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THE STATUS AND PROBLEMS OF HOUSING AND
 CONSTRUCTION INDUSTRY IN AFRICA

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THE STATUS AND PROBLEMS OF HOUSING AND CONSTRUCTION INDUSTRY IN AFRICA

General appraisal

1. The construction industry over the period 1968 to 1971 has constituted, on the average 9 per cent of the gross domestic product of African countries. This sector employs 12½ per cent of the total labour force and contributes 60 per cent of the Gross Domestic Capital Formation (See Table 1).

2. The building and construction industry, in addition to its economic importance shown by the factors above, has very important social effects. On the social scene, each individual would like to have his own dwelling; in this way housing sets the character of all human settlements. The problems of housing often have important political side effects; of the 60 per cent of total capital formation devoted to construction approximately half, or 30 per cent, is devoted to housing and community facilities. This represents about 3 to 4 per cent of the Gross Domestic Product. Thus the average per capita the expenditure in housing and community facilities in Africa is of the order of \$6 per annum. Considering that each household would like to own its own dwelling and that the costs of a minimum standard dwelling is of the order of US\$500.00, the immensity of the problem of housing the increasing population is clearly evident (see Table 2).

3. The housing and construction sector provide the physical evidence of economic development and set the character of both the rural and urban environment since by visual inspection one can establish a reliable estimate of the standard of the economy. A major characteristic of the construction industry is that it is sensitive to political and economic changes as well as to policies of finance and banking. This is because the main inputs come from government sources which are generally interested in major civil engineering works, and which are often designed to effect known social and economic changes.

4. Attention may be drawn to the importance of the construction sector and the need for its proper management as a key sector in the economic development of Africa by the following quotation from Professor Arthur Lewis,^{1/} ".....the importance of construction is not generally realized; many people think of capital formation mainly in terms of installin machinery while in truth it consists to a great extent of building structures of one sort or another; civil engineering is the key industry in capital formation with mechanical engineering following some distance behind. This has its corollaries. One is that, given finance, the real bottleneck which holds up a rapid acceleration of investment is the capacity of the building industry to extend itself. Another corollary is that in earlier stages of economic development the greatest need for capital is for public works and public utilities which in these days are not directly open to private investors. So private investment is of limited relevance to the capital need of the less developed countries....."

^{1/} The Theory of Economic Growth.

Table 1
GDFCF in Construction at Current Market Prices

Country, currency and year	Land	Dwell-	Non-	Total	Other	Total	Total			
	1/ 1.	ing 2.	residen- tial building 3.	of (1) to (3) 4. 3/ % GDFCF		con- struction work 5.		of (1) to (5) 6. % GDFCF	Total GDFCF 7.	
Zambia (ml.Kwacha)										
225.3	1967	6.1	37.1	33.1	76.3	34.0	44.4	120.7	53.6	225.3
264.7	1968	5.6	50.6	45.4	101.6	38.5	74.0	175.6	66.3	264.7
253.6	1969	6.0	44.0	39.8	89.8	35.5	76.9	166.7	65.7	253.6
260.3	1970	16.2	32.2	39.3	87.7	33.8	92.0	179.7	57.6	312.1
Southern Rhodesia (R\$ million)										
137.9	1968	11.2	23.7	21.9	56.8	41.3	32.9	89.7	65.0	137.9
154.3	1969	10.5	29.0	27.0	66.5	43.0	29.7	96.2	62.0	155.5
169.6	1970	11.7	32.6	33.6	77.9	46.0	26.5	104.4	61.0	171.7
212.8	1971	12.6	39.8	44.9	97.3	46.0	31.9	129.2	59.0	219.8
South Africa (Rand million)										
2350m	1968	2/	393	339	732	31.2	573	1305	55.5	2350
2620	1969	"	442	404	846	32.2	657	1503	57.5	2631
3139	1970	"	532	516	1,048	33.6	721	1769	56.7	3139
3604	1971	"	615	631	1,246	34.6	786	2032	56.3	3604
Tanzania (million Shs.)										
1950	1970	29	261	217	507	26.6	480	987	54.2	1815
2330	1971	49	284	226	559	25.5	825	1384	59.5	2344
Swaziland (Rand million)										
11.2	1967	0.9	2.4	1.6	4.9	43.	1.1	6.0	53.7	11.2
10.7	1968	0.5	1.4	1.5	3.4	31.7	1.2	4.6	42.6	10.7

Source: Country reply for 1972 Yearbook.

1/ Land acquisition improvement including plantation development.

