W. MacTaggart

Land-use in Sukabumi, West Java; Persistence and change

In: Bijdragen tot de Taal-, Land- en Volkenkunde 138 (1982), no: 2/3, Leiden, 295-316

This PDF-file was downloaded from <http://www.kitlv-journals.nl>

W. DONALD McTAGGART

LAND-USE IN SUKABUMI, WEST JAVA; PERSISTENCE AND CHANGE*

In his earlier work on the nature of the Southeast Asian city McGee tried to apply models of land-use which had been developed specifically with reference to the western city (McGee 1969:126-133). Such models, based on sectoral and concentric principles, and modified to take account of the cultural milieu of the region, were believed to provide at least a provisional descriptive framework which could serve as a starting-point for systematic analysis. Later work by other writers, and even by McGee himself, has tended to follow a different approach. Instead of trying to establish a framework which is intrinsically spatial, an attempt has been made to demonstrate how socio-economic characteristics of a society as a whole are translated into spatial forms (McGee 1974 and 1976; Santos 1975). Land-use therefore is seen to reflect not only the spatial exigencies of the functioning of society, but also political forces, class differentiation, the structure of land tenure, and the response to developing technology. An analysis of land, its ownership, transmission, and use, can serve as a map of social and economic relationships, reflecting the interplay and opposition of structural and spatial factors (Benda Beckmann 1979).

Such a map, of course, is not static. In the short term, population growth and the vicissitudes of the economy may introduce an element of dynamism into the urban landscape. The built-up area may extend, intensify, or experience changes that reflect technological changes in society as a whole. Nevertheless, through these changes a certain permanence may be manifested. The imprint of class relationships or ethnic divisions may remain strongly embedded in the landscape of the town, at least as long as these divisions remain important for that society. And in some cases the urban imprint of social class and the political dimension may survive the demise of the society which nurtured it, though perhaps in a modified form.

* The writer acknowledges a faculty grant-in-aid from Arizona State University enabling the field work for this paper to be carried out.

W. DONALD McTAGGART, who took his Ph. D. at the Australian National University in Canberra, is currently a Professor in the Department of Geography, Arizona State University, Tempe, Arizona 85281, U.S.A.

This paper will examine some of the implications of this antagonism between short-term dynamism and long-term stability as exhibited in the pattern of land use for the town of Sukabumi, West Java. It will seek to elucidate first of all which features in the urban landscape seem to reflect major structural facts about colonial social relations in the former Dutch East Indies, features which have become absorbed into the somewhat different social and economic order which is manifested in present-day Indonesia. It will be shown that under the colonial regime two of the significant elements of the urban landscape were the European residential quarter, and the Chinese commercial zone; both of these remain identifiable, though somewhat changed in function. *Kampung* areas, housing the Indonesian element of the population, remain, only now much expanded. Agricultural activities will be shown to have remained an important component of the urban landscape. These features, which constitute regular elements of Indonesian urban landscapes, are quantified on the basis of information drawn from the files of the property tax office in Sukabumi. In the second place, some of the short-term dynamic processes of spatial action will be considered. These are the forces which might be expected to be at work to modify the rather more permanent features already referred to. Included are the activities of governmental agencies in endeavoring to plan urban development for Sukabumi; and the action of the property taxation agency itself. It will be shown, however, that although these forces are undoubtedly at work, their influence so far has not been very great. The marketability of property in the town has not been greatly developed. Despite the overall growth of the town, present-day urban processes are relatively conservative, and the major elements of the landscape remain very much as they emerged in the aftermath of the struggle for independence.

URBAN DEVELOPMENT IN INDONESIA

Three phases of urban development are observable in Indonesia — a pre-1600 or pre-colonial phase, a colonial phase from 1600 to 1950, and a post-colonial phase from 1950 onwards. In the pre-colonial phase urban centers were capitals and religious centers for the feudal or maritime states that flourished at different times in different parts of the archipelago (Wheatley 1969; Reed 1976:14-27). Some of them remain as nuclei of centers which have become important in subsequent periods; but many have withered away and disappeared. In those that remain a part of the town normally reflects its historic past. Yogyakarta has its *kraton*, Ujung Pandang the remnants of its old fort or *benteng*. But these older elements in the land-use pattern are by now swamped with more recent forms of development.

Early Dutch settlement in the Indies was dominated by the need to

maintain security in the initial stages. Jakarta, or Batavia as it was originally called, was at first a protected city, with a fort situated close to the sea, and canals surrounding the area of residential development (Cobban 1971:114-117). As security conditions improved, the settlement spread out to the south, unhampered by the constraint of fortifications. With the full development of the Dutch colonial system in the later years of the nineteenth century there appeared throughout Indonesia a series of towns which served as the political and economic network of Dutch control. Sometimes, like Surakarta and Yogyakarta, they were grafted on to the nucleus of an indigenous *kraton*. In Singaraja, Bali, a Dutch quarter was built between the ruler's palace and the Chinese/Arab trading and port zone (McTaggart 1980). Sometimes, as in the case of Sukabumi itself, they were new foundations. Their populations were mixed, having a small European component chiefly engaged in government, administration, trade, or commerce; a Chinese population concentrated in a distinct "Chinese Quarter" and engaged primarily in retail and other small-scale trading; and a substantial native population, living in crowded native-style *kampung* which clustered around the evolving urban area.

