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WORLD HOUSING CONDITIONS AND ESTIMATED
HOUSING REQUIREMENTS

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/Introduction

Introduction

1. This paper analyses housing conditions and estimates housing requirements in major regions of the world during the fifteen years ending 1975. These estimates serve to quantify the housing programmes required throughout the world over the next fifteen years or so, as an aid to social and economic policy at the national, regional and international levels. The estimates distinguish in general between the three constituents of housing need or demand: (a) population increase; (b) replacement; and (c) removal of existing shortage or deficit. For an appraisal of housing conditions a set of indicators, Statistical Indicators of Housing Conditions^{1/}, have been formulated in accordance with the recommendations of the Working Party on Statistics for Social Programmes of the Administrative Committee on Co-ordination, as approved by the Statistical Commission and the Social Commission. The application of these indicators implies a distinction between conventional dwellings and housing units of unacceptable types, and consideration of density of occupation in terms of the number of persons per room and the availability of piped water and toilet facilities. These indicators have been taken into account as far as the information available would permit. Similarly in estimating housing needs the methods outlined in Proposed Methods of Estimating Housing Needs^{2/} have been followed to the extent that the available data permitted them to be used.

2. Populations are increasing throughout the world and adequate new dwellings are needed to house this increase in population. Otherwise the additional population will overcrowd existing dwellings or will live in makeshift structures or remain homeless. There may not be an exact correlation between an increase in population and the number of new dwellings required. The formation of new families or households represents the actual demand for new housing. Increased formation of families or households is implicit, however, in an increasing population, though the two do not necessarily grow at the same rate.

^{1/} United Nations (ST/STAT/SER.M/37), New York, 1962.

^{2/} United Nations (E/CN.3/274), New York, 1960.

3. In the absence of a known correlation between household or family formation and population increase in most countries of Africa, Asia, Latin America and other regions, the estimates made in this paper for the housing needs due to population increase are based on the assumption that the increased population must be housed on the basis of an average household size determined in the light of existing household sizes. The result represents a demand for the equivalent of new dwelling units and not necessarily actual new dwelling units. Some of the increased need may be met, for example, by additions to existing dwellings to reduce overcrowding. The estimates are based, however, on a static household size; in fact during a period of social and economic development the size of household will tend to decline. For this and other reasons the estimates under this head are probably understated.

4. The increase in population consists not only of the natural increase but includes any migration which adds to the population in particular areas. Thus urban populations are increasing not only naturally but also because persons and families from rural areas move into urban areas in large numbers. This dual increase of urban population has a profound effect on housing needs in urban areas, and the housing needs of urban and rural areas due to population increase are therefore examined separately.

Replacement

5. The second constituent of housing need is the housing required to replace existing dwellings as they fall out of stock owing to obsolescence. This constituent is particularly difficult to determine, as the rate at which dwellings fall out of use is influenced both by their technical and social "life" and by economic ability and willingness to replace them. As regards the existing housing stock in Africa, Asia and Latin America, in this paper estimated needs over the next fifteen years or so to replace obsolescent dwellings are based on the assumption that the existing stock which is reasonably sound should be replaced after 30 years in urban areas and 20 years in rural areas. These assumptions may well be considered pessimistic in that the technical, social and economic life of these dwellings will in fact be longer. Various national estimates of the period within which the existing relatively sound dwelling stock will be replaced

/are sometimes

are sometimes put as high as 50 to 200 years. It should be noted, however, that much of the stock classified here as "reasonably sound" would hardly come up to minimum standards established by law and that the "social life" of a dwelling very much depends on the rising standard of housing that people justifiably expect to be able to obtain as a result of the promise held out by economic development.

6. The situation as regards technical life will vary from country to country, depending on the age of the dwelling stock, the extent to which it was built in conformity with modern bye-laws and building codes, the materials used, and the extent to which assistance and encouragement are given for the reconditioning of existing dwellings. Social and economic considerations will also affect the obsolescence rate. Where, for example, the rural population is declining, the social need or desire to replace old dwellings will diminish as the expectation that they will continue to be occupied diminishes. A dwelling will be kept in use longer than it should be technically or socially because the occupier cannot afford to replace it or the public authorities cannot afford to help him replace it. All these considerations will be much in evidence where there is at the same time a severe housing shortage in the sense of overcrowded and unsanitary dwellings or where a population increase presses on the available supply of dwellings. A very long life, however, would be conditional upon considerable expenditure on modernization, reconditioning, extension and provision of communal facilities.

7. Some indication may be given of the effect on the estimated housing needs under this head of alternative assumptions as to the life of existing dwellings. The estimated need according to the present assumptions is about 9 million dwellings annually by 1965 in Africa, Asia and Latin America. If 100 years were taken as the life of all dwellings, urban and rural, the estimated need would fall to about 2.0 million. It should, however, be considered that in a span of 100 years the ratio between the cost of the shell (which with proper repairs and maintenance may render service over this long span) and the cost of equipping a dwelling unit will radically change. In the United States, for instance, the cost of the equipment in relation to the total cost changed from 1/20 in 1910 to 1/2 in 1940 and
/may now

may now be about $3/4$ of the total cost. Expenditure on major repairs and extensions, improvement of utilities such as water, heating, electricity, and the addition of communal facilities might be put at the equivalent of one-third of what would be required to replace the remaining stock in 20-30 years. A life of 100 years, therefore, would entail annual replacement of 2.0 million dwellings plus expenditure equivalent to 2.4 million dwellings to keep "alive" the remaining 7 million dwellings which should have been replaced, i.e., a total of 4.3 million dwellings. Similarly a life of fifty years would require an annual replacement figure equivalent to 5.7 million dwellings.

Removal of existing shortage or deficit

8. The third constituent of housing need analysed is the annual construction required to eliminate the existing shortage or deficiency. In the developing continents of Africa, Asia, Latin America and other regions a broad approach has been adopted in assessing the housing shortage or deficiency as of 1960. Generally, available data do not permit of the precise calculation of, for example, the shortfall between number of households and number of dwellings, or the number of unsanitary dwellings. Housing shortage or deficit is, therefore, taken as the number of dwellings required to house the proportion of the population considered, on the available evidence, to be in need of new housing because they live in overcrowded, unsanitary or improvised housing or are homeless. It is assumed that this shortage or deficit should be remedied in thirty years and the annual rate of construction required is calculated accordingly.

Summary of Housing Requirements in Africa, Asia and Latin America 1960-1975

9. The tables which follow summarize the annual housing requirements in the developing continents in the fifteen years or so to 1975. By 1965 a total annual output of nearly 24 million dwellings would be required on the assumption of replacing existing stock in thirty years in urban areas and twenty years in rural areas. With replacement periods of fifty years and 100 years the annual requirements in new dwellings by 1965 would be 20 million and 17 million respectively or, allowing for "reconditioning" needs in view of the longer replacements periods, 21.7 million and 19.3 million respectively. An over-all annual housing programme of eight to ten dwellings

per 1 000 inhabitants is therefore required in these continents, depending on the rate at which existing dwellings are replaced.

10. This may be compared with the housing outputs currently being attained in the more advanced regions of the world e.g., Europe and North America.^{3/} An annual rate of eight or more dwellings per 1 000 inhabitants is currently being attained only in Sweden (9.1), Switzerland (9.3), Western Germany (10.5) and the USSR (14.0). In the United States, France, Finland, the Netherlands and Norway the current rate is from 7.0 to 7.5 dwellings per 1 000 inhabitants. The other countries of Europe are currently providing annually from 4.0 to 6.5 dwellings per 1 000 inhabitants.

11. This comparison between the annual housing output required in the less developed areas of the world and that currently being attained in the more advanced and industrialized areas emphasises the enormous social and economic implications of achieving the housing programmes required in the less developed areas. In particular, these implications are such as to require that in connexion with economic planning in these areas urgent attention be paid to measures which will ensure adequate resources for housing and urban development and give housing and urban development a greater role than heretofore in social and economic development.

12. In the remainder of this paper, the needs in the different regions are examined in detail under the heads mentioned in the following summary table i.e., needs to meet population increase, needs to remedy existing shortages and deficiencies over thirty years, and needs to replace existing relatively satisfactory stock over thirty years in urban areas and twenty years in rural areas.

^{3/} European Housing Trends and Policies in 1960, United Nations, Geneva, 1961.

Summary Tables

ANNUAL HOUSING NEEDS OF AFRICA, ASIA AND LATIN AMERICA: 1960-1975

(In millions of dwelling units)

Categories of housing need	1960		1965		1970		1975	
	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural
I. Population increase								
Africa	0.3	0.54	0.4	0.67	0.5	0.73	0.7	0.8
Asia	1.9	3.40	2.6	3.70	3.5	4.30	4.8	4.6
Latin America	0.8	0.30	1.0	0.20	1.2	0.20	1.5	0.2
II. Elimination of deficit or shortage over 30 years								
Africa	0.13	0.60	0.13	0.60	0.13	0.60	0.13	0.60
Asia	0.80	4.00	0.80	4.00	0.8	4.0	0.8	4.0
Latin America	0.30	0.30	0.30	0.30	0.3	0.3	0.3	0.3
III. Replacement of stock over								
(A) 30 years (urban) and 20 years (rural)								
Africa	0.13	0.9	0.13	0.9	0.13	0.9	0.13	0.9
Asia	1.10	6.0	1.10	6.0	1.1	6.0	1.1	6.0
Latin America ^{4/}	0.40	0.5	0.40	0.5	0.4	0.5	0.4	0.5
(B) 50 years								
Africa	0.078	0.36	0.078	0.36	0.078	0.36	0.078	0.36
Asia	0.68	2.44	0.68	2.44	0.68	2.44	0.68	2.44
Latin America ^{4/}	0.236	0.21	0.236	0.21	0.236	0.21	0.236	0.21
(C) 100 years								
Africa	0.0390	0.180	0.039	0.18	0.039	0.18	0.039	0.18
Asia	0.340	1.220	0.34	1.22	0.34	1.22	0.34	1.22
Latin America	0.118	0.105	0.118	0.115	0.118	0.115	0.118	0.115
I. Population	3.00	4.24	4.00	4.570	5.20	5.25	7.00	5.00
II. Deficit	1.23	4.90	1.23	4.900	1.23	4.90	1.23	4.90
III. Replacement								
A. 30-20 years	1.630	7.400	1.63	7.40	1.63	7.40	1.63	7.40
B. 50 years ^{4/}	0.994	3.010	0.994	3.01	0.991	3.01	0.994	3.01
C. 100 years ^{4/}	0.497	1.505	0.497	1.505	0.497	1.505	0.497	1.505
Total A.	5.860	16.540	6.860	16.870	8.060	17.530	9.860	17.900
B.	5.224	12.150	6.224	12.480	7.424	13.140	9.224	13.510
C.	4.727	10.645	5.727	10.975	6.927	11.635	8.709	12.005
Rate per 1 000 inhabitants in 1965:								
	Urban	Rural	Total					
A.	13.6	9.5	10.4					
B.	12.3	7.0	8.2 ^{4/}					
C.	11.3	6.2	7.3 ^{4/}					

^{4/} See, however, paragraph 7 above, which suggests the need, at this rate of replacement, for additional expenditure on reconditioning and modernizing dwellings not replaced earlier.

I. Africa

Population growth and estimates of the
growth of the urban population

Population increase

13. The population growth in Africa in the last decade was estimated as follows:

Table 1

	1950	1955	1960
Africa - total (million of inhabitants)	199.0	216.0	237.0
Average annual percentage increase	1.5	1.0	
1. <u>Northern Africa</u>	42.7	47.3	52.7
Average annual percentage increase	2.1	2.1	
2. <u>Middle Africa</u>	142.0	154.0	168.0
Average annual percentage increase	1.5	1.7	
3. <u>Southern Africa</u>	13.9	15.3	17.0
Average annual percentage increase	1.9	2.1	

Source: The Future Growth of World Population, Population Studies, N° 28, United Nations, New York, 1958.

The estimated annual increase was about 1.8 per cent in the decade 1950-1960. During 1950-1955 it was 1.5 per cent, but in the next five years it rose to 1.9 per cent. The highest annual increase was in Northern Africa, where it was 2.1 per cent for both periods. In Middle Africa it was 1.5 per cent for the first five years and 1.7 per cent for the second five years; over the decade it was 1.7 per cent. In Southern Africa for the first five years it was 1.9 per cent and for the second five years 2.1 per cent; it was 2.0 per cent for the decade.

/u. Estimates

14. Estimates of the population growth for 1960-1975 are as follows:

Table 2

	1960	1965	1970	1975
Africa - total (millions)	237.0	263.0	294.0	331.0
Average annual percentage increase	2.1	2.3	4.4	
1. <u>Northern Africa</u>	52.7	59.3	67.1	76.4
Average annual percentage increase	2.4	2.5	2.6	
2. <u>Middle Africa</u>	168.0	185.0	205.0	230.0
Average annual percentage increase	2.0	2.1	2.3	
3. <u>Southern Africa</u>	17.0	19.0	21.5	24.4
Average annual percentage increase	2.3	2.5	2.6	

Source: Population estimates from The Future Growth of World Population,
op.cit.

15. According to these estimates the average annual increase of population will rise from 2.1 per cent in 1960-1965 to 2.4 per cent in 1970-1975. The increase is specially high in Northern Africa, where it is expected to rise from 2.4 per cent annually in 1960-1965 to 2.6 per cent annually in 1970-1975. In Middle Africa the annual increase is expected to rise from 2.0 per cent to 2.3 during the full period. In Southern Africa the expected increase is 2.3 per cent annually between 1960-1965 and 2.6 between 1965-1975. Along with this tremendous population growth a large movement of the population into towns and cities is expected. The urbanization trend in Africa is analysed to estimate its future development and obtain an idea of the size of the future urban population.