2/ Included in other construction

3/ Percentage of GDFCF

		1.	2.	3.	4			5.	6.	7.
						%			%	
<u>Nigeria</u> ^{1/}										
(LN million)										
243.2	1967	26.1	-----75.9-----		102.0	42.0	67.8	169.8	71.1	241.8
255.3	1968	23.1	-----71.0-----		94.1	37.0	50.8	144.9	66.5	217.0
253.1	1969	20.5	-----79.3-----		104.8	41.5	69.9	169.7	64.5	263.8
<u>Mauritius</u>										
(million Rupees)										
145	1967									
141	1968									
144	1969	3	35	13	51	35.5	34	85	59	144
145	1970	4	33	23	60	41.5	36	96	55	145
184	1971	3	38	30	71	38.6	42	113	61.5	184
<u>Zaire</u> (million Zaires)										
139.5	1968	^{2/}	9.1	6.2	15.3	11.0	16.5	31.8	23.0	139.5
216.7	1969	"	4.1	5.5	8.7	4.1	16.3	25.0	11.5	216.7
330.6	1970	"	4.18	7.6	13.9	4.18	22.0	35.9	10.8	330.6
<u>Tunisia</u> (million Dinars)										
144.7	1969									140.0
146.3	1970									164.3
174.3	1971									174.3
<u>Morocco</u> (10 million DH)										
2,610	1970	^{2/}	-----0.43-----			36.9	0.75	1.18	59	1.99
<u>Libya</u> (million)										
210.4	1967	^{2/}	-----113.7-----			47.2	26.1	139.8	57.5	240.4
289.7	1968	"	-----157.6-----			54.3	43.7	201.3		289.8
315.2	1969	"	-----149.0-----			47.15	52.0	201.0	63.5	316.0
<u>Sudan</u> (million £)										
70.5	1969		19.5-----16.7-----			51.0	12.8	49.0	69.5	70.5
<u>Ethiopia</u>										
(Million Eth.\$)										
510	1967		-----361.9-----			70.1-----361.9		70.5		511.4
550	1968		-----362.8-----			65.4-----362.8		65.5		554.1
500	1969		-----355.5-----			71.0-----355.5		71.0		500.3

Source: Country reply for 1972 Yearbook.

^{1/} The three eastern States are not included
^{2/} Included in other construction.

		1.	2.	3.	4.	5.	6.	7.
					%		%	
<u>Kenya (million Shs.)</u>								
1644	1967	1.6	12.5	10.2	24.3	30.0	15.9	40.2
1790	1968	2.1	15.1	13.5	30.7	34.9	17.7	48.5
1874	1969	2.4	16.2	14.2	32.8	35.0	17.8	50.6
2254	1970	2.6	17.1	14.2	33.9	30.0	23.2	56.1
								48.7
								82.2
								55.0
								88.5
								54.0
								93.7
								50.0
								112.7
<u>Malawi (million Kwachas)</u>								
25.5	1967	1.0	-----	-----	11.0	47.5	-----	12.0
37.4	1968	0.8	-----	-----	15.0	40.32	-----	15.8
49.0	1969	1.2	-----	-----	26.3	56.12	-----	27.5
48.6	1970							53.5
								25.5
								42.5
								37.4
								56.0
								49.0
								48.6
<u>Ivory Coast</u> (000 million CFA francs)								
61.8	1969							67.8
83.9	1970							74.3
<u>Sierra Leone</u> (million Leones)								
56.3	1969	0.1	11.8	1.9		24.5	12.2	26.0
								46.5
								56.3
<u>Ghana (million Cedis)</u>								
242	1969	2/	101			40.5	60	161
294	1970	2/	110			37.2	66	176
								65.0
								249
								59.8
								295

Source: Country reply for 1971 Yearbook.

2/ Included in other construction.

Table - 2

Fixed Capital Formation in Construction

(Value in million US\$)

	Total	Buildings	Infrastructure	Machinery and equipment
	\$	\$	% <u>1/</u>	\$
NORTH AFRICA				
Algeria (1963)	540	-	-	-
Egypt (1969)	808	-	-	-
Libya (1969)	916	453	49.5	157
Morocco (1970)	5.58	1.03	18.5	1.93
Sudan (1969)	20.6	4.64	22.5	3.65
				17.6
				4.38
				21.2
WEST AFRICA				
Dahomey (1966)	-	11.6	47.0	2.00
Gambia (1970)	1.4	0.415	29.6	0.26
Ghana (1970)	231	86.0	37.1	51.8
Ivory Coast (1969)	248	-	-	-
Mali (1969)	35.9	-	-	-
Mauritania (1968)	44	-	-	-
Niger (1966)	35.3	17.41	49.5	2.37
Nigeria (1969)	400	122.1	30.5	106
Sierra Leone (1969)	73.5	17.6	24.0	15.9
Togo (1967)	40.6	10.18	25.0	14.4
Upper Volta (1966)	27.8	9.95	35.6	7.15
				25.75
				-
				-
				-
				6.75
				15.00
				8.00
				22.6
				26.5
				89.3
				62.4
				21.6
				25.2
				34.4
				35.4
				9.55
				23.5
				-
				-
CENTRAL AFRICA				
Cameroon (1967)	133.60	55.7	41.6	23.7
Zaire (1970)	661.2	27.8	4.2	44.0
				17.8
				13.3
				10.0
				6.6
				227.2
				34.4

