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Change in Land Use and Villages—Fiji: 1958–1983

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Gerard Ward: Personal Journey

I began my links with the Pacific Islands region, which the University of the South Pacific (USP) now serves, in 1956 when I worked on a study of land use in Western Samoa. In the late 1950s, I undertook research on land use and population in Fiji, and it has remained a major site for my studies ever since. After USP was established, its library became a valuable resource for me and a number of its staff became close collaborators. Thus, when asked to be a member of the 1991 review team, it was a most welcome opportunity to renew contacts and contribute to USP itself.

A further opportunity occurred in 2003 when USP invited me to write a vision statement for the university: 'A Regional University of Excellence—University of the South Pacific', completed in 2004.

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Fiji, an archipelagic state of some 250 islands, of which about 70 are inhabited, lies 2,500 kilometres from its nearest larger neighbours, Australia and New Zealand. Of its population of over 600,000, 43 per cent are ethnic Fijians, 51 per cent Fiji Indians. Population is increasing at about 2.2 per cent per year, a fall from the rates of between 3 and 3.5 per cent that occurred in the 1950s. There is a considerable degree of economic specialisation between ethnic groups with Fijians concentrated in mixed subsistence–commercial agriculture and the public service, and Indians in smallholder sugar-cane growing and commerce. Although these occupational contrasts are decreasing, different distribution patterns result, though both major ethnic groups are well represented in the urban areas, which now have about 37 per cent of the total population.

Total population increased by 93 per cent between 1956 and 1982. Agriculture remains the main employment sector. With increasing population, expansion of emphasis on commercial farming and experience, and the drive for increased exports of sugar, the last 25 years have seen a rapid increase in the area of land in use. New levels of land use competition have emerged. Further increases in the numbers of people supported directly by agriculture and forestry will depend increasingly on intensification of land use. Soil surveys show that only about 30 per cent of the land area is suitable for agricultural and pastoral use (Twyford and Wright 1965). The greater part of the country is steep land largely unsuited for any productive use except conservation forests. Despite these limits on the expansion of farming, the limited range of alternative development opportunities engendered by small size and distance from markets or major sources of tourists leads the government to policies of maintaining a major rural sector and keeping people on the land.

There are also important land tenure constraints, which mean that a free land market does not operate except in restricted areas. Eighty-two per cent of the land is 'native land', owned by Fijian clan groups. In 1874 the British colonial government, concerned at the speed at which Europeans had been buying land, forbade the further sale of Fijian land to non-Fijians in order to protect the Fijians' access to the means of agricultural production. In fact, this was virtually the first act of the new colonial government. Eight per cent of the land is freehold. This represents land that Fijians had sold before 1874 and can be bought and sold. Needless to say, scarcity pushes up the market price of such land, often to levels beyond that at which agriculture is really economic. Nine per cent is Crown or government-owned land.

Fijian Indian farmers obtain land by purchasing freehold land, by leasing land from the government or by leasing native land through the Native Land Trust Board, which handles all leasing of Fijian land. About 30 per cent of the country (or 40 per cent of the native land) is in reserve and cannot be leased to any non-Fijian.

Thus the tenure class of any land is an important determinant of who can use it. As land quality also varies within each tenure class, the relationship between tenure and quality is important. Because the early European settlers sought and purchased high-quality land, 30 per cent of freehold land is Class I, and only 16 per cent of little use. But of the unleased native land only 16 per cent is Class I and 44 per cent is of not productive use (Class IV).

In the remainder of this paper I shall consider changes in land use and related matters over the last 25 years at two scales. The first is for the whole of the largest island, Viti Levu, which makes up 58 per cent of the country's land area. The second is at the micro level of three Fijian villages in Viti Levu.

Between 1958 and 1960 I completed a land use survey of most of Fiji at a scale of 1:50,000 using aerial photograph interpretation and ground checking (Ward 1965). In 1978 the Fiji Department of Agriculture completed a similar survey at the same scale. Figure 1 shows the land in use in 1958, the land developed and put into use between 1958 and 1978, and the land which in 1978 was already committed to future development.

In Viti Levu, the area of land in use increased by 233 per cent between 1958 and 1978 (and by 283 per cent if committed land is included), while the rural population of the island increased by 31 per cent between 1956 and 1976. Expansion of the area in use has continued since 1978. The fact that the increase in area in use has not been matched by comparable increases in rural population highlights some key characteristics of land use development over the past quarter century.