16. Data on the rural and urban population and on recent urbanizations trends in African countries are very sparse, and the available statistics are inadequate for present purposes. The urban population is that residing in areas designated as urban in the censuses of the different countries,

/and the

and the definitions of "urban", upon which the estimated urban population of Africa around 1956 is based, vary considerably from one country to the next. The following figures^{5/} for countries covering 66 per cent of the total population of Africa around 1956, show that about 85 per cent of the population lived in rural areas and 15 per cent in towns and cities:

Table 3

ESTIMATES OF THE RURAL POPULATION (IN THOUSANDS) IN SOME AFRICAN COUNTRIES ABOUT 1956, AS A PERCENTAGE OF THE TOTAL POPULATION

Country	Total population	Rural population	Rural population (percentage)
Algeria, 1954	9 620	8 379	87.1
Cameroons, 1957	3 187	2 996	94.2
Egypt, 1957	24 026	16 097	67.1
French Equatorial Africa, 1956	4 379	4 635	95.3
French West Africa, 1956	18 930	18 173	95.6
Kenya, 1957	6 150	5 535	a/
Madagascar, 1957	4 918	4 623	93.7
Morocco, 1954	9 648	7 815	81.2
Nigeria, 1952	31 834	30 242	95.0
Rhodesia and Nyasaland, 1956	7 260	6 679	91.8
South West Africa, 1951	511	424	83.7
Tanganyika, 1957	8 456	8 202	96.5
Togoland, French Adm., 1956	1 085	1 052	96.2 b/
Tunisia, 1956	3 783	3 291	87.3
Uganda, 1957	5 593	5 369	a/
Union of South Africa, 1951	13 915	7 553	55.4

a/ Data not available in the source cited.

b/ For the "African" population only.

It is assumed that a similar pattern exists for the total African population and that the urban population is therefore about 15 per cent of the total.

^{5/} Economic Survey of Africa 1950, United Nations, 1959, p. 14
Catalogue No. 59.II.K1.

17. The urbanization can be illustrated by the following estimates:^{6/} In 1850 about 250 000 people or 0.9 per cent of the world's population lived in cities of 100 000 inhabitants and over. In 1900 the corresponding number was 1.4 million or 1.5 per cent of the total population. In 1950 the number had grown to 10.2 million or 3.2 per cent of the total population. Thus in 1900 the number in large cities was 5.6 times as great as in 1850, and in 1950, 7.3 times higher than in 1900. The proportion of the population in large cities in 1950 was thirteen times higher than in 1850.

18. There are no data on recent trends in urbanization in individual countries with the exception of Egypt and the Union of South Africa. In Egypt from 1937 to 1947 the increases in urban areas was twice that of the total population and three times that in the rural areas. The trend in the Union of South Africa between 1946 and 1951 was similar.

Table 4

URBANIZATION TRENDS IN EGYPT AND IN THE UNION OF SOUTH AFRICA

<u>Egypt</u>	Date of census	Per cent	Date of census	Per cent	Percentage increase	Average annual rate of increase
	26.3.37		26.3.47			
<u>Population figures:</u>						
Total	15 920 694	100.0	18 966 767	100.0	19.0	1.8
Urban	4 002 406	25.1	5 711 761	30.1	43.0	3.6
Rural	11 918 288	74.9	13 255 006	69.9	11.0	1.1
<u>Union of South Africa</u>	Cities of 100 000 or more inhabitants (urban agglomeration)					
	<u>7.V.46</u>		<u>8.V.51</u>			
Capetown	470 936	-	577 648	-	23.0	4.2
Preteria	244 496	-	285 379	-	17.0	3.2
Johannesburg	762 910	-	848 007	-	11.0	2.1
Durban	371 749	-	479 947	-	29.0	5.2
Port Elizabeth	147 544	-	188 987	-	29.0	5.2
Germiston	131 197	-	168 139	-	28.0	5.1
Total population in above cities	2 128 326	-	2 548 107	-	20.0	3.7
Total population of the Union of South Africa	11 453 000	-	12 683 000	-	11.0	2.1

Source: Demographic Yearbook 1948, United Nations, table 8, and Demographic Yearbook 1955, table 7.

6/ Urbanization in Asia and the Far East, Proceedings of the Joint UN/UNESCO

19. The average annual increase in population in cities of 100 000 inhabitants and over in Africa was 4 per cent during the period 1900-1950.^{7/} This was 3.3 times the average annual increase of the total population, as the following table shows:

Table 5

	1920	1930	1940	1950
Africa - total population (in millions)	140	155	172	198
Average annual rate of increase within 10 years	1.1	1.1		1.4
Average annual rate of increase for 30 years		1.2		

Source: Demographic Yearbook 1955, United Nations, table 2, page 115.

In the light of these figures a basic assumption is made that urban population will increase twice as fast as total population in the future.

20. On this assumption estimates for future urban and rural population are as follows:

Table 6

	1955	1960	1965	1970	1975
Total population (millions)	216.0	237.0	263.0	294.0	331.0
Average annual percentage increase	1.9	1.9	2.3	2.3	
Urban population (millions)	32.0	39.0	47.0	59.0	74.0
Average annual percentage increase	3.9	3.9	4.6	4.6	
Rural population (millions)	184.0	198.0	216.0	235.0	257.0
Average annual percentage increase	1.5	1.7	1.7	1.7	
Urban population (percentage)	15.0	16.0	18.0	20.8	22.0

^{7/} "During the first half of this century, while world population increased by 49 per cent, city populations continued to increase even more phenomally with percentage increases of 228 (cities of 5 000 and over), 240 (cities of 20 000 and over) and 254.1 (cities of 100 000 and over)." Urbanization in Asia and the Far East, page 56.

Existing housing situation

21. Limited data on the existing housing situation and needs in urban areas are available for a few countries only. The information required must be estimated on certain assumptions including the number of families or households.

Size of household or family

22. The average number of persons per one married woman in Northern Africa (Algeria, Egypt, Morocco, Tunisia), is 5.1.^{8/} The average number of persons per household was smaller; in Egypt, for instance, in 1947 it was 4.7.

23. In Middle Africa, the family and household patterns are in flux and there are joint, extended and other family patterns. However, in urban areas the family pattern will probably develop as in Europe with present social and economic change. The average household in Khartoum Town^{9/} in 1955/56 was 5.9 persons; this number is expected to decrease in the near future to five persons. In Monrovia, in 1956^{10/} the average number of persons per household was 4 but in households of more than four persons - which was the largest group of households, comprising 85.3 per cent of the total population - the average was 7.33 persons. In the Union of South Africa^{8/} the size of the average family is 5.7 persons.

24. The foregoing data do not distinguish between urban and rural households. The average size of family for the total population may be used as the average size of family for the urban population or the average urban family may be assumed to be smaller than the average rural family. The second assumption is more reasonable. For the total urban population the average family is assumed to be five persons, as in Egypt, This average figure has been assumed by others also.^{11/}

^{8/} Demographic Yearbook, 1958, United Nations, table 6.

^{9/} A Housing Programme for Khartoum, the Sudan, 1962-1982, Peter W. Ameto, May 1961.

^{10/} Census of Population of Monrovia, 31 December 1956.

^{11/} For example: Nairobi African Housing Project at Ojaja, Social Aspects of Urban Development, Report by the United Nations Secretariat, 10 March 1961; Low-cost Housing for South Africa, R. Merle Fresco; Peter W. Ameto, op.cit.

Housing the population increase

25. On the assumption of an average household of five persons in urban areas and 5.5 persons in rural areas, the estimates made previously for urban and rural population will imply the following dwelling requirements:

Table 7
(millions of dwellings)

	1955	1960	1965	1970	1975
Urban housing stock required	6.4	7.8	9.4	11.8	14.8
Rural housing stock required	33.4	36.0	39.3	42.7	46.7
Total housing stock required	39.8	43.8	48.7	54.5	61.5
Average annual percentage increase	1.9	2.1	2.3	2.5	

To cope with demographic development, about 7 million dwellings should be built between 1960-1975 in urban areas and about 11 million in rural areas. Additional construction will be required to meet the current housing deficit and current replacement needs.

Existing housing situation

26. There is very little information available on the quantity and quality of housing in Africa. There is undoubtedly overcrowding in all countries and great numbers of houses are dilapidated. In Egypt^{12/} in 1957 the average number of rooms per dwelling was 2.8 and the percentage of dwellings with one or two rooms 55.8. In the Union of South Africa^{13/} in 1951, the average number of rooms per dwelling for "Non-Whites" was 2.7, and 49 per cent of dwellings had one or two rooms. In 1952 there was a shortage of 167 328 houses in urban areas in the Union for the Bantu,

^{12/} Statistical Yearbook 1959, United Nations, table 179, Housing Statistics.

^{13/} Ibid

who constitute the lowest-paid section of the community.^{14/} The needs of some towns were as follows:

Germiston	50 000
Springs	50 000
Port Elizabeth	50 000
Capetown	150 000
Durban	175 000
Johannesburg	350 000

In these cities housing was needed for about 30 per cent of the inhabitants.

27. In the African areas of non-self-governing territories, with the exception of government-owned housing estates, standards of building and of hygiene are often the same as in the tribal areas.^{15/} There is no provision for refuse disposal, no drainage or sanitary services; there are paths instead of properly constructed roads, there is no electricity, and only a few dwellings have piped water. Houses are small, rectangular or round one-roomed structures built of a combination of mud, grass and till. Windows in most cases consist of merely openings in the wall with a wooden shutter. More than 90 per cent of the African households in Kisenyi, a suburb of Kampala, are housed in one or two rooms each; more than 75 per cent are housed in a single room only.

28. These examples show how bad the housing situation is in the urban areas of Africa. It is a fair assumption that less than 50 per cent of the total urban population lives in decent housing. The remainder still live in improvised housing, in slums, under bridges, and in all kinds of other shelters as well as in overcrowded dwellings. No one, however, can say precisely how many dwelling units are needed to liquidate the existing housing deficit.

29. It is assumed that 50 per cent of the urban population live in adequate dwelling units and that the adequate dwelling units existing in 1960 should be replaced within the next thirty years. A further assumption concerns the period to remedy the existing housing shortage in urban areas. It is suggested that a reasonable period would be thirty years, as has been already suggested for Asia and Latin America.

^{14/} Low-cost Housing for South Africa, by R. Merle Freen.

^{15/} Social Aspects of Urban Development, Secretariat Report, United Nations (A/AC.35/L.335), 10 March 1961.

30. The assumptions for estimating housing needs in urban areas of Africa are therefore as follows: existing housing stock should be replaced within the next thirty years; 50 per cent of urban population live in adequate dwellings; the existing housing deficit is to be remedied in thirty years; the average urban household has five persons; and the population increase will be as shown in table 6. On these assumptions needed housing construction would be as follows:

A. Urban Areas

Table 8
(thousands of dwelling units)

Specifications	1960	1965	1970	1975
Dwellings needed to house ^{16/} population increase	304.0	367.0	343.0	681.0
Dwellings needed to offset obsolescence	130.0	130.0	130.0	130.0
Dwellings to remedy existing deficit over 30 years	130.0	130.0	130.0	130.0
Total dwellings needed	564.0	627.0	803.0	941.0
Percentage increase within five years	11	28	17	
Average annual percentage increase		2.1	5.1	3.2

The estimated house building required in urban areas is equivalent to the following number of dwelling units per 1 000 urban inhabitants annually:

1960 - 14.5 units
1965 - 13.3 "
1970 - 13.6 "
1975 - 12.7 "

B. Rural Areas

31. The housing problem in rural areas of Africa differs very much from that of Asia and Latin America. There is an extended family structure with polygamy in vast regions and an economic life based thereon. This makes it very difficult to apply the definition of a housing unit in rural areas where the population very often lives in compound houses. It is also difficult to arrive at an average size of household or family in order to measure the needs housing stock. Information does not exist on this subject.

^{16/} Obtained by dividing average annual population increase by average size of household.

32. "With few exceptions, no minimum standards of housing are applied outside municipal boundaries in the East African territories, and in the rural areas most Africans live in traditional huts little different from those their ancestors built. The materials most frequently used for construction are mud and wattle; the roofs are made of grass; the huts usually have neither windows nor doors."^{17/}

The situation is the same in the rural areas of Northern Rhodesia and other parts of Africa.

To facilitate some estimate of housing needs in rural areas of Africa, a basic assumption is made that the average family will comprise 5.5 persons. It is assumed that 50 per cent of the population live in very bad housing, that the existing housing should be replaced within the next twenty years and that at least thirty years will be needed to remedy the present housing deficit.

33. On these assumptions the housing needs in rural areas are estimated as follows:

Table 9
RURAL AREAS
(in thousands)

Specification	1960	1965	1970	1975
Dwellings needed to house population increase	540.0	667.0	726.0	794.0
Dwellings needed to offset obsolescence	900.0	900.0	900.0	900.0
Dwellings needed to remedy existing deficit over 30 years	600.0	600.0	600.0	600.0
Total building activities needed	2 040.0	2 167.0	2 226.0	2 294.0
Increase within five years (per cent)	6	3	3	
Average annual rate of increase (per cent)	1.2	0.6	0.6	

In 1960, 10.3 dwellings annually per 1 000 inhabitants were needed; in 1965, 10; in 1970, 9.5 and in 1975, 8.9.

^{17/} Social Aspects of Rural Development, United Nations Report by the Secretariat (A/AC.35/L336, 17 March 1961) Committee on Information from Non-self Governing Territories. (Twelfth session 1961).

