

HOUSING

Chapter 9. Housing Characteristics

The Commonwealth of the Northern Mariana Islands was included in the decennial housing census in 1970 for the first time. Unfortunately, as noted earlier, the 1970 had incomplete coverage, so it was only in 1980 that complete housing data were collected. No housing data were collected in the 1973 census. Some housing data were also collected in the 1967 Peace Corps census, but most of these cannot be used for comparative purposes.

Housing characteristics are important because they provide data on the conditions of housing as well as socio-economic indicators for the CNMI. By looking at data between censuses we can study material progress in the Commonwealth. In this chapter we will be looking at four general topics: Structure Characteristics, Plumbing Facilities, Socio-economic well being as measured by material goods in the house, and Financial Characteristics.

STRUCTURAL CHARACTERISTICS

Structural characteristics include the number of units in the structure, the material of the walls and roof, number of rooms and bedrooms, when the structure was originally built, and when the householder moved into the housing unit.

Although the 1970 census probably undercounted both the population and the number of housing units, numbers and percents have been presented here for comparative purposes. We are assuming that if there was an undercount of housing units in 1970, the undercount was proportional, that is, the characteristics of the enumerated housing units are about the same as the proportions that were not enumerated.

The 3,373 year-round housing units in 1980 were 111 percent more than the 1,598 units enumerated in the 1970 census (Table 9.1). The percent of single, detached units remained about the same in 1980 as in 1970, and the percentage change was also about the same as for all units. About 9 out of every 10 housing units in the CNMI in both 1970 and 1980 were single, detached units. A second type of structure is a single unit attached to another, non-housing unit; this type of structure often occurs for doctors who reside adjacent to their offices, or storekeepers who live behind their stores. Although the number of these units increased between 1970 and 1980, their proportion of all units decreased during the period to about half of the 1970 percent. Although about 4 percent of all housing units in 1970 were single units attached to a non-housing unit, this was true for only about 2 percent in 1980. The percent of 2-unit structures - structures with 2 housing units - also decreased during the period by the same percentage, from about 4 percent in 1970 to 2 percent during the 10 year period.

On the other hand, although there were only 5 structures in 1970 for 3 or 4 households, there were 67 in 1980, an increase of 1200 percent. Similarly, the number of housing units enumerated in structures having 5 or more units increased from 27 to 148 during the 10 year period (450 percent); it is

important to note that if a structure had 5 units, and each one was being used, the same structure would be included 5 times (and the characteristics would be included 5 times as well.)

Boats were not included as housing units until 1980. Only 1 boat housing unit was enumerated in the 1980 census. On the other hand, the number of mobile homes increased from 2 in 1970 to 9 in 1980, but the percentage of all households living in mobile homes was still miniscule.

Table 9.1. Units in Structure: 1970 and 1980

Units in Structure	Numbers		Change	Percents	
	1980	1970	From 1970 to 1980	1980	1970
Units in Structure..	3373	1598	111.1	100.0	100.0
1, detached.....	3004	1445	107.9	89.1	90.4
1, attached.....	62	59	5.1	1.8	3.7
2.....	82	60	36.7	2.4	3.8
3 and 4.....	67	5	1240.0	2.0	.3
5 or more.....	148	27	448.1	4.4	1.7
Boat.....	1	(NA)	(NA)	.0	0.0
Mobile home or trailer...	9	2	350.0	.3	.1

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

As would be expected, Saipan had the largest number (2895) and percent (85.8 percent) of all year-round housing units in the CNMI in 1980. There were 285 units (8.4 percent) on Rota, 179 (5.4 percent) on Tinian, and 14 (.4 percent) in the Northern Islands of Anatahan, Pagan, and Agrigan, the only inhabited islands in 1980 (Table 9.2). In the Northern Islands, all 14 housing units were single, detached units. For the other islands, the proportion of single, detached units was remarkably consistent across the islands at 89 to 90 percent. The percent of single units attached to non-housing units was also consistent at 2 percent for these three islands, as was the same 2 percent for structures with 3 or 4 housing units. Although Rota had a smaller proportion and Tinian a larger proportion of 2 unit structures, and Rota had a greater percentage and Tinian a smaller percentage of 5 or more unit structures, the absolute numbers being so small that the percentage differences were statistically insignificant. The single boat was in Saipan, and 7 of the mobile homes were on Saipan, while the other 2 were on Tinian in 1980.

Table 9.2. Units in Structure by Municipality: 1980

Units In Structure	Numbers					Percent				
	Sai-pan	Tin-Rota	N. Ian	I. Is.	I. Total	Sai-pan	Tin-Rota	N. Ian	I. Is.	I. Total
Units In Structure. 2895	285	179	14	1	100.0	100.0	100.0	100.0	100.0	
1, detached.....	2574	256	160	14	1	89.1	88.9	89.8	89.4	100.0
1, attached.....	52	6	4	0	I	1.8	1.8	2.1	2.2	0.0
2.....	74	2	6	0	I	2.4	2.6	.7	3.4	0.0
3 and 4.....	59	5	3	0	I	2.0	2.0	1.8	1.7	0.0
5 or more.....	128	16	4	0	I	4.4	4.4	5.6	2.2	0.0
Boat.....	1	0	0	0	I	0.0	.0	0.0	0.0	0.0
Mobile home or trailer.....	7	0	2	0	I	.3	.2	0.0	1.1	0.0

Source: HC80-1-A57A, Table 9

Data on material of outside walls were not collected in the 1970 decennial census. These data were collected in the 1967 Peace Corps census, however. In 1967, 1,640 units were enumerated, so there was an increase of 1,733 units over the 13 year period (Table 9.3). Since there were only 1,598 units enumerated in the 1970 census, there is some evidence that the 1970 census undercounted the total number of housing units, although the 1967 and 1970 censuses may have used different definitions of housing units.

In 1967 there was a single category for "concrete" walls, while in 1980 there were two categories - poured concrete, and concrete blocks. The number of housing units having concrete walls increased from 272 in 1967 to 1408 in 1980, an increase of more than 400 percent, about 4 times the percentage increase for all units during the period. Also, although units with concrete walls comprised only 8 percent of the total housing inventory in 1967, in 1980 about 42 percent of all housing units had concrete walls. Of the total housing units in 1980, 35 percent were concrete blocks and 7 percent were poured concrete. The percentage of housing units having metal walls also increased tremendously, from 11 percent in 1967 to 32 percent of all housing units in 1980. Although there were only 183 units with metal walls in 1967, by 1980 there were 1068 (an increase of more than 480 percent).

On the other hand, the number of units with wood walls decreased from 1155 to 895 (22.5 percent) during the period, and the percentage of housing units having wood walls decreased from 70 percent to 26 percent. That is, although 7 of every 10 housing units in 1967 had wood walls, in 1980 only 1 in 4 units had walls of this material. These figures clearly indicate the enormous improvement in the housing inventory between 1967 and 1980.

Table 9.3. Material for Outside Walls: 1967 and 1980

Type of Material	Numbers		Change From	Percents	
	1980	1967	1967 to 1980	1980	1967
Total.....	3373	1640	105.7	100.0	100.0
Concrete.....	1408	272	417.6	41.7	8.1
Poured concrete.....	223	0	(NA)	6.6	0.0
Concrete Blocks.....	1185	0	(NA)	35.1	0.0
Metal.....	1068	183	483.6	31.7	11.2
Wood.....	895	1155	-22.5	26.5	70.4
Other.....	2	3	-33.3	.1	.2
Unknown.....	0	27	-100.0	0.0	1.6

Source: HC80-1-A57A, Table 9, and 1967 Peace Corps Census

The data by island for 1980 also show the relationship between technological modernization, and housing structure. For example, in 1980, the Northern Islands, the most isolated and least modernized of the islands, had 12 units with metal walls and 2 units with wood walls (Table 9.4). Although about 7 of every 10 units on Tinian still had metal walls in 1980, 1 in 6 already had concrete walls. On the other hand, almost half of the units on Rota (48 percent) had concrete walls, partly because of a great deal of new construction on the island in recent years (see table 9.14). The data for Saipan are more mixed because of the mixture of old and new housing on the island.