The emergence of these colonial urban centers provoked a crisis in local government in the early years of the twentieth century. The European populations of these centers, although only a minority, demanded a share in the responsibility of administration, a demand which was acceded to in the so-called "decentralization legislation" of the early 1900's. Municipal governments were established in most large and medium-sized cities over the next two or three decades (cf. Milone 1966). They had to confront problems of urban management which were becoming increasingly severe, problems of health, sanitation, communications, and housing. The European-dominated municipalities were impeded in their efforts, however small, to ameliorate urban conditions by the existence of a separate form of "native" administration to which the *kampung* areas were all subject, even in the urban areas. Attempts were made, without success, to unify the administration of urban centers. Other problems, such as those of land-use control, were tackled by the passage of a number of ordinances dealing with aspects such as industrial location, and building-codes for residential construction. By 1938 the government was ready to adopt a comprehensive town-planning ordinance to guide the future development of cities and towns in the Indies, but the war intervened, and it was not actually passed until ten years later, in 1948.

By this time conditions had been greatly altered. Indonesia was under Japanese occupation during the Second World War, and at the end of the war nationalist leaders proclaimed the country's independence. This independence was only finally secured in 1949, after several years of bitter fighting. Urban areas have been affected by the

changes wrought by independence. The European population, which had been made up mainly of persons of Dutch origin, virtually disappeared, and their places in the economy and in the landscape were filled by Indonesians.

In this post-colonial phase cities and towns in Indonesia have been the target of in-migration of population from surrounding rural areas. This migration reflects in some instances the degree of insecurity which has prevailed in certain parts of the country at particular periods; but it has been generated mainly by poor conditions in the countryside, and the belief on the part of migrants that they could better their lot in life by shifting to a city. While the former areas of Dutch residence in the towns have been taken over largely by the emerging governing and administrative elite, the poorer in-migrants have swelled the populations of the *kampung* sections of the towns, and spilled over into new areas of low-income settlement in sub-standard housing. The Chinese are still largely concentrated in the areas previously recognized as the Chinese Quarters. There have been some restrictions on the economic activities of non-Indonesian citizens (many of the Chinese have elected not to take Indonesian nationality). A substantial number preferred to remain in their existing quarters in the towns, and continued in those commercial activities long regarded as the virtual preserve of the Chinese. New developments have appeared in the post-colonial phase in the shape of increasing industrialization. In the major industrial cities (Surabaya, Surakarta, Yogyakarta, Bandung, Cirebon, Jakarta-Bogor, Medan) whole new estates have appeared entirely devoted to industry. Elsewhere industrial development has had to mingle with other forms of land utilization. In general, however, despite the population growth of recent years, despite the new land-use components which have appeared, Indonesian towns have been largely accommodated within the framework of distinctive spatial elements that were already present and clearly defined in the Dutch colonial period.

THE EVOLUTION OF SUKABUMI

Sukabumi is situated at an altitude of 550 to 750 meters, on the southern slopes of Gunung Gede, one of West Java's most prominent volcanic peaks. Because of its altitude it enjoys a cooler climate than that which prevails on the lowland plains to the north, and its benign climate had much to do with its emergence as an important center during the Dutch colonial period.

Under Dutch rule the Priangan, that part of Java wherein Sukabumi is located, was developed as a source region for cash crops such as tea and coffee in the eighteenth century. Few outsiders were permitted to enter the area, however, since most of the production was con-

trolled by the native rulers, and the Dutch did not want to see any intrusion of disruptive social or economic elements. In 1870, with the passing of the Agrarian Decree, a more liberal and less protectionist economic policy was introduced, and Sukabumi was designated in 1872 as a place where Chinese were authorized to reside. In 1882 the railway line connecting Sukabumi with Bogor and Jakarta was opened, a development which greatly enhanced the resort functions of the area. Sukabumi soon came to attract a substantial population of European residents, in many instances families of administrators or commercial employees who had to work elsewhere, but who preferred to keep their families in the relative comfort of an upland station. With the increasing importance of rubber plantations in the early years of the twentieth century Sukabumi became the focal point and commercial center for the most important plantation zone in the whole of Java. Its significance as a center of European settlement was recognized by the grant of municipal status in 1914 (Cobban 1971:117; Tan Giok Lan 1963:17).

