled to be complete in 1983. Expansion of this industry will depend on future demand and our experience in producing these products.
- 4.2. The construction of a burnt bricks factory in Arusha started mid last year with the assistance of our friends of the Peoples Democratic Republic of Korea, thus marking the beginning of the burnt bricks, tiles and other clay products industry under the corporation. The Arusha factory will have a capacity of producing 5 million burnt bricks per annum by the end of 1982. At the same time we are finalising preparations for the construction of a tiles factory in Arusha and another for burnt bricks and tiles in Mbeya, with the assistance of our friends of Bulgaria.
- 4.3. It is a declared target by the ministry of industries to set up such industries (bricks and tiles) in the remote regions which do not get cement readily due to transport problems. Such regions include Mwanza, Mara, Kigoma, Rukwa, Kagera, Mtwara, Ruvuma and Lindi. Geological investigations for raw materials in Mwanza and Mtwara

which is already completed show the raw materials there quite suitable in quantity and quality. Similar investigations are underway in Kagera, Kigoma and Mara Regions and later on for every region.

- 4.4. Tanzania Saruji Corporation because of its technical knowhow will be responsible at national level to implement this policy. In order to have a good base for implementing clay products a subsidiary company under Tanzania Saruji Corporation known as Tanzania Clay Products Ltd. has been established and is now responsible for implementing the Bricks Project at Apuska. Regarding small scale bricks projects at village level what is required most is special technical training to enable the production of good quality bricks. Small Scale Development Organisation (SIDO), a corporation under the ministry of industries is capable of conducting this training at the Mbeya ceramics institute on the basis of intermediate technology to enable one man to produce 1000 hand made bricks per day after a two or three week training, such bricks are tipped to be of a much better quality than those produced by using traditional methods. The Ministry of Industries has already appealed to the Party and Government Leaders at the Regional level to cooperate with SIDO in training our villagers in an endeavour to build good houses at the village level. Undoubtedly, such small scale industries at village level will never require machines and investment which is beyond the capability of the villagers, but most certainly training and good planning are essential.

One of the steps to be taken in reducing cement consumption is the introduction of "pozzolana" cement. "Pozzolana" material is readily available in Mbeya at Songwe near the Mbeya Cement Factory and also at Oldonyo Sambu in Arusha Region. The Ministry of Industries has already directed Tanzania Saruji Corporation to start pozzolana cement production at Mbeya Cement Factory when it is operational and make use of pozzolana materials at Oldonyo Sambu in Cooperation with other relevant institutions.

Regarding roofing materials, our habit ever since has concentrated mainly in using corrugated iron sheets. Because of inadequate foreign exchange the only factory we have that produces iron sheets (i.e. Aluminium Africa (ALAF)) is now operating at half capacity, a problem likely to continue for sometime. However, we have an asbestos factory with

an installed capacity to produce 20,000 tons per annum but can currently achieve an annual production of 4,000 to 5,000 tons only. Asbestos is quite ideal for any type of roofing. The major raw material used is cement. In order to make good use of the inadequate supply of GCI sheets we have directed that asbestos will be used for roofing all industrial sheds and godowns so that GCI sheets are directed to the rural areas, and as from now designs for industrial sheds and godowns will take this concept into consideration. In future, tiles will also be made use in urban areas and therefore give way for GCI sheets to serve the low income group in the rural areas.

5. GLASS GROUP

In this group one factory is for sheet glass for building purposes of an installed capacity of 15,000 tons per year. This factory site is in Mbagala some 12 kilometres from Dar es Salaam. The second factory is for container glass in Mwanza. This factory will have an installed capacity of 20,000 tons of different products per year.

6. TRAINING

In order to fully manage these activities we have seriously considered the issue of manpower training. At present many people are being trained in India, Denmark, Japan, Indonesia and elsewhere in the field of technology, finance and management. Our objective is to continue training more people in technical fields in order to be self sufficient in these fields. Apart from higher technologies we have Saruji Training Institute which has been strengthened under the umbrella of Tanzania Saruji Corporation. The Strengthening of this institute has been made possible through the Danish assistance. It is expected that in the next five years this institute will have grown to the extent of giving training in specialised technologies and operations for cement, glass, ceramics and clay products to a very high level.

7. BOTTLENECKS

In implementing the above plans we have been experiencing the following bottlenecks:

- (i) Inadequate foreign exchange .
- (ii) Problems related to locally available raw materials.

(iii) Problems related to inadequate and poor infrastructure.

(iv) Problems related to lack of skilled/trained manpower.

8. CONCLUSION

In this paper I have attempted^{to}/explain the policy guiding the non metallic minerals industry as part of the national industrial strategy and over all national development strategy aimed at realising rapid development in our country in providing the basic need of man. These include food, habitat, health, education communication and transport. We shall try our best in implementing the plan of action discussed above but this again will depend on if the present economic climate in our country and the world at large improves.