34. In rural and urban areas the following annual house construction is required:

Table 10
(thousands of dwellings)

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Urban areas	564.0	627.0	803.0	941.0
Rural areas	2 040.0	2 167.0	2 226.0	2 294.0
Total continent	2 604.0	2 794.0	3 029.0	3 235.0
Increase within five years (per cent)	7.0	8.0	7.0	
Average annual rate of increase (per cent)	1.4	1.5	1.5	
<u>Total houses needed annually per 1 000 inhabitants</u>				
	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Dwelling units	10.9	10.6	10.3	9.8

II. Asia (excluding Asian part of USSR)

Total Population Increase

35. The population growth of the Asian continent in the decade 1950-1960 was as follows:^{18/}

Table 11

	1950	1955	1960
Asia - total	1 380.0	1 490.0	1 620.0
Average annual rate of increase (per cent)	1.5	1.6	
South-West Asia	63.3	71.6	80.9
Average annual rate of increase (per cent)	2.5	2.5	
Central South Asia	466.0	499.0	542.0
Average annual rate of increase (per cent)	1.4	1.7	
South-East Asia	171.0	186.0	204.0
Average annual rate of increase (per cent)	1.7	1.9	
East Asia	595.0	641.0	700.0
Average annual rate of increase (per cent)	1.5	1.8	
Japan and Ryukyu Islands	83.6	89.9	96.0
Average annual rate of increase (per cent)	1.5	1.3	

The annual rate of increase for the total Asian population was about 1.6 per cent in the decade. This rate was not consistent however; during the years 1950-1955 it was 1.5 per cent and in the next five years 1.6 per cent. The highest rate of increase was in South West Asia, where it was 2.5 per cent. In East Asia it was 1.6 per cent, Central South Asia 1.5 per cent and in Japan and Ryukyu Islands 1.4 per cent.

36. The forecast of the population increase in Asia for the period 1960-1975 is as follows:^{19/}

^{18/} Population estimates from The Future Growth of World Population, Population Studies No. 28, United Nations, 1958, Catalogue N° 58.XIII.2.

^{19/} Ibid.

Table 12

	1960	1965	1970	1975
Asia - total	1 620.0	1 780	1 980	2 210
Average annual rate of increase		1.9	2.1	2.3
South West Asia	80.9	91.1	103.0	116.0
Average annual rate of increase		2.5	2.5	2.5
Central South Asia	542.0	595.0	660.0	737.0
Average annual rate of increase		1.9	2.1	2.1
South East Asia	204.0	225.0	250.0	200.0
Average annual rate of increase		1.9	2.1	2.3
East Asia	700.0	771.0	856.0	958.0
Average annual rate of increase		1.9	2.1	2.3
Japan and Ryukyu Islands	96.0	103.0	110.0	117.0
Average annual rate of increase		1.4	1.4	1.2

The rate of population increase in Asia during 1960-1975 is expected to rise from 1.9 for 1960-1965 (between 1950-1955 it was only 1.5) to 2.3 for 1970-1975. The rate has been rising since 1950 and is expected to grow even faster during the next 15 years. This is a very important factor in connexion with future housing needs, since these may be expected to rise accordingly.

Urban population growth

37. The future population distribution between urban and rural areas in Asia is very difficult to determine. There is no statistical registration of movement from the rural areas to the cities. Although Asia has more cities and more people living in them than Europe or North America, Asia is less urbanized than any of the continents other than Africa. In 1950 about 13 per cent of Asia's population lived in

/cities of

cities of 20 000 or more inhabitants.^{20/} In spite of this relatively low urban population, the rate of population growth in cities has been very high. For instance, in Asia in 1900 cities of 100 000 inhabitants and over contained 19.4 million people, but fifty years later the same cities contained 105.6 million, or 5.44 times the number; this growth was greatly above the world average growth and the combined European and American growth since 1900. The increase of large city populations in Asia since 1900 greatly exceeded that of Europe and the Americas both in absolute numbers and as a percentage.^{21/} In the first half of this century, the population in the large cities of Asia has grown about 440 per cent as compared with only 211 per cent in Europe and America.

38. Urban population in Asia has grown at a faster rate than the total population. This trend was general but in some areas it was especially strong, e.g. in Japan.

^{20/} Urbanization in Asia and the Far East, Proceedings of the joint UN/UNESCO Seminar in Bangkok, 8-18 August 1956.

^{21/} Ibid. p. 58-59.

Table 13

URBANIZATION TRENDS IN SOME ASIAN COUNTRIES

Country	Date of census	Per cent	Date of census	Per cent	Percentage increase	Average annual rate of increase (per cent)
<u>Ceylon</u>	<u>18.III.1921</u>		<u>26.II.1931</u>			
Pop. figures						
Total	4 497 854	100	5 306 871	100	18	1.7
Urban	637 870	14.2	737 272	13.9	16	1.5
Rural	3 859 984	85.8	4 569 599	86.1	18	1.7
<u>India</u>	<u>26.II.1931</u>		<u>1.III.1941</u>			
Pop. figures						
Total	338 119 154	100	388 997 955	100	15	1.4
Urban	37 413 912	11.1	49 696 053	12.8	33	2.9
Rural	300 705 242	88.9	339 301 902	87.2	13	1.2
<u>Japan</u>	<u>1.XI.1945 de facto*</u>		<u>1.X.1950 de jure*</u>			
Pop. figures						
Total	71 998 104	100	83 199 637	100	16	3.0
Urban	20 022 339	27.8	31 203 191	37.5	56	9.3
Rural	51 975 771	72.2	51 996 446	62.5	0.0	0.0
<u>Philippines</u>	<u>1.I.1939</u>		<u>1.X.1948</u>			
Pop. figures						
Total	16 000 303	100	19 234 182	100	20	2.0
Urban	3 730 523	23.3	4 630 758	24.1	24	2.4
Rural	12 269 780	76.7	14 603 424	75.9	19	1.9
<u>Turkey</u>	<u>0.21.X.1945</u>		<u>22.X.1950</u>			
Pop. figures						
Total	18 790 174	100	20 934 670	100	11	2.1
Urban	4 687 102	24.9	5 267 695	25.2	12	2.3
Rural	14 103 072	75.1	15 666 975	74.8	11	2.1

22/ United Nations, Demographic Yearbook 1952, table 6.

* For Japan, the 1945 census is a de facto count and the 1950 census is a de jure count. The period 1945-50 was above average in Japan, particularly from the standpoint of urban growth. During the war, there was a large scale evacuation of young children and other dependants from the cities to the rural areas, and at the 1945 census these people were counted as rural inhabitants. By 1948 the movement had ceased and there was widespread "return migration". The latter was reflected in the 1950 census returns for urban areas. This may be the principal reason why table 13 shows an unusually high rate of growth in the urban areas and no growth in the rural areas of Japan during 1945-50.

39. In Japan the average rate of urban population growth was 9.3 per cent annually in the period 1945-1950. The average annual rate of increase in urban population in Japan during the twenty years 1930-1950 was 3.7 per cent, as against 1.4 per cent for the total population. In India, during 1931-1941, the average annual rate of increase was 1.4 per cent for the total population and 2.9 per cent for the urban. The Third Five Year Plan states that urban population is increasing annually at the rate of 4.0 per cent. In China, official estimates indicate that the urban population between 1950 and 1955 increased at the rate of nearly 7 per cent per annum.^{23/}

40. Comprehensive figures are not available for recent urban population growth in the continent, but it is assumed that the urban population is still growing and will continue to grow at a rate higher than that of the total population. On the assumption that urban population will increase at twice the rate of total population, and on the assumption that in 1950 about 15 per cent of the total population lived in urban areas, the distribution of the population between urban and rural areas in Asia is estimated as follows:

Table 14

	1950	1955	1960	1965	1970	1975
Total population	1 380.0	1 490.0	1 620.0	1 780.0	1 980.0	2 270.0
Average annual rate of increase	1.5	1.7	1.9	2.1	2.3	
Urban population	219.4	254.4	297.8	358.8	440.7	551.8
Average annual rate of increase	3.0	3.4	3.8	4.2	4.6	
Rural population	1 160.6	1 235.6	1 322.2	1 421.2	1 539.3	1 718.2
Average annual rate of increase	1.2	1.4	1.4	1.5	2.1	
Urban population as percentage of total	15.9	17.1	18.3	20.2	22.3	24.3

^{23/} Future Population Estimates by Sex and Age, Report IV, United Nations, page 27.

Size of family or household

41. The average size of family or household in this continent varies considerably. The average family in Cyprus in 1946 has 4.8 persons; in Iraq in 1947, 5.6, in Turkey in 1950, 4.7;^{24/} in South Korea in 1955, 5.22; the average household in India in 1951 was 5.0 persons; in Ceylon in 1953, 5.33,^{25/} in Pakistan in 1951, 4.7 persons; in Malaya in 1947, 5.2; in the Philippines in 1948, 5.4; in Burma in 1953 (253 towns) 5.1; and in Japan in 1955, 5.2.

42. These statistics suggest that the average household in Asia numbers 5 persons. As a rule the average urban household is smaller than the rural one.^{26/} An average of 5.0 persons per household in urban and 5.5 in rural areas is assumed.

Housing the increased population

43. On the foregoing assumptions as to size of household, the population estimated in the previous tables will require the following stock of dwellings in the years stated:

Table 15

	1950	1955	1960	1965	1970	1975
Urban housing stock	41.0	48.0	57.0	68.0	84.0	105.0
Rural housing stock	213.0	227.0	243.0	261.0	283.0	306.0
Total housing stock	254.0	275.0	300.0	329.0	367.0	411.0
Average annual rate of increase		1.5	1.7	1.9	2.1	2.3

The rate of growth of housing requirements is thus 1.5 between 1950-1955, 1.7 between 1955-1960, 1.9 between 1960-1965, 2.1 between 1965-1970 and 2.3 between 1970-1975.

^{24/} Estimates based on number of persons per married woman: Demographic Yearbook 1955 and 1958, United Nations.

^{25/} The Ten Year Plan, Colombo, 1959, page 472.

^{26/} The standard of living also influences the size of household. "If living standards continue to rise as rapidly as they have, the average American household in the year 2 000 will have fewer than two persons in it." The precise projection by the US Department of Commerce is 1.68 persons; this, it points out, would be nearly a full person less than the 2.64 person average for all households in the year 1900. "Rising Living Standards Lead to Smaller U.S. Households", New York Times, 3 October 1961.

Existing housing situation

44. Little information is available on the quantity and quality of existing housing. The United Nations Statistical Yearbook 1959, contains only data for a few countries. Jordan in 1952 had 184 839 dwellings for 3 million people. The average number of rooms per dwelling was 2.2 and the dwellings with one or two rooms 78.2 per cent of the total. Only 9.1 per cent of dwellings had piped water and 3.9 per cent electricity. In Turkey in 1950 urban dwellings totalled 171 025 and urban population in 1955, 3 697 600.

45. In Ceylon the average number of rooms per dwelling in 1946 was 2.1 in total housing stock, 2.4 in urban and 2.1 in rural stock. Dwellings with only one or two rooms were 75.6 per cent of total stock, 67.2 per cent for urban and 76.6 per cent for rural stock. There was a shortage of 172 000 houses in 1957 or 10 per cent of stock - in urban areas, 84 000 and in rural areas 88 000.^{27/}

46. In India 80 per cent of the population live in villages, "The problem of housing in Indian villages today is next in importance to that of food."^{28/} In urban areas the need for new housing is great, since the urban population is increasing at the rate of about 4 per cent per annum.^{29/} In the big cities 1.15 million houses are totally unfit for human occupation.^{30/} In 1951 the total urban population was 61.9 million, the number of occupied urban houses^{31/} 10.3 million and the number of urban households 12.8 million. If each household needed a separate dwelling unit, the shortage of housing in that year was about 2.5 million. For the decade 1951-1961, the number of houses required in urban areas was estimated at about 8.9 million. This includes the shortage of 2.5 million estimated for 1951, estimated increases in population at 33 per cent and replacement of obsolescent

27/ Building Materials and Construction Methods in Asia and the Far East, 1955, Report by the Secretariat.

28/ The Ten Year Plan, Colombo, 1959, pages 472-473.

29/ Third Five Year Plan - a draft outline.

30/ Advisory Committee on Slum Clearance.

31/ Structure with a separate main entrance.

houses. During the decade 1951-1961, an estimated 3 million dwelling units were constructed by both public authorities and private individuals or associations in urban areas. Thus the shortage in 1961 was estimated at twice that in 1951. If the urban population increased as expected, the number of people in urban areas is now about 82 million. With a shortage of about 5 million dwelling units, the number of people in bad housing conditions or without housing is about 25 million (at the average household size of 5 persons) or about 30 per cent of the total urban population. In rural areas of India, according to the 1951 population census, the rural population was 295 million or 83 per cent of the total population of about 357 million. The number of villages was 553 089 and the number of houses about 54 million. The average number of persons per house was 5.5 and the average number of households per house was 1.12. It has been roughly estimated that approximately 50 million of the houses in rural areas would need to be re-conditioned or entirely rebuilt.^{32/} The study confirmed that over the past two decades new construction has not kept pace with the growth of urban population.

47. In Pakistan^{33/} according to the 1931 census, the total population of 75 million is distributed in 14 million households. Of these households only 1.7 million live in well-built houses. The rest live

^{32/} Source: Housing in India, Monograph prepared for the Seminar on Housing through Non-Profit Organizations in Asia and the Far East, Denmark 1956. The following information is from the same monograph. In rural areas about 85 per cent of the houses have mud plinths and walls of mud, bamboo and reed and about 70 per cent roofs of straw, grass, reeds, etc.; more than 95 per cent of the houses have no latrines; 34 per cent of houses studied in the survey had one room and 32 per cent two rooms; about 38.5 per cent of households has less than 100 square feet per person of floor space, and about 32.5 per cent between 100 to 200 square feet. In the urban areas nearly one fourth of the houses have plinths, walls and roofs of mud; about 44 per cent have only one room, 28 per cent two rooms, 12 per cent three rooms and 16 per cent four or more rooms; about 46 per cent of the houses have less than 100 square feet per person.