Table 1. *The population of Sukabumi, 1905-1956, by main ethnic community*

	1905		1930		1956	
	No.	Per cent	No.	Per cent	No.	Per cent
Native Indonesians	12,000	81.6	27,183	79.5	56,027	84.2
Chinese	2,100	14.3	4,587	13.4	10,033	15.1
Europeans	600	4.1	2,259	6.6	489	0.7
Total	14,700	100.0	34,191	100.0	66,549	100.0

(Source, Tan Giok Lan, 1963:12 and 18)

Table 1 shows the population of Sukabumi as recorded on three different occasions, 1905, 1930, and 1956. Although the European and Chinese elements of the population were never in a majority, their influence was decisive in establishing the pattern of the town. The railroad cut across the town from west to east, dividing the town into an upper and lower section. With the exception of a few Chinese shops along the road to Pelabuhan Ratu, south of Sukabumi, the whole southern part of the town, lying below the railroad, was an area of Indonesian settlement. The Chinese commercial center lay just north of the railroad, and to the immediate north of the Chinese quarter was the main concentration of administrative buildings, along with the hospital. On the higher ground the Dutch spread their bungalow residences, many of the sites having commanding views over the lower land to the south. In the 1920's a police academy was built on a site in the uppermost section of the town.

Since Sukabumi was an attractive center for Europeans it quickly developed services appropriate to their presence. Several missions and churches made it their effective headquarters, and several schools were started to cater for the families of expatriates. A number of hotels were built to accommodate tourists. By 1930 the number of Europeans had reached over 2,200, equivalent to more than six and a half percent of the total town population.

The town was not heavily damaged during the Second World War. Its European population was removed, but some returned afterwards. Much more damage resulted from the period of the struggle for independence, 1945 to 1949. Several large buildings in the town, including some of the most important hotels, were destroyed. In the eyes of the new Indonesian government in the early 1950's Sukabumi assumed much less importance than it had during the Dutch period. It was not granted municipal status again until 1957, since its population was not large enough to qualify according to the criteria first used by the Indonesian authorities. By 1961 it had a population of 81,400, and by 1971 almost 96,000 (Direktorat Tata Kota dan Daerah 1972a:21). The ethnic breakdown, unfortunately, is no longer available, since the only count is by citizenship.

PATTERNS OF LAND-USE IN SUKABUMI

Figure 1 and table 2 provide some information relating to patterns of land-use in Sukabumi in the early 1970's. There is a heavy concentration around a central nucleus, which is the Chinese commercial zone, and is located on the site of the original Chinese quarter constructed in the second half of the nineteenth century. This commercial zone extends to the east, to the west, and to the south, along the major highways. Most of the government offices lie in the area just north

Table 2. *Areas of land in Sukabumi by major categories of land-use, 1972*

Category	Area (hectares)	Per cent
Residence	513.30	42.25
Commerce	48.00	3.95
Industry	24.76	2.04
Government	117.50	9.67
Park, recreation	8.72	0.72
Agriculture	502.72	41.38
Total	1,215.00	100.00

Figure 1. Land-use in Sukabumi, 1972

of this commercial center, although they are by no means confined to this section. Offices of the city and district administration, the hospital, the largest schools, various police and military functions, all are found in this government zone. The police academy, however, is a land-use unit on its own, in respect of both its scale and the exogenous nature of the decision to establish it in Sukabumi. Industrial establishments are not concentrated heavily in any specific zone; consequently they scarcely show on a generalized map. However, there are a number of industrial establishments scattered along the railroad, and along the main east-west highway.

Residential development also tended to follow along the main highways leading out of the town, leaving much of the intervening land unbuilt. The land-use map, however, does not adequately distinguish between different styles of housing. Virtually all the Dutch housing was to the north of the main east-west highway. Dutch housing consisted for the most part of modest bungalows, each set separately in its own compound, with servants' quarters attached behind. Preferably each house had to have direct access to a road capable of carrying four-wheeled vehicles. *Kampung* housing, which makes up all the residential development in the southern part of the town, and a substantial proportion in the upper town as well, is much more crowded. Houses, though often neat and clean, are built close together. The majority gain access only on to a narrow alleyway, or *gang*, not wide enough to accept vehicular traffic. Many are built of unsubstantial materials, and may be regarded as only temporary.

The areas not built up and not used for some other urban function are devoted to agriculture, including fish culture. Since agricultural operations are normally carried out on a fairly small scale there is no problem in continuing with them in an environment already partly devoted to urban uses. The sloping site on which the town is built lends itself to irrigation, and to *padi* cultivation, and this is much the most important of the agricultural activities carried on within the boundaries of the town. As a rule the agricultural land in the town area lies away from the major roads, which tend to attract some form of building development.

Table 2 provides some estimated figures on the areas devoted to different uses. These figures at once reveal the importance of agriculture in the town. The amount of land devoted to agriculture is almost as much as that devoted to residential uses. Apart from residence and agriculture, other categories have only very small amounts of land. Needless to say, the amount devoted to government uses is greatly affected by the substantial size of the Police Academy site in the northern part of the town.

The data provided in table 2 can be supplemented and extended by referring to data on land-use obtained from the records of IPEDA,

the property tax collection office. In Indonesia property tax is assessed on both rural and urban areas, by an office which reports not to the local second-level district in which it is situated (and to which it normally turns over the revenue it collects) but to a section of the Ministry of Finance in Jakarta. The local IPEDA office keeps records of all the properties in the area of its responsibility, and as a rule these properties are reinspected annually by personnel from local administration services for the purpose of revision of assessments. Information is accordingly available as to the size of buildings and lots, and the functions carried on. This information is, however, incomplete, since governmental properties are not included; nevertheless, for the remainder of the properties covered, IPEDA data represent the most complete and most readily accessible information (Booth 1974; McTaggart 1979).