1/ Percentage of GDFCF

(Value in million US\$)

	Total \$	Buildings \$	%	Infrastruc- ture \$	%	Machinery and equipment \$	%
EAST AFRICA							
Botswana (1968)	13.2	5.48	41.5	1.60	12.1	3.96	30.1
Ethiopia (1969)	250	-	-	-	-	-	-
Kenya (1970)	15.6	4.59	29.4	2.85	18.3	4.875	31.2
Lesotho (1967)	6.91	5.71	82.5	0.27	3.9	0.93	13.2
Madagascar (1966)	88.0	-	-	-	-	25.4	28.9
Malawi (1969)	64.0	-	-	-	-	17.4	27.2
Mauritius (1970)	28.3	10.7	38.0	7.0	24.8	5.62	20.0
Swaziland (1968)	14.25	3.86	27.2	1.60	11.2	5.49	57.5
Tanzania (1970)	256	68.0	26.5	67.1	25.2	78.0	30.5
Uganda (1970)	139	-	-	-	-	52.4	37.6
Zambia (1970)	437	100.00	22.8	129.00	29.5	147	33.5

SOUTH AFRICA

Southern Rhodesia (1970)	240	508	21.15	370	15.4	632	26.4
South Africa (1970)	4,140	1,340	33.5	930	22.5	1,100	26.6

=====

Structure of construction

5. The employment characteristics of the construction industry show, at the moment, very erratic changes which lead to high costs and uncertainty of employment. The construction industry by its very nature employs a large number of unskilled and semi-skilled labour, it is in this way the employer of the majority of rural emigrants to the cities and by so doing transforms the rural emigrant into an urban dweller.
6. The average structure of the construction industry in Africa may be represented by the table (see Table 3). It is clear from this structure that the biggest single investor in construction is the public sector; maintenance and repairs account for about 16 per cent of the total annual investment. This would tend to increase as the stock grows older; since at the initial stages of economic development most of the stock is new, and maintenance is minimal.
7. The industry is characterized by a few big, usually foreign, contractors who execute most of the major infrastructural works. These are followed by a number of medium-sized local contractors who carry out maintenance and repairs and specialize, usually, in the construction of dwellings. This group forms about 30 per cent of contractors in the industry. There is then a large number of artisans and private builders who are either individual specialists executing private contracts, e.g. plumbers, electricians or general artisans who carry out individual contractors. These constitute 50 to 60 per cent of all contractors in this sector.
8. The construction of infrastructure (roads, dams, public buildings, etc.) is relatively modernized with the use of heavy machinery and cranes as appropriate. This coupled with relatively low labour costs, from a better paid and highly productive force, makes for lower costs in this infrastructural sector. The situation in the housing sector, however, is quite different. Work in this sector is still artisanal, productivity is low and because of the lack of standardization costs are high, often at the same level as in the industrialized countries.
9. The production of housing over the past few years has been of the order of three units per thousand of population while the need is of the order of 10 to 13 units per thousand. The outputs of this sector is lower in quality than it should be, being the sector which not only consumes the largest single investment resources but also sets the character of the urban environment.
10. The shortage of skills in the building and construction industry is acute at the intermediate and professional levels. Recent training programmes have tended to emphasize the training at the professional (engineers, architects, town planners, quantity surveyors, etc.) level and at the moment there is an acute shortage of intermediate (site supervisors, clerks of works, foremen, etc.) personnel. Thus while the demand for professional services is gradually being met from local sources, a considerable number of intermediate personnel are still being recruited from abroad often at high costs. Thus in addition to the high import content of building materials there is also a considerable import of technical know-how into the construction industry.