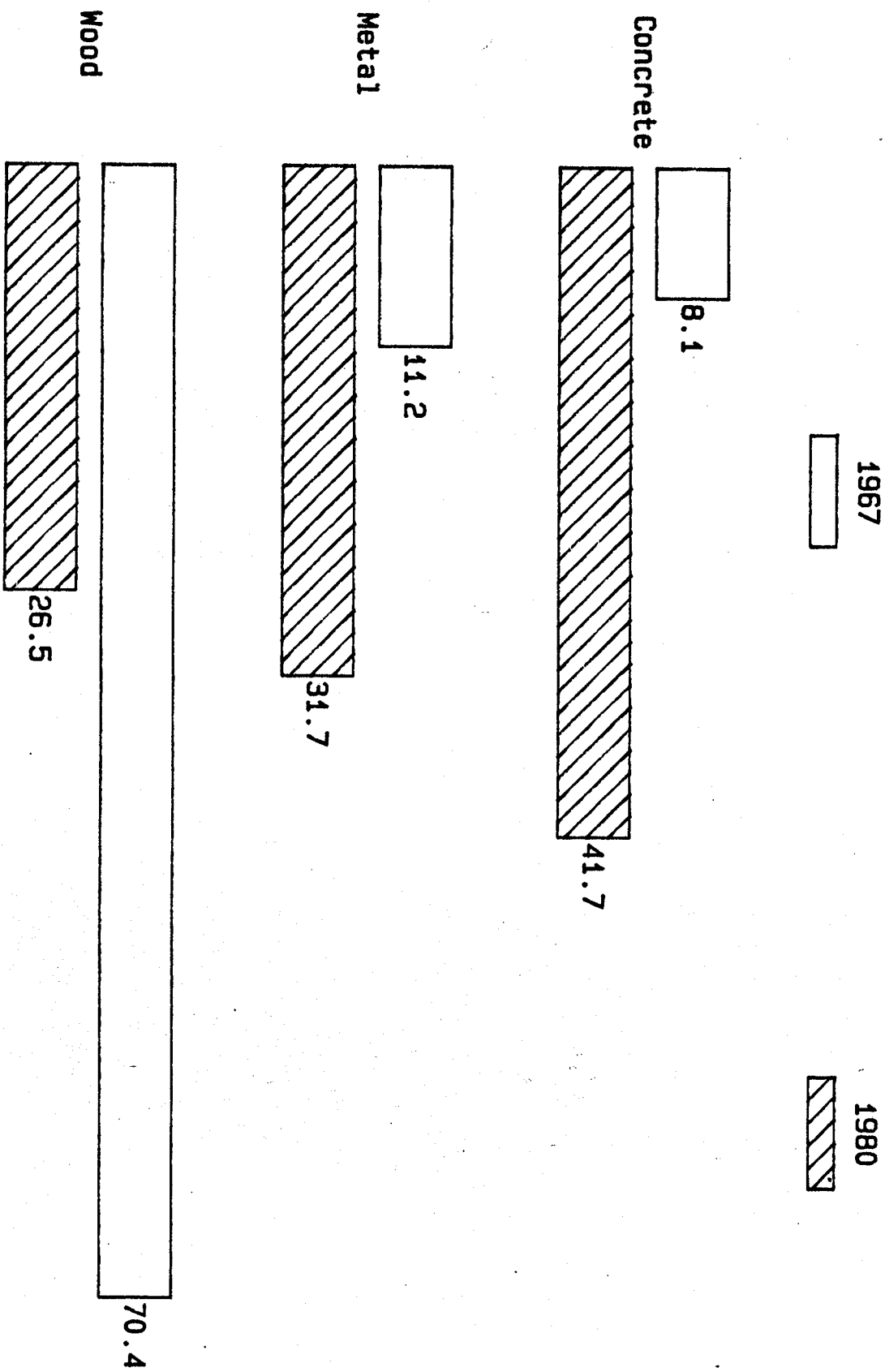
Table 9.4. Material for Outside Walls by Municipality: 1980

Material of Walls	Numbers				|	Percent				
	Sal- pan	Tin- Rota	N. ian	N. Is.		Total	Sal- pan	Tin- Rota	N. ian	N. Is.
Total.....	2895	285	179	14	|	100.0	100.0	100.0	100.0	100.0
Poured concrete.....	215	4	4	0	|	6.6	7.4	1.4	2.2	0.0
Concrete blocks.....	1025	133	27	0	|	35.1	35.4	46.7	15.1	0.0
Metal.....	853	79	124	12	|	31.7	29.5	27.7	69.3	85.7
Wood.....	800	69	24	2	|	26.5	27.6	24.2	13.4	14.3
Other.....	2	0	0	0	|	.1	.1	0.0	0.0	0.0

Source: HC80-1-A57A, Table 9

FIGURE 9.1

Materials of Outside Walls: 1967 and 1980 (Percent)



Another measure of the housing inventory is the material used for the roof. In both 1967 and 1980, the majority of housing units had metal roofs. In 1967, 1405 units (86 percent of all units) had metal roofs, compared to 2019 (60 percent) in 1980; the increase in units was 44 percent (Table 9.5). However, the largest increase proportionately was in concrete roofs which increased from 149 to 1125 (655 percent) during the 13 year period. By 1980, about 1 in 3 of all roofs in the CNMI were made of concrete, compared to less than 1 in 20 in 1967.

Table 9.5. Material for Roof: 1967 and 1980

Type of Material	Numbers		Change	Percents	
	1980	1967	From 1967 to 1980	1980	1967
Total.....	3373	1640	105.7	100.0	100.0
Concrete.....	1125	149	655.0	33.4	4.4
Metal.....	2019	1405	43.7	59.9	85.7
Wood.....	206	(NA)	(NA)	6.1	(NA)
Thatch.....	1	29	-96.6	.0	1.8
Other.....	22	33	-33.3	.7	2.0
Unknown.....	0	24	(NA)	0.0	1.5

Source: HC80-1-A57A, Table 9, and 1967 Peace Corps Census

In 1980, all of the roofs in the Northern Islands were made of metal (Table 9.6). As with the walls, the data for Tinian were the most transitional; although 87 percent of all the housing units had metal roofs, another 9 percent (16 units) had concrete roofs, while the remaining 4 percent had wood roofs. Roofs for Rota, like its walls, showed the recent building activity on the island. Although the percentage of metal roofs was the same as for Saipan in 1980, 41 percent of the roofs on Rota were made of concrete, compared to 34 percent on Saipan; on the other hand, although 7 percent of the roofs on Saipan were made of wood, this was true for less than one percent of those on Rota. Rota also had one house with a thatch roof.

Table 9.6. Material for Roof by Municipality: 1980

Material of Roof	Numbers				Total	Percent			
	Sai-pan	Tin-Rota	N. Ian	N. Is.		Sai-pan	Tin-Rota	N. Ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
Poured concrete.....	993	116	16	0	33.4	34.3	40.7	8.9	0.0
Metal.....	1683	166	156	14	59.9	58.1	58.2	87.2	100.0
Wood.....	197	2	7	0	6.1	6.8	.7	3.9	0.0
Thatch.....	0	1	0	0	.0	0.0	.4	0.0	0.0
Other.....	22	0	0	0	.7	.8	0.0	0.0	0.0

Source: HC80-1-A57A, Table 9

Another measure of the changing life-style on the islands is the number of rooms in the housing units. Traditionally, because so much of the daily activities such as fishing and horticultural activities, occurred outside the house, houses were simple, and generally were made only large enough for all persons to have a place to sleep at night. With Westernization, more room was now desired, both to have areas for a kitchen and new appliances such as refrigerators, stoves, and televisions and VCRs, but to separate activities and give more privacy.

Between 1970 and 1980 the absolute number of housing units with only 1 room and with 2 rooms actually decreased (Table 9.7). One room housing units decreased 11 percent during the decade, and 2 room units decreased 9 percent. Although 33 percent of all the units in 1970 consisted of one or two rooms, this percentage decreased to only 14 percent in 1980. The increase in the number of 3 room housing units was somewhat less than the increase for all the units between 1970 and 1980.

It is in the larger units that the largest increases were seen. The number of 4 room units increased from 274 to 886 units (223 percent), and the number of 5 room units increased from 247 to 852 units (245 percent). Each of these was more than one fourth of all the units in 1980, so together they made up about one-half of all the units, compared to about one third in 1970. Larger housing units also experienced increases in both their absolute counts, and percentage increases. The median number of rooms increased from 3.3 rooms per unit in 1970 to 4.1 in 1980, an increase of 24.2 percent, or about one room.

Table 9.7. Rooms in Structure: 1970 and 1980

Rooms	Numbers		Change	Percents	
	1980	1970	From 1970 to 1980	1980	1970
Total.....	3373	1598	111.1	100.0	100.0
1 room.....	156	176	-11.4	4.6	11.0
2 rooms.....	316	345	-8.4	9.4	21.6
3 rooms.....	639	333	91.9	18.9	20.8
4 rooms.....	886	274	223.4	26.3	17.1
5 rooms.....	852	247	244.9	25.3	15.5
6 rooms.....	359	152	136.2	10.6	9.5
7 rooms.....	98	35	180.0	2.9	2.2
8 or more rooms.....	67	36	86.1	2.0	2.3
Median.....	4.1	3.3	24.2	...	...