The information in table 3 is based on a survey of IPEDA materials for the year 1975. It shows, for each of the six *lingkungan* (lower-level administrative districts; see figure 2), areas of floor space in buildings devoted to each of the major functions designated, along with areas of land not covered by buildings, but forming part of properties otherwise included in the tax survey.

The table confirms the high percentage of land in the urban area devoted to agriculture. The total area of agricultural land is given as 540 hectares, somewhat higher than the estimate of 503 hectares based on the work of the Direktorat Tata Kota dan Daerah, and quoted in table 2. Taking the area of the town to be the same (1215 hectares), the IPEDA figures give a percentage for agricultural land at 44. Over four-fifths of this agricultural land is considered to be *padi* land. The highest percentages occurred in the lower sections of the town — Nyomplong, Tipar, and Nanggeling, all of which had over fifty per cent. The lowest percentages occurred in Selabatu and Kebunjati (26 and 21 per cent respectively), sections of the town which contain a large part of the central and heavily built-up portion.

These two situations reflect two of the identifiable spatial systems of the town. On the one hand, the lower part of the town consists of a mosaic of high-density *kampung* housing and quite extensive areas of agriculture in the intervening open spaces. On the other, the central part of the town is heavily built up, and, as will be shown later, contains much of the commercial element in the town. The remaining *lingkungan*, Gunung Puyuh, is apparently somewhat different. Its percentage area devoted to agriculture (40 per cent) is lower than is the case in the lower part of the town, higher than for the *lingkungan* which contain the commercial district. Observation confirms that Gunung Puyuh contains a large proportion of the former Dutch housing in Sukabumi. Unlike the *kampung*-style housing, Dutch housing was spacious in concept. The individual houses themselves

Table 3. *Areas of Land and Buildings by Functional Category and by Lingkungan, Sukabumi, 1975. Areas in Hectares*

	Rice Land	Other Agri- culture	Commerce		Workshop		Industry		Housing		Other		Total		TOTAL AREA
Lingkungan			LAND	BDG	LAND	BDG	LAND	BDG	LAND	BDG	LAND	BDG	LAND	BDG	
Gunung Puyuh	103.14	35.88	.017	.923	.962	.786	.096	.243	47.833	19.579	3.673	.074	191.601	21.605	325
Selabatu	28.15	10.01	.265	3.024	.843	1.350	.141	.371	27.956	23.015	3.502	.033	70.867	27.793	149
Kebunjati	19.67	5.69	.133	1.097	.742	1.289	1.538	1.711	34.949	20.688	3.570	.050	66.292	24.835	121
Nyomplong	103.01	10.27	.018	1.108	1.500	2.681	1.731	2.369	35.218	20.188	3.974	.241	155.721	26.587	219
Tipar	78.70	11.33	.076	.406	.172	.849	.246	.765	35.577	18.271	.924	.011	127.025	20.302	174
Nanggaleng	105.95	28.20	.478	.280	.215	.114	2.236	.517	26.024	6.544	10.959	.018	174.042	7.473	227
TOTAL	438.62	101.38	.987	6.838	4.434	7.069	5.988	5.796	207.557	108.285	26.582	.427	785.548	128.595	1215

Source: IPEDA, Sukabumi

Figure 2. Administrative districts in Sukabumi

were not very large, since many of the Dutch residents were of only modest means; but most of them did have a compound as part of the property. Equally significant, the Dutch residents in pre-war Sukabumi preferred to have direct access from their houses to a motorable road, in contrast to *kampung* dwellers, who were generally prepared to be satisfied with access on to an alley or *gang*. Consequently, housing in Gunung Puyuh tends to be of lower density. The bulk of the houses are of bungalow style, though by now some are quite old. They front on to the street and are surrounded by a yard which contains what were once servants' quarters. Behind these houses, and away from the street, agriculture continues. In recent years, however, there has been some infiltration of *kampung*-style housing into several parts of Gunung Puyuh.

Consideration of some of the other functions in Sukabumi reinforces and extends this framework of differentiated residential areas sketched out above. A total of 6.8 hectares of floor space was devoted to commercial activities, along with a very small additional amount of unbuilt land. Forty-four per cent of all the commercial floor space was in the *lingkungan* Selabatu, which contained the main part of "Chinatown". Kebunjati, Gunung Puyuh and Nyomplong all had smaller, though nonetheless significant, amounts of commercial floor space. Virtually all this commercial floor space is in sections of the town lying to the north of the railroad. In other words, the *kampung* zones of the town have very little commercial floor space recorded. This feature does not imply a total absence of commercial activities in the *kampung* residential areas; however, commercial activities carried on in these parts of the town tend to involve itinerant vendors and hawkers, or to be carried on in small impermanent stalls, often referred to as *warung*. In general these small-scale activities do not attract the attention of the property taxation office.