By 1958 the greater part of the Class I and II land (suitable for arable farming) was already occupied, primarily by sugar cane farms. Cane farms on the best land (Class I) in the late 1950s could support population densities of about 270 persons per square kilometre. On marginal land, the figure was closer to 40 per square kilometre. The dramatic increase in the area of land under cane, which took place during the late 1970s, mainly occurred on Class II or even Class III land. The latter is

suitable for use only after major improvement. New sugar cane farms average 20 hectares compared with about 4 hectares on the best land of older cane areas. In other words, most of the expansion of land use since 1958 has been onto second-class and marginal land, which cannot support densities comparable to those on land already occupied by 1958.

A great deal of the expansion of land use has been through the establishment of the Fiji Pine Commission's pine plantations and the Department of Forestry's hardwood and other plantations. Both developments are in the main on lower-quality land and, as extensive forms of land use, are unlikely to support high densities of rural population. The major pastoral settlement scheme at Yalavou provides about 100 farms averaging approximately 240 hectares each and, apart from the farm families, is likely to generate about 50 additional rural jobs. Therefore, schemes like this are unlikely to support population densities of more than about four per square kilometre. Farms on cattle schemes in the wet zone of the east are generally smaller, but even here holdings average about 35 hectares and are unlikely to support more than about 30 persons per square kilometre.

Thus the general tendency has been for new land development to be for less-intensive farming, matching the generally lower quality of the unused land compared with that which was in use in the late 1950s. It would be unrealistic to expect most of Fiji's currently unused but useable land to support rural population densities of an order higher than between 20 and 40 persons per square kilometre.

In the case of native land occupied under customary tenure and used for mixed subsistence-cash crop agriculture, the assessment of 'carrying capacity' is much more complex. Under a purely subsistence system, and on good-quality land, a predominantly root crop agricultural system incorporating adequate fallow periods might support population densities of the order of 100 to 150 persons per square kilometre if no land is needed for forestry, firewood or hunting areas. In fact, densities of this level will be achieved rarely because of variable land quality. Nevertheless, the high yields attainable from root crops for relatively low labour inputs make this a theoretical possibility if there is little need to purchase food and consumer goods. When cash crops are added to, or replace, the subsistence crops, the land requirement per family increases. The increase is obviously greater with conversion to low-intensity forms of commercial farming such as grazing or copra production.

Figure 1. Viti Levu: Area of land use in 1958 and 1978.

Source: Based mainly on 1958 and 1978 land use surveys (see text). Originally prepared for Fiji Employment and Development Mission.

Figure 2. Viti Levu: Land unused in 1978 that is suitable for use.

Source: Based on data from Twyford and Wright (1965) as well as 1958 and 1978 land use surveys (see text). Originally prepared for Fiji Employment and Development Mission.

In the 1970s Fijian villages absorbed considerable numbers of people who might otherwise have been forced to seek work in the urban areas where unemployment is already considerable. This rise in village population has been possible because of some important features of traditional land tenure. But, as will be shown below, trends in rural villages suggest this possibility may not continue.

Figure 2 shows the land in Viti Levu that is suitable for use but that was not in use in 1978. The greater part of the unused or uncommitted land is of Class III quality, with soils suited to permanent agriculture or pastoral use only after major improvements. These improvements include major soil conservation measures on the steeper land, major drainage schemes on poorly drained areas or heavy regular fertiliser applications on infertile soils. The implication in terms of support of population is that future land use will be extensive on such areas with low population densities. In western Viti Levu, the areas of unused land are likely to be most suited to extensive grazing or pine afforestation, although distance to processing plants may be a problem in the latter case. The unused land of the south is generally hilly and the cost of providing access will be relatively high. There may be prospects for tree crops, grazing and perhaps further planting of hardwoods on land that is generally not under native reserve.

The best prospects for expansion of agriculture and pastoral farming in Viti Levu are in the east and there is more unused Class II land here than in other parts of the island. This needs only minor improvement. However, it must be noted that in this area very rapid expansion of pasture, crop production (for example, ginger) and cacao planting has occurred in the period since 1978. This expansion is not allowed for in the map and thus part of the area shown as unused or committed has in fact already been put into use.

This discussion of the area and quality of available land is at a very broad scale. The key point is that the last 25 years have seen a remarkable expansion in the area of land under economic use, but the reserves of land suitable for continuation of this trend are now limited, fragmented and generally of poor quality. Infrastructure costs per new farm will rise, and the time is approaching when these costs will outweigh the potential benefits. Thus future strategies for rural development will have to be based on greater intensification of land use, although a contradictory trend of increasing farm size may also become more obvious as higher standards

of living are sought by farmers. It seems unlikely that the next 20 years will see as great an increase in rural population as occurred in the 1960s and 1970s and, as a consequence, the urban and non-agricultural sectors will be called on to provide a higher proportion of the necessary new jobs than they have provided in recent years. As long as the majority of Fijians have the opportunity to use customary land for subsistence cropping, and for some cash cropping, then village communities will be able to absorb some additional population in the largely non-monetary economy and provide a security net for those unable to find urban or other wage employment. A number of trends suggest that this condition will not be maintained for much longer.

