

The Land Border of South Vietnam: Some Physical and Cultural Characteristics

T. T. Connors, M. G. Weiner and J. A. Wilson

January 1970

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A REPORT PREPARED FOR
THE ADVANCED RESEARCH PROJECTS AGENCY

The RAND Corporation

1700 MAIN ST. • SANTA MONICA • CALIFORNIA • 90406

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This study is presented as a competent treatment of the subject, worthy of publication. The Rand Corporation vouches for the quality of the research, without necessarily endorsing the opinions and conclusions of the authors.

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PREFACE

The data presented in this Report were collected and organized as part of a study of the land border of South Vietnam, undertaken by Rand for the Advanced Research Projects Agency. The parent study, of which this is a part, is primarily concerned with counterinfiltration systems for South Vietnam. The material presented here should enable the design and operation of alternative counterinfiltration systems to be related to the physical and cultural characteristics of the border.

This detailed description of the South Vietnamese border zone should be of use in a wide range of related studies. Because of this broad applicability, this study is being published as a Rand Report.

SUMMARY

This Report presents a compilation of detailed data on physical and cultural characteristics of the 1700-km land border of South Vietnam. The physical data comprise topography, vegetation (types and density), foot trafficability, movement routes (roads, tracks, trails, and waterways), and climatology. The cultural data concern the composition and density of the ethnic and tribal populations along the entire land border.

For convenience of organization and presentation of data, the border is divided into 107 sectors, each approximately 16 km in length. A series of maps is presented to indicate the location of each sector and a summary of its major characteristics.

The detailed data from which these maps were prepared are included in an appendix, as is a general description of the climatological influences in Southeast Asia.

ACKNOWLEDGMENTS

The authors wish to acknowledge the assistance of their Rand colleagues, Joseph M. Carrier, who provided data on the tribal population of the South Vietnamese border, and Charles Schutz, who prepared the climatological description presented in Appendix B.

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I. INTRODUCTION

The land border of South Vietnam is over 1700 km (1070 mi) in length* and extends from the Gulf of Tonkin to the Gulf of Thailand. South Vietnam has common borders with North Vietnam, Laos, and Cambodia. The border between North Vietnam and South Vietnam is not an international boundary, but a provisional military demarcation line that was established by the 1954 Geneva Conference and the Central Mixed Commission for Vietnam. Ruling No. II of the Commission defines the line, which is about 75 km long and runs through a demilitarized zone (DMZ) that varies in width from 6 to 10 km.⁽²⁾

The border between Laos and South Vietnam is defined by a series of agreements and accords and is over 400 km long.⁽³⁾

The border between Cambodia and South Vietnam was established by treaties negotiated between France and Cambodia in the 19th century and by decrees of the colonial period (which began in the middle of the 19th century and ended with the French defeat at Dien Bien Phu in 1954). Six sections of this border, which is over 1200 km long, are indefinitely defined or are in dispute. Most of the disputed areas are small, the largest being about 9 km long and 4 km wide. There is also a territorial dispute between Cambodia and South Vietnam over several small islands in the Gulf of Thailand.⁽⁴⁾

For convenience in collecting and describing data on the physical and cultural characteristics of the border areas, we have defined a border zone extending from the border line to a depth of 10 km into

*Based on map measurements using the 1:50,000 scale map of Army Map Service Series L-7014.(1)

South Vietnam. This border zone is indicated in Fig. 1. The depth of 10 km was chosen because the area within this range incorporates variations in terrain and other characteristics that are generally representative of the area to a depth of over 30 km, and because 10 km is close to the maximum range of 105-mm artillery.

The border zone was then subdivided into 107 sectors, each 16 km in length. This sector length allowed aggregation of detail intuitively determined to be consistent with the reliability of a 1:50,000 scale map and resulted in a manageable number of sector units. Also, a border length of 16 km would be within the range of 155-mm artillery if the artillery were located in the center of the sector. The data presented in this Report are organized in terms of the 107 sectors, which are numbered consecutively from the eastern end of the DMZ (Sector 1) to the Gulf of Thailand (Sector 107).

The types of information available for each sector are illustrated in Fig. 2, using Sector 1 as an example. The characteristics presented and the sources from which they were taken are described below.*

Topography

The following four categories of topography were established on the basis of relative relief and contour-line density: flat; flat, subject to inundation; rolling; and rough. The minimum and maximum elevations (high and low points) in each sector were taken from 1:50,000 scale maps and recorded, usually to the nearest 50 m. The frequency of contour lines in each sector was evaluated from topographical maps.

Vegetation

Fifteen types of vegetation were identified from several map sources.** The percentage of each type of vegetation in an area was determined by planimeter measurements on 1:50,000 scale maps. The planimetered area was then converted to a percentage of the entire area of the sector.

*The basic data are presented in detail in Appendix A.

**These vegetation types are described in Section II.

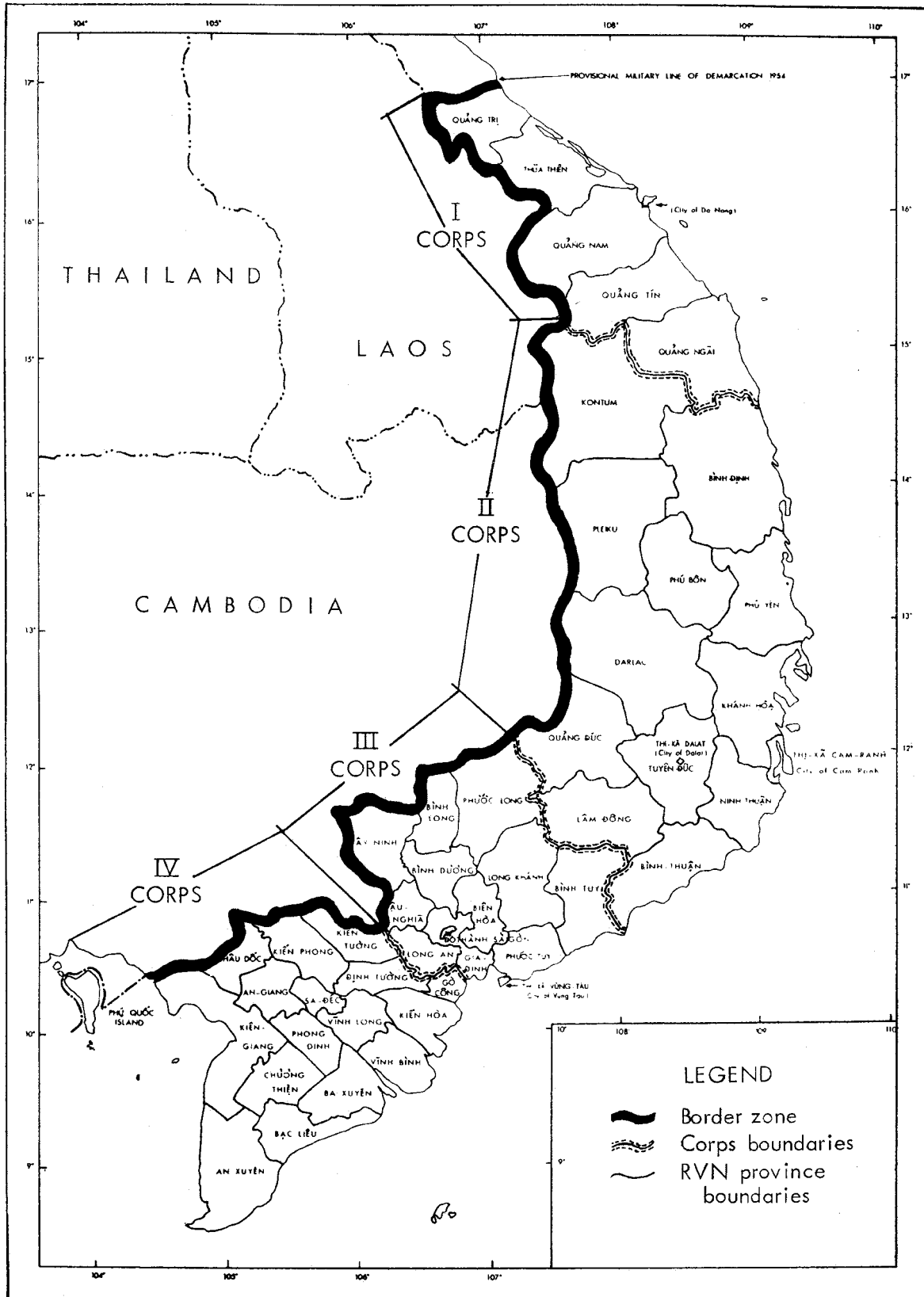


Fig. 1—South Vietnam

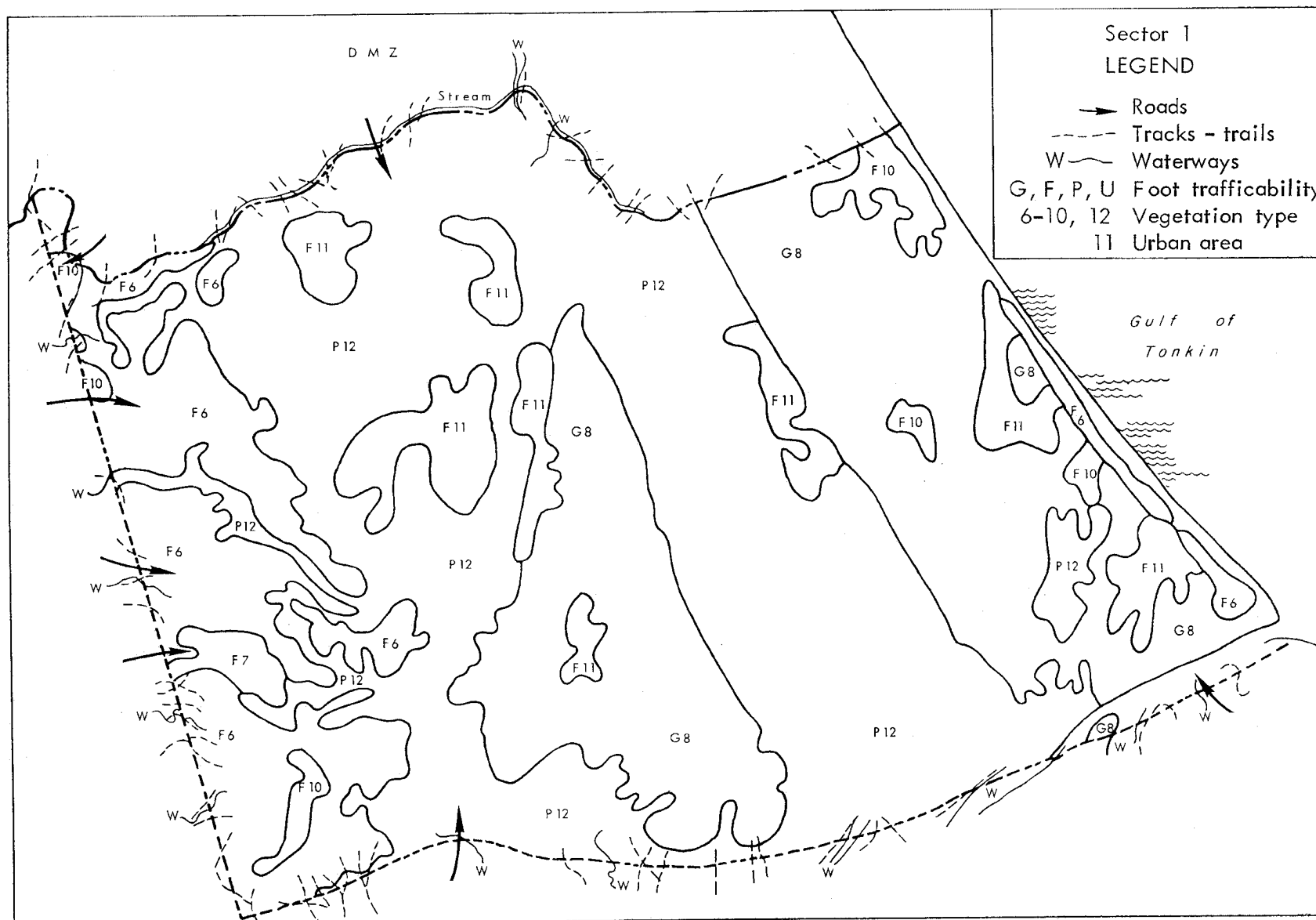


Fig. 2—Example of information available for border-zone sectors

Trafficability

Foot trafficability was determined primarily from Tactical Scale Study maps⁽⁵⁾ and Army Map Service Series L-7014 maps.⁽¹⁾ The classification into Good, Fair, Poor, and Unsuitable used by the Tactical Scale Study maps was also used here (see p. 13). The percentage of trafficability of each type was determined by the use of planimetry, similar to the technique used for vegetation. Separate measurements were made for trafficability in wet and dry seasons.

Population

Population data on ethnic Vietnamese and Cambodians in South Vietnam were obtained from the Hamlet Evaluation System study reported by Headquarters U.S. Military Assistance Command, Vietnam.⁽⁶⁾ These data were correlated for each sector by plotting villages and hamlets in each sector according to the Universal Transverse Mercator grid coordinates of the sector. Ethnic minority groups in particular sectors were identified from map data and reports. Population estimates for the ethnic minority groups were based on the number of household units or dwellings multiplied by a factor of 10 occupants per dwelling unit.*

Movement Routes

The data on movement routes (roads, tracks, trails, and waterways) were also obtained from various maps. A numerical count was made of the roads, tracks (routes capable of being used by animal-drawn carts), and trails. Waterways were divided into two classes, small and large. Any stream or canal with a width of 50 m or less was considered a small waterway; those more than 50 m wide were considered large.

Two counts were made for all movement routes: the number of routes that crossed the border, and the number that crossed the sides or rear boundaries of each sector.

* Because of the movement and relocation of some of the ethnic minority groups, the estimates of tribal population in each sector should be regarded as crude at best.

Climatology

The climatological conditions along the land border of South Vietnam were identified from an earlier Rand study.⁽⁷⁾ A general description of these conditions is given in Appendix B.

II. PHYSICAL AND CULTURAL CHARACTERISTICS OF THE BORDER OF SOUTH VIETNAM

In this section, the physical and cultural characteristics of the South Vietnamese border are summarized in tabular form, and a series of maps is presented for each major characteristic, indicating the nature of each sector in terms of those characteristics. Data for each sector were taken from several sources and reduced to numerical form. The detailed data sheets are given in Appendix A.

Topography

Each sector of the border zone was classed as one of the four types defined below:

1. Flat: topography in which there are few contour lines and little elevation change.
2. Flat, subject to inundation: flat topography in which flooding occurs, or swamp or marshland.
3. Rolling: topography in which there are relatively frequent contour lines but no sharp elevation changes.
4. Rough: topography in which there is a heavy concentration of contour lines and sharp elevation changes.

Table 1 summarizes the topographical characteristics of the border zone.

About 40 percent of the border zone is flat, and about 60 percent has rolling or rough topography. The flat areas lie at the extreme eastern end of the DMZ and along about one-half of the Cambodia-South

Table 1

TOPOGRAPHY OF THE BORDER ZONE

Type of Topography	No. of Sectors	Percent of Border
Flat	18	17
Flat, subject to inundation	26	24
Rolling	32	30
Rough	31	29

Vietnam border, the border zone between Tay Ninh (in III Corps) and the Gulf of Thailand being flat and subject to inundation. The other half of the Cambodia-South Vietnam border is almost all rolling terrain. The topography of the border with Laos is almost entirely rough. The predominant topography, by sector, is shown in Figs. 3 through 7.*

Vegetation

The following fifteen classes of vegetation are found along the border:

1. Multicanopy forest with dense undergrowth. This type of forest is a dense, 2- or 3-layered mixture of broad-leafed trees, deciduous or evergreen, depending on altitude. The trees are usually from 20 to 30 m in height, with an occasional single tree reaching 50 m. The crowns of the uppermost layers generally overlap, seeming to form an impenetrable cover when viewed from directly above, but appearing somewhat less dense on hillsides or adjacent to cleared areas when viewed obliquely. Tree trunks are from 0.5 to 1.5 m in diameter and are generally spaced 2 to 3 m apart. Undergrowth is dense, particularly where sunlight reaches the forest floor, such as along waterways. Some elephant grass is found along stream courses in hilly areas.