Workshop (artisanal) and industrial functions show much less concentration than the commercial functions, and, incidentally, exhibit a much more generous use of land in addition to the building space they occupy. Nyomplong had the largest areas devoted to workshops and industry — just over 39 per cent of the total. Workshop and industrial activities are most frequently encountered along the railroad and main road which runs east-west through the town, but they do in fact occur widely throughout the town.

Generally it does not appear that the broad structural patterns of land-use have changed very much since the Dutch period. The same units of land-use are discernible — the same major residential areas, the same commercial center. Although there have been marked changes in the socio-economic sphere, they have accommodated to the existent structure of the town, and have not compelled any fundamental change.

FACTORS CURRENTLY AFFECTING LAND-USE PATTERNS

In view of the persistence of major land-use patterns in Sukabumi, it may be asked what forces seem to be likely to operate to change them in the near future. We will consider three main possible influences: taxation rates within the town; regulations presently governing land-use; and the process of town planning.

Initially, however, it may be remarked that there are also forces at work which would most clearly seem to operate to conserve present patterns, or at least some of them. The centralization of commercial activities in the old Chinese quarter of Sukabumi, originally a reflection of the important role played by the Chinese in retail commerce in the town, is reinforced by current tendencies in the region as a whole. Sukabumi is the administrative and commercial center for a *kabupaten* (second-level district) with a population in excess of a million and a quarter. In serving the commercial needs of the population of this considerable hinterland the central section of Sukabumi benefits greatly from the fact that all the public transport terminals for intra-district travel are located in or near the Chinese shopping area. This ensures that the best commercial locations will continue to be found in the center (cf. Jackson 1975).

Property taxation rates

Table 4 shows the average per square meter taxation rates for Sukabumi in 1975. The IPEDA tax office uses a formula which takes into consideration the size of a building, its use, and its location zone in the town; however, these location zones do not conform to administrative districts as at present established. It is evident that the tax rates are low (400 rupiahs = 1 US dollar). The highest overall average rate for any *lingkungan* was only 8.54 rupiahs per square meter; with building sizes commonly around 70 square meters, a total annual tax liability of only 600 rupiahs is indicated. Businesses do pay at a somewhat higher rate than residential users. Agricultural taxation rates are extremely low. It may be concluded that even in an economy where average earnings remain relatively low, taxation on the scale suggested by these figures is not a factor of sufficient importance to affect location decisions, or to effect changes in the present distribution of activities.

Existent land-use controls

Like all *stadsgemeenten* in Indonesia in the 1920's, Sukabumi was subjected to the *Hinderordonnantie* of 1926 (cf. *Nederlandsch-Indië* 1926), a piece of legislation whose purpose was to arm local councils with the power to control noxious industries or other activities. Any activity which was objected to by residents on the grounds that it

Table 4. *Land Tax Rates for Land and Buildings by Functional Category and by Lingkungan, Sukabumi, 1975.*
Amounts in Rupiahs per Square Meter

	Rice Land	Other Agri- culture	Commerce		Workshop		Industry		Housing		Other		TOTAL	
Lingkungan			LAND	BDG	LAND	BDG	LAND	BDG	LAND	BDG	LAND	BDG	LAND	BDG
Gunung Puyuh	.97	.70	10.31	7.08	8.84	18.59	6.00	4.51	1.21	3.13	4.33	3.34	1.08	3.88
Selabatu	1.13	1.40	10.33	31.33	9.74	26.76	6.00	20.75	1.88	4.28	2.44	4.25	1.67	8.54
Kebunjati	1.12	1.51	11.23	27.86	4.88	20.12	5.70	23.93	2.15	3.91	4.67	4.55	2.05	6.90
Nyomplong	1.12	.87	9.26	29.18	5.75	18.73	5.00	13.94	2.01	4.10	.56	13.41	1.38	7.59
Tipar	1.12	1.21	10.07	19.05	6.84	22.42	5.66	9.38	1.86	3.51	2.33	19.84	1.37	4.84
Nanggaleng	1.03	.75	9.54	24.60	2.55	14.02	4.48	16.72	0.61	1.75	.81	4.80	.98	3.84
TOTAL	1.06	.90	10.03	26.14	6.92	20.86	5.05	15.30	10.03	3.69	2.04	9.72	1.30	6.38

Source: IPEDA, Sukabumi

constituted a threat to public health could be prevented from building a facility in proximity to residential areas; effectively such industries were relegated to more distant sites on the fringes of the town. As far as Sukabumi is concerned, it does not appear that this ordinance was ever used in such a way as to have a profound effect on land-use patterns. Few industries ever attempted to penetrate the zone which was the predominantly Dutch residential area, and there is little doubt that if industry had tried to infiltrate into that area the provisions of the ordinance would have been invoked. But industrial activities by preference are believed to have been located in the central belt of the town, where they were well served by road and rail services. Furthermore, their workforces were drawn from the *kampung* areas, not the higher-class residential areas of the upper town.