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

Housing units on Rota and Saipan were only slightly larger than those on Tinian and the Northern Islands in 1980 (Table 9.8). While the median number of rooms on Tinian and the Northern Islands was 3.5 rooms per unit, the median was 4.1 on Saipan and 4.2 on Rota. Ten of the units in the Northern Islands had 3 or 4 rooms, while 2 had fewer and 2 had more rooms. On Tinian the largest numbers of units had 4 or 5 rooms. On Rota about one-fourth of the units had 5 rooms while one-fifth had 4 rooms and another one-fifth had 3 rooms; the data for Saipan were similar, but with a larger proportion of 4 room units.

Table 9.8. Rooms by Municipality: 1980

Rooms	Numbers				Percent				
	Sai-pan	Tin- Rota	N. Ian	N. Is.	Total	Sai-pan	Rota	Tin-ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
1 room.....	135	14	6	1	4.6	4.7	4.9	3.4	7.1
2 rooms.....	278	28	9	1	9.4	9.6	9.8	5.0	7.1
3 rooms.....	550	59	25	5	18.9	19.0	20.7	14.0	35.7
4 rooms.....	755	59	67	5	26.3	26.1	20.7	37.4	35.7
5 rooms.....	732	73	45	2	25.3	25.3	25.6	25.1	14.3
6 rooms.....	303	37	19	0	10.6	10.5	13.0	10.6	0.0
7 rooms.....	86	8	4	0	2.9	3.0	2.8	2.2	0.0
8 or more rooms.....	56	7	4	0	2.0	1.9	2.5	2.2	0.0
Median.....	4.1	4.2	3.5	3.5	...	...	...	...	...

Source: HC80-1-A57A, Table 9

Until now, we have been considering all year-round units. Some of the housing data are presented for all year-round units, and some are presented for occupied units only. Since some units are vacant, data on persons per unit is presented only for occupied units. In 1980, 3,028 of the 3,373 (89.8 percent) of all year-round housing units were occupied, compared to 1,517 of the 1,598 (94.4 percent) in 1970 (Table 9.9). The increase for occupied units was 93 percent compared to the 111 percent for all year-round housing units. It should be remembered that in the Pacific Islands, definitions of "Vacant" are more problematic than on the mainland because housing units which many mainlanders might not find habitable, are considered habitable in the islands. Also, since much less construction is needed, with neither heating nor cooling as necessary considerations, housing construction is simpler and easier in the islands.

Housing was more crowded in 1970 than in 1980, with the median number of persons per unit decreasing from 6.2 to 5.4. However, except for the category "8 or more persons" per unit, all other categories increased by more than 100 percent during the decade. The last category remained the largest, both in absolute numbers and as a percentage of all units, but the percentage of units with 8 or more persons decreased from 36 percent in 1970 to 20 percent in 1980. This decrease in units with more than 7 persons probably indicates the changing life-style in the CNMI to one which is very gradually leaving the traditional and joining the middle-class ideal presented by the American Administration for so long. As the number of rooms per unit is increasing, the number of very large families and households is decreasing. Other data in this report show a decrease in the number of extended families and an increase in the number of nuclear families (see Chapter 3), and the housing data also show this trend.

Except for the "8 or more persons" category, all other categories increased as percentages of the total housing inventory. For units with more than 3 persons, the percentage increase was directly proportional to the number of persons in the unit. That is, while the number of units with 4 persons increased 130 percent, those with 5 persons increased 146 percent, those with 6 persons 152 percent, and those with 7 persons 204 percent. Therefore, although the trend is away from very large households, there were still a very large proportion of moderately large households in the CNMI in 1980.

Table 9.9. Persons in Units: 1970 and 1980

Persons	Numbers		Change From	Percents	
	1980	1970	1970 to 1980	1980	1970
Total.....	3028	1571	92.7	100.0	100.0
1 person.....	252	116	117.2	8.3	7.4
2 persons.....	359	161	123.0	11.9	10.2
3 persons.....	365	166	119.9	12.1	10.6
4 persons.....	389	169	130.2	12.8	10.8
5 persons.....	382	155	146.5	12.6	9.9
6 persons.....	318	126	152.4	10.5	8.0
7 persons.....	341	112	204.5	11.3	7.1
8 or more persons.....	622	566	9.9	20.5	36.0
Median.....	5.4	6.2	...	...	...

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

Table 9.10 shows that except for the Northern Islands, about one-fifth of the occupied housing units on each of the islands had 8 or more persons in 1980. (In the Northern Islands 8 of the 13 occupied housing units had 8 or more persons.) The medians were also about the same for the three islands - 5.3 persons per unit for Saipan, 5.7 for Rota, and also 5.7 for Tinian.

Table 9.10. Persons per Unit by Island: 1980

Persons per Unit	Numbers				Percent				
	Sai- pan	Tin- Rota	N. ian	N. Is.	Total	Sai- pan	Tin- Rota	Tin- ian	N. Is.
Total.....	2632	233	150	13	100.0	100.0	100.0	100.0	100.0
1 person.....	210	34	7	1	8.3	8.0	14.6	4.7	7.7
2 persons.....	309	25	23	2	11.9	11.7	10.7	15.3	15.4
3 persons.....	328	24	13	0	12.1	12.5	10.3	8.7	0.0
4 persons.....	359	12	18	0	12.8	13.6	5.2	12.0	0.0
5 persons.....	331	31	20	0	12.6	12.6	13.3	13.3	0.0
6 persons.....	270	28	19	1	10.5	10.3	12.0	12.7	7.7
7 persons.....	294	29	17	1	11.3	11.2	12.4	11.3	7.7
8 or more persons.....	531	50	33	8	20.5	20.2	21.5	22.0	61.5
Median.....	5.3	5.7	5.7	8.1	...	...	...	...	...

Source: HC80-1-A57A, Table 3

The change in the life-style in the CNMI is also seen in the number of persons per room (Table 9.11). While more than half of all housing units in 1970 had 1.51 or more persons per room, only about one-third of the units were this crowded in 1980. All of the other categories increased during the period, both percentage increase, and as a proportion of all categories. Although the number of units with 1.51 or more persons per room increased by 19 percent during the decade, units with .51 to .75 persons per room, and 1.01 to 1.50 persons per room increased by more than 200 percent during the decade.

Table 9.11. Persons per room: 1970 and 1980

Persons Per Room	Numbers		Change	Percents	
	1980	1970	From 1970 to 1980	1980	1970
Total.....	3028	1571	92.7	100.0	100.0
0.50 or less.....	464	175	165.1	15.3	11.1
0.51 to 0.75.....	351	114	207.9	11.6	7.3
0.76 to 1.00.....	581	233	149.4	19.2	14.8
1.01 to 1.50.....	629	205	206.8	20.8	13.0
1.51 or more.....	1003	844	18.8	33.1	53.7
Median.....	1.10	1.08	...	...	...

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

Although about one-third of all occupied housing units in the CNMI in 1980 had more than 1.50 persons per room, the figure was slightly higher for Rota and slightly lower for Tinian (Table 9.12). (For the Northern Islands, 10 of the 13 occupied housing units had 1.50 or more persons per room). At the other extreme, Rota also had the highest proportion of housing units with less than .51 persons per room.

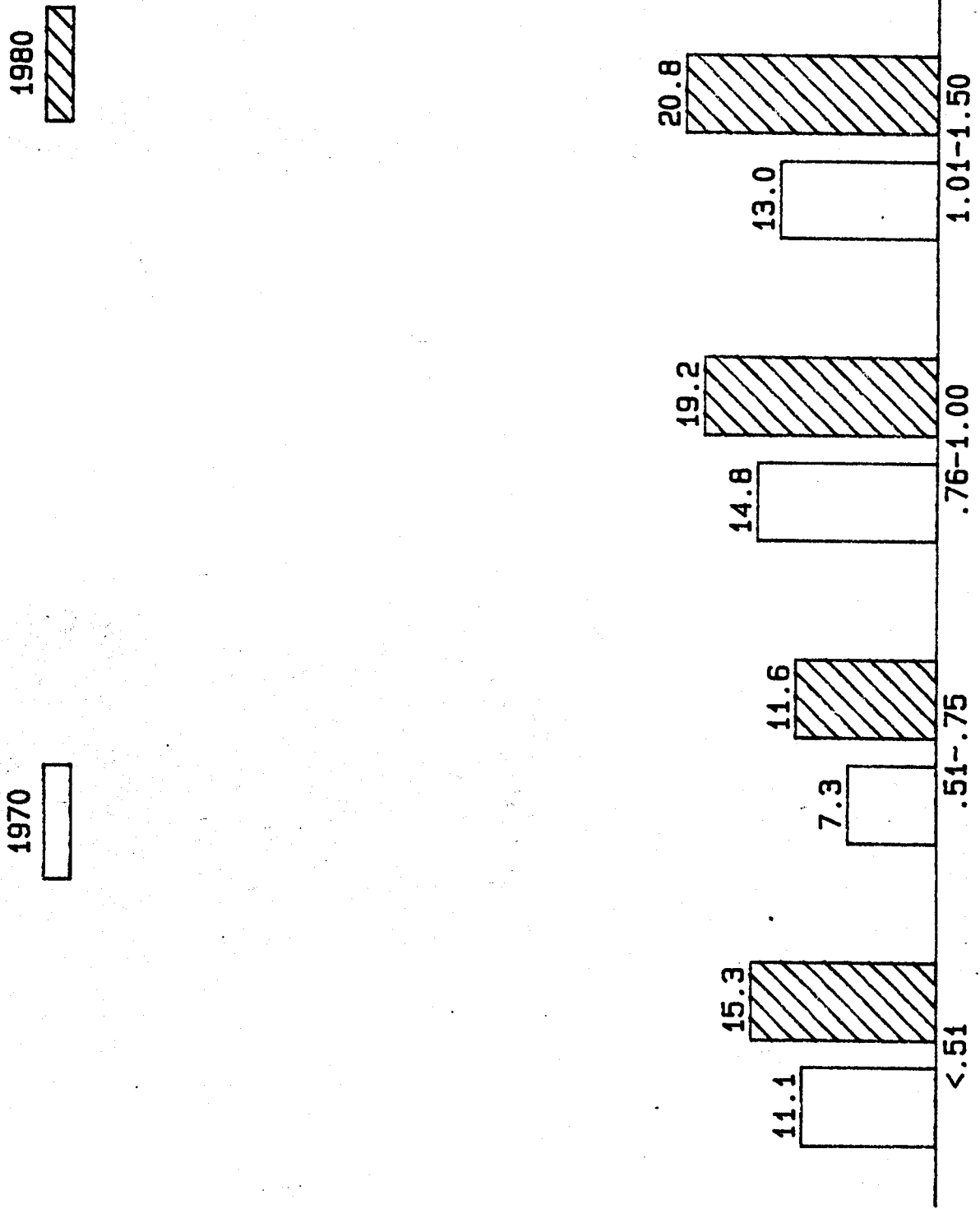
Table 9.12 Number of Persons per Room by Island: 1980