Land is not distributed with any degree of equality between owning groups. In part this simply reflects the inequalities existing at the time of survey and registration of native land. In the decades since clan (*mataqali*) holdings were registered, the differential growth, or decline, of owning groups has led to greater divergence between the size of these groups and the areas of land held. Thus, some groups with few members now hold large areas while others, with many members, have little land. Where traditional systems of allocating land for use applied, such divergence in legal holdings was of limited significance. Members of *mataqali* with little land, or whose holdings were located at some distance from the village, were able to use the land of more fortunately placed groups. Recompense, made through customary processes, was non-monetary and usually not very demanding. In areas with little pressure on land, no significant material recompense was necessary.

Studies in the late 1950s showed that in villages that were close to urban areas or were otherwise firmly locked into commercial farming or other monetary activities, landowners were reluctant to allow other members of their own village who were short of land to have access to garden land through traditional mechanisms. In such areas, the monetary value of land, realisable by leasing or through cash cropping was fully recognised and 'lending' land to members of other *mataqali* was rarely practised (Ward 1960). Elsewhere, this was not the case and many Fijian farmers planted freely on the land of other *mataqali*. In the north-east, many of the villagers are members of *mataqali* who had left their own lands in the hills to the east and west of the main Wainibuka River valley and moved, by customary agreement, to live close to the river (and later the road) and use the land of other villagers.

In 1983 I revisited three villages in which I had worked in 1958 and 1959. In 1958, Saliadrau was very isolated with access only by foot or on horseback. Sote was more accessible by road and river. Nabudrau, while close to the capital Suva, could only be reached by boat and foot and had not had land suitable for commercial agriculture. Survey results on these villages were published in 1960 and 1965 (Ward 1960 and Ward 1965:271–95).

The changes in material conditions in the three villages are representative of those that have occurred generally. In 1958–59, all houses in Saliadrau, most in Sote and some in Nabudrau were built of local material (such as reed and split bamboo walls) and had thatch roofs. In 1983 all houses had iron roofs, most had sawn timber walls and in some concrete blocks were used. Water-sealed pit latrines or well-constructed covered pits were the norm in 1983 and all three villages have piped water, whereas only Nabudrau had this facility in 1959.

One of the most striking changes is in the material possessions of households. Furniture in houses now commonly includes beds, tables and chairs, food and clothing cupboards, and curtains. Some houses are subdivided into separate rooms or sleeping areas. Radios are commonplace. In the technical field, the greater use of motor mowers, chemicals for agriculture, a plough in one village, trucks (in two villages), outboard motors and other equipment reflects the much deeper involvement in the commercial economy. Altogether, these changes suggest a considerably higher material level of living than in the late 1950s.

The extension of rural roads has benefited Saliadrau and Sote. The former was reached by all-weather road in 1981, while a farm access road ends close to Sote although river transport to the main highway is still used for most movement of market produce. Nabudrau, in the lower Rewa Delta, is still dependent on outboard motor boats to provide the link to roads that in turn provide access to Suva, and thus suffers from high transport costs despite being close ‘as the crow flies’ to Suva.

The principal farming system in both years was swidden cultivation, usually with taro being the initial crop, though often interplanted with *yaqona* (*Piper methysticum*), which would then remain in the garden until harvested several years later. The dried root of *yaqona* is used to make a drink that is a mild narcotic, of ceremonial importance and relatively high value. Yams were of declining importance and cassava

was a recent introduction to provide emergency food after the 1952 hurricane. The average area planted per household (excluding pasture and coconuts) in 1958 was 0.41 hectares, or 0.08 per head.

Gardens were well scattered, with some about 2 kilometres from the village. Some were on the restricted area of alluvial terraces near the village, but most were on steep land with slopes of up to 45 degrees. Apart from the *yaqona*, all production was for consumption within the village. Very little purchased food was used, although a tiny cooperative store had been established.