^{33/} Housing in Pakistan, Monograph prepared for the same Seminar.

/in huts,

in huts, temporary tenements or are without a house. In towns the position is even worse than in the country as a whole. The influx of refugees is continuing and they are mostly urban dwellers. The city of Karachi, planned for a population 0.3 million before partition in 1947, is now populated by 1.5 million. Secondly the swift progress of industry and the concentration of industries in towns are encouraging the migration of population from rural to urban area. The annual population increase of over one million means an additional need of about 200 000 new houses each year.^{34/} The need for replacement may easily increase the figure to 300 000 or 400 000 a year. In Indonesia, "the conditions of the urban native housing, mostly for the labour group, are obviously bad because of overcrowding and unsanitary conditions. Squatters' houses contribute much to these conditions."^{35/}

48. In Korea in 1955, one million housing units were required to replace those destroyed during the war, to accommodate refugees and to meet the normal increase in population.^{36/}

49. In Japan in 1955 the total number of dwellings was 16 484 430.^{37/} The average number of rooms per dwelling was 3.2 in urban areas and 3.7 in rural areas. The percentage of dwellings with one or two rooms was 40.0 in urban and 26.3 in rural areas. In 1955 the housing shortage was estimated at 2.7 million units or about 1 690 000 in urban and 1 010 000 in rural areas.^{38/} The housing shortage in 1945 was estimated at about 4.2 million dwelling units. During the period 1945-1955, 4 240 000 dwelling units were constructed, but these could liquidate only the shortage which existed in 1945. The shortage in 1955 represented demand by the new households created during this period. It does not include the number of housing units necessary for current replacement, which is assumed to be approximately 2 per cent per annum of the existing housing stock in 1955 or about 330 000 units.

^{34/} First Five Year Plan, page 370

^{35/} Housing in Indonesia, Monograph prepared for 1956 Seminar.

^{36/} ECAFE, T/HBWP 3/2, page 151.

^{37/} Statistical Yearbook 1959, United Nations, table 179.

^{38/} On the assumption that each family required a separate dwelling and that dwellings are overcrowded if the total living space is less than 15 sq.m. and, at the same time, there is less than 4.2 sq.m. per person. Housing in Japan in 1958, Housing Bureau, Ministry of Construction.

50. The foregoing examples illustrate the housing situation in certain countries generally similar to the rest of Asia. To compute housing needs, the proportion of urban population living in satisfactory dwelling units may be assessed at about 60 per cent and the proportion of rural population at 50 per cent.

51. On the assumption that the proportion of people living in satisfactory dwellings was 60 per cent in urban and 50 per cent in rural areas, the housing shortage in Asia in 1960 was about 145 million units - 23 million in urban areas and 122 million in rural areas. To liquidate this deficit in a period of thirty years, to house the increase and movement of population as well as to replace housing units falling out of use within thirty years in urban areas and twenty years in rural ones, and assuming the average size of household to be 5.0 in urban areas and 5.5 in rural areas, the building activity should be as follows:

Table 16
ANNUAL HOUSE CONSTRUCTION NEEDED IN URBAN AREAS
(millions)

Specification	1960	1965	1970	1975
Dwellings to house population increase ^{39/}	1.9	2.6	3.5	4.8
Dwellings needed for replacement over 30 years urban and 20 years rural	1.1	1.1	1.1	1.1
Dwellings to remedy existing deficiencies over 30 years	0.8	0.8	0.8	0.8
Total building activity needed	3.8	4.5	5.4	6.7
Increase within five years per cent	18	20	24	
Average annual rate of increase (per cent)	3.4	3.7	4.4	

^{39/} Obtained by dividing average annual population increase by average household size.

52. The foregoing figures indicate that in urban areas about 13 new dwelling units per 1 000 inhabitants are required annually in the period 1960-1975 to house the increase in population, to remedy the estimated existing housing deficit within 30 years, and to offset current obsolescence.

Table 17

ANNUAL HOUSE CONSTRUCTION NEEDED IN RURAL AREAS
(millions)

Specification	1960	1965	1970	1975
Dwellings needed to house the population increase	3.4	3.7	4.3	4.6
Dwellings needed for replacement over 20 years	6.0	6.0	6.0	6.0
Dwellings needed to remedy existing deficiencies over 30 years	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>	<u>4.0</u>
Total building activity needed	13.4	13.7	14.3	14.6
Increase within five years (per cent)	2	4	2	
Average annual rate of increase (per cent)	0.4	0.8	0.4	

The annual rate of house construction needed in rural areas in 1960 is 10 dwelling units per 1 000 inhabitants, in 1965, 9.5, in 1970, 9.2, and in 1975, 8.7.

54. The following table summarizes requirements in urban and rural areas:

Table 18

TOTAL ANNUAL HOUSE CONSTRUCTION NEEDED IN ASIA
(millions)

	1960	1965	1970	1975
Number of dwelling units	17.2	18.2	19.7	21.3
TOTAL HOUSE CONSTRUCTION NEEDED PER 1 000 INHABITANTS				
	10.6	10.2	9.9	9.6

III. Latin America

Total population increase

55. Latin America has four major geographic regions: Central America, Caribbean, Tropical South America and Temperate South America. In all those regions the population increase over the last decade was the highest in the world. This population growth was as follows:

Table 19

	1950	1955	1960
Latin America - total (millions)	162.6	182.4	205.8
Average annual rate of increase	2.3	2.4	
1. <u>Central America</u>	34.7	40.0	46.3
Average annual rate of increase	2.9	3.0	
2. <u>Caribbean</u>	16.3	17.8	19.6
Average annual rate of increase	1.7	1.9	
3. <u>Tropical South America</u>	84.4	94.6	107.0
Average annual rate of increase	2.3	2.5	
4. <u>Temperate South America</u>	27.2	30.0	112.9
Average annual rate of increase	2.0	1.9	

Source: The Future Growth of World Population, Population Studies N° 28, United Nations, New York, 1958.

The average annual rate of increase was about 2.4 per cent in Latin America, against the world rate of 1.5 per cent. Africa had 1.8 per cent, North America, 1.7 per cent, Asia 1.6 per cent and Europe only 0.8 per cent. The highest annual rate of increase was in Central America (2.9 per cent) and Tropical South America (2.5); the Caribbean and Temperate South America had a rate of about 1.9 per cent.

56. The population forecast for the next fifteen years in Latin America is as follows:

Table 20

	1960	1965	1970	1975
Latin America - total (millions)	205.8	233.1	265.2	304.1
Average annual rate of increase	2.5	2.7	2.8	2.8
1. <u>Central America</u>	46.3	53.6	62.2	72.3
Average annual rate of increase	3.0	3.0	3.0	3.0
2. <u>Caribbean</u>	19.6	21.7	24.2	27.1
Average annual rate of increase	2.1	2.1	2.3	2.3
3. <u>Tropical South America</u>	107.0	122.0	140.0	163.0
Average annual rate of increase	2.7	2.8	3.0	3.0
4. <u>Temperate South America</u>	32.9	35.8	38.8	41.7
Average annual rate of increase	1.7	1.5	1.4	1.4

Source: The Future Growth of World Population, op.cit.

57. For the period 1960-1975 population increase is expected to be very high in Latin America. The annual rate of increase will grow from 2.5 per cent during 1960-1965 to 2.8 per cent during 1970-1975. The population of Central America is expected to grow at the highest rate in the world, namely 3.0 per cent during 1960-1975. In Tropical South America, the rate will increase, reaching 3.0 per cent annually during 1970-1975. This tremendous increase will have great implications for the social and economic life of the continent. The demand for jobs, houses and schools grows rapidly as a result of this population boom.

/Growth of

Growth of urban and rural population

58. In 1950, 39 per cent of the population of Latin America lived in urban areas.^{40/} A decade later this percentage had risen to 46 per cent. This means that the urban population was growing at 4.0 per cent annually, while total population was growing at about 2.5 per cent annually. This trend was as follows in the individual countries:

40/ Minimum Needs in Annual Housing Construction in Latin American Countries, Estimates for 1950-60 and Projections for 1975.
OAS Advisory Committee on Housing, CINVA, Bogota, Colombia,
September 4-9, 1961. Urban population is defined as inhabitants living in communities of 2 000 and more persons.

Table 21

URBAN AND RURAL POPULATION IN 1950 AND 1960

Country	Population (thousands) 1950			Population (thousands) 1960			Average annual rate of increase per 1 000 persons 1950-1960		
	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural
Latin America	155 423	61 366	94 057	199 195	91 103	108 092	2.5	4.0	1.4
Argentina	15 942 ^{a/}	9 977	5 965	20 998	14 203	6 795	2.1 _{b/}	2.8 _{b/}	1.0 _{b/}
Bolivia	3 019	1 013	2 006	3 709	1 381	2 328	2.1	3.1	1.6
Brazil	51 976	16 021	35 955	65 862	24 134	41 728	2.4	4.2	1.5
Colombia	11 459 _{a/}	4 416 _{a/}	7 043 _{a/}	14 711	7 066	7 705	2.9 _{d/}	5.4 _{d/}	1.0 _{d/}
Costa Rica	801	232	369	1 144	415	729	3.8	6.0	2.5
Cuba	5 508	2 713	2 795	6 819	3 731	3 088	2.2	3.3	1.0
Chile	6 295 _{a/}	3 771 _{a/}	2 524 _{a/}	7 634	5 007	2 627	2.5 _{f/}	3.6 _{f/}	0.5 _{f/}
Ecuador	3 197	885	2 312	4 287	1 468	2 819	3.0	5.2	2.0
El Salvador	1 868	517	1 351	2 396	829	1 567	2.5	4.8	1.5
Guatemala	2 805	674	2 131	3 755	1 157	2 598	3.0	5.2	2.2
Haiti	3 112	3.2	2 800	3 726	633	3 093	1.8	7.3	1.0
Honduras	1 428	247	1 181	1 932	492	1 440	3.1	7.1	2.0
Mexico	25 826	11 003	14 823	34 626	17 423	17 203	3.0	4.7	1.5
Nicaragua	1 660	298	762	1 465	536	929	3.3	6.1	2.0
Panama	797	337	460	1 052	491	561	2.8	3.8	2.0
Paraguay	1 397	388	1 009	1 624	564	1 060	1.5	3.8	0.5
Peru	8 521	2 973	5 548	10 857	4 418	6 439	2.5	4.0	1.5
Dominican Republic	2 131	458	1 673	2 845	806	2 039	2.9	5.8	2.0
Uruguay	2 407	1 893	514	2 760	2 246	514	1.4	1.7	0.0
Venezuela	4 974	2 430	2 544	6 933	4 259	2 674	3.4	5.8	0.5

Source: Based on table 2, Minimum Need of Annual Housing Construction in the Latin American Countries,
Estimates for 1950-1960 on Projections for 1975.

a/ 1947.

b/ Annual rates for 1947-60.

c/ 1951.

d/ Annual rates for 1951-60.

e/ Figures for 1952.

f/ Annual rates for 1952-60.

59. Data for some countries ^{41/} show that the annual rate of urban population increase has been growing steadily. In Brazil it rose from 3.9 per cent in the period 1940-1950 to 4.2 per cent in 1950-1960;^{42/} in Colombia from 4.3 per cent in 1938-1951 to 5.4 per cent in 1950-1960; in Chile from 2.5 per cent in 1940-1952 to 3.6 per cent in 1950-1960; in the Dominican Republic from 4.4 per cent in 1935-1950 to 5.8 per cent in 1950-1960; in Honduras from 4.1 per cent in 1945-1950 to 7.1 per cent in 1950-1960. In Mexico the rate has remained at 4.7 per cent for the past twenty years, but in Venezuela, it dropped from 8.8 per cent in 1941-1950 to 5.8 per cent over the past decade. The urban population, which grew 1.8 times faster than the total population in the period 1950-1960, is likely to grow further in the future.

60. The growth of urban population at the same rate as in the recent decade would mean an increase in the urban population of about 100 million by 1975. This would require more than 30 million new urban jobs, in industry and services, besides new housing and related facilities. This is hardly practicable; in Europe, which is much more industrialized, about 50 per cent of the people live in urban areas.

61. If the urban population grows annually by 4.2 per cent, the rural population will have a low constant increase of about 1.0 per cent. On these assumptions, the distribution of the population between urban and rural areas would be as follows:

^{41/} Demographic Yearbooks 1955 and 1958, United Nations.

^{42/} Data for 1960 from table 2 of Minimum Needs of Annual Housing Construction in the Latin American Countries, Estimates for 1950-1960 and Projections for 1975.

Table 22
(in millions)

	1950	1955	1960	1965	1970	1975
Total population	162.6 ^{42/}	182.4	205.8	233.1	265.2	304.1
Average annual rate of increase (per cent)	2.3	2.5	2.5	2.7	2.8	
Urban population	63.4	77.3	94.6	116.3	142.6	175.4
Average annual rate of increase (per cent)	4.1	4.1	4.2	4.2	4.2	
Rural population	99.2	105.1	111.2	116.8	122.6	128.7
Average annual rate of increase (per cent)	1.2	1.2	1.0	1.0	1.0	
Percentage-Urban	39.0	42.0	46.0	50.0	54.0	58.0

Sources: Total population is taken from The Future Growth of World Population, op. cit.; the relative size of the urban population for 1950 and 1960 from Minimum Needs in Annual Housing Construction in Latin American Countries, op. cit.