2. Multicanopy forest with dense undergrowth and bamboo. This type of vegetation is similar to type 1, except that it also includes

* Maps depicting border-zone characteristics are grouped at the end of this section. Figures 3 through 7 are located on pp. 21 - 25.

dense clumps of bamboo, particularly in the low valleys. The stems of the most common variety of bamboo are from 1 to 5 in. in diameter and from 3 to 15 m in height. Bamboo grows in tight clumps between 0.6 and 1.0 m in diameter, which in dense undergrowth are generally spaced about 3 m apart.

3. Multicanopy forest with light undergrowth. Except for the amount of undergrowth, this class of vegetation is identical to type 1.

4. Single-canopy forest with dense undergrowth and galleries. The single-canopy forest consists primarily of deciduous trees forming a more-or-less discontinuous cover. The trees vary from 4 to 25 m in height, depending on their location; their diameter varies from 0.2 to 0.8 m. The density of the trees varies considerably, also depending on the situation, but a spacing of from 5 to 10 m is common. Undergrowth is similar to that found in multicanopy forests. Intermittent grass areas often contain "gallery" forests, i.e., relatively dense rows of trees bordering the stream courses, so named because the crowns of the bordering trees often overlap.

5. Single-canopy forest with light undergrowth and bamboo. This type of vegetation is similar to type 4, except for the presence of bamboo and the difference in density of undergrowth.

6. Single-canopy forest with light undergrowth, rubber and palm plantations. The trees in rubber plantations are generally 10 to 20 m in height and have trunk diameters of 24 to 30 cm. Spacing between trees varies from 3 to 5 m, with rows about 8 m apart. The crowns of the trees quite often touch, forming a closed canopy. Undergrowth density varies from very light to fairly heavy, depending on the level of activity on the plantation. Palm plantations consist of coconut trees averaging 25 to 30 m in height and having diameters of from 0.4 to 0.5 m. The trees are generally spaced 5 m or more apart, with the area between them clear of undergrowth, unless the trees have been abandoned, in which case a dense undergrowth can occur.

7. Brushwoods and coffee and tea plantations. This class of vegetation consists of natural low undergrowth and coffee and tea bushes in plantations. The natural brush--grasses, brush, and scrub deciduous trees--varies in height from 1 to 3 m. It is often found

on abandoned slash-and-burn plots, along stream courses, and on some foothills. Coffee and tea plantations consist of bushlike plants from 3 to 15 m in height. The larger coffee plants are laid out in parallel rows about 5 m apart, while the small tea plants are generally planted in rows 1.2 m apart.

8. Dune grass, and casuarina on sand. This type of vegetation, which consists of a mixture of grass, brush, and (occasionally) thickets of date palms and stands of small trees, is often found in beach areas. (Casuarina is a small scrub pine from 3 to 4 m in height, often found on beach ridges.)

9. Sugar-cane plantations. Sugar cane can form very dense stands of closely meshed leafy stems, varying in height with the stage of growth but capable of reaching over 4 m.

10. Dry crops, open areas, pineapple plantations, and upland rice. This category includes open meadows, grass areas, and a number of different crops. Most of these crops, such as taro, beans, sweet potatoes, and pineapples, are relatively low to the ground. On the other hand, some of the crops, such as corn, tobacco, sugar cane, and the grasses, can reach to a height of 4 m.

11. Urban-area vegetation. This category includes the trees, grasses, shrubs, and crops associated with dwelling areas. Fruit trees, such as banana and coconut trees, and vegetable plots and gardens are often found in and around individual houses.

12. Rice, single crop. This category consists of irrigated rice grown in fields surrounded by dikes 1 to 3 m high. The rice plants are planted in rows and vary in height from 1 to 1.5 m at maturity. The fields remain covered with at least 0.15 m of water until 2 to 6 weeks before harvest. At harvest time, the rice is stacked in the field in bundles. During the dry season the fields are either left in stubble or planted in dry crops.

13. Swamps, inundated brushwoods, and saline areas. This type of vegetation is characterized by dense reeds and grass and brushwoods subject to seasonal inundations. The grasses and reeds can grow to a height of 2 m.

14. Fresh-water swamp. Grasses, shrubs, and trees, many with aerial root systems, comprise this category. The proportion of each type of plant depends on the particular situation.

15. Marsh. This vegetation category includes bushes, reeds, floating aquatic plants, and grasses in perennially wet or inundated lowlands. The average height of the grasses and reeds varies from 1 to 2 m.

The percentage of the border zone covered by each type of vegetation is shown in Table 2.

Table 2
DISTRIBUTION OF VEGETATION CLASSES IN THE BORDER ZONE

Vegetation Class	Percent of Border Zone
1. Multicanopy forest with dense undergrowth	46.0
2. Multicanopy forest with dense undergrowth and bamboo	2.0
3. Multicanopy forest with light undergrowth	< 1.0
4. Single-canopy forest with dense undergrowth and galleries	< 1.0
5. Single-canopy forest with light undergrowth and bamboo	3.0
6. Single-canopy forest with light undergrowth, rubber and palm plantations	13.0
7. Brushwoods and coffee and tea plantations	10.0
8. Dune grass, and casuarina on sand	< 1.0
9. Sugar-cane plantations	< 1.0
10. Dry crops, open areas, pineapple plantations, and upland rice	2.0
11. Urban-area vegetation	< 1.0
12. Rice, single crop	12.0
13. Swamps, inundated brushwoods, and saline areas	1.0
14. Fresh-water swamp	< 1.0
15. Marsh	9.0

The fifteen classes of vegetation fall into four main types:

1. Grassland or plantation vegetation which does not generally grow to great heights and which is not usually found in areas subject to inundation (includes classes 7, 8, 9, 10, and 11).
2. Riceland or marsh and swamp vegetation found in areas subject to inundation (includes classes 12, 13, 14, and 15).
3. Single-canopy forest (includes classes 4, 5, and 6).
4. Multicanopy forest (includes classes 1, 2, and 3).

Based on this categorization, each border sector can be classified in terms of its predominant vegetation. A summary of the vegetation in the border zone is presented in Table 3.

Table 3
VEGETATION OF THE BORDER ZONE^a

Type of Vegetation	No. of Sectors	Percent of Border
Cropland (dry)	7	7
Riceland or marsh (wet)	26	24
Single-canopy forest	14	13
Multicanopy forest	60	56

^aThese data differ slightly from those in Table 2 for several categories. This results from considering only the predominant vegetation type in each sector.

Figures 8 through 12 (pp. 26 - 30) show the predominant type of vegetation in each sector. Comparison of these maps with the topography maps (Figs. 3 through 7) indicates the expected general relationship between topography and vegetation, i.e., the flatlands tend to be crop areas and the areas of rolling and rough topography tend to be covered with single-canopy or multicanopy forest.

Foot Trafficability

Foot trafficability refers to the suitability of the ground surface for movement on foot. This measure combines topography, vegetation, the presence of surface water, and other natural factors. For this study, the four-part classification of the Tactical Scale Study maps was used.⁽⁵⁾ This classification defines trafficability as follows:

1. Good: "...conditions do not significantly hinder progress or moderately restrict choices of direction of movement."
2. Fair: "...conditions moderately hamper progress or moderately restrict choices of direction of movement."
3. Poor: "...conditions severely hinder progress or greatly restrict choices of direction of movement."
4. Unsuitable: "...conditions preclude all but local movement."

Areas within each sector were designated as G, F, P, or U, as illustrated in Fig. 2; these areas were then measured by planimeter and the values converted into percentages of the total area of the sector. Measurements and conversion were done for foot trafficability in both the wet and dry seasons.*

A preliminary analysis of the planimetered foot-trafficability data indicated that they could be visually represented best by combining the "poor" and "unsuitable" terrain into a single composite type and then indicating the percentage of that type occurring in each sector. All the remaining terrain--"good" and "fair"--was then considered as being trafficable with minimum difficulty. The advantage of this simplified categorization is that it provides a more quantitative measure of the infiltration potential of each sector than would be possible by simply identifying the dominant level of trafficability, as was done with types of vegetation. For studies of infiltration, as contrasted to more-or-less conventional military movement, it is doubtful that "unsuitable" is a particularly meaningful term.

*The percentages for each sector are presented in Appendix A.

Table 4 shows the distribution of the difficult-trafficability areas for both the wet and the dry season.

Table 4
AREAS OF DIFFICULT TRAFFICABILITY IN THE BORDER ZONE

Percent of Sector Comprising Poor and Unsuitable Terrain	No. of Sectors		Percent of Border	
	Wet Season	Dry Season	Wet Season	Dry Season
Less than 10	4	7	4	6
10 to 39	7	17	7	16
40 to 70	14	19	12	18
More than 70	82	64	77	60

Table 4 indicates that between 60 and 77 percent of the border zone, depending on the season of the year, is primarily poor or unsuitable (i.e., difficult) for foot trafficability. Only 4 to 6 percent of the border zone contains less than 10 percent of difficult terrain and hence can be considered trafficable with minimum difficulty.

The distribution of difficult terrain in each sector is shown in Figs. 13 through 17 (pp. 31 - 35).

Population

The population of the South Vietnam border zone is a mixture of ethnic Vietnamese, tribal and religious groups, and Vietnamese with Cambodian backgrounds. The population density is highly variable, with some portions of the Laos-South Vietnam border being essentially uninhabited and some sections of the Cambodia-South Vietnam border having populations of over 400 inhabitants per square kilometer.

For this study, data on the ethnic Vietnamese and Cambodian groups* were primarily obtained from Ref. 6; data on minority groups,

*Population data are subject to variation because of continual population movement and displacement.

particularly on the Montagnard tribes of the highland areas, were taken from various studies and maps.

The population in the border zone is close to 500,000, the major concentrations occurring at the eastern end of the DMZ and in the area between Tay Ninh and the Gulf of Thailand. Table 5 summarizes the numbers of sectors having various population-density levels. The density ranges for each sector are shown in Figs. 18 through 22 (pp. 36 - 40).

Table 5

POPULATION DENSITY OF THE BORDER ZONE

Population Density (inhabitants/sq km)	No. of Sectors	Percent of Border
Less than 20	86	80
20 to 100	11	11
101 to 200	3	3
201 to 300	5	4
301 to 400	1	1
More than 400	1	1

Ethnic Composition and Population

The border areas of South Vietnam, particularly in the Laos-South Vietnam border and the portions of the Cambodia-South Vietnam border north of Tay Ninh province are largely inhabited by ethnic minority groups.* The precise tribal areas of the border are not clearly delimited, and some movement of the tribal groups occurs continuously.

The major ethnic groups of the border zone and estimates of tribal populations of the border sectors are presented in Table 6.** Tribal-population data are pre-1964, i.e., before the intensification of military activities in Vietnam. Tribal-population estimates for each

* These groups are described in Refs. 8 through 11.

** It was not possible to determine from the available data how much overlap there is between the data of Ref. 6 and those in Table 6. Spot checks indicate that a large part of the ethnic minority population of the border sectors is not included in the data of Ref. 6.

sector were derived by counting the number of house symbols on the Army Map Series L-7014 maps and then multiplying them by 10 (an estimated number of inhabitants per household). This factor is probably conservative; the actual number of household residents is no doubt higher, based on descriptions of tribal life, but some units have been abandoned during the course of the Vietnamese war. The tribal population in each sector is given in Appendix A.

Table 6
ETHNIC GROUPS AND TRIBAL POPULATION
IN THE BORDER ZONE^(1,8-11)

Group	Symbol ^a	Population
Vietnamese	V	...
Cambodian	C	...
Brou	BR	9,650
Pacoh	PA	2,900
Phuong	PH	2,800
Katu	KA	1,900
Jeh	JE	1,900
Kayong	KG	1,600
Jarai	JA	6,600
Rhade	RH	500
Mnong	MW	5,100
Stieng	ST	4,900
Unknown	U	900
Total	...	38,750

^aUsed in ethnic-composition maps
(Figs. 23 through 27).

The ongoing war has brought about many changes in ethnic populations, including the following:

1. An estimated 7,500 Jeh and Sedang tribesmen have become refugees and moved from the border area.
2. An estimated 12,000 Brou tribesmen were relocated because of the fighting in the Khe Sanh area.

3. An estimated 8,000 Jarai were relocated to regions away from the border in 1967 and 1968.
4. An unknown number of Stieng, Mnong, and Katu have relocated to regions away from the border.

Because of these and other changes, data on the locations of ethnic minority tribes and estimates of their population in the border zone cannot be accepted with high confidence.

Figures 23 through 27 (pp. 41 - 45) show the occupying ethnic group(s) of each sector and, where there are tribal populations, their density. No density designations are included for nontribal sectors.

Movement Routes

There are three major types of movement routes in the border zone: roads, tracks and trails, and waterways. Using available data, we have identified and counted these routes; however, this count can be considered only a rough approximation of the actual number, for several reasons: (1) The only maps available for some portions of the border were several years old. (2) It is likely that some trails and waterways are not included on the available maps. (3) Some additional trails or tracks have undoubtedly been created since the source maps were published.

Two forms of data were used for all of the movement routes, a count of the routes crossing the border into each sector and a count of the routes entering each sector on its remaining three sides. In a general sense, the routes crossing the border represent potential avenues for infiltration, and those crossing the other sides of the sectors represent potential avenues either for leaving the sector or for gaining access to the sector (e.g., by forces attempting to intercept the infiltrators on surface routes).

Roads

A road is defined as any movement route with adequate width and surface to support motorized vehicles at some time of the year. Most

of the roads are designated by route numbers of the national, provincial, interprovincial, etc., highway system of South Vietnam. The data on road density are summarized in Table 7.

Table 7
ROAD DENSITY OF THE BORDER ZONE

No. of Roads	Roads Crossing Border		Roads Entering Sector	
	No. of Sectors	Percent of Border	No. of Sectors	Percent of Border
0	80	75	52	49
1 to 2	25	23	32	30
3 to 5	2	2	19	18
More than 5	0	0	4	3

As indicated in Table 7, about 75 percent of the sectors have no roads that cross the border--and another 23 percent have only one or two roads crossing the border. However, about 51 percent of the sectors have at least one road that exits from them, and over 21 percent of the sectors have three or more exit roads. In other words, there are more roads that permit access to the border sectors from inside the country than from outside.

Figures 28 through 32 (pp. 46 - 50) present the data on numbers of roads in the border zone. Access to the border from either side is generally sporadic, the larger number of roads being in the Cambodia-South Vietnam border zone, particularly opposite Saigon.

Trails and Tracks

Trails and tracks are defined as movement routes whose widths or surface conditions do not usually permit the passage of motorized vehicles. Trails are generally about 1 m wide and are used primarily for foot traffic; tracks are generally about 1 to 3 m wide and can be used for animal-drawn vehicles. As indicated earlier, the available data are very unreliable, since the number of trails or tracks can change rapidly, as new ones are easily established.

Available maps show about 650 trails or tracks crossing the border. The distribution of these routes is summarized in Table 8, and data for the individual sectors are presented in Figs. 33 through 37 (pp. 51 - 55).