Persons per Room	Numbers				Percent				
	Sai-pan	Tin-Rota	N. Is.	N. Is.	Total	Sai-pan	Rota	Tin-ian	N. Is.
Total.....	2632	233	150	13	100.0	100.0	100.0	100.0	100.0
0.50 or less.....	394	45	24	1	15.3	15.0	19.3	16.0	7.7
0.51 to 0.75.....	309	23	17	2	11.6	11.7	9.9	11.3	15.4
0.76 to 1.00.....	518	38	25	0	19.2	19.7	16.3	16.7	0.0
1.01 to 1.50.....	548	43	38	0	20.8	20.8	18.5	25.3	0.0
1.51 or more.....	863	84	46	10	33.1	32.8	36.1	30.7	76.9
Median.....	1.1	1.1	1.3	1.9	...	...	...	...	...

Source: HC80-1-A57A, Table 3

FIGURE 9.2

Persons Per Room: 1970 and 1980 (Percent)



The number of bedrooms in units was asked for the first time in 1980. About 5 percent of all units had no bedrooms at all, which is consistent with the more traditional pattern of having only living areas without defined rooms for various activities. About one-third of the units had 2 bedrooms, and another third had three bedrooms in 1980.

Table 9.13. Bedrooms by Municipality: 1980

Bedrooms	Numbers				Total	Percent			
	Sai-pan	Rota	Tin-ian	NIs		Sai-pan	Rota	Tin-ian	NIs
Bedrooms.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
None.....	145	15	6	1	5.0	5.0	5.3	3.4	7.1
1.....	565	57	23	5	19.3	19.5	20.0	12.8	35.7
2.....	921	79	78	6	32.1	31.8	27.7	43.6	42.9
3.....	933	77	53	2	31.6	32.2	27.0	29.6	14.3
4.....	263	39	15	0	9.4	9.1	13.7	8.4	0.0
5 or more.....	68	18	4	0	2.7	2.3	6.3	2.2	0.0
Median.....	2.9	2.9	2.8	2.2	...	...	...	...	...

Source: HC80-1-A57A, Table 9

As noted earlier, Rota was experiencing a building boom about the time of the 1980 census. Fully 13 percent of Rota's housing was constructed in 1979 or 1980, on the basis of the 1980 census. (Although 3 of the 14 housing units in the Northern Islands were constructed during this period, all of these were metal structures.) About 9 percent of all housing in the CNMI was constructed during the most recent period before the census. Of the three major islands, Tinian's housing was oldest; only 7 percent of the houses were constructed in 1979 or 1980, while 50 percent were built between 1950 and 1969. Only 19 percent of the houses on Tinian were built between 1975 and 1978 compared to 24 percent on Saipan, and 28 percent on Rota (more than 40 percent of all of Rota's houses were built between 1975 and 1980.) It is important to note that less than 1 percent of all houses were built before 1940, showing both the affects of the sea and sun, as well as the bombing and other activities during World War II. Many Federal agencies request information on numbers and percent of housing constructed in 1939 and before and are frequently surprised by the small number of these units.

Table 9.14. Year Structure Built by Municipality: 1980

Year Structure Built	Numbers				Percent				
	Sai-pan	Rota	Tinian	NIs	Total	Sai-pan	Rota	Tinian	NIs
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
1979 to March 1980.....	261	37	13	3	9.3	9.0	13.0	7.3	21.4
1975 to 1978.....	679	81	34	7	23.7	23.5	28.4	19.0	50.0
1970 to 1974.....	730	61	36	1	24.5	25.2	21.4	20.1	7.1
1960 to 1969.....	850	68	72	3	29.4	29.4	23.9	40.2	21.4
1950 to 1959.....	248	19	17	0	8.4	8.6	6.7	9.5	0.0
1940 to 1949.....	102	18	5	0	3.7	3.5	6.3	2.8	0.0
1939 or earlier.....	25	1	2	0	.8	.9	.4	1.1	0.0

Source: HC80-1-A57A, Table 9

Altogether, 32 percent of the householders in the CNMI had moved into their units in 1979 or 1980 (Table 9.15). Another 34 percent moved in between 1975 and 1978 so almost two-thirds moved in between 1975 and 1980. Rota's householders were the longest term residents in their current homes: only 19 percent moved in in 1979 or 1980 while 11 percent moved in in 1959 or earlier (compared to 6 percent for the whole Commonwealth). Although 14 percent of all householders in CNMI moved in between 1960 and 1969, this was true for 23 percent of those on Tinian. Most of the householders on the Northern Islands had moved into their units relatively recently, but this phenomenon has something to do with the type of traditional house construction on these islands; when houses are constructed of less technologically complex materials, they wear out faster, so new houses are built, and householders move into these houses closer to census date.

Table 9.15. Year Householder Moved into Unit by Island: 1980

Year Moved in	Numbers				Percent				
	Sai-pan	Rota	Tinian	NIs	Total	Sai-pan	Rota	Tinian	NIs
Total.....	2632	233	150	13	100.0	100.0	100.0	100.0	100.0
1979 to March 1980.....	860	44	47	7	31.6	32.7	18.9	31.3	53.8
1975 to 1978.....	904	78	43	3	33.9	34.3	33.5	28.7	23.1
1970 to 1974.....	377	46	18	2	14.6	14.3	19.7	12.0	15.4
1960 to 1969.....	350	40	34	1	14.0	13.3	17.2	22.7	7.7
1959 or earlier.....	141	25	8	0	5.7	5.4	10.7	5.3	0.0

Source: HC80-1-B57A, Table 10

In this monograph, we are not considering the differences between owner-occupied housing units and renter occupied housing units because the definitions the U.S. Bureau of the Census used for the mainland census do not always apply in the Commonwealth of the Northern Mariana Islands (Table 9.16). If a family builds a house on communal land, paying only for the materials, and lives in the unit, the Census Bureau considers that house as being renter-occupied without payment of cash rent because no mortgage or other bank or other payments are involved. There were 697 of these units in 1980 (23 percent of the total). If these units are included with rental units, then about 60 percent of all occupied housing units in 1980 were "owner-occupied". The percent of owner-occupied units varied from 73 percent for Rota and 11 of the 13 units in the Northern Islands, to 63 percent for Tinian and 58 percent for Saipan.

An average of 5.4 persons lived in all occupied units in 1980; of these the average for owner-occupied units was 6.2 persons per unit and the average for renter-occupied units was 4.2 persons. The average for renter-occupied units was 5.2 on Tinian, probably because of the large dairy farm requiring more crowded conditions for persons working at the farm (but living in households rather than in group quarters - which are excluded from these calculations.) On the other hand, the average persons per unit in "owner-occupied" units in the Northern Islands was 9.2 persons (probably because the enumerator here placed these units in the owner rather than renter occupied status.)