Size of household

62. The average size of household differs from country to country. ^{43/} It is 5.6 persons in Costa Rica; 5.1 in El Salvador; 6.0 in Nicaragua; 4.5 in Panama; 4.5 in Mexico; 5.1 in Ecuador; 4.2 in Venezuela and 5.3 in Paraguay.

63. To calculate housing needs, 4.8 persons is assumed to be the average for urban households and 5.3 persons for rural households. The OAS Advisory Committee on Housing based its studies ^{44/} on the same assumptions.

^{42/} Data for 1960 from table 2 of Minimum Needs of Annual Housing Construction in the Latin American Countries, Estimates for 1950-1960 and Projections for 1975.

^{43/} Demographic Yearbook, 1955, United Nations, table 9.

^{44/} Minimum Needs in Annual Housing Construction in Latin American Countries, op. cit.

64. On these assumptions as to size of household, the housing demand would be as follows:

Table 23
(in millions)

	1950	1955	1960	1965	1970	1975
Urban housing requirements	13.2	16.1	19.7	24.2	29.7	36.5
Rural housing requirements	18.7	19.8	21.0	22.0	23.1	24.3
Total housing requirements	31.9	35.9	40.7	46.2	52.8	60.8
Average annual percentage increase		2.5	2.5	2.7	2.7	2.8

Population increase will require about 20 million new dwelling units in the period 1960-1975, 16.8 million in urban areas and about 3.3 million in rural areas.

Existing housing situation

65. The housing situation is very unsatisfactory in Latin America. In Mexico in 1950 ^{45/} there were 5 259 204 dwellings and 5 768 815 households. Thus, 508 606 households were without separate dwellings. The average number of rooms per dwelling was 1.9 and the average number of persons per household was 4.5; 84.4 of dwellings had 1 or 2 rooms; and only 43.4 per cent of dwellings had piped water.

66. Guatemala had 152 175 urban dwellings in 1949 for about 681 000 ^{46/} persons. There were about 4.5 persons per dwelling and 1.86 persons per room. 69.1 per cent of dwellings had 1 or 2 rooms; only 33.8 per cent of dwellings had piped water, 38.6 per cent electricity and 19.8 per cent both.

67. In Nicaragua it is estimated that there was a deficit of 43 000 dwellings in 1940 i.e., 25 per cent of households were without separate dwellings. ^{47/} In El Salvador the average number of persons per dwelling was 5.1 and the number of persons per room 2.5; 85.0 per cent of the housing stock had one or two rooms.

^{45/} Statistical Yearbook 1959.

^{46/} Ibid.

^{47/} Estimated with the help of the United Nations Demographic Yearbook 1955, table 9, and the Statistical Yearbook 1959, table 179.

68. In Panama there were 2.2 persons per urban room, and 2.7 per rural room. In the Dominican Republic in 1950, 40.4 per cent of urban dwellings and 57.1 per cent of rural dwellings had 1 or 2 rooms. In 1943 in Jamaica, 83.3 per cent of urban dwellings and 80.9 per cent of rural dwellings had one or two rooms. The average number of persons per room was 2.0. Colombia in 1951 had 2.3 persons per room and 6.7 persons per dwelling.

69. In Venezuela in 1950 there were 5.7 persons per dwelling and about 2.0 persons per room; 53.7 per cent of dwellings with one or two rooms. In 1958, the housing deficit in Venezuela was about 780 000 units of which 25 per cent were in rural areas. ^{48/} About 50 per cent of the population had very bad housing or none at all. About 50 000 dwellings for new families and 50 000 for replacement were required annually to liquidate the housing shortage in twenty years.

70. In Ecuador 83.2 per cent of dwellings had one or two rooms in 1950. In Chile in 1952, 47.1 of urban dwellings and 57.3 of rural dwellings had one or two rooms. In Chile in 1952, ^{49/} of 1 051 075 family dwellings only 921 359, or 88 per cent, were "socially acceptable", and there was a housing deficit of 233 282 units or 25.3 per cent.

71. In Argentina, ^{50/} the housing deficit is 1.5 million units for a population of about 20.5 million. About 37-44 per cent of the population live in very bad housing, if the average family had five or six persons. The greatest need for new housing is in the areas surrounding the five large cities of Greater Buenos Aires, Rosario, Córdoba, Mendoza and Tucumán. Requirements of these cities are approximately 1 million units, or slightly more than 60 per cent of total needs.

72. In Brazil, out of a population of nearly 60 million people, more than 11 million live in overcrowded conditions. ^{51/} The housing shortage is about 4 million, not taking into account house depreciation. Unsanitary dwellings needing fundamental improvements are 5 million, including those in rural areas.

48/ Mensaje del Presidente de la República ante El Congreso Nacional,
29 April 1960.

49/ Institute of Economics of the University of Chile.

50/ A 7 500 million dollars National Housing Programme.

51/ Suplemento Informativo, October 1961, "Preliminary Plan for Brazilian Housing Institute Presented".

The population is increasing annually by about 1.8 million. Reckoning an average of five persons per house, 360 000 houses are needed annually to house this increase. In 1950 ^{52/} in São Paulo, Belo Horizonte and Rio de Janeiro, 25 per cent of the population were without dwellings. In twelve main cities the housing deficit was 225 000 dwellings for 800 000 people. The average annual rate of increase of the population was 2.4 per cent, but that of the housing stock was only 1 per cent. In the new capital city, Brasilia, about 9 000 dwellings were built, but 18 000 were required annually at a cost of about 20 million cruzeiros. The number of people in bad housing in Brazil may be estimated at about 30 per cent.

Estimated housing needs

73. In brief, it may be assumed that about 40 per cent of the urban population and about 50 per cent of the rural population live in bad housing. On this assumption, the sound housing stock in urban areas can be estimated at about 11.8 million units and in rural areas at 10.5 million units in 1960. To liquidate the housing deficit in thirty years, and to meet needs from population increase and movement as well as to replace housing units falling out of use within thirty years in urban areas, and within twenty years in rural areas, house building should be as follows:

Table 24

URBAN AREAS
(millions of dwelling units)

<u>Specification</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Dwellings to house population increase ^{53/} and movement	0.8	1.0	1.2	1.5
Dwellings to offset obsolescence	0.4	0.4	0.4	0.4
Dwellings to remedy existing deficit in 30 years	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>	<u>0.3</u>
Total dwellings needed	1.5	1.7	1.9	2.2
Increase within five years (per cent)	13	12	16	
Average annual rate of increase (per cent)	2.5	2.3	3.0	

This amounts to 16 dwelling units per 1 000 urban inhabitants in 1960; 15 in 1965; 13 in 1970; and 13 in 1975.

^{52/} Quadernos Latino-Americanos de Economía Humana N° 6.

^{53/} Note: Average household of 4.8 persons. Obtained by dividing average annual population increase by average household size.

Table 25
RURAL AREAS
(thousand of dwelling units)

Specification	1960	1965	1970	1975
Dwellings needed to house population increase and <u>54</u> /movement	251.0	220.0	231.0	243.0
Dwellings to offset obsolescence	525.0	525.0	525.0	525.0
Dwellings to remedy existing deficit in 30 years	350.0	350.0	350.0	350.0
Total dwellings needed	1 126.0	1 095.0	1 106.0	1 118.0
Increase within five years (per cent)	---	1	1	
Average annual rate of increase (per cent)	---	0.2	0.2	

74. The following tables summarize total new housing required:

Total-new housing needed (in millions)

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Number of dwelling units	2.6	2.8	3.0	3.3

New houses needed annually per 1 000 inhabitants

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
	12.6	12.0	11.3	10.8

75. To check the foregoing estimates a comparison may be made with Argentina. About 250 000 units are required annually to house the population increase, to cover replacement and gradually to liquidate existing needs. Applying the Argentine estimate pro rata to the total population of the continent suggests an annual need of about 2.5 million dwelling units in 1960 in the continent. The figure 2.6 million already obtained is very close to this figure.

54/ Note: Average household is 5.3 persons.

IV. Europe ^{55/}

Population Increase

76. The estimates of the population growth for the last decade and the period 1960-1975 ^{56/} indicate that this continent has the lowest rate of population increase in the world. In Europe, population has been increasing throughout the decade 1950-1960 at the average annual rate of 0.8 per cent, while the total population of the world increased at the average annual rate of 1.5 per cent in the decade 1950-1960 and the forecast for the period 1960-1975 is 1.9 per cent annually. The following table illustrates this as well as the rate of increase in particular regions of Europe:

	(millions of persons)					
	1950	1955	1960	1965	1970	1975
World Total	2 500	2 690	1 920	3 180	3 500	3 860
Average annual rate of increase (per cent)	1.5	1.5	1.7	1.9	1.9	1.9
<u>Europe</u> (excluding the European part of the Soviet Union)						
Total	393	409	424	440	457	476
Average annual rate of increase (per cent)	0.8	0.8	0.8	0.8	0.8	0.8
<u>Northern and W. Europe</u>						
Total	133	137	140	144	148	154
Average annual rate of increase (per cent)	0.6	0.4	0.6	0.6	0.6	0.8
<u>Central Europe</u>						
Total	128	134	140	145	151	156
Average annual rate of increase (per cent)	1.0	0.8	0.8	0.8	0.8	0.6
<u>Southern Europe</u>						
Total	132	138	144	151	151	166
Average annual rate of increase (per cent)	0.8	0.8	1.0	1.0	1.0	1.0

^{55/} Excluding the European part of the Soviet Union.

^{56/} The Future Growth of World Population, United Nations. Department of Economic and Social Affairs, New York, 1958.

77. The low rate of population growth in most European countries makes the housing problem there less acute than in regions with high and rapidly increasing rates of population growth, as for example, Latin America or Africa. This conclusion does not, however, apply to some Eastern European countries, where the rate of rural population increase is relatively high and where the urban population is increasing particularly fast. Recent urbanization trends in European countries are illustrated in the following table:

Country	I Census or estimates				II Census or estimates				Increase		Average annual	
	Date	Population		Urban pop. (Per- cent- age)	Date	Population		Urban pop. (percent age)	(percentage)		rate of increase (percentage)	
		Total	Urban			Total	Urban		Total	Urban	Total	Urban
Albania	3.IX.1950	1 218 943	249 783	20.5	1.VII.1958*	1 506 594	428 800	28.5	24	72	2.7	6.7
Austria	10.X.1948	6 952 744	3 381 330	48.6	1.VI.1951	6 933 905	3 410 842	49.2	0.0	1	0.0	0.3
Belgium	31.XII.1930	8 092 004	4 893 683	60.5	31.XII.1947	8 512 195	5 339 726	62.7	5	9	0.27	0.5
Bulgaria	3.XII.1946	7 029 349	1 735 188	24.7	1.XII.1956	7 613 709	2 556 071	33.6	8	47	0.8	3.9
Czechoslovakia	22.V.1947	12 164 095	5 935 433	48.8	1.III.1950	12 338 450	6 321 845	51.2	1	6	0.3	2.0
Denmark	15.VI.1945	4 045 232	2 634 187	65.1	1.X.1955	4 448 401	3 070 318	69.0	10	17	1.0	1.6
Finland	31.XII.1950	4 029 803	1 302 427	32.3	31.XII.1958*	4 394 700	1 627 200	37.0	9	25	1.1	2.8
France	10.IV.1946	3 988 182	21 108 694	53.0	10.V.1954	42 734 445	23 899 131	55.9	7	13	0.9	1.5
E. Germany	31.VIII.1950	17 199 098	11 836 650	68.8	31.XII.1950*	17 285 902	12 398 900	71.7	0.0	5	0.0	0.6
W. Germany	29.X.1946	43 705 289	29 973 545	68.6	13.IX.1950	47 695 672	33 930 037	71.1	9	13	2.2	3.1
Greece	16.X.1940	7 344 860	2 350 100	32.0	7.IV.1951	7 632 801	2 807 905	36.8	4	19	0.4	1.6
Hungary	1.I.1949	9 204 799	3 355 672	36.5	1.I.1957*	9 803 888	3 950 000	40.3	6	18	0.7	2.1
Iceland	2.XII.1940	121 474	74 490	61.3	1.XII.1950	143 973	104 749	72.8	18	41	1.7	3.5
Ireland	12.V.1946	2 955 107	1 119 180	37.9	8.IV.1951	2 960 593	1 227 393	41.5	0.0	10	0.0	1.5
Norway	3.XII.1946	3 156 950	884 097	28.0	1.XII.1950	3 278 546	1 054 820	52.2	4	19	1.0	4.4
Poland	1.I.1950	24 613 684	9 605 254	39.0	6.XII.1960	29 731 200	14 118 100	47.5	21	47	1.9	3.9
Portugal	12.XII.1940	7 722 152	2 398 772	31.1	15.XII.1950	8 441 312	8 694 869	31.2	9	10	0.9	1.0
Rumania	25.I.1948	15 872 624	3 713 139	23.4	1.VII.1958*	18 058 604	5 727 381	31.7	14	54	1.3	4.4
Sweden a/	31.XII.1940	6 371 432	2 830 968	44.4	31.XII.1950	7 041 829	3 342 803	47.5	10			
Switzerland	1.XII.1941	4 265 703	1 402 335	32.9	1.XII.1950	4 714 992	1 720 057	36.5	10	23	1.1	2.3
United Kingdom	26.IV.1931	39 952 377	31 951 918	80.0	8.IV.1951	43 757 888	35 361 797	80.8	9	11	0.43	0.52
Yugoslavia	15.III.1948	15 772 098	2 557 682	16.2	31.III.1953	16 991 449	3 144 675	18.5	8	23	1.5	4.2

Source: United Nations, Demographic Yearbook 1960, table 9.

a/ Data for urban population are not comparable, owing to differences in definitions of "urban" used in the 1940 and 1950 censuses.