In 1983, although population was higher and there were more gardens, the total planted area was lower. The area planted per household (excluding pasture and coconuts) had fallen to 0.25 hectares and 0.05 hectares per head. However, in addition to *yaqona*, taro was now sold regularly in Navua and Suva markets, being carried in about one-and-a-half hours in a truck owned by one of the village families. But the most striking change was the increase in the area under cattle pasture, most being on a formal lease that covered much of the alluvial terrace adjacent to the village. A second lease had been applied for by another villager. The general pattern of garden location was much the same in 1983 as in 1958, except that more gardens were being planted on the ridges to the south of the village and on the opposite side of the river where the road is located. The alluvial flats could no longer be used because of the cattle farm.

In Sote village the changes in land use were rather more marked. Bananas, which had been the village's main cash crop in 1959, have virtually disappeared. This followed the general collapse of Fiji's export banana industry in the 1960s. Disease, shipping difficulties and hurricane damage all played a part in the demise of the industry. In Sote, root crops are now the main cash crop. The pattern of garden location has changed, with less emphasis on the small alluvial terraces where bananas were formerly planted. Some of this land is now under pasture, both on formal leases and under more customary arrangements. Recently, a number of cacao blocks, each of about 0.8 hectares, have been planted under forest shade, but most trees are still immature.

Less obvious, but of considerable importance, are changes in cultivation practices. In 1959 most taro gardens in Sote contained a number of taro varieties, sometimes six or seven in the one plot. Today, growers concentrate on the two varieties that are most popular in the Suva and

Nausori markets. A new 'Malayan' variety of *Saccharum edule* has been introduced; it flowers twice a year and thus is more productive for the market. At least one grower is using hormone treatment to induce out-of-season production of pineapples. Ploughing has been used by several farmers. The planted area (excluding coconuts and pasture) had fallen from 0.14 hectares to 0.1 hectares per head of population.

Livestock farming has become important and there are six cattle enterprises (three on formal leases) on village land, with a total area of 63.5 hectares under pasture. In addition, three members of the village have leases in a cattle development project to the north of the village. A commercial piggery has been set up, using purchased feed for the most part. The locking up of large areas in pasture is now a potential constraint on garden location. Several farmers have moved out of the village to live close to their own gardens for most of the time, and others are considering following suit.

In the latter half of the 1950s, Nabudrau was a village in decline. Its population had fallen to 57 in 1956 (from 155 in 1891). In 1958 there were only seven men in the village available for full-time agricultural work, while 52 men were working away from the village. A history of involvement in wage labour going back to the 1920s, as well as the restrictions of a low-lying swampy site, meant that there was virtually no cash cropping in Nabudrau. In both 1959 and 1983, 0.04 hectares were planted (excluding coconuts) per head of population. In 1983 there was still no significant cash cropping, and the subsistence gardening practised was little different from that of 1959. Almost all the food consumed in the village was grown there, although fish was obtained in an old exchange relationship with a nearby fishing village. Root crops were given in exchange.

Despite there being no significant cash income from agriculture, Nabudrau in 1983 was a much more active and much less depressed village than in 1959. A number of middle-aged men who had retired with pensions from public service or army positions had returned to live in the village. The school had expanded, serving several nearby villages. Instead of village children being sent to school in Suva (to take advantage of better facilities), some Suva residents of Nabudrau origin were now sending children to live in the village and attend school as this was somewhat cheaper than keeping them in Suva.

In 1958–59 in all three sample villages, three-quarters or more of the gardens were located on land that did not belong to the planter's kin group (Figures 3, 4 and 5). It was possible to predict in the early 1960s, as the commercial imperative (or, in another terminology, the penetration of capitalism) continued, that this rather *laissez-faire* attitude to the relationships between ownership and use of land would change. This has happened. Studies carried out in 1982–83 for the Fiji Employment and Development Mission showed clearly that intra-village disputes of land were becoming much more common and that villagers were less and less willing to allow non-members of a *mataqali* to use that *mataqali*'s land except through formal leases or following informal rent payments. In 1959, 74 per cent of the gardens in Sote were on land that did not belong to the planter. In 1983 in this village, the most committed of the three sample villages to commercial farming, the proportion had dropped to 37 per cent. In Nabudrau, where commercial agriculture was not significant, the situation was unchanged.

The case of Saliadrau, where the degree of commercial involvement had increased markedly only within the last two years (before 1983), the change compared with Sote had not been so great. But the position needs elaboration. A considerable proportion of the Saliadrau gardens (23 per cent in 1958; 36 per cent in 1983) were located on land to the south of the village belonging to a related *mataqali* resident in a neighbouring village, but with rather difficult access from that village. That village was not short of planting land in 1959 and, although a couple of its members are now planting in the general area used by Saliadrau, the flexible use situation has continued until the present. If one were to exclude this area from calculations, the 1958 figures would be 69 per cent of gardens on land that did not belong to the planter's *mataqali*, and only 46 per cent in 1984. It can be suggested that the pressures to relate use to ownership are also appearing in Saliadrau.