Table 9.16. Tenure and Persons per Occupied Housing Unit: 1980

Occupied Housing Units	Total	Salpan	Rota	Tinian	N. Is.
Occupied housing units..	3028	2632	233	150	13
Owner-occupied housing units.	1809	1534	170	94	11
Percent owner-occ.....	59.7	58.3	73.0	62.7	84.6
Renter-occupied units.....	1219	1098	63	56	2
No cash rent.....	697	610	37	48	2
Total persons.....	16780	14549	1261	866	104
Persons in occupied units....	16234	14062	1233	835	104
Owner occupied units.....	11151	9473	1036	541	101
Renter occupied units.....	5083	4589	197	294	3
Persons per occupied unit..	5.4	5.3	5.3	5.6	8.0
Owner-occupied units.....	6.2	6.2	6.1	5.8	9.2
Renter-occupied units.....	4.2	4.2	3.1	5.2	1.5

Source: HB80-1-A57A, Table 2

The change in plumbing facilities shows specific as well as general changes in the living conditions in an area. The Commonwealth of the Northern Mariana Islands is no exception.

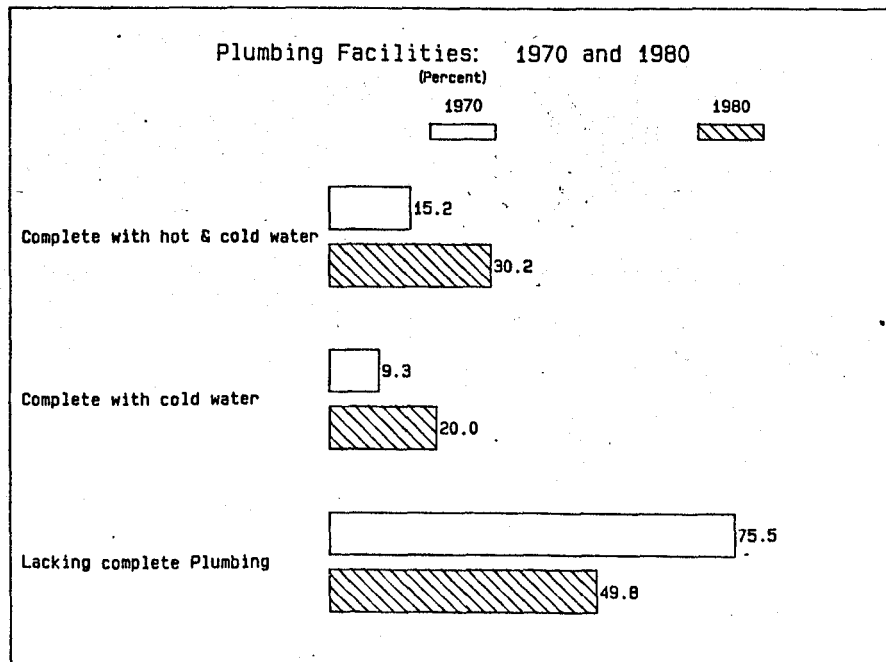
The percent of housing units with complete plumbing doubled between 1970 and 1980, from about 1 in 4 units to 1 in 2. The percents in the subcategories also doubled, with units with both hot and cold running water increasing from 15 to 30 percent (so that 3 in every 10 housing units in the CNMI in 1980 had hot and cold running water), and units with only cold running water increasing from 9 to 20 percent.

Table 9.17. Plumbing Facilities: 1970 and 1980

Plumbing Facilities	Numbers		Change From 1970 to 1980	Percents	
	1980	1970		1980	1970
Total.....	3373	1598	111.1	100.0	100.0
With complete plumbing...	1693	391	333.0	50.2	24.5
With hot and cold water.	1020	243	319.8	30.2	15.2
With cold water only....	673	148	354.7	20.0	9.3
Lacking complete plumb...	1680	1207	39.2	49.8	75.5

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

FIGURE 9.3



Data for the different islands varied considerably. Only 2 of the 14 units in the Northern Islands had complete plumbing in 1980 (Table 9.18). Of the three major islands, Saipan had the largest percentage of complete plumbing with 52 percent, followed by Rota with 41 percent, and Tinian with only 31 percent. Fully 11 percent of the units on both Tinian and Rota had no plumbing facilities at all (compared to 7 percent for Saipan.) Also, although 2 percent of the units on Saipan had complete plumbing with only cold running water, this was true for 19 percent of the units on Rota and 21 percent of those on Tinian.

Table 9.18. Plumbing Facilities by Municipality: 1980

Plumbing Facilities	Numbers				Percent						
	Sai-pan	Tin-ian	N. Is.	Total	Sai-pan	Tin-ian	N. Is.	Total	Sai-pan	Tin-ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Complete plumbing/blding	1519	117	55	2	50.2	52.5	41.1	30.7	14.3	14.3	14.3
With hot/cold water...	938	63	17	2	30.2	32.4	22.1	9.5	14.3	14.3	14.3
With cold only.....	51	54	38	0	4.2	1.8	18.9	21.2	0.0	0.0	0.0
Lacking complete plumb..	1376	168	124	12	49.8	47.5	58.9	69.3	85.7	85.7	85.7
Some, but not all.....	1172	136	104	7	42.1	40.5	47.7	58.1	50.0	50.0	50.0
No plumbing.....	204	32	20	5	7.7	7.0	11.2	11.2	35.7	35.7	35.7

Source: HC80-1-A57A, Table 2

The percentage of units with hot and cold water almost doubled between 1970 and 1980, from 17 percent to 32 percent (Table 9.19). On the other hand, the percent of units with no piped water at all also increased during the period, from 5 percent to 8 percent. This phenomenon might be partially explained by the tremendous growth in the Commonwealth during the period, with facilities not keeping up with population growth and pressure on resources.

Table 9.19. Water Supply: 1970 and 1980

Water Supply	Numbers		Change From	Percents	
	1980	1970	1970 to 1980	1980	1970
Total.....	3373	1598	111.1	100.0	100.0
Hot and cold piped water.	1082	265	308.3	32.1	16.6
Cold water only.....	2007	1246	61.1	59.5	78.0
No piped water.....	284	87	226.4	8.4	5.4

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

In 1980, 9 of the 14 units in the Northern Islands were recorded as having hot and cold water (all 9 being heated by electricity) (Table 9.20). The trend for the other islands follows the other trends for plumbing. Essentially no other means besides electricity was used to heat hot water - gas was used by only 3 units, and solar energy by another 2. About 12 percent of the units on Tinian had hot and cold piped water, compared to 23 percent for Rota, and 34 percent for Saipan. Once again, 12 percent of the units on Rota and 11 percent of those on Tinian had no piped water at all, compared to 8 percent on Saipan.

Table 9.20. Water Supply by Island: 1980

Water Supply	Numbers				Percent				
	Sai- pan	Tin- Rota	N. ian	N. Is.	Total	Sai- pan	Tin- Rota	Tin- ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
Hot and cold piped water	987	65	21	9	32.1	34.1	22.8	11.7	64.3
Heated by electricity.	982	65	21	9	31.9	33.9	22.8	11.7	64.3
Heated by gas.....	3	0	0	0	.1	.1	0.0	0.0	0.0
Heated by solar energy	2	0	0	0	.1	.1	0.0	0.0	0.0
Only cold piped water...	1682	187	138	0	59.5	58.1	65.6	77.1	0.0
No piped water.....	226	33	20	5	8.4	7.8	11.6	11.2	35.7

Source: HC80-1-A57A, Table 9

About 57 percent of year-round housing units in the CNMI in 1980 had a bathtub or shower either in the housing unit, or outside (Table 9.21). For the Northern Islands, 9 of the 14 housing units reported having a bathtub or shower, presumably the same 9 units with hot and cold piped water. For the other three islands, Saipan had the largest percent with a bathtub (59 percent). Less than half of the housing units on Rota and Tinian had a bathtub or shower: 44 percent on Rota and 40 percent on Tinian. Presence of a bathtub or shower is a housing indicator, showing transition from traditional to contemporary life-style.