78. Assuming that the urban population of Europe amounted in 1960 to approximately 50 per cent of the total population and that in the fifteen years 1960-1975 it will grow at a rate twice that of the total population, the distribution of the population between urban and rural areas would be as follows in the period 1960-1975:

(millions of persons)

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
1. Total population	424	440	457	476
Average annual rate of increase (per cent)	0.8	0.8	0.8	0.8
2. Urban population	212	230	250	271
Average annual rate of increase (per cent)	1.6	1.6	1.6	1.6
3. Rural population	212	210	207	205

79. Generally speaking, it seems safe to assume that migration of rural population in Europe to urban areas will continue during 1960-1975, though this assumption may well be affected by policies to improve the economic and social status of rural areas within the framework of regional development plans designed to ensure a more balanced distribution of population. Such migration will very probably reduce the rate of growth of the rural population and may cause a decline in the actual numbers of persons classified as "urban". On the other hand, the urban population could, on the assumption made, increase by almost 60 million in the same period. This implies that the future building activity in rural areas will consist mainly of normal replacement of existing housing stock and elimination of the existing housing deficit including overcrowded and sub standard or unfit dwellings. In urban areas, in addition to elimination of shortages and deficiencies and to normal replacement, housing construction must meet demand from demographic development consisting of natural population increase, household formation and migratory movement to cities.

/Size of

Size of household and housing needs

80. The average size of households differs in European countries. The following table shows the number of households and the average number of persons per household in some countries in Europe. ^{57/}

Country	Census (date)	Population in all ^{a/} households	Total ^{a/} households	Average number of persons per household
Austria	1.VI.1951	6 933 905	2 207 025	3.1
Belgium	31.XII.1947	8 512 195	2 836 979	3.0
Denmark ^{b/}	7.XI.1950	4 178 800	1 326 680	3.1
France ^{b/}	10.III.1946	38 755 000	12 644 190	3.1
Eastern Germany	29.X.1946	17 313 734	5 824 118	3.0
Western Germany	13.IX.1950	47 695 672	15 402 058	3.1
Greece	7.IV.1951	7 632 801	1 791 426	4.3
Ireland	12.V.1946	2 755 490	662 654	4.2
Netherlands	31.V.1947	9 625 499	2 490 219	3.9
Norway	1.XII.1950	3 234 663	971 515	3.3
Portugal ^{b/}	15.XII.1950	8 350 835	2 047 439	4.1
England and Wales	8.IV.1951	43 757 888	13 187 399	3.3
Scotland ^{b/}	8.IV.1951	4 869 868	1 535 925	3.4
Yugoslavia	15.III.1948	15 772 098 ^{c/}	3 609 745	4.4

^{a/} Includes institutional households and their occupants.

^{b/} Private households and occupants thereof.

^{c/} Total population.

81. It seems that the average household size for the total urban population can be taken as 3.2 persons and for the rural population as 4.0 persons. This is based on the assumption that in countries where the percentage of the urban population is very high the average number of persons per household is significantly lower than in countries with a high percentage of the population

^{57/} Demographic Yearbook 1955, United Nations, table 9.

/living in

living in rural areas. It would be useful to know the trend of the development of the households structure in European countries, which would help us in defining the future housing needs. In most western European countries young people marry earlier than was the custom before 1940 and if this trend continues it will have great consequences for the average size of household and for housing demand. In the absence of data on the possible future sizes of households, it is proposed to assume the same average household size for the entire period. On this assumption the housing needs would be as follows:

<u>Housing stock required</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
	(millions)			
1. Urban areas	66.0	72.0	78.0	85.0
2. Rural areas	53.0	52.0	52.0	51.0
3. Total housing stock	<u>119.0</u>	<u>124.0</u>	<u>130.0</u>	<u>136.0</u>

82. These estimates suggest that in urban areas, the housing needs due to demographic growth will increase by approximately 19 million dwelling units in the period 1960-1975. In rural areas, on the other hand, the needs will decrease by about 2 million units in the same period.

Existing housing situation and the needed building activity

83. The housing situation in Europe is shown in the two following tables:

DWELLINGS, ROOMS AND PERSONS PER ROOM

Country	Date	Dwellings	Room	Persons per room
Austria	1.VI.1951	2 138	7 480 *	0.93 *
Belgium	31.XII.1947	2 868	11 480 *	0.74 *
Bulgaria	31.XII.1956	1 733	4 147	1.84
Czechoslovakia	1.III.1960	3 613 ^{a/}	8 018 ^{b/}	1.53 ^{b/}
Denmark	1.X.1955	1 385	6 145	0.72
Eastern Germany	29.X.1946	5 000 ^{c/}		
Finland	31.XII.1950	999	2 612	1.54
France	10.V.1954	14 383	42 487 * ^{d/}	1.01 ^{d/}
Greece	30.VI.1957	1 880	4 508	1.79
Hungary	1.I.1949	2 481 ^{a/} ^{e/}	5 708	1.61
Ireland	12.V.1946	7 407 ^{f/}	2 729 ^{g/}	1.01 ^{g/}
Italy	9.XI.1951	11 411	37 342	1.27
Netherlands	30.VI.1956	2 534	12 992	0.84
Norway	1.XII.1950	890 ^{a/}	3 424	0.96
Poland(h)	1.XII.1960	7 039	17 243	1.72
Portugal	15.XII.1950	2 274 ^{a/}	8 000	1.06
Romania	21.II.1956			
Spain	31.XII.1950	6 370	26 436 *	1.06
Sweden	31.XII.1950	2 340 *	7 250 *	0.97
Switzerland	1.XII.1950	1 286 ^{i/}	6 311 ^{j/}	0.75
Turkey	20.X.1955	4 250 *	10 657	2.26
United Kingdom	8.IV.1951	14 129	64 646	0.78
Western Germany	25.IX.1956	12 727	48 572	1.03
Yugoslavia	31.III.1953	3 563	7 300	2.33

Source: Annual Bulletin of Housing and Building Statistics for Europe, 1960,
United Nations, Geneva, 1961.

/ a/ Occupied

- a/ Occupied dwelling only.
- b/ The kitchen is included only if its surface is 12 sq. m. or more; if all kitchens were included, the number of persons per room would be about 1.33.
- c/ The housing stock at the end of 1957 is estimated by the Secretariat.
- d/ Only large family kitchens are counted as rooms; if all kitchens were undivided, the number of persons per room would therefore be slightly below 1.00.
- e/ The housing stock at 1 July 1954 has been officially estimated at 2 540 000 dwellings.
- f/ The number of occupied houses (which may contain several structurally separated dwellings) amounts to 622 000. The number of dwellings at the end of March 1959 can be estimated at 740 000.
- g/ Rooms occupied by private households only.
- h/ Preliminary data.
- i/ Dwellings with kitchen; the number of dwellings with and without kitchens was about 1.3 million.
- j/ In dwellings with and without kitchens.
- *) Estimate.

/SOME CHARACTERISTICS

SOME CHARACTERISTICS OF OCCUPANCY OF DWELLINGS

Country	Date	Number of dwellings (thousands)	Size				Piped water		Equipment electricity	Fixed baths	
			Dwellings with rooms				A	B			
			1-2	3-4	5-6	7 or more					
Percentages											
Austria a/	Total	1951	2 138	b/	b/	b/	b/	34.2	63.3	90.7	10.6
	Urban		1 173					44.9	86.9	97.2	15.2
	Rural		965					21.2	34.5	82.7	4.9
Belgium	Total	1947	2 816	25.5	44.7	22.0	7.9	48.5	56.1	95.4	8.4
Bulgaria	Urban	1956	561	74.3	24.0	1.6	0.1				
	Total		1 733	60.6	35.6	3.4	0.4				
	Rural		1 172	54.1	41.2	4.2	0.6				
Czechoslovakia o/	Total	1950	3 613	66.4	30.1	3.1	0.4		35.6	85.2	
	Urban		1 585	65.6	30.2	3.8	0.4		36.1	94.7	
	Rural		2 028	66.8	30.0	2.8	0.4		22.3	79.1	
Denmark	Total	1955	1 380	4.3	57.5	28.8	9.4			98.4	39.4
	Urban		933	5.9	64.3	24.8	5.0	100.0		99.5	47.8
	Rural		447	0.8	43.0	37.5	18.7	63.5		96.3	21.9
Finland	Total	1950	998	57.3	33.2	7.1	2.4		25.2	77.2	43.1 d/
	Urban		373	67.6	26.2	4.9	1.3		53.3	98.4	24.8 d/
	Rural		625	51.0	37.4	8.5	3.1		8.4	64.6	53.9 d/
France e/	Total	1954	13 402	40.5	44.5	11.8	3.1	58.4	61.5	93.0	10.4
	Urban		7 846	45.6	42.3	9.8	2.3	75.4	79.7	95.4	14.9
	Rural		5 556	33.2	47.7	14.8	4.3	34.3	35.0	89.5	4.0
Greece	Total	1951	1 708	63.9	29.5	5.4	1.2	12.1	66.4	28.7	2.7
	Urban		877	60.7	31.4	6.6	1.3	23.0	75.0	53.2	5.1
	Rural		831	67.5	27.6	4.0	0.9	0.6	57.3	2.9	6.1
Hungary	Total	1949	2 481	70.1	27.6	2.3			17.0	46.1	10.1
	Urban		977	66.3	29.0	4.7 f/			41.1	75.1	22.0
	Rural		1 504	72.7	26.6	0.7 f/			1.4	27.2	2.5
Ireland g/	Total	1946	663	15.7	52.9	21.2	10.2	29.3h/	88.7h/		15.4
	Urban		240	25.2	41.8	20.5	12.4	67.3k/	91.8h/		35.5
	Rural		423	10.4	59.2	21.5	8.9	7.9k/	8.6h/		3.9
Italy	Total	1951	10 756	42.2	38.4	13.3	6.1	35.9	45.1	82.7	10.7
Netherlands	Rural	1956	313	9.9	30.1	43.7	16.3		75.5	95.0	14.3
	Total		2 519	5.4	28.3	49.8	16.5		89.6	98.1	26.8
	Urban		883	2.7	34.0	49.3	14.0		99.6	99.8	32.3
Norway	Total	1950 l/	890	22.7	51.6	19.1	6.6		65.3	82.9	16.2
	Urban		311	23.0	60.0	14.0	3.0		95.3	100.0	31.8
	Rural		579	25.5	47.1	21.8	8.6		53.3	76.1	10.0
Poland	Urban	1950	2 445	58.6	36.3	5.1 j/					
Portugal k/	Total	1950	2 274	32.9	43.5	15.4	8.2	14.5		19.5	7.8
	Urban		655					42.5		46.9	22.1
	Rural		1 619					3.1		8.5	2.0
Spain	Total	1950	6 292	20.7	42.3	26.1	10.9	34.2		80.5	9.2
	Urban		2 817	18.5	38.8	30.5	12.2	58.9		86.4	17.1
	Rural		3 475	22.5	45.2	22.5	9.3	13.2		73.8	2.5
Sweden	Total	1945	2 102	37.6	47.1	11.6	3.7	67.0	68.7	93.7	27.6 l/
	Urban		1 181	45.1	43.6	8.7	2.6	88.5	90.5	99.6	43.4 l/
	Rural		921	28.0	51.6	15.3	5.1	39.3	40.8	86.2	7.2 l/
Switzerland	Urban	1950	692	5.8	50.3	33.0	10.9	98.8		100.0	69.1 m/
	Rural		26	3.3	32.0	39.0	25.7	78.5		96.8	17.4 m/
Turkey	Urban	1950	171	36.6	33.2	16.1	14.1	33.6		54.3	
United Kingdom	Total	1951	14 059	9.4	40.9	43.9	7.8	81.4 h/	94.5 n/		62.4 n/
	Urban		11 134	7.4	40.4	44.9	7.3	83.3 h/	97.9 n/		64.5 n/
	Rural		2 960	7.4	42.9	40.0	9.7	73.2 h/	79.9 n/		59.6 n/
Western:	Total	1956	12 864	16.5	57.6	19.9	6.0		77.7	88.4	47.4
Germany	Urban		5 053	20.2	63.8	13.6	2.4		86.2	88.0	52.6
	Rural		7 611	14.1	54.3	24.1	8.3		72.0	88.6	43.9
Yugoslavia k/	Urban	1954	930	80.2	19.8 o/			28.8		87.3	17.0

SOME CHARACTERISTICS OF (continued)

Source: United Nations, Annual Bulletin of Housing and Building Statistics for Europe 1960, Geneva 1961.

Data relate in principle to permanent occupied accommodation; in a few cases the percentages shown (indicating the proportion of dwellings having certain characteristics) exclude dwellings with an unknown number of rooms.