Table - 3 1/

Sectors	All work	New work			Repair & maintenance		Maintenance as percentage of new work	
		Total	Public	Private	Total	Public		Private
Agriculture, forestry, fishing, mining, quarrying	11	10.2	2.2	8.0	8.8	0.1	0.7	8
Manufacturing, including construction	12	11.4	2.4	9.0	0.6	0.1	0.5	5
Gas, electricity, water	7	6.6	6.6	-	0.4	0.4	-	6
Transport, communications, roads and other public services	24	16.0	16.0	-	8.0	8.0	-	50
Trade, commerce and other private services	5	4.5	0.5	4.0	0.5	-	0.5	10
Dwellings	35	31.8	0.3	31.5	3.2	-	3.2	10
Education	3	2.8	2.1	0.7	0.2	0.2	-	7
Health and welfare	3	2.8	2.3	0.5	0.2	0.2	-	7
TOTALS	100	86.1	32.4	53.7	13.9	9.0	4.9	16

1/ ECA rough estimates pending availability of accurate figures.

11. There are only fourteen schools of engineering in Africa and only eight schools of architecture and physical planning. All these produced less than a thousand professionals a year, whereas the theoretical need is about 10,000 engineers and architects. Vocational training schools exist in most countries but the output is small and the type of training programmes they follow are not related to the needs of the continent.

Construction Technology

12. As stated above, heavy mechanical equipment is used in construction. The low level of maintenance of these equipment as well as the lack of continuity in the construction industry to keep these fully utilized constitute another cost factor in the construction industry. In this specific area there is need for long-term careful planning in order to make optimal use of plant and machinery.

13. By the mid sixties, a few prefabrication plants had been established mainly in North and West Africa. These plants had a high level technological content and were designed to produce buildings out of heavy load-bearing components. They have proved to be economically infeasible principally because the local markets were inadequate for such high capital investment. Thus all the heavy prefabrication plants have been unsuccessful because the low level of productivity kept costs so high as to put such prefabricated houses out of reach of the average urban dweller. Thus, it could be generally stated that the prefabricating plants so far established in Africa have not taken into account the level of technology needed, available labour and the size of the markets. Considering the fact that, very often, the capital investments required for the big prefabricating plants are enough to satisfy, by traditional methods the housing needs of the urban areas in which they are located, it becomes clear that at the present levels of housing need and demand a different approach would be needed to utilize the available labour to produce dwellings by traditional methods but with improved techniques such as standardization, modular co-ordination, etc. This approach is the one adopted by the more successful medium sized plants, requiring lower capital input, and employing available labour as much as possible.

14. A large proportion of housing by value is still constructed by traditional methods. Because of the constraints mentioned earlier, productivity is low and the quality is uncertain. Standardization is absent. No attempt has been made, to introduce modular co-ordination to any extent. The national authorities, with exception of few cases have not yet promulgated building regulations which take local conditions resources, needs and standards into account. Because of the low level of intermediate supervisory building personnel it has not been possible to introduce techniques which would introduce innovations into the building industry, by the transfer of knowledge on the building site.

Building materials

15. Imported building materials are becoming popular and prestigious in many countries. Though traditional methods of construction are still widely in use, locally produced materials are used mainly in the rural and peri-urban areas. Without a definite government intervention it may not be possible to reverse this trend, and encourage the use of local materials in the urban areas as well.

16. Table 4 shows both the value and characteristics of the building materials which constitute the urban and infrastructural sector of construction. The traditional sector uses earth, timber, lime and thatch, though these predominantly local materials form a considerable part (about 20 per cent) of capital formation, principally in housing, its value is not known. It will be seen that out of a total expenditure of approximately 2,950 million dollars spent on construction in the modern sector, 1,935.77 million dollars is spent on imported materials. Almost all electrical fittings and fixtures are still imported. The resources of the continent in raw materials for cement, iron and steel, ceramic and timber are adequate for her needs, but the distribution is such that there would have to be co-operation between States of the region to utilize African resources fully.

17. As shown in Table 4, imported materials form more than 60 per cent of the total consumption. Most of these could be exchanged by intra-African trade if the industries, mentioned above, were so organized. The present situation reflects the position during colonial times when all materials were imported from the metropolitan country. In spite of the establishment of several cement producing plants in the continent the situation has not significantly changed.

18. The energy resources required for the establishment of these basic building materials industries are adequate though largely undeveloped. Oil and natural gas are available in North and West Africa. These could be harnessed for the production of the basic building materials in those regions, for export to the less endowed areas. The under-development of productive resources has a limiting effect on construction activity. This refers particularly to the development and use of local building materials and to the lack of co-ordination, between governmental machinery, educational and research institutes, and the construction industry. Not only is the development and use of local materials necessary but the better use of present resources in order to reduce the cost of houses and related facilities is also required.