Table 9.21. Bathtub or Shower by Island: 1980

Bathtub or Shower	Numbers				Percent				
	Sai- pan	Tin- Rota	N. ian	N. Is.	Total	Sai- pan	Tin- Rota	Tin- ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
With bathtub or shower..	1705	125	72	9	56.7	58.9	43.9	40.2	64.3
No bathtub or shower....	1190	160	107	5	43.3	41.1	56.1	59.8	35.7

Source: HC80-1-A57A, Table 2

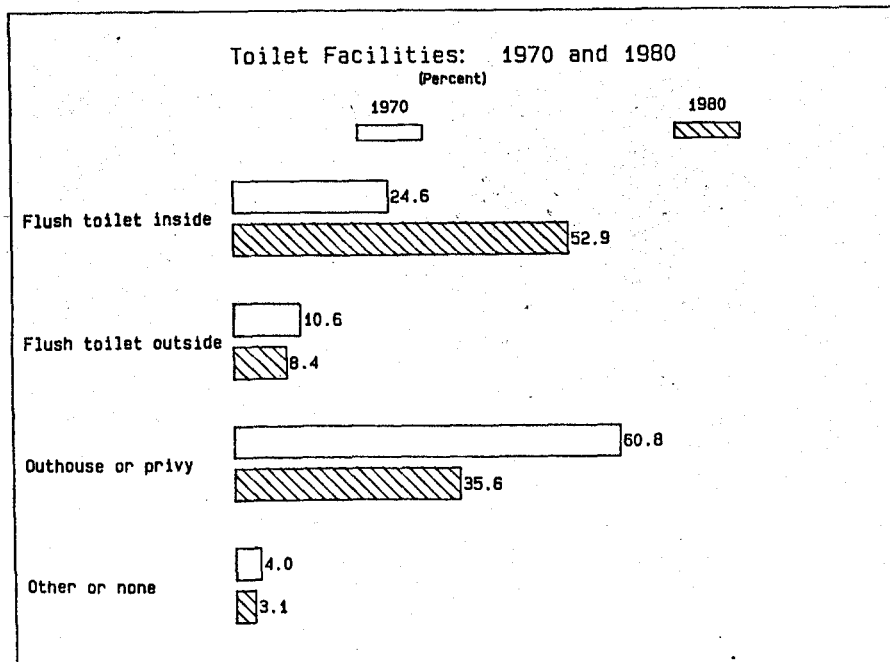
More than half of all housing units in the CNMI in 1980 had a flush toilet inside the housing unit, compared to only about one-fourth in 1970 (Table 9.22). In fact, although only 393 units in 1970 had a flush toilet inside the unit, by 1980, 1784 units fell in this category, an increase of 354 percent. All categories showed increases, but all of the other categories showed smaller increases, and all were smaller percentages of the total for the CNMI. The largest decrease was in the category "outhouse or privy" which decreased from 61 percent of the units in 1970 to only 36 percent of the units in 1980. Altogether 61 percent of the units in 1980 had a flush toilet either inside or outside the unit, compared to only 35 percent in 1970.

Table 9.22. Toilet Facilities: 1970 and 1980

Toilet Facilities	Numbers		Change	Percents	
	1980	1970	From 1970 to 1980	1980	1970
Total.....	3373	1598	111.1	100.0	100.0
Flush toilet inside.....	1784	393	353.9	52.9	24.6
Flush toilet outside.....	283	170	66.5	8.4	10.6
Outhouse or privy.....	1201	971	23.7	35.6	60.8
Other or none.....	105	64	64.1	3.1	4.0

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

FIGURE 9.4



There was a direct relationship between population size and presence of a flush toilet by island. Of the 14 units in the Northern Islands, only 2 had flush toilets, and all of the others used an outhouse. Almost 6 out of every 10 housing units on Tinian still used a privy, compared to only about 4 of 10 on Rota and 1 in 3 on Saipan. On the other hand, more than half of all the units on Saipan in 1980 had a toilet inside the building, a figure which probably shows the direction for the whole CNMI over the next few years. (The numbers for Rota may be skewed because of the relatively large number of units reporting "other or none"; these may have been units under construction which did not yet have plumbing - the figures reported here are for all year-round housing units, not just occupied units.)

Table 9.23. Toilet Facilities by Island: 1980

Toilet Facilities	Numbers				Percent				
	Sai-pan	Tin-Rota	N.ian	N.Is.	Total	Sai-pan	Tin-Rota	N.ian	N.Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
Flush toilet.....	1869	130	66	2	61.3	64.6	45.6	36.9	14.3
Inside this building..	1606	120	56	2	52.9	55.5	42.1	31.3	14.3
Outside this building.	263	10	10	0	8.4	9.1	3.5	5.6	0.0
Outhouse or privy.....	958	124	107	12	35.6	33.1	43.5	59.8	85.7
Other or none.....	68	31	6	0	3.1	2.3	10.9	3.4	0.0

Source: HC80-1-A57A, Table 2

The data for source of water show that the percentage of housing units connected to a public system changed very little between 1970 and 1980 (Table 9.24). The percentage of persons getting water from private cisterns or tanks decreased considerably, from 42 to 4 units during the period, as did the units obtaining water from a public standpipe (from 56 to 9 units). On the other hand, the number of units obtaining water from an individual well increased from 25 to 143 units, more than doubling its percentage of all units. The data on "other source" are problematic, since the figure of 110 for 1980 was more than 3 percent of all units. It is not clear what the source of water was for these units, or whether these are vacant units without water.

Table 9.24. Source of Water: 1970 and 1980

Source of Water	Numbers		Change From	Percents	
	1980	1970	1970 to 1980	1980	1970
Total.....	3373	1598	111.1	100.0	100.0
Public system.....	3107	1460	112.8	92.1	91.4
Private cistern, tanks...	4	42	-90.5	.1	2.6
Individual well.....	143	25	472.0	4.2	1.6
Public standpipe.....	9	56	-83.9	.3	3.5
Other source.....	110	15	633.3	3.3	.9

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

All 14 of the units in the Northern Islands in 1980 obtained water from catchments, tanks, and drums (more than for Rota and Tinian combined).

Table 9.25. Source of Water by Island: 1980

Source of Water	Numbers				|	Percent				
	Sai- pan	Tin- Rota	N. ian	N. Is.		Total	Sai- pan	Rota	Tin- ian	N. Is.
Total.....	2895	285	179	14	|	100.0	100.0	100.0	100.0	100.0
Public system.....	2658	281	168	0	|	92.1	91.8	98.6	93.9	0.0
Individual well.....	4	0	0	0	|	.1	.1	0.0	0.0	0.0
Catchment, tanks, drums.	118	3	8	14	|	4.2	4.1	1.1	4.5	100.0
Public standpipe.....	8	1	0	0	|	.3	.3	.4	0.0	0.0
Some other source.....	107	0	3	0	|	3.3	3.7	0.0	1.7	0.0

Source: HC80-1-A57B, Table 10

The question on sewage disposal was asked for the first time in 1980. About 1 in every 4 of the housing units in the CNMI in 1980 were connected to a public sewer, and another 3 in 10 units used a septic tank or cesspool to dispose of waste (Table 9.26). Some of the data are problematic since the 12 units on Rota and 4 on Tinian reporting connection to a public sewer are probably in error. There was no public sewer on these islands in 1980. There was no mechanical means of disposing of sewage in the Northern Islands at all. For the others, 75 percent of the units on Tinian had no mechanical means of disposal, compared to 56 percent on Rota, and 42 percent on Saipan.

Table 9.26. Sewage Disposal by Island: 1980

Sewage Disposal	Numbers				Percent				
	Sai-pan	Tin-Rota	N. Ian	N. Is.	Total	Sai-pan	Tin-Rota	N. Ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
Public sewer.....	822	12	4	0	24.8	28.4	4.2	2.2	0.0
Septic tank or cesspool.	859	113	40	0	30.0	29.7	39.6	22.3	0.0
Other means.....	1214	160	135	14	45.2	41.9	56.1	75.4	100.0

Source: HC80-1-B57A, Table 10

SOCIO-ECONOMIC INDICATORS

Housing data give a number of socio-economic indicators which help determine the relative quality of life, how it is changing over time, and comparisons for the different islands. By looking at these data, individually and collectively, we can get some insight into the general conditions of housing on the islands and how those conditions have changed, and are likely to continue to change into the future.

The percentage of housing units with electricity remained the same (at 94 percent) between 1970 and 1980 (Table 9.27). The proportion of units with cooking facilities decreased slightly during the decade (which might be partially attributable to the large number of houses under construction at the time of the 1980 census). On the other hand, the percentage of units with a refrigerator increased dramatically, from 71 percent in 1970 to 89 percent in 1980.

Table 9.27. Electricity, Cooking Facilities, and Refrigerator: 1970 & 1980

Characteristic	Numbers		Change From 1970 to 1980	Percents	
	1980	1970		1980	1970
Total.....	3373	1598	111.1	100.0	100.0
Electricity.....	3173	1508	110.4	94.1	94.4
Cooking Facilities.....	3225	1551	107.9	95.6	97.1
Refrigerator.....	2695	1116	141.5	89.0	71.0

Source: HC80-1-A57A, Table 9, and HC70, Part 58, Table 1

There were large differences in source of electricity between the islands in 1980 (Table 9.28). Apparently 9 of the 14 units in the Northern Islands were connected to electricity by a "public system"; the others had no electric power. Although 6 percent of all units in the CNMI had no electric power in 1980 (and 5 percent on Saipan), 14 percent of the units on Tinian and 13 percent of the units on Rota had no electric power.