Table 8

TRAILS AND TRACKS ENTERING THE BORDER ZONE^a

Number	Trails/Tracks Crossing Border		Trails/Tracks Entering Sector	
	No. of Sectors	Percent of Border	No. of Sectors	Percent of Border
0	13	12	4	4
1 to 4	42	40	20	19
5 to 9	26	24	10	9
10 to 18	21	20	46	44
19 to 25	3	3	8	7
More than 25	1	1	18	17

^aNo data are available on Sector 107.

The data on trails and tracks reflect a somewhat different picture than do the road data. Not only are there many more trails and tracks than there are roads, but with a few exceptions (13 out of 106 sectors) there are tracks or trails crossing the border into every sector, as indicated in the tracks/trails maps. Also, some sectors are shown to have more movement routes crossing the border than routes entering or exiting the sector. While part of this apparent difference may be the result of inadequacies in the available data, it may be that some of the ethnic minority groups along the border have developed trails to cross the border, while there is little movement laterally or toward the interior of the country.

Waterways

The waterways in the border area of South Vietnam range from large rivers, such as the Mekong, to small, intermittent streams.* For this

* Intermittent streams were not considered to be potentially significant waterways for movement and hence were not included in the waterway count.

study, waterways were divided into two groups: (1) large waterways, defined as permanent streams or canals, 50 m or more in width, entering, or themselves comprising, one of the boundaries of a sector; and (2) small waterways, defined as all permanent streams or canals less than 50 m wide. (The numbers of large and small permanent streams in each sector are given in Appendix A.) Table 9 and Figs. 38 through 42 (pp. 56 - 60) show the overall distribution of waterways (large and small combined).

Table 9

WATERWAYS OF THE BORDER ZONE

Number	Waterways Crossing Border		Waterways Entering Sector	
	No. of Sectors	Percent of Border	No. of Sectors	Percent of Border
0	47	44	7	6
1 to 4	45	42	42	40
5 to 9	7	6	29	27
10 to 18	6	6	13	12
19 to 25	1	1	3	3
More than 25	1	1	13	12