A more recent piece of legislation is the Sukabumi building code (Kotamadya Sukabumi 1971). This code sets standards which are to be followed by all new construction, and it requires all such buildings to be approved for the issue of a building license. However, the code does not make distinctions between different functional uses, nor does it distinguish between different parts of the town. Consequently it has not had any major impact on land-use patterns.

Land-use and urban planning

Conscious efforts at town planning in Sukabumi are recent, and date from the period of the late 1960's and the early 1970's (Direktorat Tata Kota dan Daerah 1972a, b, and c). Such plans are now required under Indonesia's comprehensive planning system, and a master plan for Sukabumi for the remainder of this century has been aimed at. Planning for Sukabumi has been based on an analysis of the functions of the town in its regional and national context. Sukabumi is regarded as a major commercial center for the western part of Java, collecting and processing some of the produce from the rubber and tea estates which surround it, and serving as a retail center for the population. Its industries cater partly for the local regional market (food-processing, brick and tile manufacture) and partly for the national market (engineering, metal-working, and most recently cement manufacture). It is believed to have a future as an important recreational center, especially for the population of the Jakarta metropolitan area, and it remains the main center in Indonesia for the training of police recruits. The plan for the town was drawn up by the Direktorat Tata Kota dan Daerah, and passed into law in 1974 (Kotamadya Sukabumi 1974). The town is envisaged as a series of different functional zones, linked together by a transportation network. Policies and regulations are established so that each type of zone should be able to perform its appropriate function with maximum efficiency. The locations of the major zones are indicated in figure 3.

Figure 3. Planned land-use for Sukabumi

The city center: the city center as defined is essentially the area of concentration of Chinese commercial activities — the traditional commercial center of the town. It is considered to be the most accessible commercial zone in the town, and as such will continue to enjoy an advantage over commercial centers which may be developed in other parts of the town. The functions of this zone will include small-scale commerce, produce marketing, wholesaling and distribution, banking, and entertainment. High building densities will be allowed, with no requirement for open space between buildings, or set-back from the edge of the street. Residence will continue to be a major function of the area. No expansion of this center is expected.

Government zone: this area lies just to the north of the commercial center, and is the area which traditionally has had the greatest concentration of administrative offices. Here again there is no intention of concentrating all government functions in this zone. Many offices are at present scattered in other parts of the town, especially those which are related to the lower-order administrative divisions such as *lingkungan*. Building densities should be much lower than in the commercial center, and an attempt should be made to keep down unnecessary traffic. It is not expected that much change will take place in this zone in the immediate future, but it is believed that by the period 1982-85 a considerable amount of rebuilding of offices will be needed.

Industrial zone: the designation of a distinct industrial zone in the western part of the town is a new departure. Hitherto industry has been scattered throughout much of the central sections of the town, intermingled with the poorer residential zones from which many of the employees came. The plan proposes to establish an industrial zone on land presently under rice cultivation, a zone which would be almost exclusively industrial. The proposed site was selected for a number of reasons. It was felt better to locate it in a lower rather than an upper part of the town, so that drainage and disposal of effluent would not inconvenience a large part of the town's population. It was believed that the industrial area should have good connections with other parts of the *kabupaten*, especially that part lying to the south of Sukabumi. And finally it was considered that the topography in the southern sections of the town would be less broken, and require less engineering in the process of creating factory sites. The plan does not, however, specify what mechanism will be used in order to effect the development of the industrial zone. It is not clear whether existing industries in Sukabumi will be compelled to relocate, or indeed what provisions will be made in the industry zone to receive potential customers.

Recreational zone: several different kinds of recreational zones are to be created. The town is expected to develop as a center for tourism, and more hotels are likely to be built. These will not be in the commercial center, already too crowded to attract this kind of development. More likely they will occupy sites along major roads towards the outskirts of the town. Neighborhood recreational facilities are also required, and these will be scattered throughout the town. However, a major recreational center for Sukabumi as a whole is proposed for a site in the south, located close to mineral hot springs. This site is currently being privately developed.

Residential zone: the remainder of the town, along with some other areas of anticipated expansion, are classified as residential. The zoning provisions for this type of area do not preclude other uses. Up to twenty-five per cent of the area may be devoted to schools, clinics, government offices, commerce, and even some kinds of workshop or industrial functions, so long as the purpose is to serve the neighborhood needs. The zoning system does not recognize specifically the difference between *kampung* housing and other types of urban residence such as shop-house residential sections, or areas of bungalow housing. The only differentiating factor is overall residential density. It is planned to permit residential densities in the range of 150-250 persons per hectare in the inner parts of the town; intermediate zones should aim at 100-150 persons per hectare; whereas fringe areas should have less than 100 per hectare. At the present time the inner parts of the town and the more densely populated *kampung* areas (many of which are quite some distance away from the center) locally exceed 300 persons per hectare. Although it is recognized that almost all the residential areas in Sukabumi are in immediate need of renovation, the plan does not provide any means for doing this directly.