Figure 3. Location and tenure of gardens, Saliadrau village, 1958 and 1983.

Source: Author's fieldwork, 1958 and 1983.

Figure 4. Location and tenure of gardens, Sote village, 1959 and 1983.
Source: Author's fieldwork, 1959 and 1983.

Figure 5. Location and tenure of gardens, Nabudrau village, 1959 and 1983.

Source: Author's fieldwork, 1959 and 1983.

Other changes are also evident in both Sote and Saliadrau. Since the 1960s it has been possible for Fijians to take out formal leases over the land of either their own or other *mataqali*. The leases are processed by the Native Land Trust Board with the agreement of the owning *mataqali*. Once leased the land lies outside the area of possible use under customary practices, and such leases are normally taken up for commercial purposes. The Sote example is instructive. To the north of the village, where Sote people formerly grew bananas on the land of another village, the leases of the cattle project now commit the land to cattle pasture. At least three Sote people live on their individual cattle farms within the scheme. To the south of the river that forms the northern boundary of village land, three formal leases and three other cattle farms on unleased land lock up 63.5 hectares under pasture. These pastoral farms constrain the area that can now be used for food or cash crop gardens. In addition, Sote people have leased 2,652 hectares to the government for mahogany plantations. As yet the removal of this land from the commercial pool has not had serious effects. Nevertheless, when combined with the increasing reluctance to allow non-owners to use customarily held land, especially for cash crops, the implications for land-short *mataqali* are quite clear.

Changes of the type described in the above paragraphs reduce the capacity of the Fijian village to accommodate people regardless of the extent of their legal landholdings. It was this capacity that allowed the villages to absorb many of the growing number of younger people who, in the late 1970s and early 1980s, would otherwise have been forced into urban employment or unemployment. In many villages, the trends described here have gone much further than in the sample villages. It is not unreasonable to suggest that, if present trends continue, another 10 years will see the end of the land tenure/land use flexibility that has persisted so far.

It is clear that the social and economic situation in Fijian villages has changed considerably over the last quarter century, and a number of trends are closely linked to the land use and land tenure changes described above. The first is the increasing number of tasks that are now performed by the nuclear family or household rather than by wider kin groups. As more farmers establish consolidated holdings on leases or on unleased *mataqali* land this trend will continue. Wage labour of varying degrees of formality within villages is increasingly widespread. So too is daily or weekly commuting from villages to urban or rural non-farm jobs. The improved road network of the last decade has facilitated this but it is not a new development, though now much more common. The withdrawal

of this labour from farming does have implications for certain agricultural practices and crop choices. It also brings more cash and information into the villages. Daily papers and radio news broadcasts keep people informed of national events, even in villages like Saliadrau. Market information is now spread much more quickly.

It is also clear that there is now much greater variation in wealth and income within villages. In the case of Saliadrau, one man—a commoner—who stood out in 1958 solely because he had a few more garden plots than anyone else, is now the owner of the only truck in the village, has a cattle holding (on a formal lease) and a plantation of mahogany, was the first to build a sawn timber and iron-roofed house, is about to build a concrete-block house, has more furniture than anyone else, and is clearly en route to becoming a 'big peasant'. Meanwhile, the traditional village leaders of Saliadrau are not so well placed economically. Brookfield (1975) and others have noted the increasing presence in villages of people who are destitute or have very low real incomes. The individualisation of economic activity, the changing degree of access to land and cash, and the decline in the efficacy of mobilising assistance through kinship networks have detrimental as well as beneficial effects on different people. And the social security net of the 'traditional' social system is becoming much less effective. Spate, in his extremely perceptive report to the government, published in 1959, foresaw most of these trends.

In conclusion, some matters of policy importance may be noted. It should be recognised that a 'new frontier' approach to land development will not be practical for more than a few years as the supply of unused land will be inadequate. The ability of the subsistence component of the rural economy to absorb more people is questionable both because of rising expectations and the process of privatisation of land tenure. The rapid expansion of pastoral farming on village land may need to be questioned as there is a growing tendency for cattle to be grazed on the easily accessible alluvial flats, and for subsistence or commercial root crops to be forced onto steep land that cannot sustain prolonged cultivation. Rural villages within reach of urban areas or other wage employment areas will become increasingly dormitory centres for wage workers, with a destabilising effect on the role of the village in farming, and particularly production for market. The polarisation between the richer and the poorer in rural society will become more marked, perhaps with important consequences for the bonds that formerly held the Fijian society of chiefs and commoners together.

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