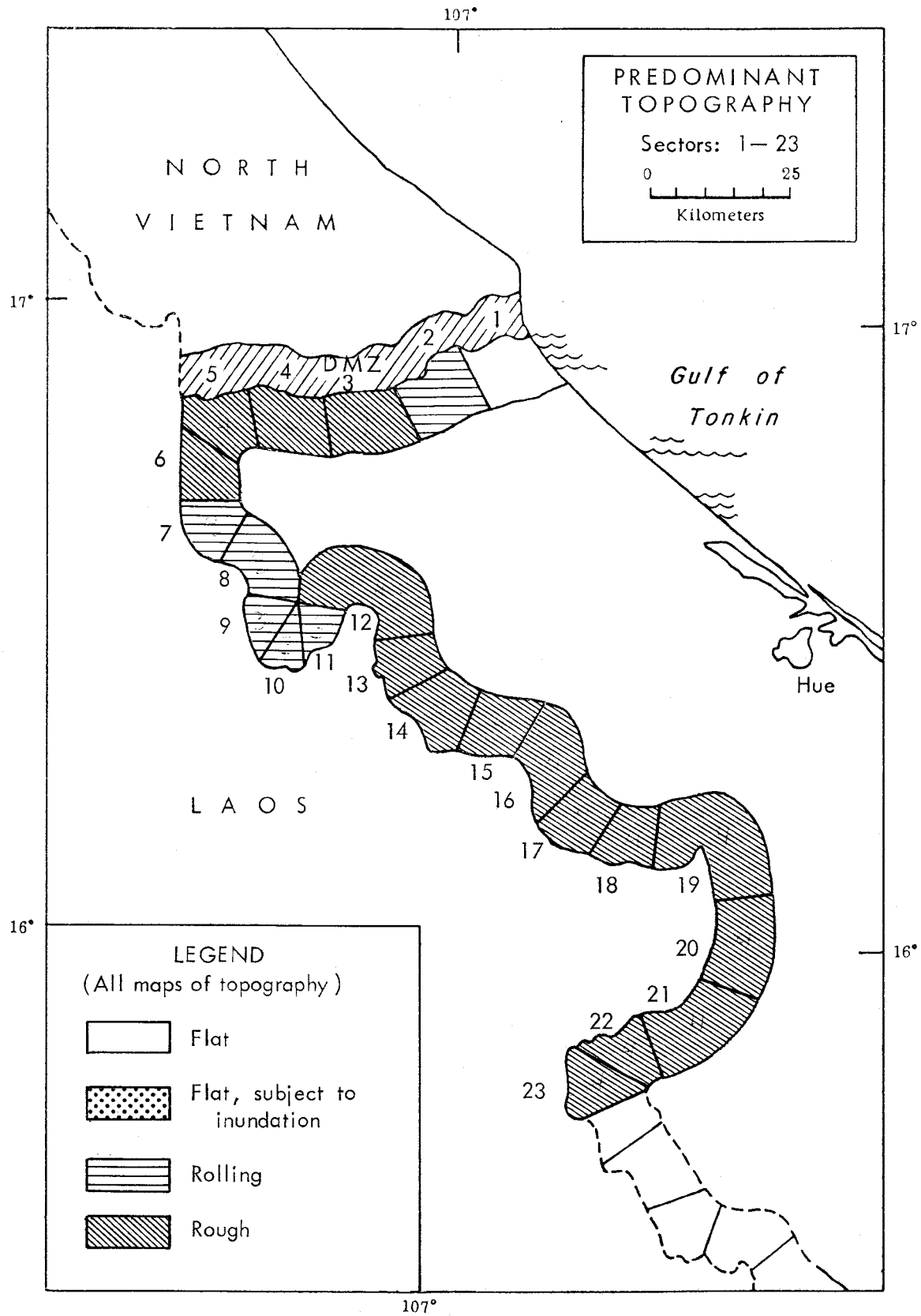


Fig. 3—Predominant topography of Sectors 1 - 23

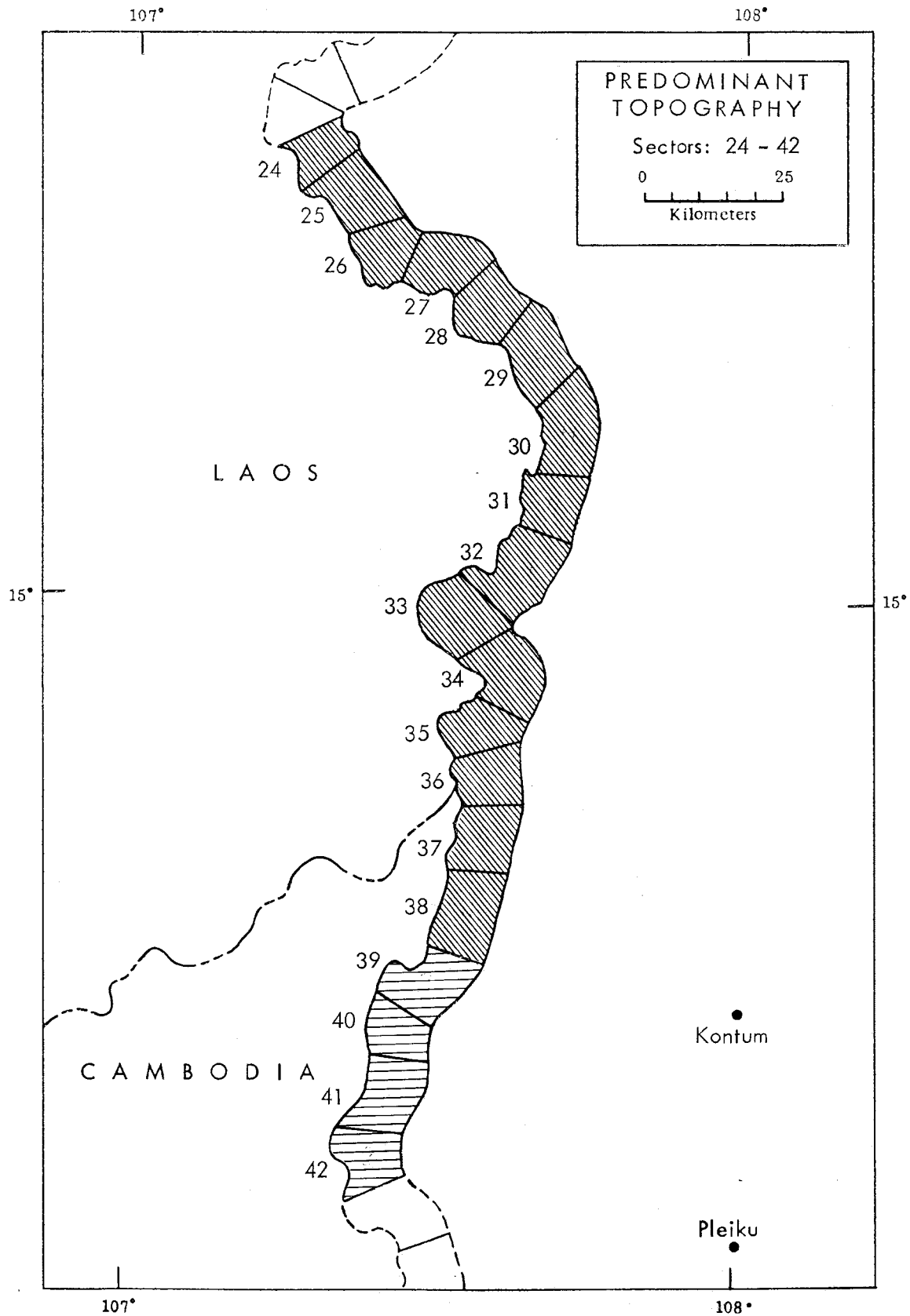


Fig. 4—Predominant topography of Sectors 24 - 42

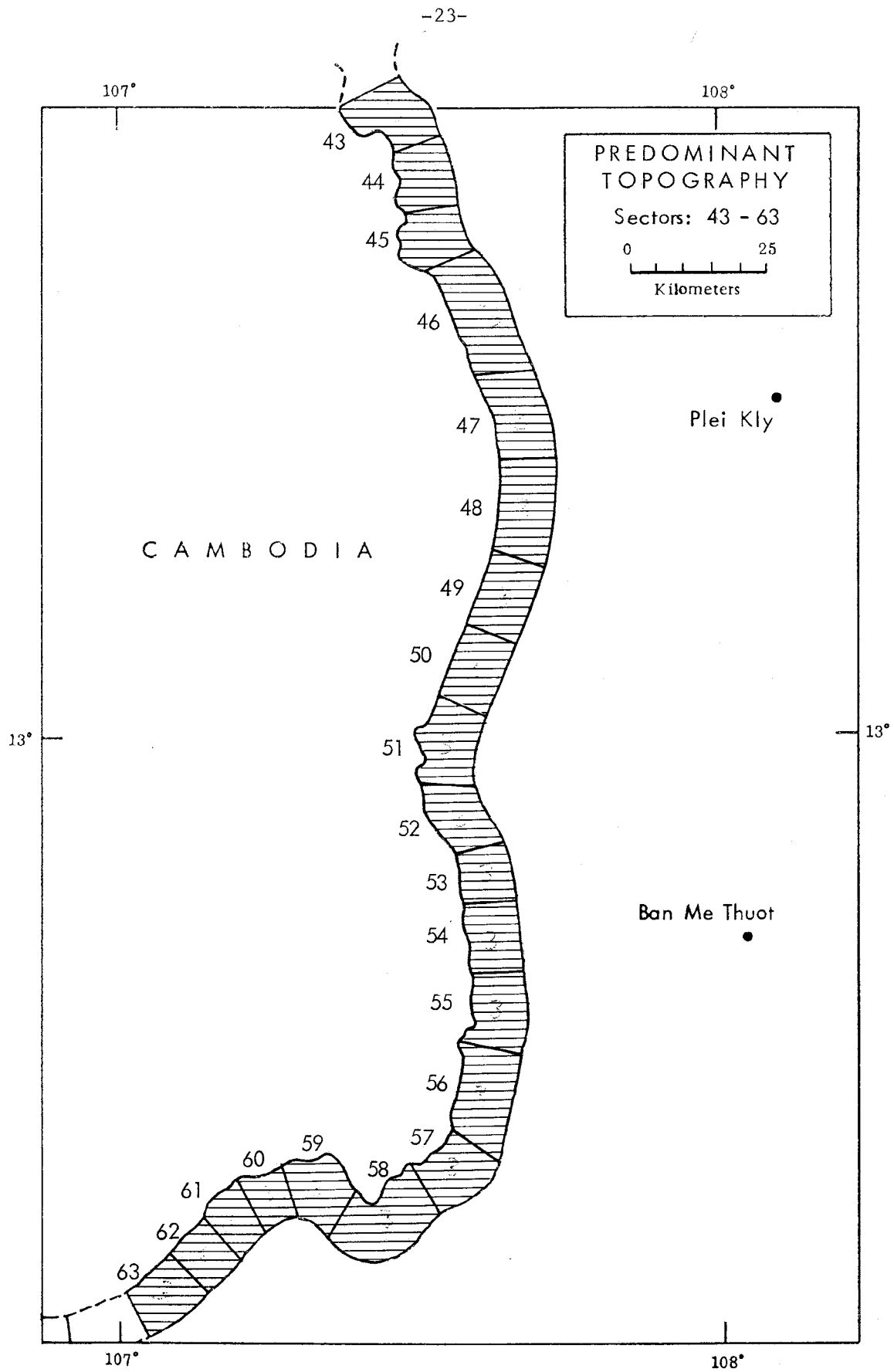


Fig. 5—Predominant topography of Sectors 43 - 63

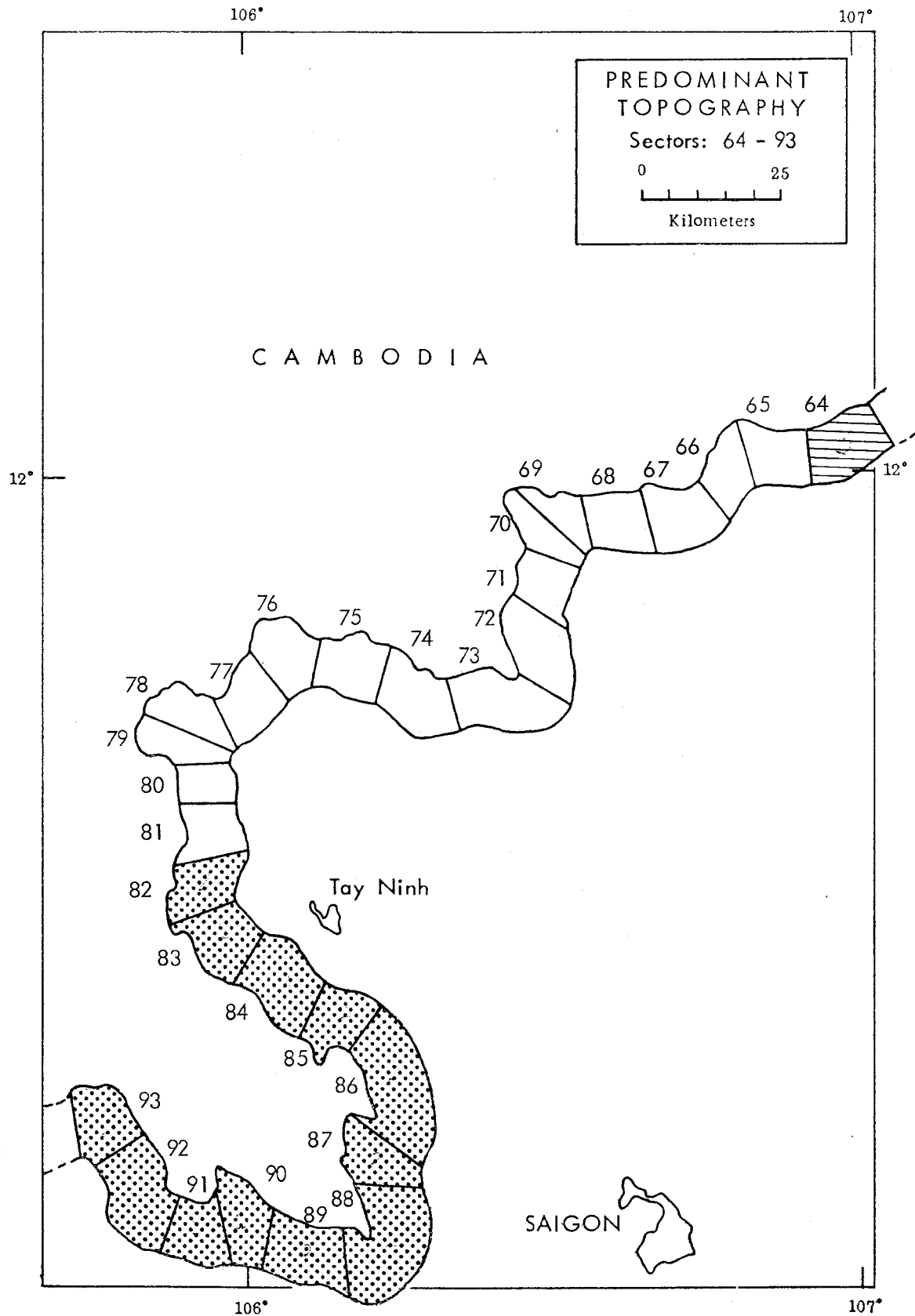


Fig. 6—Predominant topography of Sectors 64 - 93

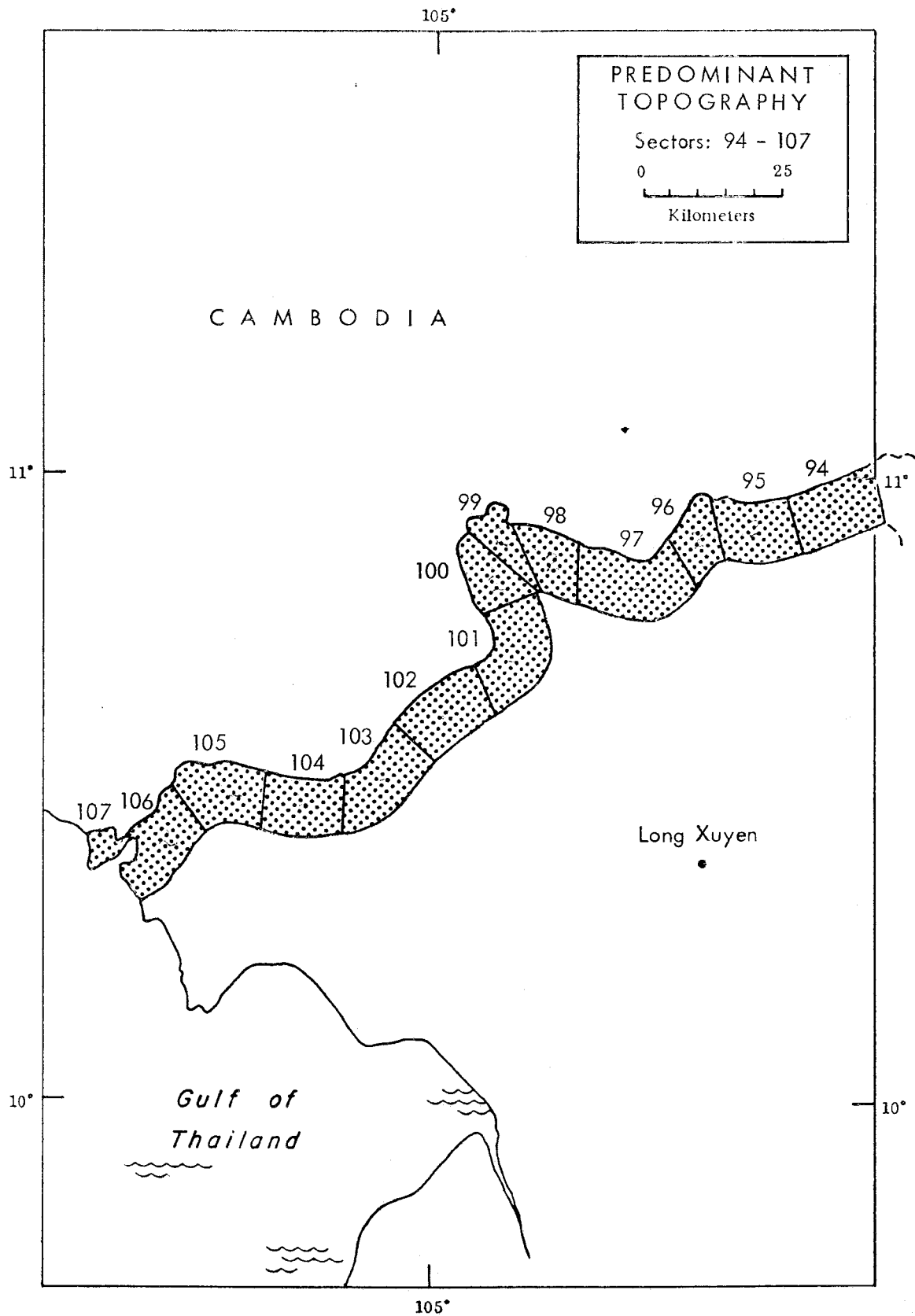