Piped water: A - piped water supply within dwellings;
B - piped water supply inside or outside dwellings.

a/ Total number of dwellings, occupied or vacant.

b/ Dwellings by number of "living units" - 1/2 and 1, 44 per cent; 1 1/2 and 2, 35 per cent; 2 1/2 and 3, 13 per cent; 3 1/2 and more, 8 per cent. Living units are defined as follows: rooms of 1/5 sq. m. or more; smaller rooms are reckoned as half a living unit; the kitchen is excluded.

c/ Only kitchen of 12 sq. m. or more are counted as rooms.

d/ Including Finnish baths (saunas) in separate buildings.

e/ Only large family kitchens are counted as rooms.

f/ With five rooms or more.

g/ Data refer to households (housekeeping-unit concept).

h/ Figures in column A refer to households with exclusive use of piped supply laid on to the dwelling; the figures in column B refer to all households with access to water supply whether exclusive or shared with other households.

i/ 1946 for data on equipment and tenure status; the figure for owner-occupied (dwellings) may be considerably higher in 1950.

j/ With five rooms or more.

k/ Kitchens are not counted as rooms.

l/ Excluding shower rooms and Finnish baths.

m/ A shower is not considered as a "fixed bath".

n/ Figures are for Great Britain and relate to households.

o/ With three rooms or more

84. It is difficult to appraise the actual housing shortage in Europe. Doubtless, there exists a great difference in the quantitative and qualitative housing situation between countries of Western and Central Europe on the one hand, and countries of Southern and Eastern Europe on the other hand. According to The European Housing Situation, ^{58/} in Western and Central Europe there were 270 dwellings per thousand inhabitants in 1953. In the same year in Southern Europe (Greece, Italy, Portugal, Spain, Turkey and Yugoslavia) the number of dwellings per thousand inhabitants was 224. The housing situation in Eastern Europe is no better than in Southern Europe and it may be assumed that the average number of dwellings per thousand inhabitants in Eastern Europe was on the level of Southern Europe. To bring the housing situation in Southern and Eastern Europe to the same level as it was in 1953 in Western and Central Europe, about ten million additional dwelling units will be needed for the population in 1960. However, this shortage cannot be considered as the only shortage in Europe.

85. There is still a housing shortage in some Western European countries in spite of the fairly high housing output in recent years, which may be estimated at approximately 3-4 million dwelling units for the year 1960. The total housing shortage in Europe (excluding the Soviet Union) may be roughly estimated at about 14 million dwelling units for the year 1960. To liquidate this shortage in fifteen years would require about 950 000 dwellings every year. For the increased population, it is necessary to build approximately 1 million dwelling units every year, and to replace the existing housing stock, at the rate of 1 per cent yearly, another million. The total needed building activity may, therefore, be estimated at about 3 million dwelling units per year. This is about 7 dwelling units per 1 000 inhabitants.

86. In 1960, about 2.1 million dwelling units ^{59/} were built in Europe, or about 70 per cent of what has been estimated above to be the annual requirements. An output of more than six dwelling units per 1 000 inhabitants was achieved by only ten countries. The rest had housing production between 2.1 dwellings per 1 000 inhabitants (Ireland) and 5.9 (United Kingdom).

^{58/} The European Housing Situation, United Nations, Geneva, 1956.

^{59/} Annual Bulletin of Housing and Building Activities for Europe, 1960, United Nations, Geneva, 1961.

V. Northern AmericaPopulation increase

87. In Northern America are included the following countries: Canada, United States (with Alaska), Bermuda, Greenland, and St. Pierre and Miquelon. The population of Canada and the United States, however, represented in 1960 almost a hundred per cent of the total population of this region, and the same will be true in 1975. The estimates of the population of the region are as follows: ^{60/}

	(in millions)					
	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Number of population	168	182	197	210	225	240
Average annual rate of increase (per cent)	1.6	1.6	1.3	1.4	1.3	

88. The average annual rate of increase will fall slightly from 1.6 per cent in the period 1950-1960 to about 1.4 per cent in the following period, 1960-1975.

Changes in the housing stock in Canada

89. In Canada there were the following changes in the number of population and its location and in the housing stock, between 1941 and 1951. ^{61/}

	<u>1941</u>	<u>1951</u>	<u>-1951:1941</u>	verage annual rate of increase (per cent)
Population: Total	11 506 655	14 009 429	122.0	2.0
Urban	6 252 416	8 817 637	141.0	3.5
Rural	5 254 239	5 191 792	99.0	0.1
Housing stock:				
Total	2 575 744	3 409 295	132.0	2.8
Urban	1 416 893	2 155 035	152.0	4.3
Rural	1 158 851	1 254 260	108.0	0.8

^{60/} The Future Growth of World Population, United Nations, Population Studies, No 28-Appendix C. Table I (A).

^{61/} Statistical Yearbook 1959, United Nations, and Demographic Yearbook 1960.

90. As the above table shows, in the period 1941-1951 the housing stock in Canada grew faster than the population. The average annual rate of increase in the population was 2.0 per cent, but the total housing stock increased at the amount rate of 2.8 per cent, and the urban housing stock at 4.3. The same trend can be observed in rural housing, which grew at the rate of 0.8 per cent annually, while the rural population rate of increase was 0.2 per cent.

91. To continue this relative rate of construction, about 1 091 000 dwellings should have been built between 1951 and 1961. Between 1951 and 1958 Canada built about 881 000 dwelling units. ^{62/} This is equivalent to about 110 000 units annually or about 25 per cent more than the 88 000 units needed to cope with population increase.

92. There were 3 409 295 dwellings in Canada in 1951; the average number of rooms per dwelling in the total housing stock was 5.3 (5.2 in urban areas and 5.6 in rural areas). The number of persons per dwelling was 4.1 for the total housing stock: 4.0 in urban and 4.3 in rural areas. In the same year, the average number of persons per household ^{63/} was 4.1 and the total number of households was almost the same as the total number of dwellings. The percentage of dwellings with one or two rooms was very low, 5.6 in urban and 8.7 in rural areas. There was piped water in 94.1 per cent of urban housing and in 39.5 per cent of rural housing; gas facilities in 31.4 per cent of urban and 3.8 per cent of rural housing; electricity in 99.3 per cent of urban and 65.9 per cent of rural housing, and baths in 83.2 per cent of urban and 22.3 per cent of rural dwellings.

93. In 1951, about 20 per cent of rural and 9 per cent of urban dwellings in Canada were in need of major repairs. In cities of over 30 000 population there were about 100 000 dwellings in this condition. About 350 000 units, nearly 10 per cent of the whole stock, are now over 95 years old and over half a million units are from 50 to 95 years old. ^{64/}

^{62/} Statistical Yearbook 1959, United Nations, table 123.

^{63/} Demographic Yearbook 1955, United Nations, table 9.

^{64/} Housing and Urban Growth in Canada - A Brief from Central Mortgage and Housing Corporation to the Royal Commission on Canada's Economic Prospects, 1956.

Needed building activity in Canada

94. In Canada according to Housing and Urban Growth in Canada ^{65/} housing unit completions should be as follows:

<u>In the period</u>	1956 - 1960	470 000 dwelling units
	1961 - 1965	550 000 dwelling units
	1966 - 1970	670 000 dwelling units
	1971 - 1975	810 000 dwelling units

95. The forecast for the period 1956-1960 was 470 000 dwelling units, but the real output was much higher. During the period 1956-1959 alone, about 545 000 dwelling units were contracted in Canada, and the average annual output for the period was 130 000 dwelling units. ^{66/}

96. Estimating the housing construction output for the year 1960 at the rate of 130 000 dwelling units and assuming that it will grow at the average rate of increase of at least 3 per cent yearly, ^{67/} housing unit completions would be as follows during the period 1960-1975.

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Dwelling units	130 000	151 000	175 000	203 000

Population development and changes in the housing stock in the United States

97. In the United States the increase in housing stock was greater than the population increase in the period 1940-1950. This is shown in the following table based on the censuses of 1 April 1940 and 1 April 1950.

	<u>1940</u>	<u>1950</u>	<u>1950:1940</u>	<u>Average annual rate of increase (per cent)</u>
Housing stock				
Total:	37 325 470	45 983 398	123.0	2.1
Urban:	21 616 352	29 569 073	136.0	3.1
Rural	15 709 118	16 414 325	104.0	0.4

^{65/} Housing and Urban Growth in Canada - A Brief from Central Mortgage and Housing Corporation to the Royal Commission on Canada's Economic Prospects, page 13.

^{66/} Statistical Yearbook 1960, United Nations, page 263.

^{67/} According to the estimates made (Housing and Urban Growth in Canada, op. cit.) and by the Central Mortgage and Housing Corporation the average is expected to be 4 per cent.

Urban and rural population of the United States, 1940 and 1950 ^{a/}

Area	Number	1940		1950		Ratio 1950:1940	1940-1950 Average annual rate of increase (per cent)
		Per cent	Number	Per cent	Number		
Total	131 689 275	100.0	150 697 361	100.0		114	1.4 (1.36)
Urban ^{b/}	74 423 702	56.5	89 749 063	59.6		121	1.9 (1.89)
Rural	57 245 573	43.5	60 948 298	40.4		106	0.1 (0.06)

a/ Conterminous United States, i.e., excluding Hawaii and Alaska.

b/ For both 1940 and 1950 the definition of urban is that used in the census of 1950.

98. In 1950 ^{68/} the average number of persons per dwelling was 3.5 in total housing, 3.4 persons in urban and 3.8 persons in rural housing. The percentage of dwellings with one or two rooms was 10.6 in urban housing and 10.2 in rural housing. The average number of persons per room was 0.7 in urban and 0.8 in rural housing. 97.2 per cent of urban dwellings had piped water, 70.0 per cent gas, 97.2 per cent electricity and 87 per cent baths. There was piped water in 57.5 per cent of the rural dwellings, gas in 26.0 per cent, electricity in 83.0 per cent and baths in 42.8 per cent.

99. The United States had ^{69/} 58.3 million units (census date of 1960). This means that the housing stock, in the decade 1950-1960, increased by about 27 per cent or 2.4 per cent annually, which was a more rapid increase than in the previous decade. A substantial improvement can be noticed in the quality of United States housing in 1960 as against 1950. "Almost 90 per cent of owner-occupied housing was classified as non-dilapidated and with all plumbing facilities in 1960 as compared to only 70 per cent in 1950. American families, however, still inhabited 2.5 million housing units that are classified as dilapidated and an additional 3.8 million units lack private toilet or bath or running water."

^{68/} Statistical Yearbook 1957, United Nations, 1960.

^{69/} Official information supplied by the United States Government

/Needed building

Needed building activity in the United States

100. To maintain the existing trend, the housing stock should grow annually at the rate of 2.4 per cent in the future and the same rate if increase should be maintained in annual dwelling construction. Taking as the starting-point the number of housing starts ^{70/} in 1960, the housing construction on the rate postulated would be as follows:

	(in thousands)			
	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Dwelling units	1 280.6 ^{71/}	1 430.0	1 605.0	1 800.0

101. This output should cover all needs arising from demographic development and obsolescence. It was officially estimated by the United States Government that according to the analysis of demographic data, increasing household formation rates may be anticipated in the near future. Rates above 1 million per annum are expected. The average for the decade 1960-1969 will probably be in the neighborhood of 1.2 million new households per annum. This indicates that the foregoing estimates of future housing output are reasonable in relation to needs from all causes. These estimates are, however, based on continuance of the trend in output observed during 1950-1960.

102. Only a little of this construction will be located in rural areas. The bulk will be located in urban areas which are expanding their population both through natural causes and through migration from rural areas.

103. If the housing stock continues to grow at the same rate of 2.4 per cent annually as in 1950-1960, it will increase as follows in the period 1960-1975:

	<u>1950</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Number of dwelling units:	54.9	58.3	74.0	94.0	119.0

70/ Annual Bulletin of Housing and Building Statistics for Europe, 1960, United Nations, Geneva, 1961, table 8 (work begun).

71/ Rounded figure.

104. Total housing construction would seem to be as follows in Northern America:

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Dwelling units:	1 410 000	1 581 000	1 780 000	2 003 000

105. On the foregoing basis the total Northern American housing output per 1 000 inhabitants is estimated at the following rate during the period 1960-1975:

	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Dwelling units	7.1	7.5	7.9	8.3

VI. Oceania and Pacific

Population increase

106. This group of regions includes Australia, New Zealand and the Pacific Islands. The estimates of the population growth are as follows: ^{72/}

	(in millions)					
	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Population figures: Total	13.2	14.7	16.3	17.8	19.4	21.0
Average annual rate of increase (per cent)	2.1	2.1	1.7	1.7	1.5	1.5
Australia and New Zealand	10.2	11.5	12.7	13.8	14.9	16.0
Average annual rate of increase (per cent)	2.5	1.9	1.7	1.5	1.4	1.4
Pacific Islands	2.93	3.26	3.63	4.04	4.50	5.01
Average annual rate of increase (per cent)	2.1	2.1	2.1	2.1	2.1	2.1

Size of household and housing needs

107. The average household size differs in the various countries of this region, but only in the Fiji Islands was it higher than four persons per household. The table below shows the average size of households in some countries of the region: ^{73/}

Country	Census date	Total population	Total households	Average number of persons per household
Australia	30.VI.1947	7 579 358	1 907 895	4.0
Fiji Islands	2.X.1946	259 638	45 096	5.8
		(Population in private households)	(Private households)	
Hawaii (non-indigenous population only)	1.IV.1950	463 230	112 290	4.1
New Zealand	(25.IX.1945)	1 603 554)	412 642)	(3.9
	(17.IV.1951)	1 993 594)	504 987)	(3.9

^{72/} The Future Growth of the World Population, United Nations Population Studies, N° 28.

^{73/} According to Demographic Yearbook 1955.

/108. Assuming

108. Assuming that the average household in the region contains four persons, the housing needs would be as follows:

	(in millions)					
	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Dwellings	3.3	3.8	4.4	4.4	4.9	5.3
Increase within 5 years (per cent)	11.0	11.0	9.0	9.0	8.0	
Average annual rate of increase	2.1	2.1	1.7	1.7	1.5	

109. Between 1960 and 1975, the housing stock of the discussed region should therefore increase by about 1.2 million dwelling units. In the two main countries of the region the latest available information ^{74/} - from the Statistical Yearbook 1959, table 179 - is as follows:

Existing housing situation

110. In Australia in 1954 the average number of people per dwelling was 3.8 and the average number of rooms per dwelling 5.0. Only 6.3 per cent of dwellings had one or two rooms and the average number of persons per room was 0.7.