19. There is no shortage of natural resources in Africa as far as cement, lime, clay, metallic ores, and wood are concerned. In view of the electric power and oil potential of the continent, the present scarcity of economic fuel and power does not present an insurmountable problem. In this field, however, a serious obstacle is the relatively small national markets for household fittings, sanitary ware, hardware, etc., and this limitation is further aggravated by the inadequacy of transport links and suitable transport equipment both within individual countries and in groupings of countries.

Table 4

(Value in million US\$)

Building materials	Consumption locally produced	Imports	Total domestic consumption	Imports as a % of total domestic consumption
1. Cement and cement products - 25%	390.90	346.60	737.50	47
2. Iron and steel products - 34%	120.40	882.64	1,003.00	88
3. Ceramic products including glass and other non-metallic products - 10%	118.00	117.00	295.00	60
4. Wood products - 17%	325.97	175.53	501.50	35
5. Paints and varnishes - 4%	59.00	59.00	118.00	50
6. Electrical fittings and fixtures - 10%	-	295.00	295.00	100
Total	1,014.23	1,935.77	2,950.00	65

20. The bulky nature of some building materials makes it necessary to locate industries near the point of utilization but for material such as cement which could be transported for relatively longer distances, the distribution of producing plants in Africa could be so arranged that within any country the prices of cement produced on the continent is no more than the world price. Arrangements of this nature would require considerable efforts for international co-operation.

21. A persistent problem of local building materials industries is that their marketing arrangements are always tied in with those of imported materials. This situation makes it very difficult for locally produced building materials industries to establish their viability on the local markets. Before a break through is made to reduce the costs of locally produced building materials, it may be necessary to dissociate their marketing from that of imported materials.

22. The most important problem facing African countries in the building industries is that of high costs; this is caused by the marketing arrangements mentioned above. Low productivity, caused by low level manpower has aggravated the situation. In the land-locked countries to which building materials would have to be transported, sometimes more than 2,000 km, prices are as much as $2\frac{1}{2}$ times those at the coastal ports. These costs make the establishment of basic infrastructure in these countries even more difficult thus delaying their development.

23. Given the portion of Gross Domestic Product expended on construction and an annual growth rate of about 7 per cent in the long run, there is no doubt that the construction industries are going to play a major role in the economies of African countries in the future. This enormous scope for expansion does not seem to be realized in many development plans; the result is that problems of the construction industries are not tackled directly as they should.

Table 5 (Value in million US\$)

	<u>1965</u>	<u>1972</u>
GDP.....	22,980	54,000.00
Investment in construction	1,980	5,310.00
Expenditure of building materials.....	1,100	2,950.00
Of which imported.....	600	1,935.77

Notes: Accumulated investments in construction over the period 1965 to 1972 amounted to US\$ 25,650 million
¹ Building materials imported over the period amount to US\$14,850 million
¹ Proposed investment in building materials industries is approximately US\$ 370 million per year for the continent or 17.5 per cent of the annual building materials import bill.

¹ See paragraph 24.

24. This enormous capacity is indicated in Table 5. If as a management decision we decide to invest 10 per cent of our expenditure on construction in building materials industries we would find that we would have invested 2,560 million US\$ by now. But this would have been much more than our absorptive capacity so that by now African dependence on imported building materials would have been minimal. It is worth noting that in 1972 the continent imported 1,935.77 million US\$ of building materials. The investment indicated above would have produced this amount of building materials with enough for export. An examination of Table 5 would indicate the kinds of management decisions that need be taken with respect to the construction sector.

Finance for housing and infrastructure

25. Table 6 shows the wide variation of the terms of mortgage loans for housing. Because of the long-term nature of housing and demand it is essential to set up financial institutions which lend at much lower rates of interest. This would have the following effects:

- (a) It would vitalize the building materials and construction industry by creating a steady market; and
- (b) Place housing within reach of many more more people.

These advantages would be more effective when coupled with standardization and modular co-ordination.

Housing and construction policies

26. The majority of governments in Africa have been trying to ensure that considerable sums are invested in housing and that domestic resources be used to the greatest extent possible in developing this sector. However, the size of the investment level is still comparatively small and based on the estimated overall position given in Table 3, dwellings probably accounted for about 35 per cent of the work done in the construction industry in 1971 in Africa. This would mean that about 2,100 million US\$ were invested in housing in 1971.

27. It should be noted from Table 3 that as much as 99 per cent of new housing built in 1970 was for the private sector; this is probably an over-estimate but it does indicate the government generally only influence the housing situation through indirect means. There are exceptions and the more recent policy appears to reflect an increased desire for more direct involvement in the development of housing. In many countries progress has been made in establishing machinery to deal with housing development but existing organizations such as housing corporations are generally under-employed and their operations tend to be haphazard because of a lack of a stated policy and of a programme geared to economic development. In a number of countries also, too many authorities and departments have a direct or indirect influence on housing, making the co-ordination and execution of policy difficult.