Fig. 7—Predominant topography of Sectors 94 - 107

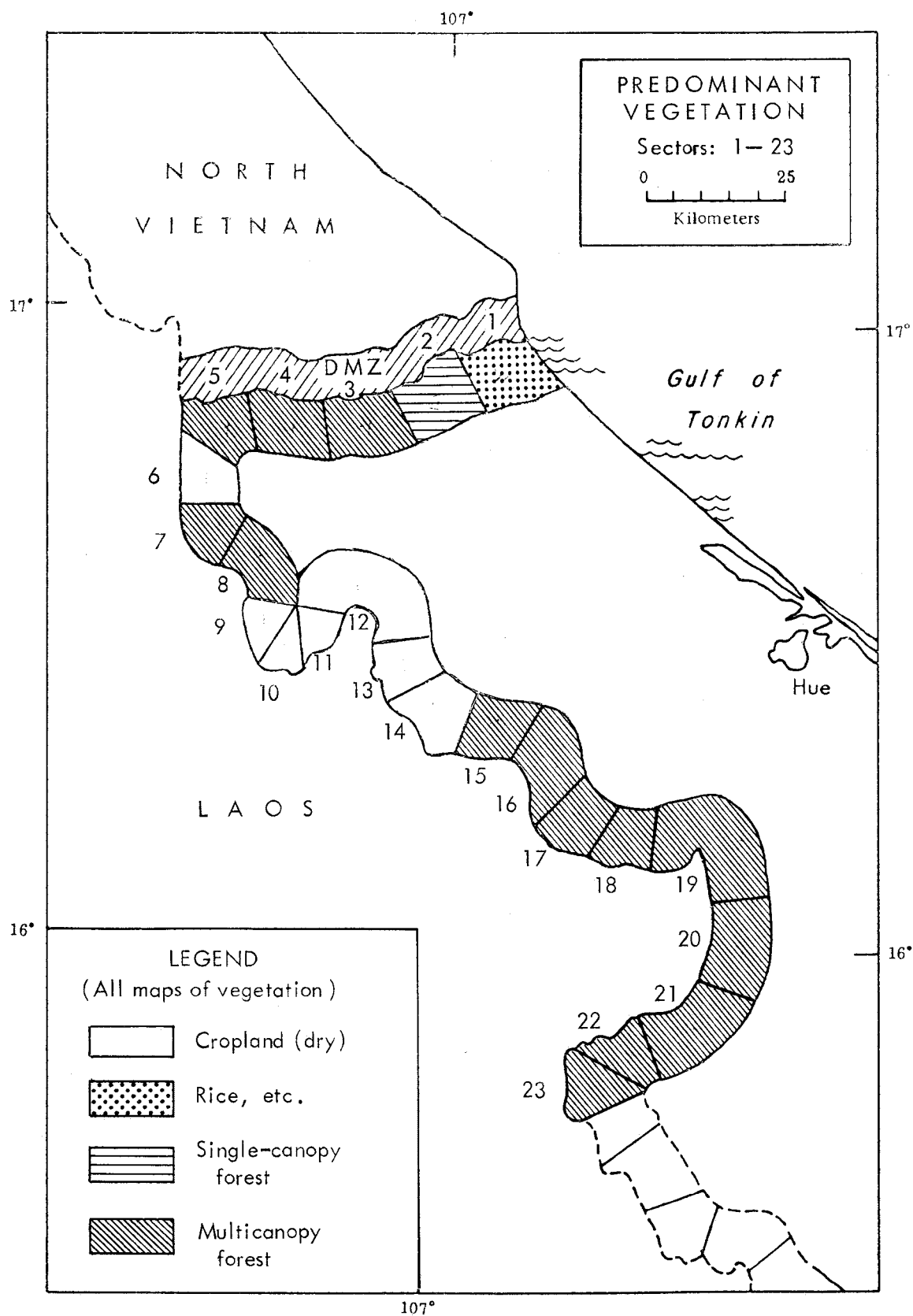


Fig. 8—Predominant vegetation of Sectors 1 - 23

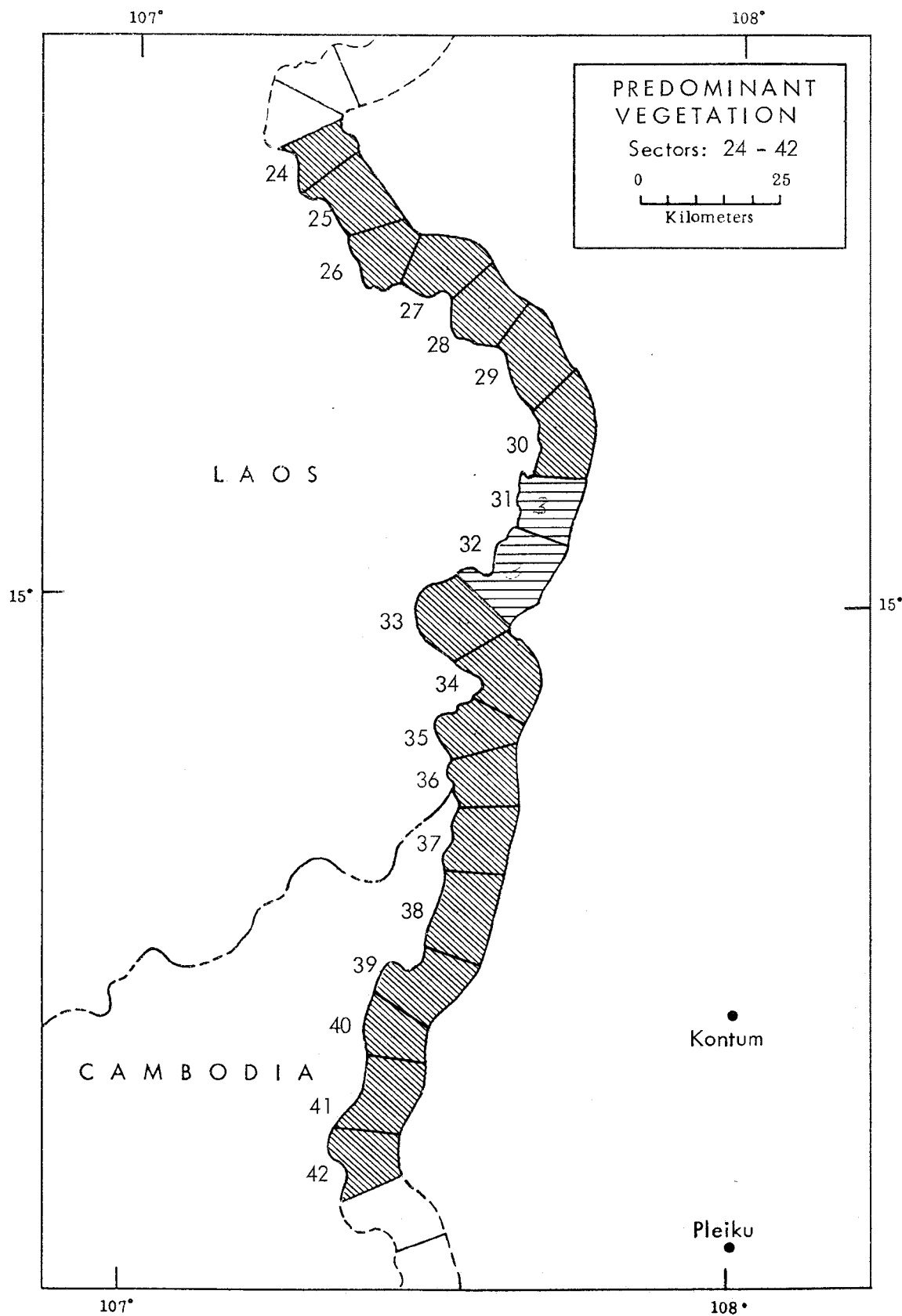


Fig. 9—Predominant vegetation of Sectors 24 - 42

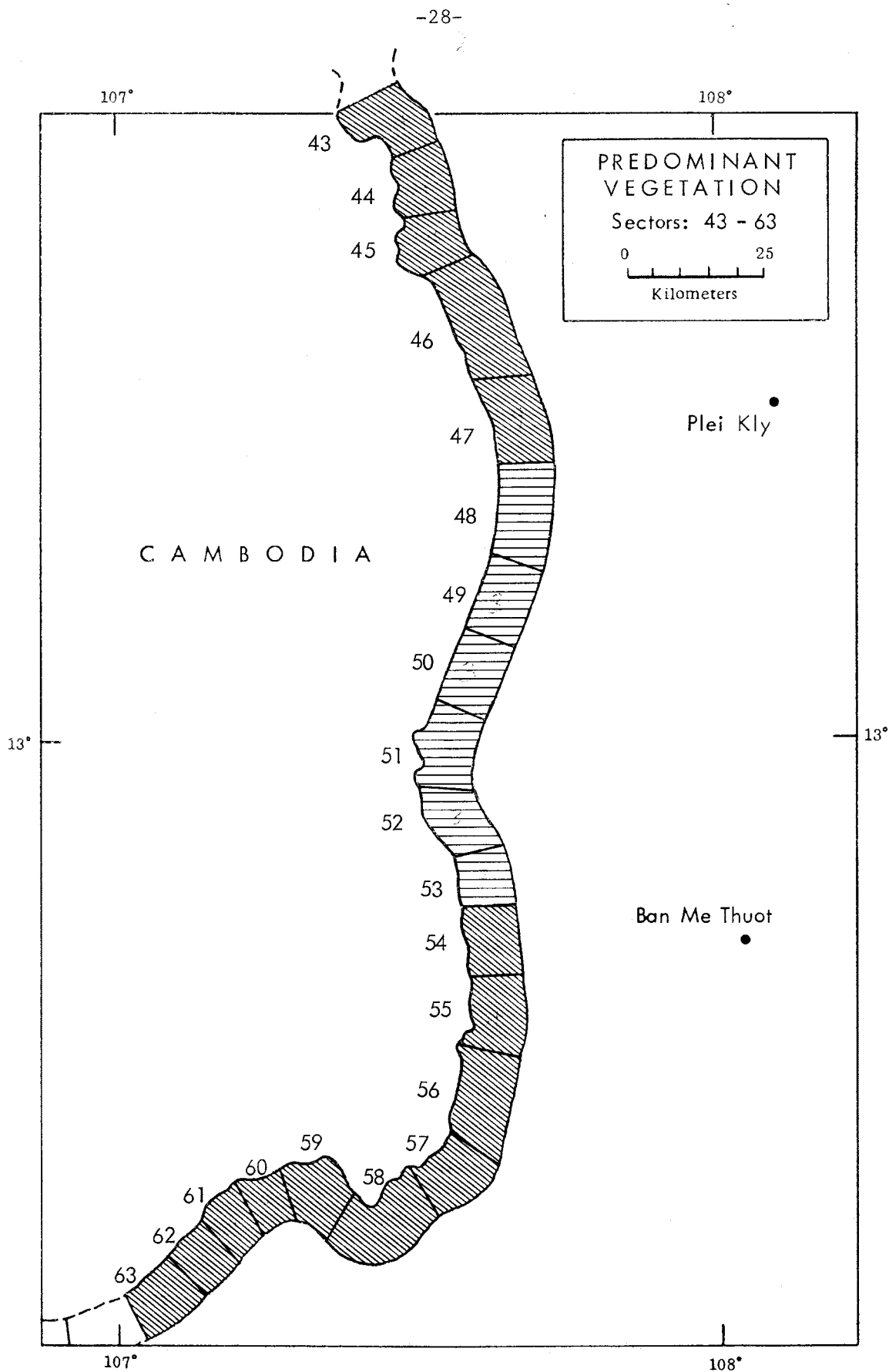


Fig. 10—Predominant vegetation of Sectors 43 - 63

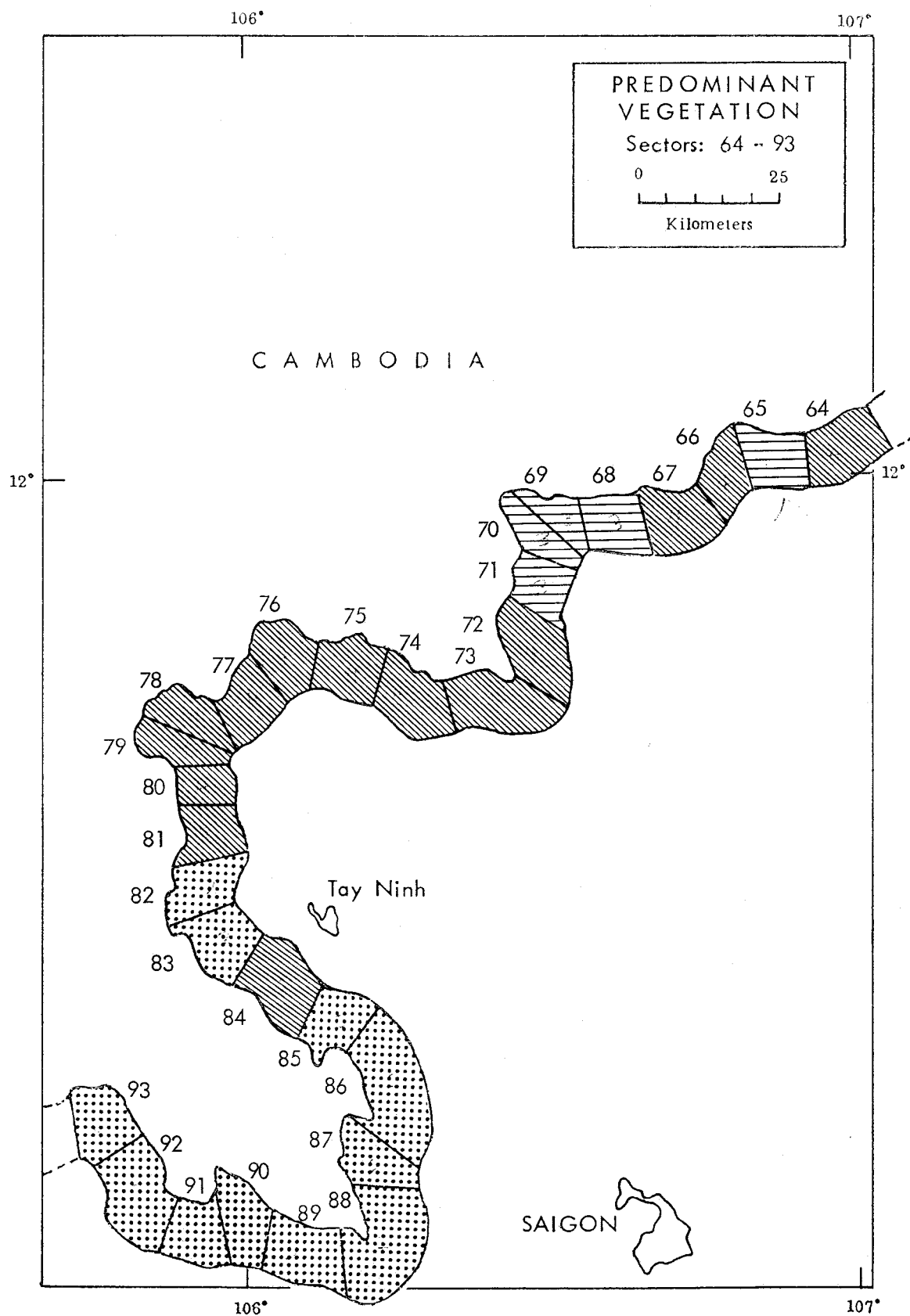


Fig. 11—Predominant vegetation of Sectors 64 - 93

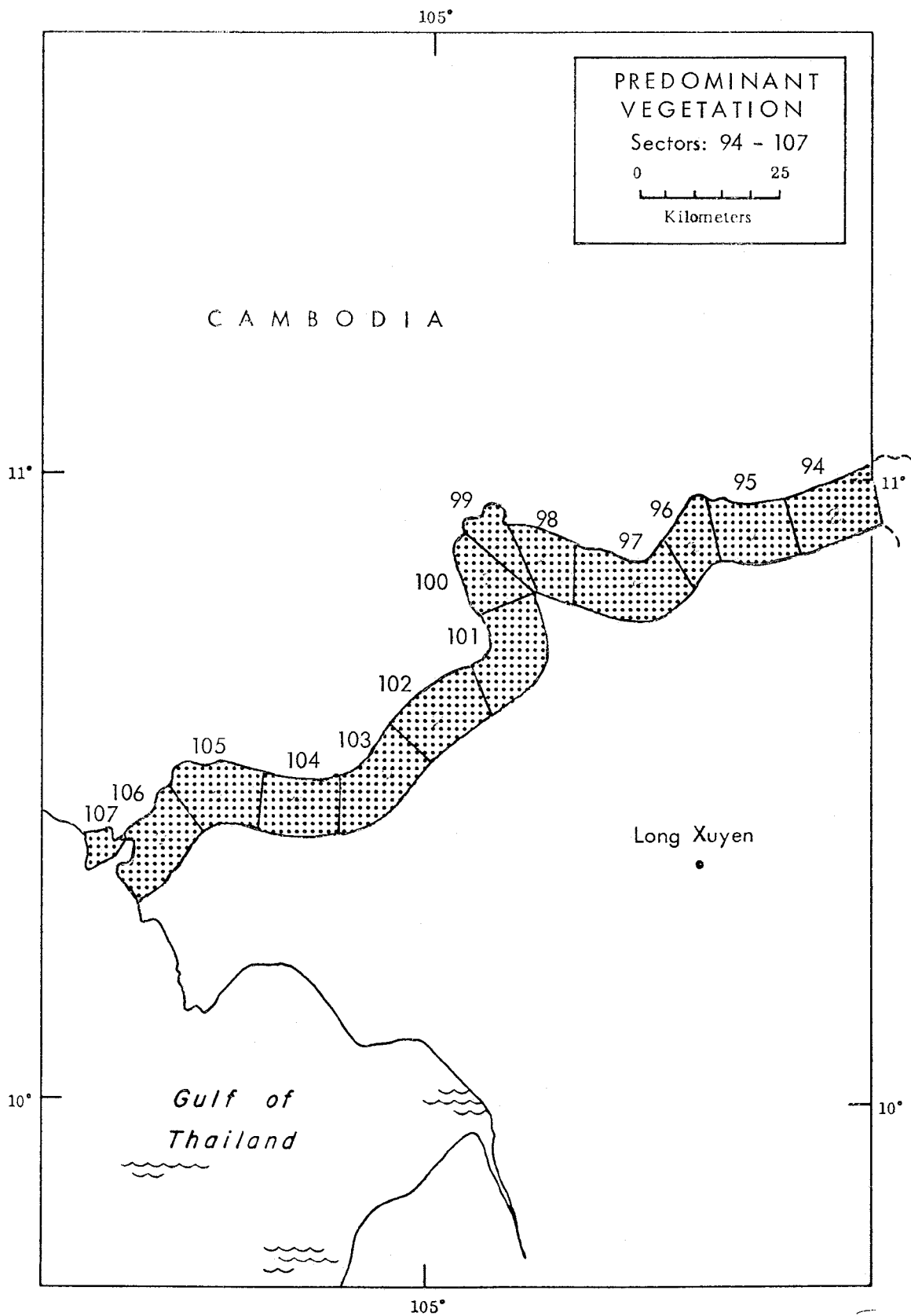