Table 9.28. Electric Power by Island: 1980

Electric power	Numbers				Total	Percent			
	Sai-pan	Tin-Rota	N. Is.	N. Is.		Sai-pan	Rota	Tin-ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
With electric power.....	2763	247	154	9	94.1	95.4	86.7	86.0	64.3
By public utility.....	2752	245	153	9	93.7	95.1	86.0	85.5	64.3
By private generator..	11	2	1	0	.4	.4	.7	.6	0.0
No electric power.....	132	38	25	5	5.9	4.6	13.3	14.0	35.7

Source: HC80-1-B57A, Table 10

About 1 in 4 housing units in the CNMI in 1980 had air conditioning - either from a central system or individual room units (Table 9.29). None of the housing units in the Northern Islands had air conditioning, while 12 percent of those on Tinian, 16 percent on Rota, and 26 percent on Saipan had air conditioning. It should be noted that there is a high correlation between presence of electricity and air conditioning, since air conditioning is not possible without electricity.

Table 9.29. Air Conditioning by Island: 1980

Air conditioning	Numbers				Total	Percent			
	Sai-pan	Tin-Rota	N. Is.	N. Is.		Sai-pan	Rota	Tin-ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
None.....	2142	240	157	14	75.7	74.0	84.2	87.7	100.0
Central system.....	85	4	0	0	2.6	2.9	1.4	0.0	0.0
1 + individual room unit	668	41	22	0	21.7	23.1	14.4	12.3	0.0

Source: HC80-1-B57A, Table 10

About 4 percent of the housing units in the CNMI in 1980 had no cooking facilities, a percentage heavily influenced by the 13 percent for Rota (which undoubtedly included a number of unfinished housing units) (Table 9.30). About 88 percent of all the units had cooking facilities located inside the building, although this was true for only 75 percent of the units on Rota (where 12 percent used outside cooking facilities). A large majority (64 percent) of units used electricity for cooking, although 11 percent used kerosene and more than 20 percent used "other" means, including 38 percent on Rota.

Table 9.30. Cooking Facilities by Island: 1980

Cooking facilities	Numbers				Percent				
	Sai- pan	Tin- Rota	N. ian	N. Is.	Total	Sai- pan	Tin- Rota	N. ian	N. Is.
Total.....	2895	285	179	14	100.0	100.0	100.0	100.0	100.0
Cook fac. inside bldg.	2577	214	158	12	87.8	89.0	75.1	88.3	85.7
With electric stove...	1917	126	72	1	62.7	66.2	44.2	40.2	7.1
With kerosene stove...	328	4	10	4	10.3	11.3	1.4	5.6	28.6
With gas stove.....	19	0	1	0	.6	.7	0.0	.6	0.0
Other.....	313	84	75	7	14.2	10.8	29.5	41.9	50.0
Cook fac. outside bldg.	220	33	9	2	7.8	7.6	11.6	5.0	14.3
With electric stove...	24	8	2	0	1.0	.8	2.8	1.1	0.0
With kerosene stove...	24	1	0	0	.7	.8	.4	0.0	0.0
With gas stove.....	1	0	0	0	.0	.0	0.0	0.0	0.0
Other.....	171	24	7	2	6.0	5.9	8.4	3.9	14.3
No cooking facilities...	98	38	12	0	4.4	3.4	13.3	6.7	0.0

Source: HC80-1-B57A, Table 10

In 1980, only 11 percent of the housing units did not have a refrigerator. Only 6 of the 13 units in the Northern Islands had a refrigerator. For the large islands, while 17 percent of the units on Rota and Tinian had no refrigerator, only about 10 percent on Saipan were without this appliance.

Table 9.31. Refrigerator by Island: 1980

Refrigerator	Numbers				Percent				
	Sai-pan	Tin-Rota	N.ian	N.Is.	Total	Sai-pan	Tin-Rota	N.ian	N.Is.
Total.....	2632	233	150	13	100.0	100.0	100.0	100.0	100.0
Mechanical.....	2322	193	124	6	87.4	88.2	82.8	82.7	46.2
Ice.....	50	0	0	0	1.7	1.9	0.0	0.0	0.0
No Refrigerator.....	260	40	26	7	11.0	9.9	17.2	17.3	53.8

Source: HC80-1-B57A, Table 10

Presence of a radio, telephone where telephone service is available, and a television where electricity is available also show socio-economic attainment. In 1980, about 1 in 4 housing units had a telephone, 6 out of 7 had a radio, and 7 in 10 had a television (Table 9.32).

There were no telephones on either the Northern Islands or Rota in 1980, and although 28 households recorded having a telephone in 1980, actually there was no telephone service on Tinian in 1980. About 28 percent of the households on Saipan had a telephone in 1980. Since 1980 was the first time the question was asked, no comparative data are available.

All households in the Northern Islands had a radio in 1980. For the other islands, the percentage without a radio ranged very little, from 12.4 percent on Rota to 14.7 percent on Tinian.

Table 9.32. Telephone, Radio, and Television by Island: 1980

Characteristic	Numbers				Percent				
	Sai-pan	Tin-Rota	N.ian	N.Is.	Total	Sai-pan	Tin-Rota	N.ian	N.Is.
Total.....	2632	233	150	13	...	...	...	...	...
No telephone.....	1899	233	112	13	74.5	72.2	100.0	74.7	100.0
No radio.....	379	29	22	0	14.2	14.4	12.4	14.7	0.0
No television.....	725	95	82	13	30.2	27.5	40.8	54.7	100.0

Source: HC80-1-B57A, Table 10

Of course, no households in the Northern Islands had television, since reception was not possible. About 55 percent of the households on Tinian did not have a television, compared to 41 percent on Rota, and 28 percent on Saipan. Again, presence of a television was highly correlated with presence of electricity.

Knowledge about vehicles available, like air conditioning, and other energy consuming devices, is important for planning and policy purposes. In 1980, only 15 percent of all occupied housing units had no vehicle available. Only 1 of the 13 households in the Northern Islands had a vehicle (Table 9.33). For the other islands, about 1 in 8 on Saipan had no vehicle, compared to 1 in 5 on Tinian, and 1 in 3 on Rota. For Tinian, 70 percent of the households had one vehicle, compared to 61 percent on Saipan and 47 percent on Rota. Saipan had highest average number of vehicles per household (1.4 vehicles assuming that households with 3 or more vehicles had exactly 3 vehicles for this purpose), compared to an average of 1.3 vehicles per household for Rota and 1.2 vehicles per household for Tinian.

Table 9.33. Vehicles Available by Island: 1980

Vehicles available	Numbers				Percent				
	Sai-pan	Tin-Rota	N.ian	N.Is.	Total	Sai-pan	Tin-Rota	N.ian	N.Is.
Total.....	2632	233	150	13	100.0	100.0	100.0	100.0	100.0
None.....	338	79	30	12	15.2	12.8	33.9	20.0	92.3
1.....	1601	109	105	1	60.0	60.8	46.8	70.0	7.7
2.....	534	33	10	0	19.1	20.3	14.2	6.7	0.0
3 or more.....	159	12	5	0	5.8	6.0	5.2	3.3	0.0

Source: HC80-1-B57A, Table 10

Data on housing characteristics on the elderly were also collected for the first time in 1980 (Table 9.34). Only 269 of the 3,028 occupied housing units (8.9 percent) had a householder 65 years or older in 1980. Of these, 80 percent were owner-occupied housing units (although the definition of "Owner" has to be considered ambiguous in light of the fact that many people construct housing on communal lands and were therefore placed in the "Renter not paying rent" category in 1980.)

Summary characteristics for the elderly show differences from the characteristics for all households. For example, 54 percent of the elderly households lacked complete plumbing compared to 50 percent for all households. Similarly, although 15 percent of households in the CNMI in 1980 did not have access to a vehicle, this was true for 35 percent of the elderly households. While 14 percent of the total households had no radio, 25 percent of the elderly households were in this category. Finally 76 percent of all households did not have air conditioning compared to 90 percent of the elderly households.

Because of the small numbers of elderly households on Rota, Tinian, and the Northern Islands, island comparisons are not possible for the elderly.

Table 9.34. Characteristics of Housing Units with Householder or Spouse 65 Years and Over by Island: 1980

Characteristic	Numbers				Total	Percent			
	Sai-pan	Tin-Rota	Tin-ian	NIs		Sai-pan	Rota	Tin-ian	NIs
Occupied Housing....	214	37	17	1	...	...	...	...	...
Owner-occupied HUs.....	167	31	16	1	79.9	78.0	83.8	94.1	100.0
Lacking complete plumb..	104	26	15	1	54.3	48.6	70.3	88.2	100.0
No cooking facilities...	1	1	0	0	.7	.5	2.7	0.0	0.0
No vehicle available....	63	24	7	1	35.3	29.4	64.9	41.2	100.0
No radio.....	53	11	4	0	25.3	24.8	29.7	23.5	0.0
Lacking air condition...	191	34	17	1	90.3	89.3	91.9	100.0	100.0

Source: HC80-1-B57A, Table 10

Finally, a limited number of financial characteristics for housing data were collected in 1980. Altogether, value of the unit was collected for 1,229 of the 1809 owner-occupied units (90 percent) (Table 9.35). The median value of the housing in the CNMI in 1980 was \$10,400. The units on Saipan had the highest value at \$12,236. By 1980, 12 percent of the units on Saipan were valued at \$50,000 or more.