111. In New Zealand in 1951, the average number of persons per dwelling was 4.0 and the average number of persons per household was 3.9. The average number of rooms per dwelling was 4.8; the percentage of dwellings with one or two rooms was 6.1; and the average number of persons per room 0.8.

112. Australian Housing Survey ^{74/} says that "Despite the fact that Australia received over 1 000 000 immigrants between 1947 and 1957, the estimated housing shortage was reduced from 250 000 to 100 000, an improvement of 150 000 dwellings or 60 per cent." This shortage represents about 5 per cent of the total number of occupied dwellings in 1954. ^{75/}

Growth of urban and rural population

113. The trends in population development in the two main countries of this region in recent years were quite different. The population in New Zealand

^{74/} Australian Housing Survey, Australian and New Zealand Bank Ltd., p. 24.

^{75/} Statistical Yearbook 1960, United Nations, p. 556.

increased equally in urban and rural areas at the average annual rate of 2.3 per cent between 1951 and 1959. ^{76/} In Australia there was a higher increase in total population, averaging an annual rate of 2.5 per cent between 1947 and 1954. In addition, the urban population increased at the average rate of 4.8 per cent annually. The rural population decreased from 2 354 248 in 1947 to 1 887 892 in 1954. This high rate of increase of urban population was due not only to the natural increase but also to a considerable amount of immigration.

114. The following table shows the changes in the location of the population in New Zealand and Australia in recent years:

Country	Census date	Per cent	Census Date	Per cent.	Percentage increase	Average annual rate of increase (per cent)
<u>New Zealand</u>	<u>17.IV.1951</u>		<u>I.IV.1959</u>			
N° of population						
Total	1 939 472	100.0	2 326 129	100.0	20.0	2.3
Urban	1 070 848	55.2	1 283 000	55.2	20.0	2.3
Rural	868 624	44.8	1 043 129	44.8	20.0	2.3
<u>Australia</u>	<u>30.VI.1947</u>		<u>30.VI.1954</u>			
N° of population						
Total	7 560 755	100.0	8 963 161	100.0	19.0	2.5
Urban	5 206 507	68.9	7 075 269	78.9	39.0	4.8
Rural	2 354 248	31.1	1 887 892	21.1	19.8	3.2

115. The trend of population development in New Zealand leads to one very important conclusion for housing policy in that country. In almost forty years the urban and rural population has grown at approximately the same rate, and as a result there has been no basic change in population distribution. Although the percentage of total population living in urban areas increased from 53.9 to 60.3 per cent during the period 1921-1945, available data show that for the present decade at least the distribution of population between rural and

^{76/} Demographic Yearbook 1960, United Nations.

^{77/} Estimate of population.

urban areas has remained constant. ^{78/} If it is assumed that this trend will continue in the next fifteen years, future housing needs will arise proportionate to the natural increase in population in the urban and rural areas without additional needs created by migration. An entirely different situation exists in Australia, where in the last twenty years, extensive urbanization has taken place. In 1933 the percentage of the population living in urban areas was 64.0 per cent but twenty-one years later, in 1954, it was almost 80.0 per cent. The increase in the urban population was 67.0 per cent in this period, or about 2 843 151 persons. ^{79/}

116. On the other hand, the rural population declined from 2 381 017 to 1 887 892 persons. This shift in the distribution of population between rural and urban areas has a considerable influence on housing and other needs in urban areas, and if this trend continues, almost all future building activities in Australia will be concentrated in urban areas.

Future building activities needs

117. "It was estimated that Australia required about 53 000 new dwellings to meet new housing needs in 1957. By 1965, however, the annual requirement is expected to increase to 66 000 new dwellings as a result of increased numbers reaching the marriageable age groups. By 1970, the annual need is expected to rise to about 78 000 new dwellings. These estimates exclude dwellings required to meet slum replacement." ^{80/}

118. The number of occupied dwellings was 2 380 353 in Australia in 1954. ^{81/} If it is assumed that this housing stock should be replaced at the rate of 1.0 per cent per year, about 24 000 dwelling units should be added annually for obsolescence to the construction needed for demographic development. On this assumption, and from the previously mentioned estimates, dwelling construction in Australia is estimated as follows for the years 1960-1975:

^{78/} Demographic Yearbook 1960, page 389. The definition of "urban" was changed for the 1951 census. By the new definition the urban percentage has been about 55 since 1951.

^{79/} Demographic Yearbook 1960, page 389.

^{80/} "Australian Housing Survey" - Australia and New Zealand Bank Limited.

^{81/} Ibid.

	(thousands of dwellings)			
	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Construction needed	82 000 ^{82/}	90 000	102 000	109 000 ^{83/}
Percentage increase	10.0	13.0		7.0
Average annual rate of increase (per cent)	1.9	2.5		1.4

119. Taking the proportion of the needed building activity in Australia as a measure for Oceania and the Pacific, we will have the following building activity in the total region:

	(dwelling units)			
	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Total house-building needed	130 000	142 000	163 000	176 000

120. Probably about 75-80 per cent of future construction will be located in urban areas.

121. The foregoing estimated house-building requirements amount to 8.0 per 1 000 population in 1960, 8.1 in 1965 8.4 in 1970-1975.

122. In Australia the annual rate of dwelling construction was 8.7 per 1 000 population in the period 1951-1956. In New Zealand it was 8.3. ^{84/}

123. This indicates that these two countries, whose population represents 76 per cent of the total regions, have already a satisfactory rate of dwelling construction. Unfortunately, there are no data available on housing for the rest of the region. However, it can be assumed that in the remaining countries the situation in housing is not as good owing to a lack of economic and social development.

^{82/} The number for 1960 was obtained by using the rate of 8 dwelling units per 1 000 inhabitants for 1965.

^{83/} The number for 1975 was obtained by using the rate of 8.4 dwelling units per 1 000 inhabitants for 1970.

^{84/} Australian Housing Survey - Australia and New Zealand Bank Ltd., p. 6.

VII. Soviet Union

Population increase

124. According to The Future Growth of World Population,^{85/} the population growth of the Soviet Union should be as follows:

	(millions)					
	<u>1950</u>	<u>1955</u>	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Population figures	181	197	215	234	254	275
Average annual rate of increase (per cent)	1.7	1.7	1.7	1.6	1.5	

125. It is expected that the rate of the population growth will be lower in the period 1965-1975 than in the recent period 1950-1960 and than that foreseen for the period 1960-1965. In this event, the housing demand due to population increase will be eased significantly after 1965.

Size of household

126. There are no data available from which to analyse the trend in household formation in the Soviet Union in the last ten years, but the assumption may be made that the average size of household will decrease, as in all industrialized countries. This development, if it occurs, will radically change the future housing needs, requiring a higher total of dwellings, mostly dwellings of smaller size. However, the lack of sufficient statistical and other data needed for this kind of demographic projection rules out the possibility of making any estimates concerning the size of households. On the other hand, it is not necessary to assess too precisely the demographic structure in order to make long-range housing projections. There are many demographic, economic and social aspects involved in the formation of households which in a long-range projection can materially alter the final results. As in previous chapters, a rough estimate of future housing needs based on an assumed average household size will also be made for the USSR.

^{85/} Population Studies, Vol. 28, United Nations, New York, 1958.

Growth of urban and rural population

127. According to a recent study made in the Soviet Union, the urbanization trend has been very pronounced.^{86/} The urban population^{87/} which declined from 20 million in 1917 to 16 million in 1920, increased to 60.4 million in 1940, 103.7 million in 1960 and 108.3 million in 1961. The urban population was almost seven times greater in 1961 than it was in 1920.^{88/} The projection of the urban and rural populations for the coming two decades is based on the assumption that owing to the social and economic changes in rural areas, and the increase of productivity in urban areas (obtained through automation and mechanization) immigration from villages to towns and cities will slow down. The development in urban and rural population is estimated as follows:

	(millions)			
	<u>1940</u>	<u>1960</u>	<u>1968</u>	<u>1980</u>
Total population	190.7	212.3	243.1	297.0
Urban population	60.4	103.7	124.0	165.0
Rural population	130.3	108.6	119.9	132.0
Urban population as a percentage of total population	31.6	48.8	51.0	55.5
Percentage increase	<u>1940-1960</u>		<u>1960-1980</u>	
Urban population	71.7		59.1	
Rural population	16.7		21.5	
Total population	11.3		39.9	

128. According to the estimates^{89/} mentioned, the average annual rate of increase will be as follows:

	between 1960-1968	between 1968-1980
Total population	1.6 per cent	1.6 per cent
Urban population	2.6 per cent	2.3 per cent
Rural population	1.2 per cent	0.9 per cent

^{86/} "Sovremennye problemy zhilishnogo hoziaistva" - D.L. Broner, Gosudarstvennoje izdatelstvo "Vishaja Shkola" 1961, Moscow.

^{87/} According to the definition of urban used in the census, urban population relates to inhabitants of "cities, towns and urban type localities".

^{88/} In 1926 there were 709 towns and 1 216 urban type communities, and in 1961, 1 685 towns and 3 157 urban type communities.

^{89/} "Sovremennye problemy zhilishnogo hoziaistva" - B.L. Broner, Gosudarstvennoje izdatelstvo "Vishaja Shkola", 1961, Moscow.

129. Based on these averages, the relevant estimated figures for the years 1965, 1970 and 1975 are as follows, assuming that the population will increase at an even pace:

	(millions)			
	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Total population	212.3	229.8	251.4	273.4
Urban population	103.7	118.2	130.2	146.0
Rural population	108.6	115.1	121.5	127.4

Housing needs

130. The average household was estimated at 3 to 4 persons for urban areas and 3.8 for rural areas in 1958-1959.^{90/} On the assumption that those averages will prevail in the period 1960-1975, the housing stock needs would be as follows:^{91/}

	(million of dwellings)			
	<u>1960</u>	<u>1965</u>	<u>1970</u>	<u>1975</u>
Housing needs in urban areas	29.6	33.8	37.2	41.7
Housing needs in rural areas	28.6	30.3	32.0	33.5
Total housing needs	58.2	64.1	69.2	76.2
Total increase per cent		10.1	8.0	8.7
Average annual per cent of increase		1.9	1.5	1.7

131. It appears, therefore, that the Soviet Union should have about 58.2 million dwellings in 1960 and 76.2 million in 1975. This means that between 1960 and 1975, housing stock should increase by 17 million dwelling units, of which about 12 million would be required in urban and about 5 million in rural areas.

^{90/} Ibid.

^{91/} As an average for urban housing, the figure of 3.5 persons per household is used.

132. According to The European Housing Situation,^{92/} the total urban population at the end of 1954 was about 85 million. The number of dwellings per 1 000 inhabitants was approximately 195, and the useful floor space per inhabitant 7.2 sq.m. The average floor space per dwelling was about 37 sq. m.

Housing construction

133. Housing construction has increased very rapidly in the Soviet Union in recent years. The table below illustrates the trend between 1953-1960.^{93/}

	(thousands)							
	<u>1953</u>	<u>1954</u>	<u>1955</u>	<u>1956</u>	<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>
Dwellings completed	1245.0	1351.0	1512.0	1636.0	2197.0	2692.0	3039.0	2978.0
No. completed per 1 000 inhabitants	6.5	7.0	7.7	8.2	10.8	13.0	14.5	14.0

134. As a result of this increase in dwelling construction, the housing situation has improved in the Soviet Union and the objective of present plans is to liquidate the existing housing shortage and provide decent housing for every citizen.

135. In urban areas, there were 958 million sq. m. of living space in housing in 1960.^{94/} Assuming that the average dwelling has 40 sq.m. of living space there would appear to be about 24 million dwelling units in urban areas in 1960. This number, compared with the numbers of the urban population, makes 231 dwellings per 1 000 inhabitants. According to the estimates made earlier, about 275.0 dwelling units per 1,000 inhabitants are required to satisfy all housing needs in the Soviet Union in 1960. This would indicate that the shortage in 1960 amounted to about 44 dwelling units per 1 000 inhabitants of urban population or a total of 6 million dwellings in urban areas.

^{92/} United Nations Publication, Catalogue No. 1956.II.E.3, page 38.

^{93/} Annual Bulletin of Housing and Building Statistics for Europe 1960, United Nations, Geneva, 1961.

^{94/} Kapitalnoye Stroitelstvo SSSR, Statistichesky Sbornik, Gosstatizdat, Moscow, 1961, page 199.

136. There are no data available on housing shortage in rural areas of the Soviet Union. Construction of new houses has increased very much in rural areas since the war. For example, at the beginning of the nineteen-fifties construction of houses was at the level of 400 000 houses a year, and in 1959 "members of collective farmers and the rural intelligentsia built on their own account and with the help of State credits 830 000 dwellings; there was also large-scale construction of dwellings in rural areas by means of State resources".^{95/}

137. In the Soviet Union, as in other countries with centrally planned economies, housing development is part of the national economic and social development plan. Thus, with the framework of the national short and long-range plans, steady improvement of housing conditions has been obtained.

138. The targets for the seven-year plan 1959-1965 were to build 15 206 000 housing units in urban and 7 million in rural areas.

^{95/} According to Soviet statistics, during the second World War a number (1 700) of urban communities and more than 10 000 villages with total floor space of housing estimated for over 70 million sq.m. were also destroyed. (Zhilishnoye Stroitelstvo SSSR, Gosstroy izdat, Moscow, 1959).