Fig. 12—Predominant vegetation of Sectors 94 - 107

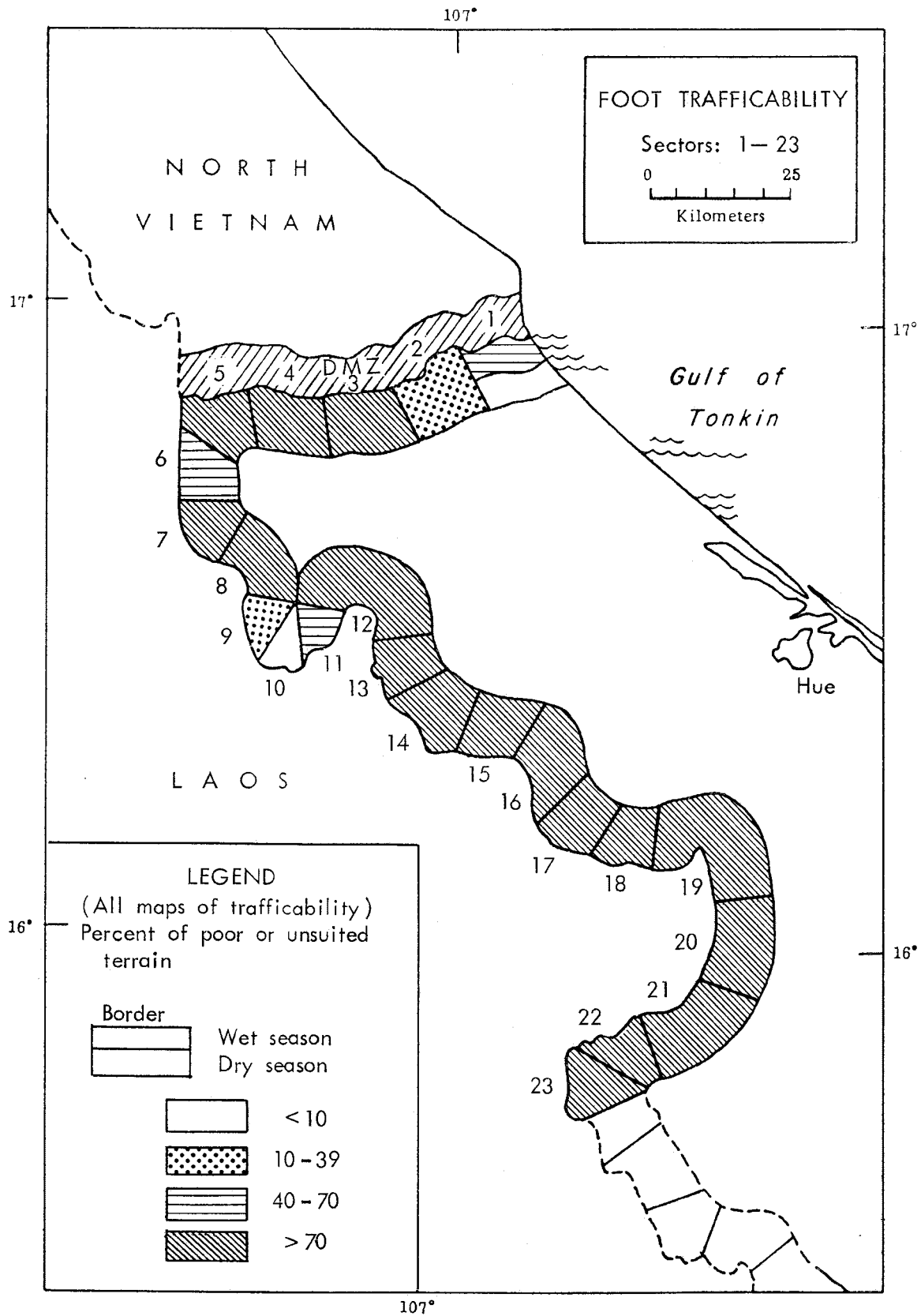


Fig. 13—Foot trafficability of Sectors 1 - 23

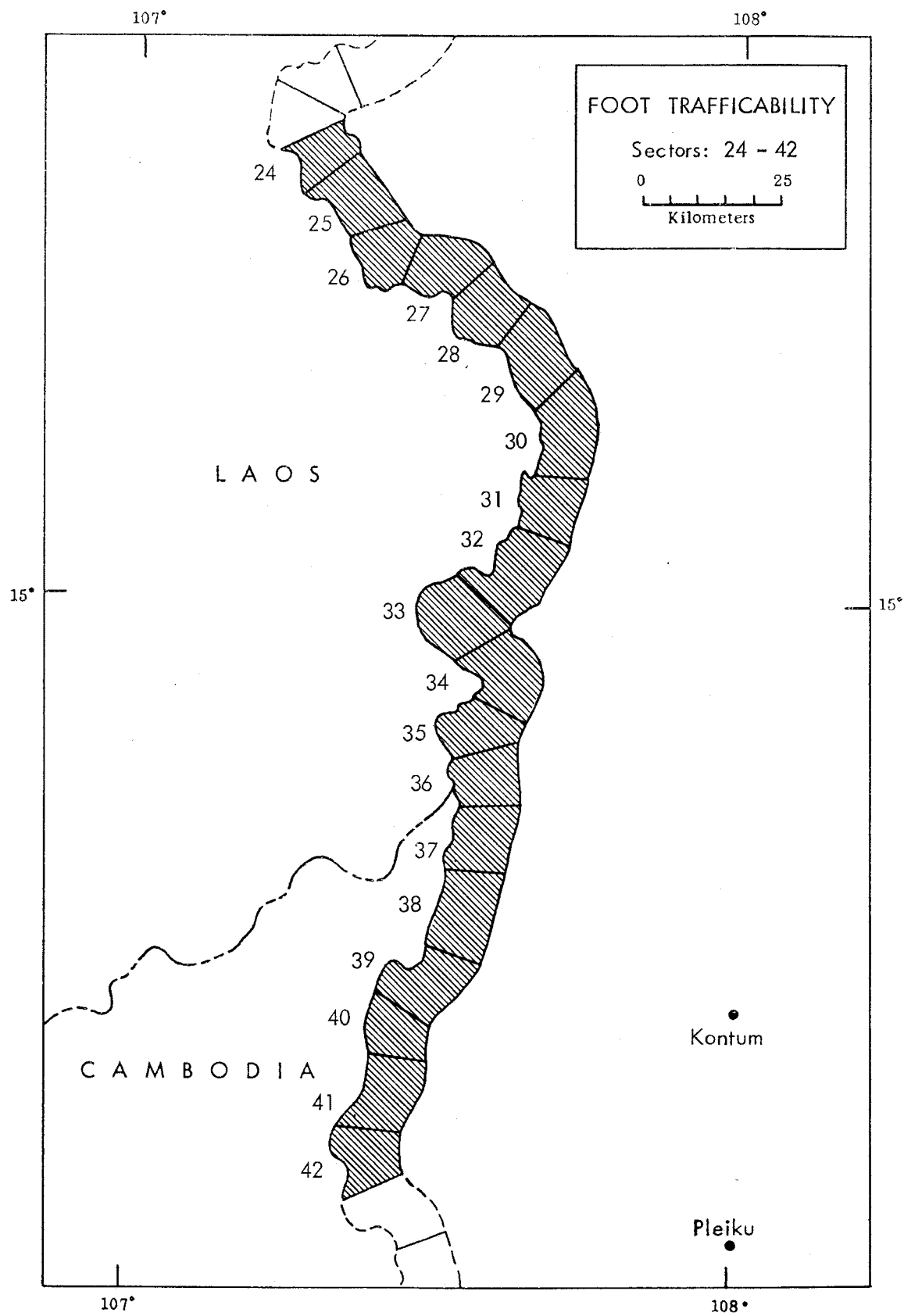


Fig. 14—Foot trafficability of Sectors 24 - 42

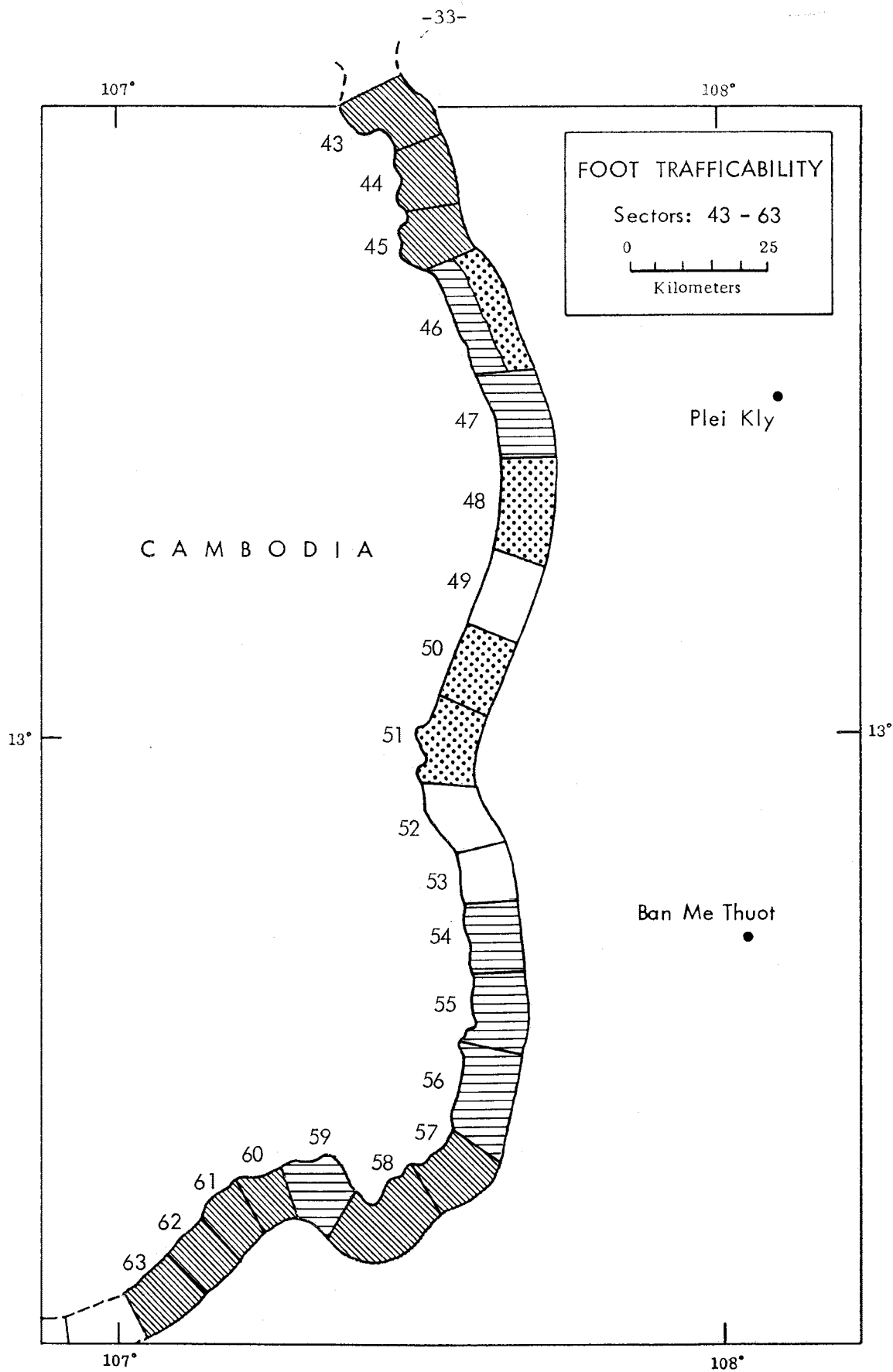


Fig. 15—Foot trafficability of Sectors 43 - 63

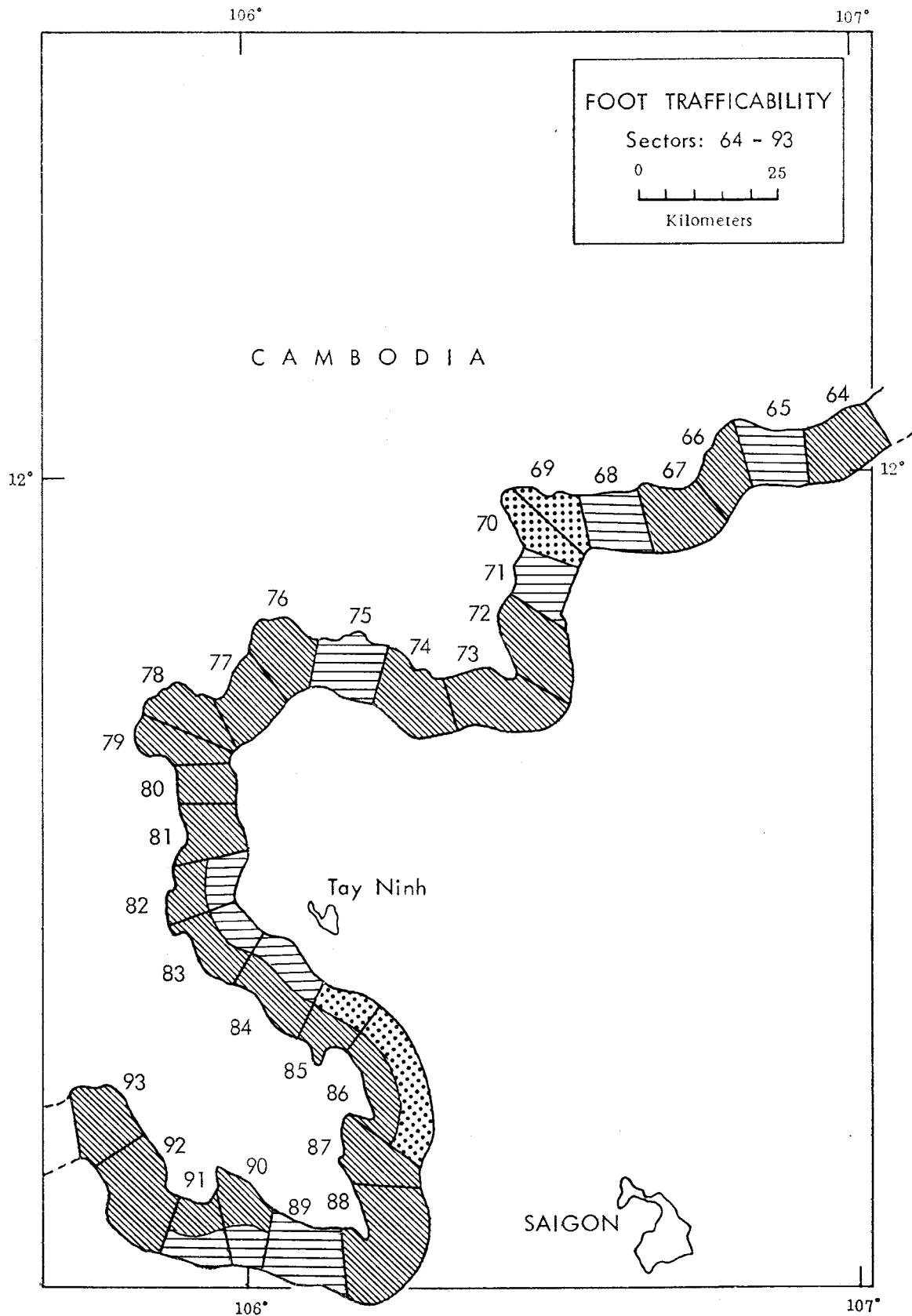


Fig. 16—Foot trafficability of Sectors 64 - 93

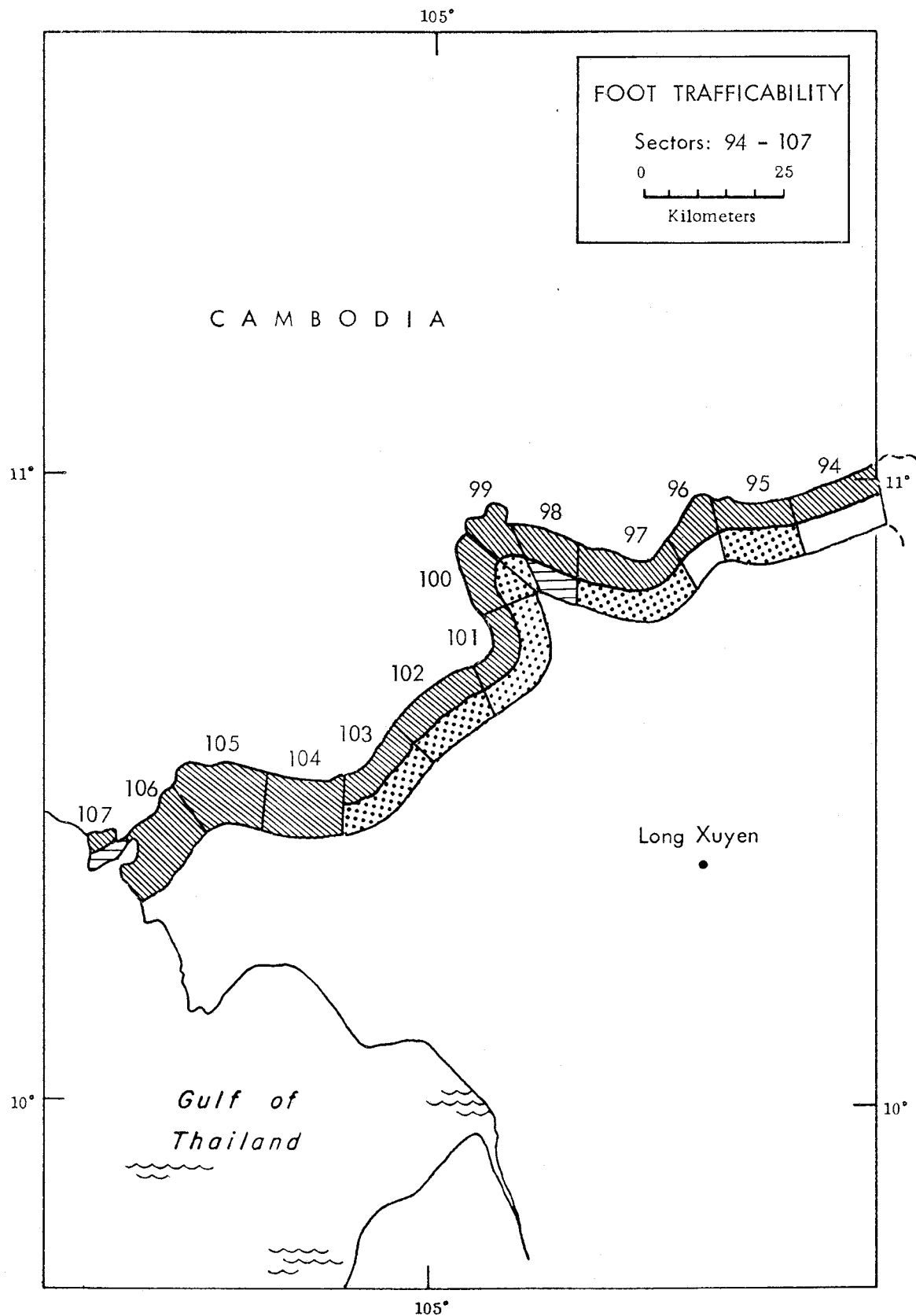