Table 9.35. Value of Owner-occupied Housing Units by Island: 1980

Value	Numbers				Percent				
	Sai-pan	Tin-Rota	N. Ian	N. Is.	Total	Sai-pan	Rota	Tin-ian	N. Is.
Total.....	1388	154	76	11	100.0	100.0	100.0	100.0	100.0
Less than \$1000.....	101	20	0	1	7.5	7.3	13.0	0.0	9.1
\$1,000 to \$1,999.....	47	20	2	1	4.3	3.4	13.0	2.6	9.1
\$2,000 to \$2,999.....	72	12	1	4	5.5	5.2	7.8	1.3	36.4
\$3,000 to \$3,999.....	71	5	12	2	5.5	5.1	3.2	15.8	18.2
\$4,000 to \$4,999.....	40	4	10	0	3.3	2.9	2.6	13.2	0.0
\$5,000 to \$7,499.....	228	15	28	3	16.8	16.4	9.7	36.8	27.3
\$7,5000 to \$9,999.....	75	5	10	0	5.5	5.4	3.2	13.2	0.0
\$10,000 to \$14,999.....	161	13	7	0	11.1	11.6	8.4	9.2	0.0
\$15,000 to \$19,999.....	102	6	4	0	6.9	7.3	3.9	5.3	0.0
\$20,000 to \$24,999.....	97	10	1	0	6.6	7.0	6.5	1.3	0.0
\$25,000 to \$29,999.....	58	10	1	0	4.2	4.2	6.5	1.3	0.0
\$30,000 to \$39,999.....	98	19	0	0	7.2	7.1	1.4	0.0	0.0
\$40,000 to \$49,999.....	70	7	0	0	4.7	5.0	.5	0.0	0.0
\$50,000 or more.....	168	8	0	0	10.8	12.1	.6	0.0	0.0

Source: HC80-1-A57A, Table 4

Table 9.36. Contract Rent by Island: 1980

Contract rent	Numbers				Percent					
	Total	Sai-pan	Tin-Rota	N. Ian	N. Is.	Total	Sai-pan	Rota	Tin-ian	N. Is.
Total.....	1219	1098	63	56	2	100.0	100.0	100.0	100.0	100.0
Less than \$50.....	129	115	13	1	0	10.6	10.5	20.6	1.8	0.0
\$50 to \$59.....	46	43	2	1	0	3.8	3.9	3.2	1.8	0.0
\$60 to \$69.....	16	16	0	0	0	1.3	1.5	0.0	0.0	0.0
\$70 to \$79.....	24	22	1	1	0	2.0	2.0	1.6	1.8	0.0
\$80 to \$89.....	8	5	3	0	0	.7	.5	4.8	0.0	0.0
\$90 to \$99.....	4	4	0	0	0	.3	.4	0.0	0.0	0.0
\$100 to \$119.....	27	26	1	0	0	2.2	2.4	1.6	0.0	0.0
\$120 to \$149.....	21	19	0	2	0	1.7	1.7	0.0	3.6	0.0
\$150 to \$199.....	47	40	4	3	0	3.9	3.6	6.3	5.4	0.0
\$200 to \$249.....	39	38	1	0	0	3.2	3.5	1.6	0.0	0.0
\$250 to \$299.....	34	34	0	0	0	2.8	3.1	0.0	0.0	0.0
\$300 to \$399.....	94	93	1	0	0	7.7	8.5	1.6	0.0	0.0
\$400 to \$499.....	18	18	0	0	0	1.5	1.6	0.0	0.0	0.0
\$500 or more.....	15	15	0	0	0	1.2	1.4	0.0	0.0	0.0
No cash rent.....	697	610	37	48	2	57.2	55.6	58.7	85.7	100.0

Source: HC80-1-A57A, Table 4

Table 9.36 shows the amount of contract rent paid for renter-occupied housing units. The median contract rent for the CNMI in 1980 was \$125 and varied from \$100 on Saipan to \$417 on Tinian. About 11 percent of all the renter-occupied units had contract rent of less than \$50, but this was true for 21 percent of the units on Rota. Of course, 57 percent of the units paid no cash rent at all.

CONCLUSIONS

The data presented here show that while the Commonwealth of the Northern Mariana Islands probably has a better housing inventory than many developing countries, there are a number of areas where improvement is still needed. While 61 percent of the housing units have flush toilets, for example, that still means that 39 percent do not. A large number of housing units still do not have kitchen facilities or complete plumbing. On the other hand, a balance must be maintained for the island ecosystem. The effects of large numbers of vehicles, central air conditioning, and frost-free refrigerators have not been adequately measured, and energy use and consumption must be considered for planning and policy use.

FIGURE 9.5 PERCENT OF YEAR-ROUND HOUSING UNITS WITH AIR-CONDITION: 1980

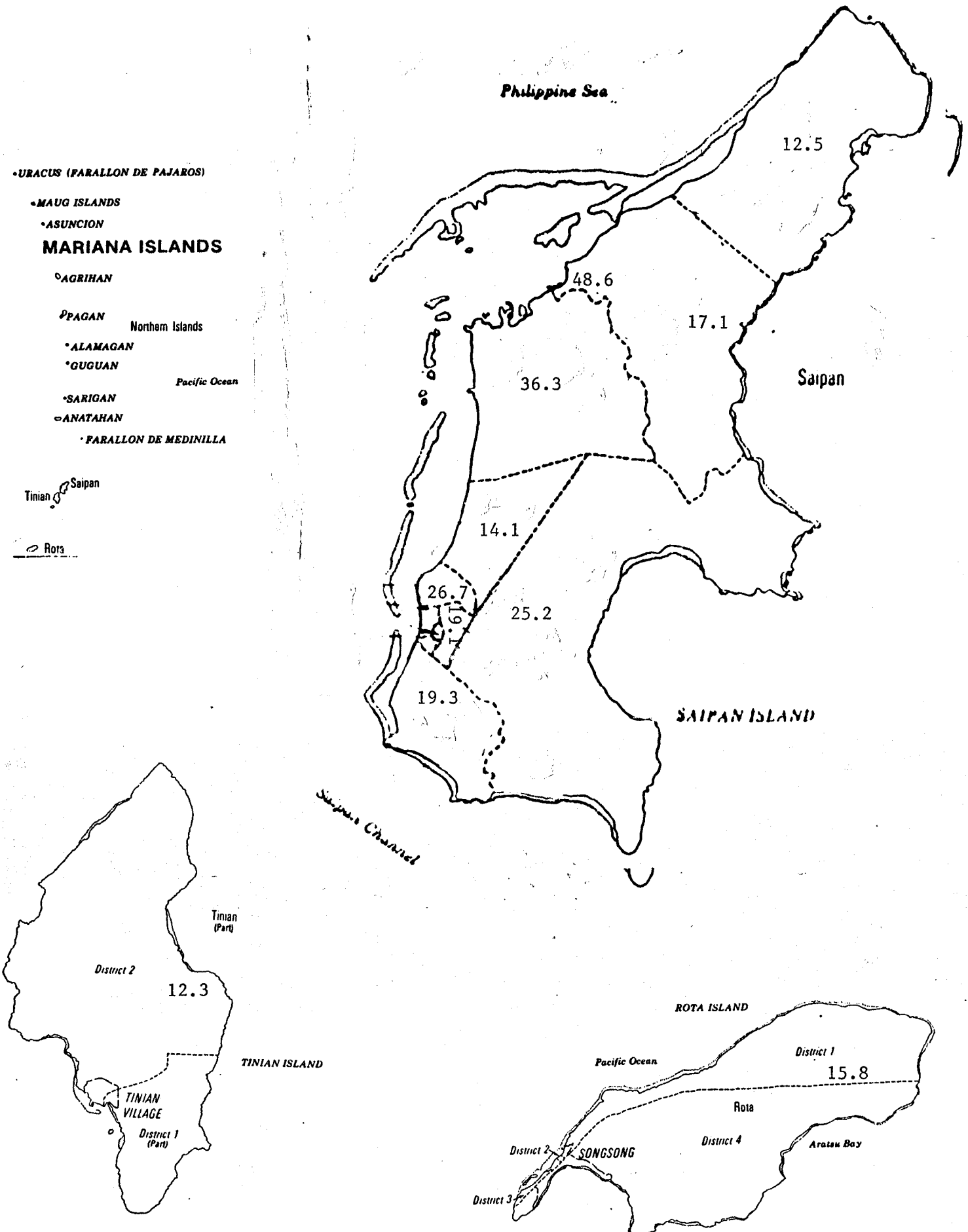


FIGURE 9.6 PERCENT OF YEAR-ROUND HOUSING UNITS BUILT AFTER 1969: 1980