Transport linkages: considerations of transport have played a role in shaping present-day Sukabumi. The relative affluence of the former Dutch population enabled them to adopt a spacious urban residential style, since each could afford either personal transport or the use of comfortable public transport. *Kampung* dwellers could not, and this was an encouragement for the development of high-density residential areas. Areas of *kampung*, however, have tended in recent years to locate in a series of clusters along the major roads leading out of the town. In this way the inhabitants are able to make use of the private minibus services that are directed primarily to destinations outside the town. Although inconvenient, this was less expensive than dependence on individually commissioned forms of intra-urban transport, such as *becak* (pedicabs) or *dokar* (small pony carts). The municipality itself provides no form of public transport, but since 1975 a number of

private operators have begun to run minibuses within the town. Their routes have been prescribed, and their fares are substantially lower than those of the *becak* or the *dokar*. It is likely that these latter forms of transport will decline substantially as time goes on. The plan makes no provision for transport facilities, other than recognizing the need for continued investment in upkeep of roads and bridges, and planning for the construction of a by-pass road, east to west, through the southern part of the town. The purpose of this is to relieve the congestion now endemic in the central parts of Sukabumi. The railroad, except for an occasional passenger or freight train to Bandung, is moribund, the line being cut to the west. There appear to be no provisions for re-opening it.

It is evident that in general, land-use planning seeks more to adapt to presently existing patterns than to change them. Most of the zones designated by the plan are urban entities already recognized. The purpose of the plan is not to transform them, but to consecrate them, to regulate their patterns, and to seek to improve their overall quality. The only exception is the industrial zone, which is a real departure from previous patterns.

CONCLUSIONS

It appears that the land-use structure of Sukabumi can be analyzed in terms of a number of significant elements. These elements are in large part historically derived, but respond at the same time to factors of socio-economic dynamics, and factors of location (cf. McTaggart 1969:26-28; Jackson 1974:65-80). The commercial section of the town grew out of the Chinese settlement of the late nineteenth century. It has retained its commercial primacy, as well as its basically Chinese character. It is a landscape unit distinct from all the others in the town, in that it is the only area fully built up, with a shop-house style of architecture, and with predominantly two-storey buildings. Other distinctive landscape units include the administrative or government area (with large office buildings, hospital, clinics, and several schools), located in the area which historically lay between the Dutch residential zone and the town's business center; the Dutch residential zone itself, with its characteristic bungalow architecture and its spacious design, situated in the upper and more congenial part of Sukabumi; and the *kampung*-style settlements, initially predominantly in the middle and lower reaches of the town, but now more widely scattered. It seems also that these elements are not likely to disappear. Most of the evident forces acting to influence the overall land-use patterns in Sukabumi are conservative. Some of these elements experience change as time goes by; the Dutch residential zone changed in terms of its social content at the time of the departure of the

Dutch, but it retained its appearance and its social pre-eminence. But for the most part they remain as identifiable units. The industrial zone, should it ever materialize, will become another such element of the urban landscape.

Although each of these elements does respond to factors of location, it is important to recognize that such factors are contingent factors rather than general ones. The Dutch residential area responded to the desirability of the higher setting; the administrative zone to proximity to the Dutch residential area; the *kampung* locations to accessibility, and to space left unoccupied by other uses. There is no apparent logical overall pattern which these elements may be expected to assume, no overall structure to which the town as a whole conforms. Elements could be transposed without undermining the logic of a spatial model of the town, with the sole exception of the commercial area at the town center; the commercial area historically determined centrality in Sukabumi, becoming the focus around which the rest of the town grew. The image which it is therefore appropriate to retain is one in which the town consists of a collection of these elements, arranged not in a manner which could be described as structurally determined, but in a way specific to the history of Sukabumi, and to the conditions of the site.

It has been argued that those factors which might be considered likely to induce changes in the pattern of land use in Sukabumi have not been particularly successful in doing so. Property taxation rates have been too low to penalize "inefficient" uses; existent land use controls have been too rudimentary; and contemporary city planning is of too recent an origin to have had any profound effect. Demographic and social changes seem to have been more potent factors in reshaping the town. Departed Europeans have been replaced by a new Indonesian elite, which has assumed the Europeans' place both functionally and spatially; and pressure of population in the surrounding areas has contributed a flow of in-migrants that has substantially raised the population of the town itself. Demand for housing has led to rapid spread of residential areas, especially in the poorer sections of the town.

Nonetheless, these demographic and social pressures have been accommodated within the same general land use framework in the town. The former Dutch residential zone remains the most prestigious residential zone, and many of the houses date from the pre-war period. In the less wealthy areas, the increasing population is housed in *kampung* housing very similar to that already there. Even the pattern of intermixture of *kampung* and agricultural uses persists, since there are few incentives to convert all agricultural land to urban uses. Patterns, in other words, have tended to be conserved, rather than obliterated, even as the town expands as a whole.