Fig. 17—Foot trafficability of Sectors 94 - 107

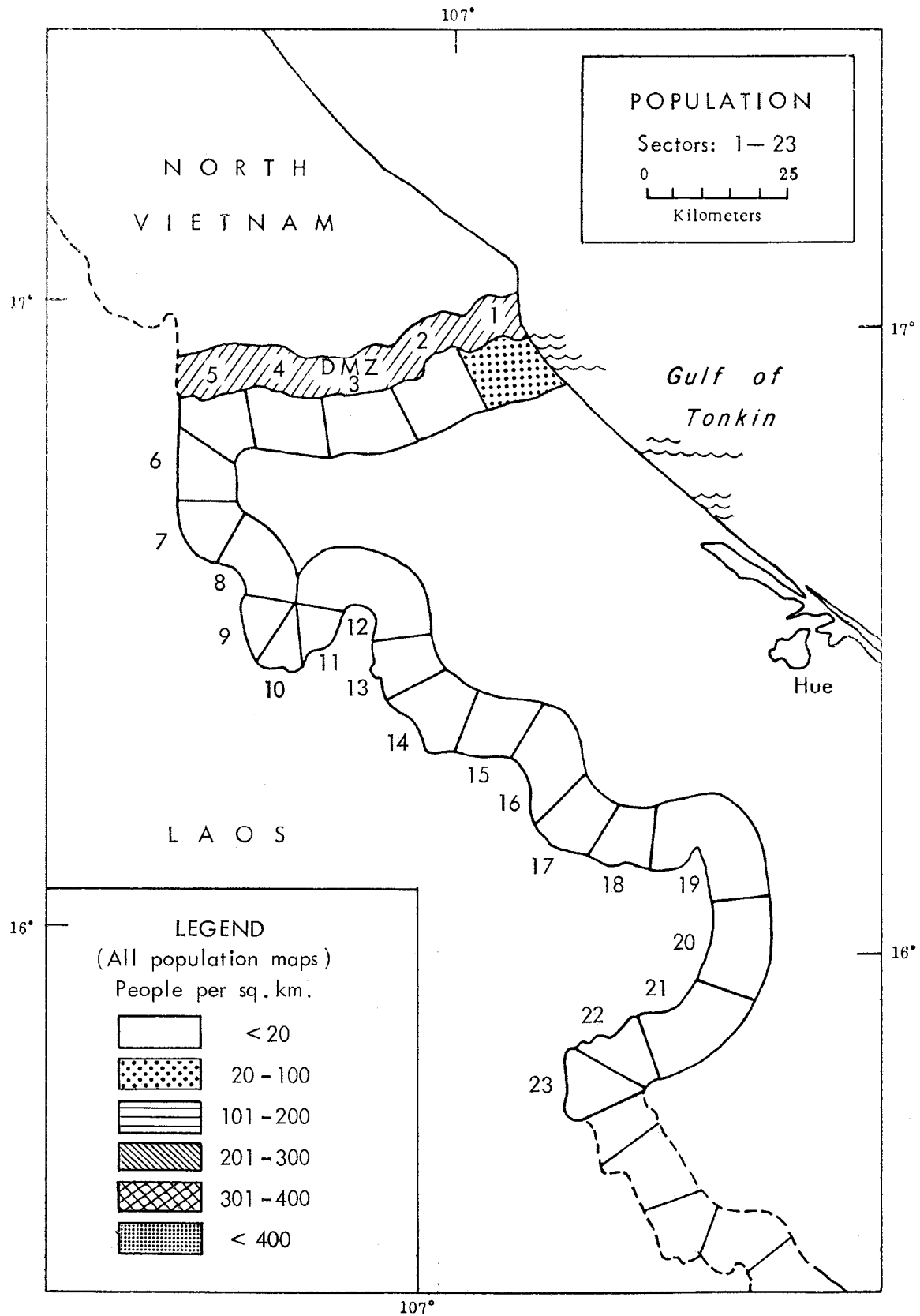


Fig. 18—Population density of Sectors 1 - 23

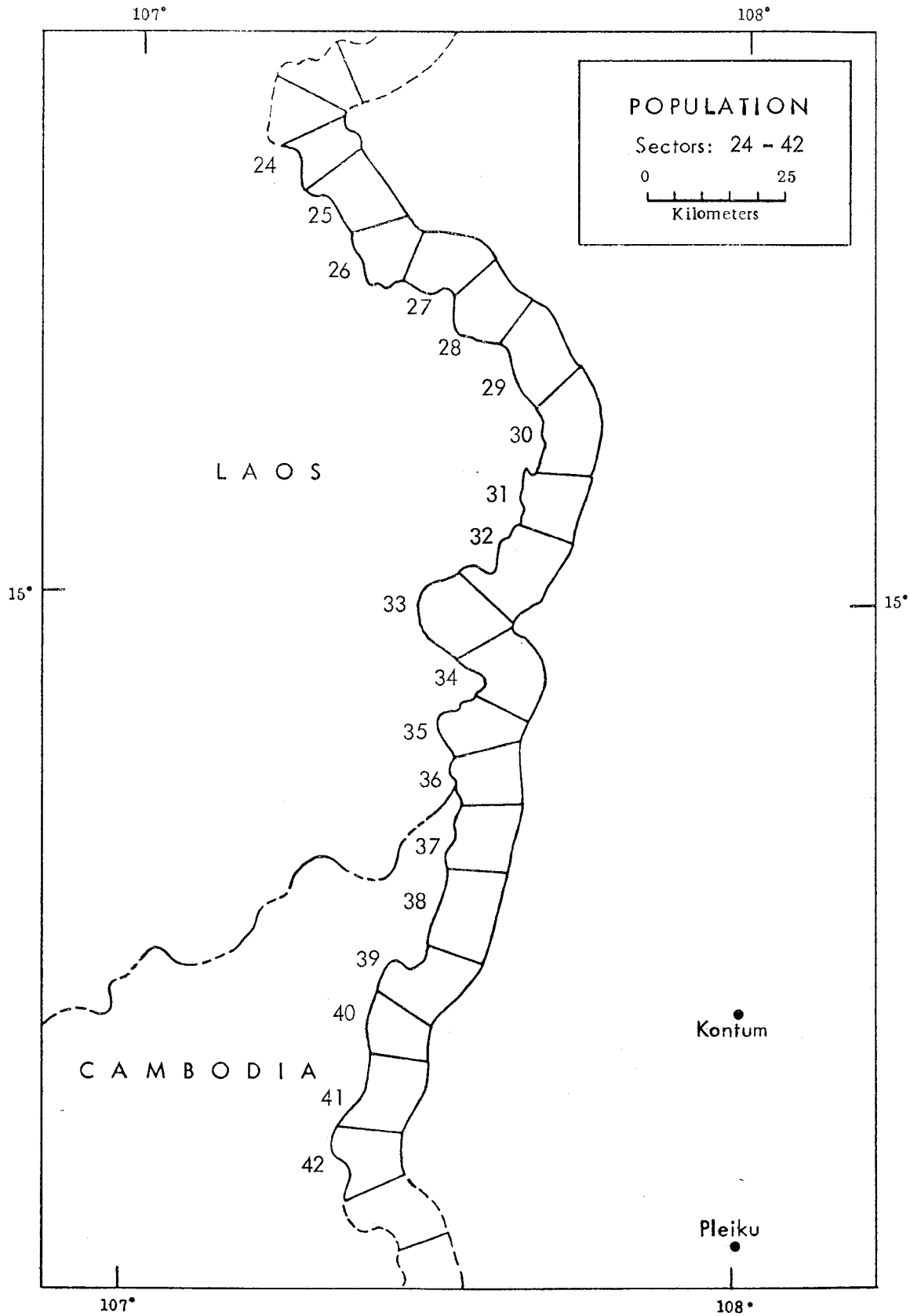


Fig. 19—Population density of Sectors 24 - 42

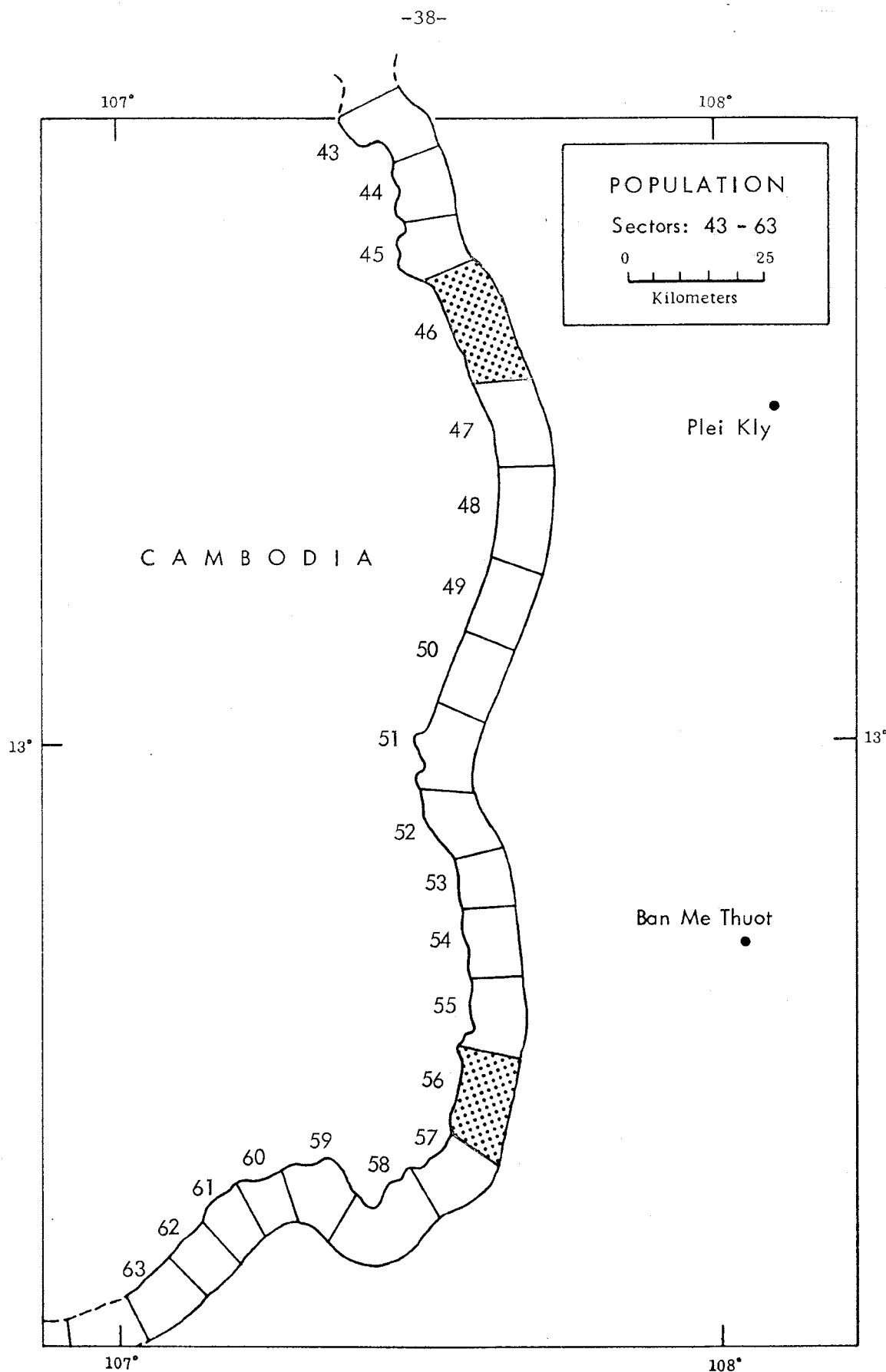


Fig. 20—Population density of Sectors 43 - 63

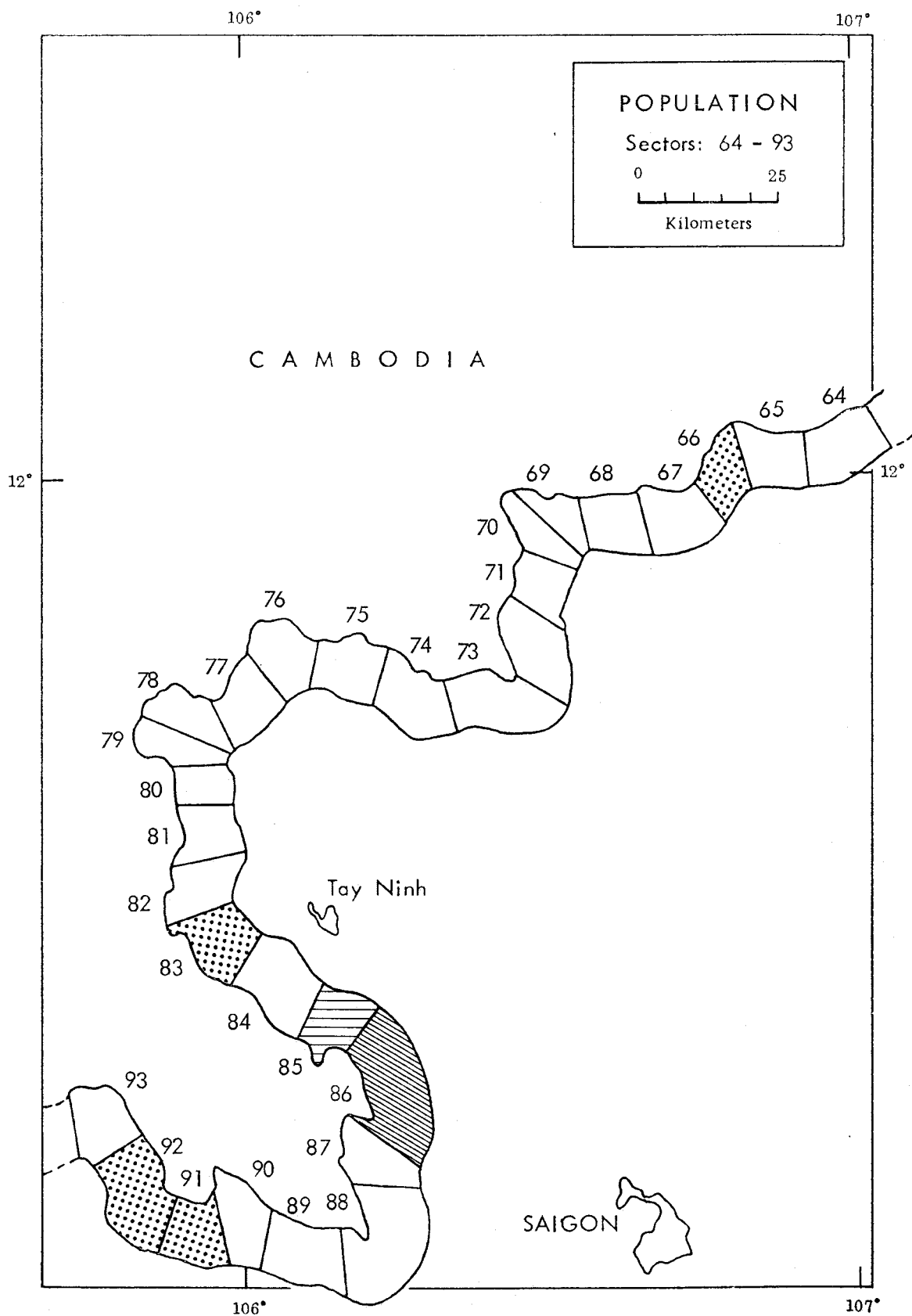


Fig. 21—Population density of Sectors 64 - 93