Table 6

Details of terms for house mortgage loans ^{1/}

Country	Organization	Period of repayment of loans	Rate of interest per annum
Botswana	Commercial Banks	Not known but probably not in excess of 5 years.	Not known, but probably those prevailing in the Republic of South Africa 8½-10 per cent.
Central African Republic	National Development Bank	5-10 years	8-10 per cent
Egypt	Not named	Up to 15 years	5-6 per cent
Ethiopia	Mortgage Company of Ethiopia	5 years	8½ per cent plus 1 per cent additional on approval of loan
	Imperial Savings and Home Ownership Public Association	16 years	Up to 7 per cent
Ghana	First Ghana Building Society	5-15 years	9 per cent
Kenya	Housing Finance Company Kenya Limited	15-25 years	8½ per cent
Liberia	Commercial Banks (Housing Bank proposed)	1-5 years	9-10 per cent discounted initially
Madagascar	A Social Welfare Body not named	Up to 20 years	3 per cent.
	Madagascar National Bank	10 years	5-7 per cent
	" " "	5 years	8 per cent (50 per cent loans for sums in excess of 2.5 million Madagascar francs)
Malawi	New Building Society	Not stated	7½ per cent Freehold 8½ per cent Leasehold.

^{1/} Source: Country monographs and secretariat.

Country	Organization	Period of repayment of loans	Rate of interest per annum
Mauritius	Commonwealth Development Corporation	Up to 20 years	Approx. 8½ per cent
	Government Local Money Market		
Morocco	Caisse Immobiliere et Hoteliers	15 years	4 per cent (on low-cost housing)
	" " "	15 years	4-8.3/4 per cent on ordinary loans
Nigeria	Western State Housing Corporation	10-15 years	7½ per cent
	Nigeria Building Society, Lagos	Up to 20 years	8½ per cent
Sierra Leone	Not known but probably from Commercial Banks as Botswana		
Somalia	Credito Samale (Government Commercial Bank)	5 to 25 years	5 per cent
Sudan	Sudan Estates Bank	18 years	3 per cent for low-income groups loan up to £S.2,000
	Sudan Estates Bank	18 years	3 per cent for middle-income groups loan up to £S7,000
	Sudan Estates Bank	not stated	6-9 per cent for high incomes over £S450 per annum. Loans up to £S25,000
Swaziland	Swaziland Credit and Savings Bank	Up to 15 years	8½ per cent
	Swaziland Building Society	Up to 15 years	9 per cent
Tanzania	Housing Finance Company of Tanzania Limited.	15 to 25 years	8½ per cent
Uganda	Housing Finance Company of Uganda Limited	15 to 25 years	8½ per cent
Zambia	First Permanent (1962) Building Society, Lusaka	Not stated	Not stated

28. There is a trend by governments to formulate plans on specific operations, establish relevant machinery and commit themselves to the relevant policy. What this trend needs is a goal whereby local allocations and constructions to housing can be seen to be applied on an overall basis with more emphasis and involvement. Such measures should include more concentration on the development of land and local materials.

29. Mortgage credit has become a characteristic of most of the programmes in African countries 1/. There still exists some contention as between home-ownership and rented housing owned by government and local government authorities. The trend is for mortgage credit to become the cornerstone of housing activities, thus to assist in solving the key problem of low purchasing power. Members of African governments have taken a little time to examine this particular problem, and while it is not anticipated that the peak in housing construction experienced in the late 1950s and early 1960s is likely to be repeated, there is now an appreciation that housing is a national problem and that national resources will have to be used to satisfy a national demand.

30. In present financial conditions, it is being realized that dependence cannot and should not be placed on external funds for housing. Local sources of funds such as the accumulation of savings and deposits in local currencies in banks, savings and loan associations, and other credit institutions are gradually being brought into use in housing. Some governments of African countries have recognized that they have recourse to the funds accumulated in social security schemes, in post office savings banks, credit unions, co-operative housing societies, and even in traditional savings societies, all of which can be mobilized 2/.

31. Action has been taken in some countries to review the objective of savings and loan associations whereby credit facilities can be made available to the low-income groups for housing. The ECA has made available to the governments of member States documentation on methods of establishing savings and loan associations to provide housing credit together with recommendations on the terms of which credit could be made available. 3/ It has been recognized that there is a need for incentives both for the person building his own house, and to the building contractor who is prepared to devote the majority of his time to house-building.