A number of other questions remain unanswered. Does this same

kind of model appear to be suitable for other Indonesian towns? What do we know about the socio-economic content of the various elements? This latter question may only be answered on the basis of further enquiry, but the beginnings of an answer to the former are possible. Other Indonesian towns do exhibit similar elements. Ujung Pandang, for example, shows marked differences of landscape in its residential areas, with the former Dutch residential zone revealing densities much lower than those which prevail in the *kampung* areas, a different style of housing, a superior level of infrastructural services, and a higher level of immediate accessibility (McTaggart 1976). The same relationship between the Dutch zone and the administrative district is observable, the same centrality of the traditionally Chinese commercial section. In Padang similar patterns again appear, but here with an exception that "proves the rule". In Padang centrality has moved from the former Chinese commercial center, which now remains partially deserted; it has moved to a new and deliberately created commercial center in a new location, where it has been the policy of the Padang administration to establish a commercial center without the dominance of the Chinese community (Kotamadya Padang 1974). Medan (Withington 1960) and Palembang (Jackson 1973) can be cited as examples of cities where the urban landscape may likewise be analyzed in terms of similar elements.

Socio-economic features therefore become one of the most important factors in understanding the land-use structure of an Indonesian town. Towns have been the meeting-point of important class influences in Indonesian life, and these are translated into landscape patterns. It would seem that as land-use planning proceeds in Indonesia, more attention will have to be paid to this variable than has been in the past. Urban planning is a process whereby the community as a whole is encouraged to develop the city. It can only be effectively done if the basic processes of landscape development are comprehended.

REFERENCES

- Benda Beckmann, F. von
1979 *Property in social continuity; continuity and change in the maintenance of property relationships through time in Minangkabau, West Sumatra*, The Hague: Martinus Nijhof.
- Booth, A.
1974 'IPEDA - Indonesia's land tax', *Bulletin of Indonesian Economic Studies* 10:55-81.
- Cobban, J.
1971 'Geographic notes on the first two centuries of Djakarta', *Journal of the Malaysian Branch of the Royal Asiatic Society* 44:114-117.
- Direktorat Tata Kota dan Daerah
1972a *Kotamadya Sukabumi; kompilasi data*, Jakarta.
1972b *Kotamadya Sukabumi; analisa dan gagasan rentjana*, Jakarta.
1972c *Rentjana kota Sukabumi; penyempurnaan dari buku gagasan rentjana Kotamadya Sukabumi*, Jakarta.

Jackson, J. C.

- 1973 'Post-Independence Developments and the Indonesian City; preliminary Observations on the Spatial Structure of Palembang', *Sumatra Research Bulletin* II-2:3-11.
- 1974 'The structure and functions of small Malaysian towns', *Transactions of the Institute of British Geographers* 61:65-80.
- 1975 'The Chinatowns of Southeast Asia; traditional components of the city's central area', *Pacific Viewpoint* 16:45-77.

Kotamadya Padang

- 1974 *Rencana pembangunan lima tahun 1974/5 - 1978/9*, Padang.

Kotamadya Sukabumi

- 1971 *Peraturan Daerah Kotamadya Sukabumi tentang bangunan dalam Daerah Kotamadya Sukabumi*, Sukabumi.
- 1974 *Peraturan Daerah Kotamadya Sukabumi tentang Rencana Induk Kotamadya Sukabumi*, Sukabumi.

McGee, T. G.

- 1969 *The Southeast Asian city*, New York: Praeger.
- 1974 *The persistence of the proto-proletariat; occupational structures and planning for the future of Third World cities*, Los Angeles: University of California School of Architecture and Urban Planning.
- 1976 'Beach-heads and enclaves; the urban debate and the urbanization process in Southeast Asia since 1945', in: Yeung and Lo (editors), *Changing Southeast Asian cities; readings in urbanization*, pp. 60-75, Singapore: Oxford University Press.

McTaggart, W. D.

- 1969 'Urbanization in Malaya — the small towns', in: *Modernization of the Pacific Region*, pp. 26-28, Kuala Lumpur: Pacific Science Association.
- 1976 'Urban policies in an Indonesian city; the case of Ujung Pandang, Sulawesi', *Town Planning Review* 47-1:56-81.
- 1979 'IPEDA Land-tax data as a source of information on the Indonesian city; the case of Ujung Pandang, Sulawesi', *The Professional Geographer* 31-4:416-422.
- 1980 'An evaluation of the master plan for Singaraja, Bali', *Malaysian Journal of Tropical Geography* 1-1:21-33.

Milone, Pauline

- 1966 *Urban areas in Indonesia*, Berkeley: Institute of International Studies, University of California.

Nederlandsch-Indië

- 1926 *Staatsblad*, No. 226.

Reed, R.

- 1976 'Indigenous urbanism in Southeast Asia', Yeung and Lo, (editors), *Changing Southeast Asian cities; readings in urbanization*, pp. 60-75, Singapore: Oxford University Press.

Santos, M.

- 1975 *L'espace partagé*, Paris: Genin Librairies Techniques.

Tan Giok Lan

- 1963 *The Chinese of Sukabumi*, Ithaca: Department of Asian Studies, Cornell University.

Wheatley, P.

- 1969 *City as symbol*, London: University College.

Withington, W.

- 1960 'Urban Land-use in Southeast Asia; the example of Medan', *Annals of the Association of American Geographers* 50-3:355.