1/ See Table 6

2/ ECA document entitled "Review of Sources and Methods of Financing for Housing and Urban Development in Africa" (E/CN.14/HOU/64).

3/ The Role of Savings and Loan Associations (E/CN.14/HOU/26); Mortgage Operations and mortgage securities in housing (E/CN.14/HOU/27); The Savings for Building System: A pattern to encourage private housing finance (E/CN.14/HOU/36).

32. The cost of infrastructure projects and housing is rising throughout the continent. The main causes of this rise in costs are the lack of proper urban physical planning coupled with the urbanization problem and the high import element of building materials resulting in an annual outlay in Africa of about 2,572 million US dollars ^{1/}. The element of "imported inflation" will continue to have an influence on the rate of housing production, and domestic capital formation in African countries.

33. It can be seen that limitations in formulating and implementing housing policy are numerous but so are the prospects for increasing housing production through a well-defined policy, plan and programme if certain new approaches and innovations are employed.

34. Insofar as the prospects for formulating housing policy and programmes or areas for action are concerned, arrangements whereby each ministry of government responsible for housing has its own economics unit have been made in a few countries. It would seem that these arrangements are probably the most effective and practical answer to the limitations which exist.

35. The ECA has been studying the effectiveness of statutory executing agencies such as housing corporations as shown in annual reports and accounts. These reports and accounts show that in relation to overhead costs, the building programmes of these agencies do not produce sufficient housing nor do they have any impact on the improvement of existing dwellings. Perhaps this is because the basis of planning has been the need for new housing which seems to derive directly from the statistical view of a "housing deficit". Although governments have made substantial stakes in new housing, their resources are not unlimited and it has often been the case that funds made available to executing agencies have run out before projects have been completed. A research project has been started at ECA, dealing with the programming of infrastructure and housing which will attempt to show the sequence of events through land use, urban physical planning, and infrastructural and building works, right down to the time of disposal of the land and buildings. The role of the statutory executing agencies in these conditions would be primarily that of a land developer but with sufficient building activity to set standards for dwellings and community buildings. The bulk of the dwellings would be built by the occupiers either through contractual arrangements or under self-help methods. These measures would avoid tying up large sums of public funds for long periods at a very low rates of amortization of capital invested.

Physical planning and urban development

36. Most countries of the region possess organizations for physical and regional planning. The densities of land utilization are much lower than would be required for optimal economic use of the available land in the urban areas. In certain residential areas of several African cities there are densities as low as one dwelling per acre. This results in very high service costs per dwelling. On the other hand those residential areas in the older

1/ The African Building Materials Industries (E/CN.14/HOU/34).

parts of these cities have very high densities which result in unhealthy conditions. These very near slum areas often do not have adequate services of water and access routes. With the exception of the North African sub-region, very little has so far been done to rehabilitate these very high density areas.

37. A few countries have started research programme in land use but their findings have yet been incorporated into national standards for local and regional planning. The rapid growth of the urban areas and the planning problems associated with this growth have made government agencies responsible for physical and regional planning aware of the need to develop land at optimal densities so that the costs of services is maintained at a minimum. Inadequate research effort has, so far been directed to this area, and planning criteria cannot be justified in local terms, being arbitrary or copied from elsewhere.

38. Thus only a few countries have formulated housing and urban development policies which take all the relevant factors into account:

- rural-urban migration
- magnitude of demand
- incomes and financial resources
- land use
- financial institutions, labour, technology
- building materials and their availability
- other sectors of the construction industry
- building regulations, standardization, modular co-ordination.

In the majority of the countries in Africa, housing and settlement development policies are only ad-hoc programmes which complicate rather than simplify the prospects of finding permanent solutions to these problems.

Social considerations

39. In the field of housing and urbanization the basic problem in Africa has been the neglect of traditional social attitudes not only in the interior layouts of the houses themselves but also, very often, in the layouts of towns and neighbourhoods. The assumption made by planners that the physical structures would change social attitudes has been proved wrong. The result is overcrowding inside the houses and the lack of adequate public facilities in the towns.

40. The second problem has been caused by rural exodus. This has shown itself as slums and shanty towns in towns and peri-urban areas. When this increase caused by rural exodus is coupled with natural growth, the danger of the overcrowded areas outgrowing the towns themselves is very imminent. The social disintegration of urban areas in this manner is obvious.

41. There is no doubt as to the economic viability of the marginal and slum settlements in towns since in certain African cities (e.g. Nairobi, Mathare valley), the annual turnover has been estimated at more than 25 per cent of the total turnover of the City itself. The essential thing however, is to initiate policies which would integrate these marginal areas into the cities of which they are "sub-cities". Such policies should take the following into account:

- (i) Child care and training of adolescents;
- (ii) Neighbourhood and entertainment facilities;
- (iii) Sanitary facilities, water public lighting, etc. social welfare and community development;
- (iv) Employment and the encouragement of small-scale self-help industries;
- (v) Social factors which lie behind rural-urban emigration;
- (vi) Qualities, skills and attributes which exist in slum areas and which could be exploited to the benefit of the marginal areas;
- (vii) The prevention of anti-social attitudes such as vandalism, etc. which arise from the stigma of living in "low-class" areas;
- (viii) The realization of the fact that "slums and shanty towns" form an economic solution to the housing problem and should be catered for by appropriate physical planning measures such as site and service schemes, etc.
- (ix) Markets as points of social contact in the African context the market as a factor in social evolution.

42. In the peri-urban areas questions of land settlement and use create considerable social conflicts. Policies and programmes would be required to evolve land use patterns which reflect the social attitudes of the people.

43. Of the 60 per cent of financial resources that go into housing and construction, half goes into the provision of housing and its related urban facilities. In the fast urbanizing centres of Africa, horizontal housing as distinct from high-rise (vertical) housing has been very typical. This is not surprising since it is the best transition from the rural to the urban settlement. It also retains most of the features of African life in as much as the ease of expanding the dwelling is maintained. Densities in the typical traditional African settlement (e.g. Ibadan, Kumasi) were quite high at 30-50 dwellings per hectare in spite of the fact that in those days land was more readily available and none of the modern constraints imposed by the need for common services and facilities were present.

44. The present trend is what has become known as the residential area is a string of 'hamlets' or villas spread around at 5-10 dwellings per hectare. Infrastructure for this type of urban grouping is very expensive. This high cost is not generally reflected in rents or financial amortization. A situation is created whereby substantial subsidies are channelled into housing a certain social class. At the other end of the scale are the well known slums and shanty towns which officially have the status of a neglected step child (the situation is rapidly changing for the better) which, as we have seen earlier, have a significant economic role in the urban agglomeration. The potential for decay in the former settlement is as high as the potential to improve in the latter. The rational solution is to work out a system of land use and the provision of infrastructure which has the highest potential for improvement. This is the basic problem of the professions that deal with the physical evolution of the built-up environment.

45. The arguments concerning horizontal housing vis-a-vis vertical housing need not be repeated here. In Africa the preference for housing and infrastructure based on imported materials and techniques has grown out of considerations of status and prestige rather than those of needs.

46. Given land, the available materials and techniques^{1/} as well as the financial resources, horizontal housing (single storey; G+0) would appear to be the solution which for the time being offers the following advantages:

- (i) Low-cost of basic structure and related infrastructure with regard to technical specifications and materials.
- (ii) Ease of expansion within land allocation to suite changing family and living conditions.

^{1/} See document entitled "Materials and Techniques for Rural Housing" (E/CN.14/HOU/79).

47. Taking account of the situation outlined immediately above the only problem remaining is the courage to accept and give official endorsement to locally available materials and techniques and to have these specified where appropriate for example:

- (i) Timber in Gabon, Ghana, Zaire, Congo, Nigeria, Cameroon;
- (ii) Stabilized clay products in most African countries;
- (iii) Coral and lime in most locations bordering the Indian ocean;
- (iv) Easily cut and shaped stones in the rift valley zone.

Conclusion

48. In conclusion, the foregoing survey of economic, social and technical conditions in the construction and housing field can be summed up as requiring the following actions; the housing and construction problems can be solved if an integrated approach is applied in both urban and rural development. This integrated approach comprises:

- (i) an intrepid urbanization and housing policy for the increasing number of households, as part of long-term development planning;
- (ii) imaginative physical planning for the optimum use of the land;
- (iii) a realistic policy promoting savings and investment; and the flow of finance into the construction industry;
- (iv) basic decisions concerning quality levels (housing standard) founded on human needs and economic reality;
- (v) an intensive encouragement of research divided into:
 - functional research;
 - techno-physical research;
 - techno-economic research;
- (vi) a suitable working method integrating research and practice to achieve the desired goals.

- (vii) An effective public machinery for co-ordinating and managing the housing and construction industry in terms of building regulations, standards and administration, budgeting and tendering procedures, the supply and marketing of building materials, manpower, productivity and the capacity of the building industry.

49. Given the range of problems outlined in this paper and the limited capacities of the countries of the region, very little could be achieved without intensive co-operation of African governments.