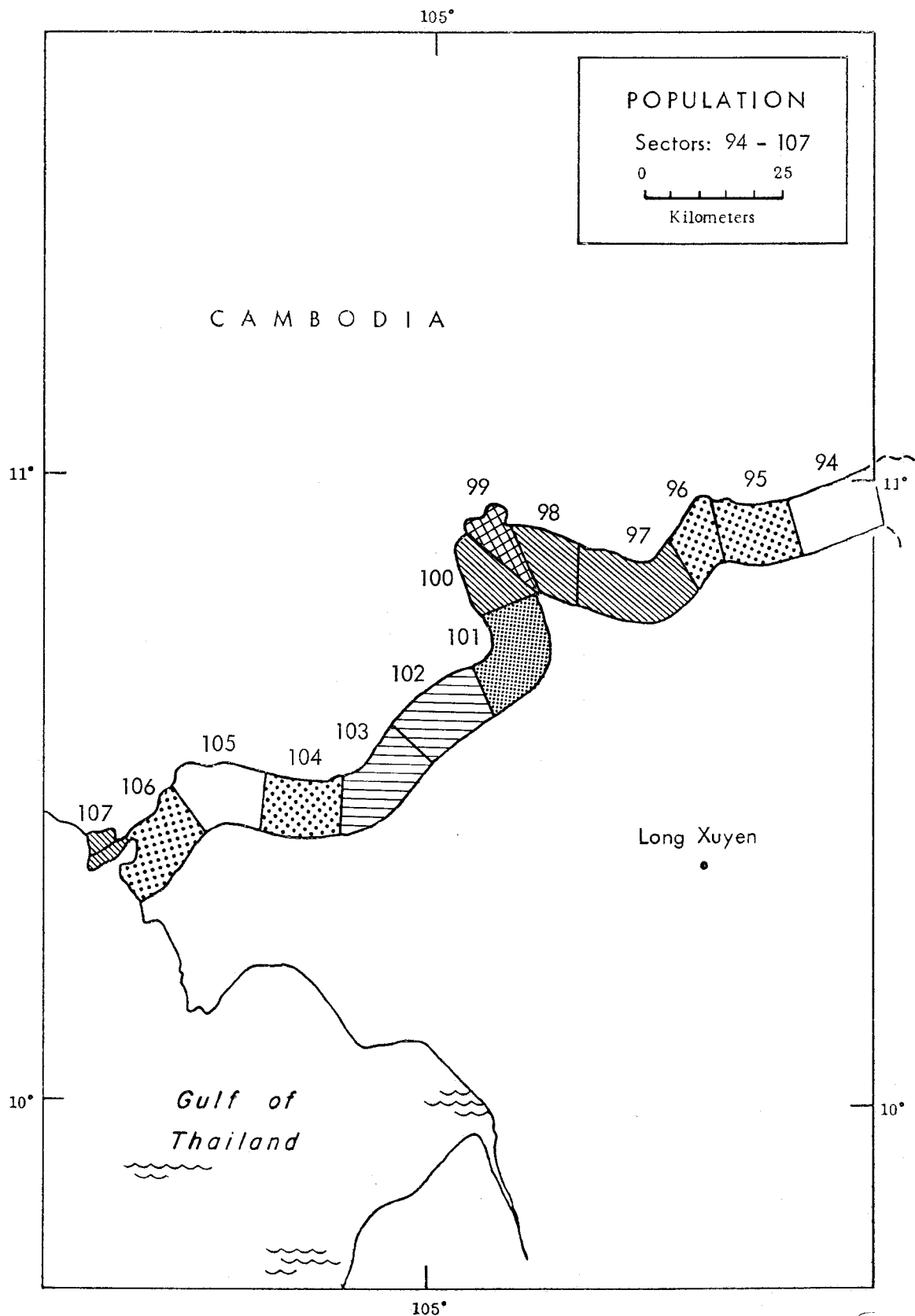


Fig. 22—Population density of Sectors 94 - 107

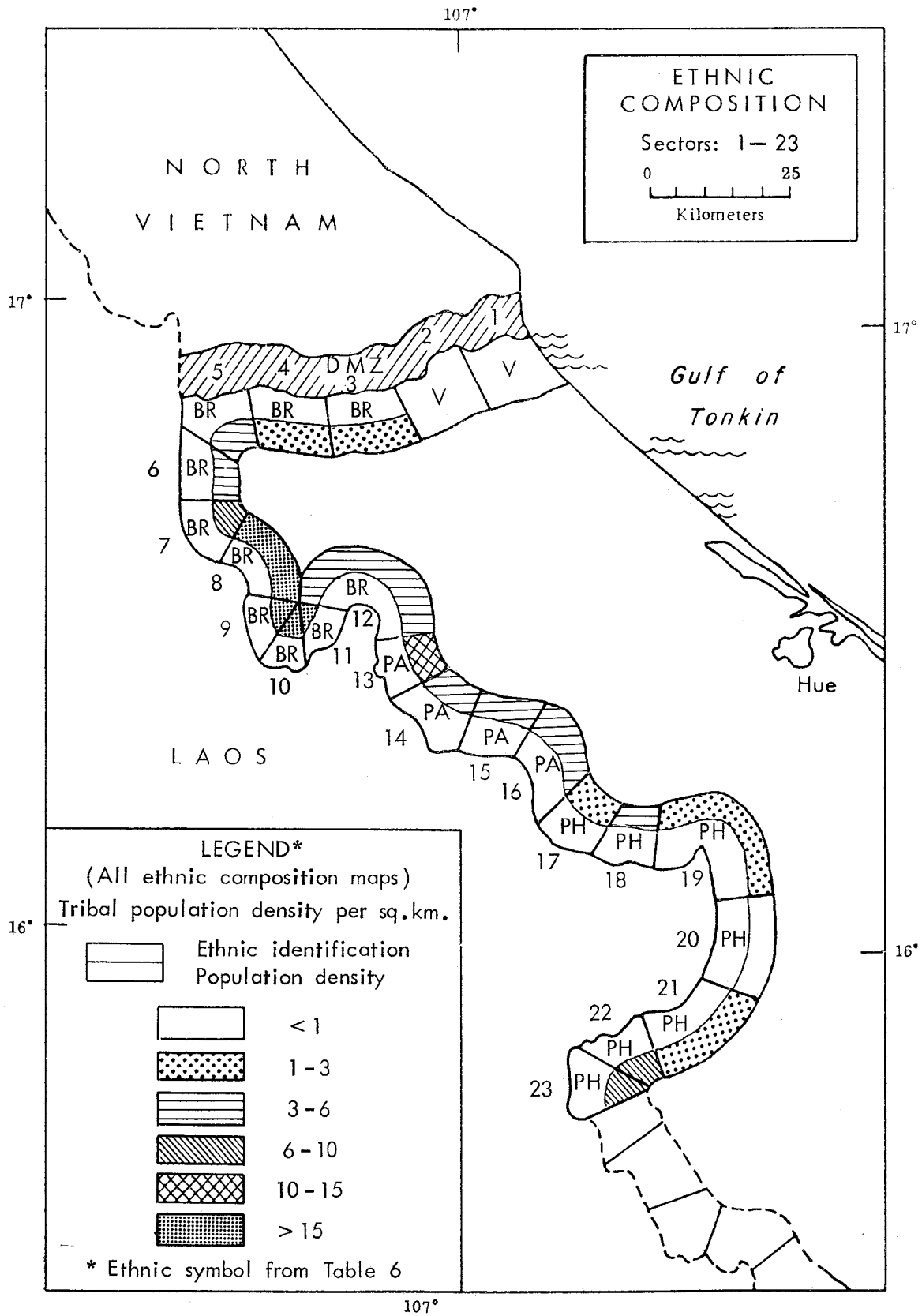


Fig. 23—Ethnic composition of Sectors 1 - 23

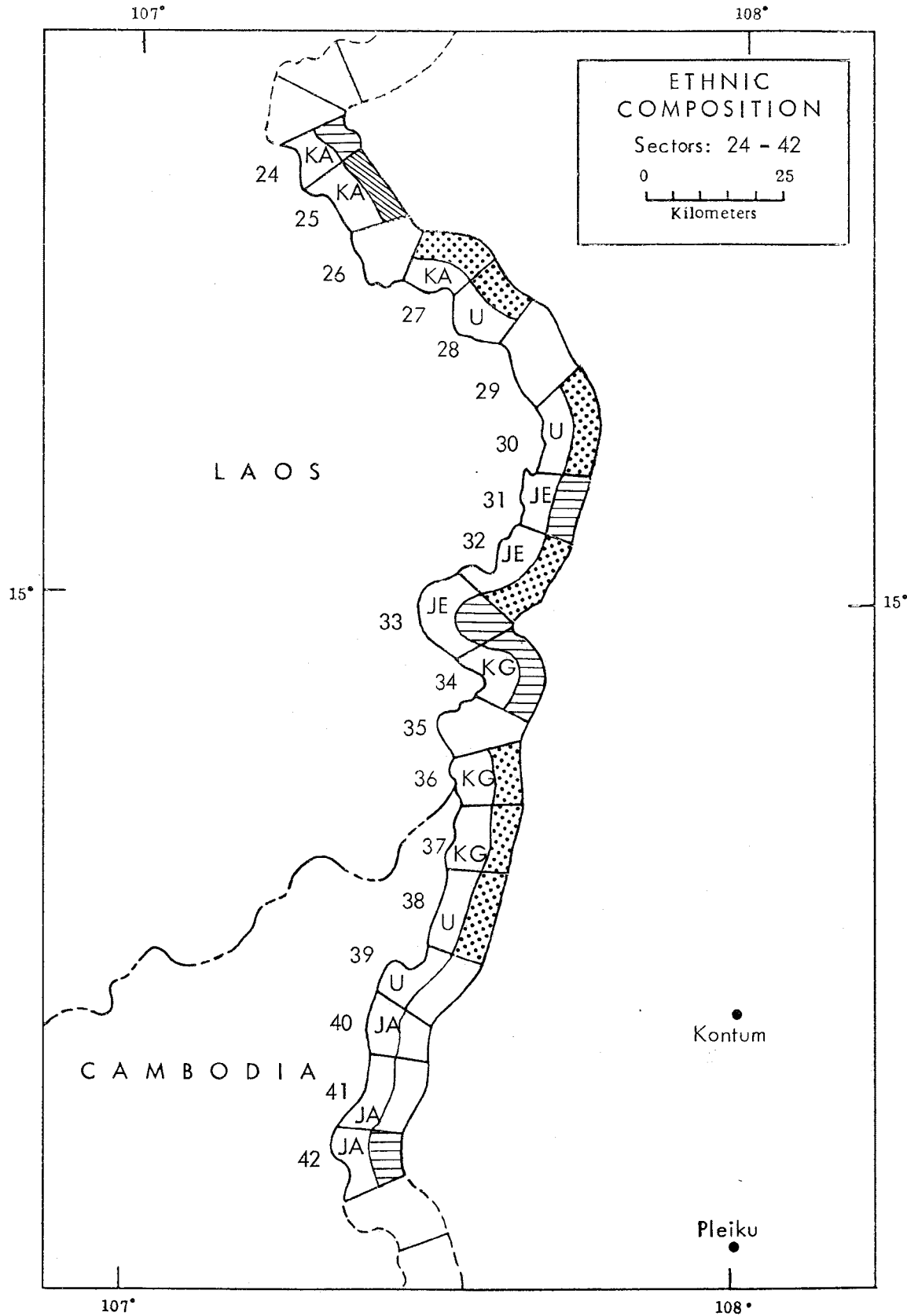


Fig. 24—Ethnic composition of Sectors 24 - 42

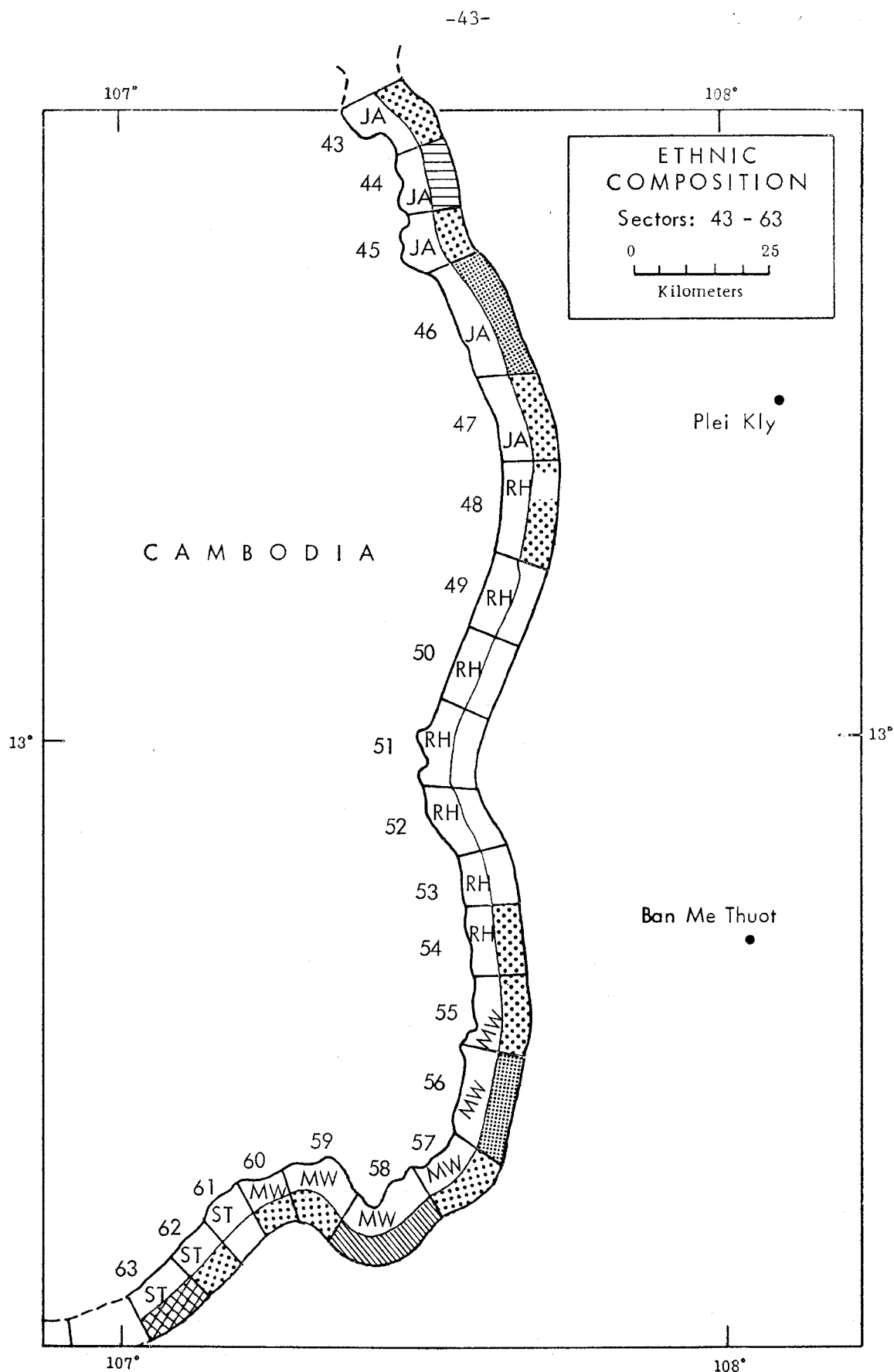


Fig. 25—Ethnic composition of Sectors 43 - 63

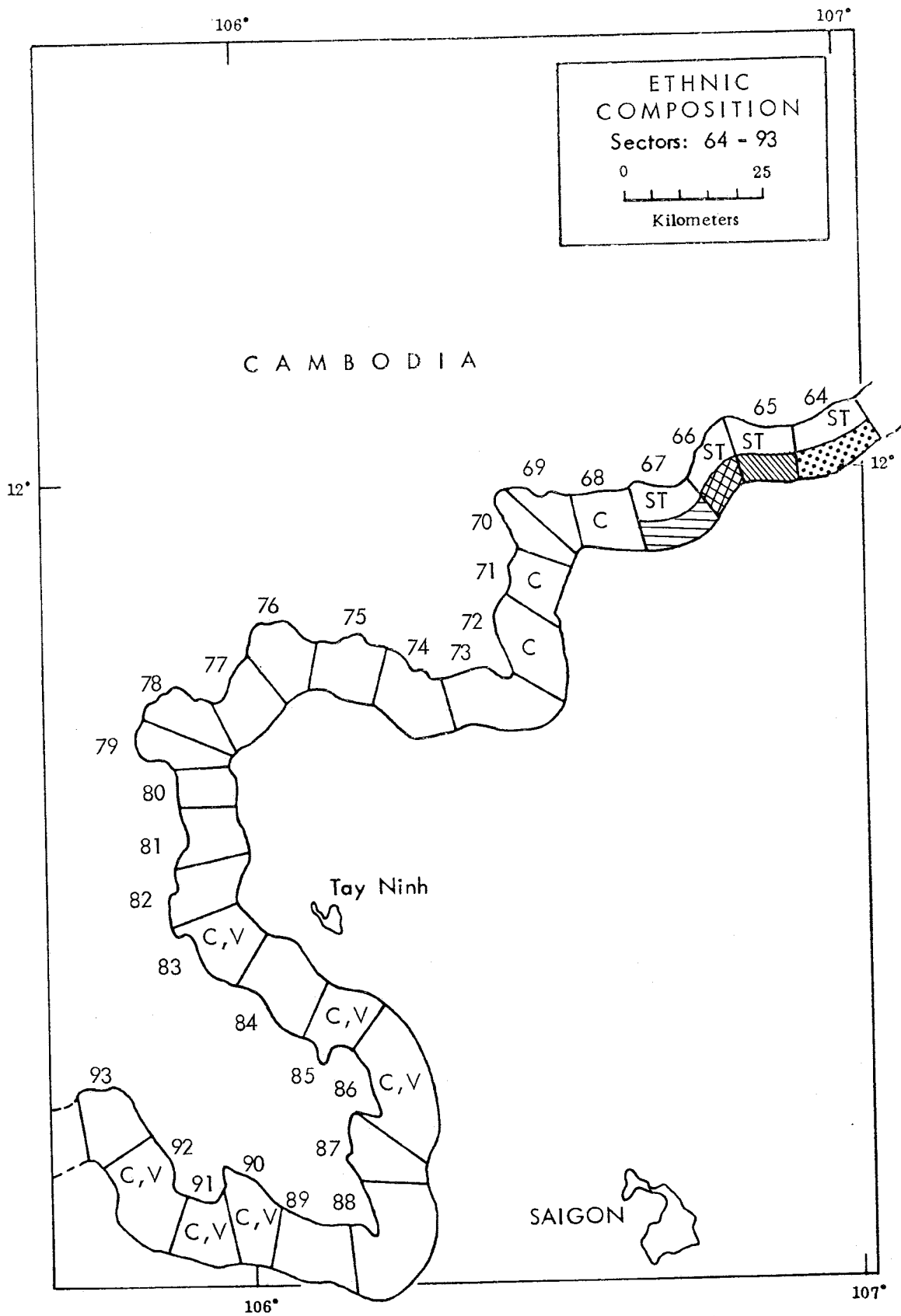


Fig. 26—Ethnic composition of Sectors 64 - 93

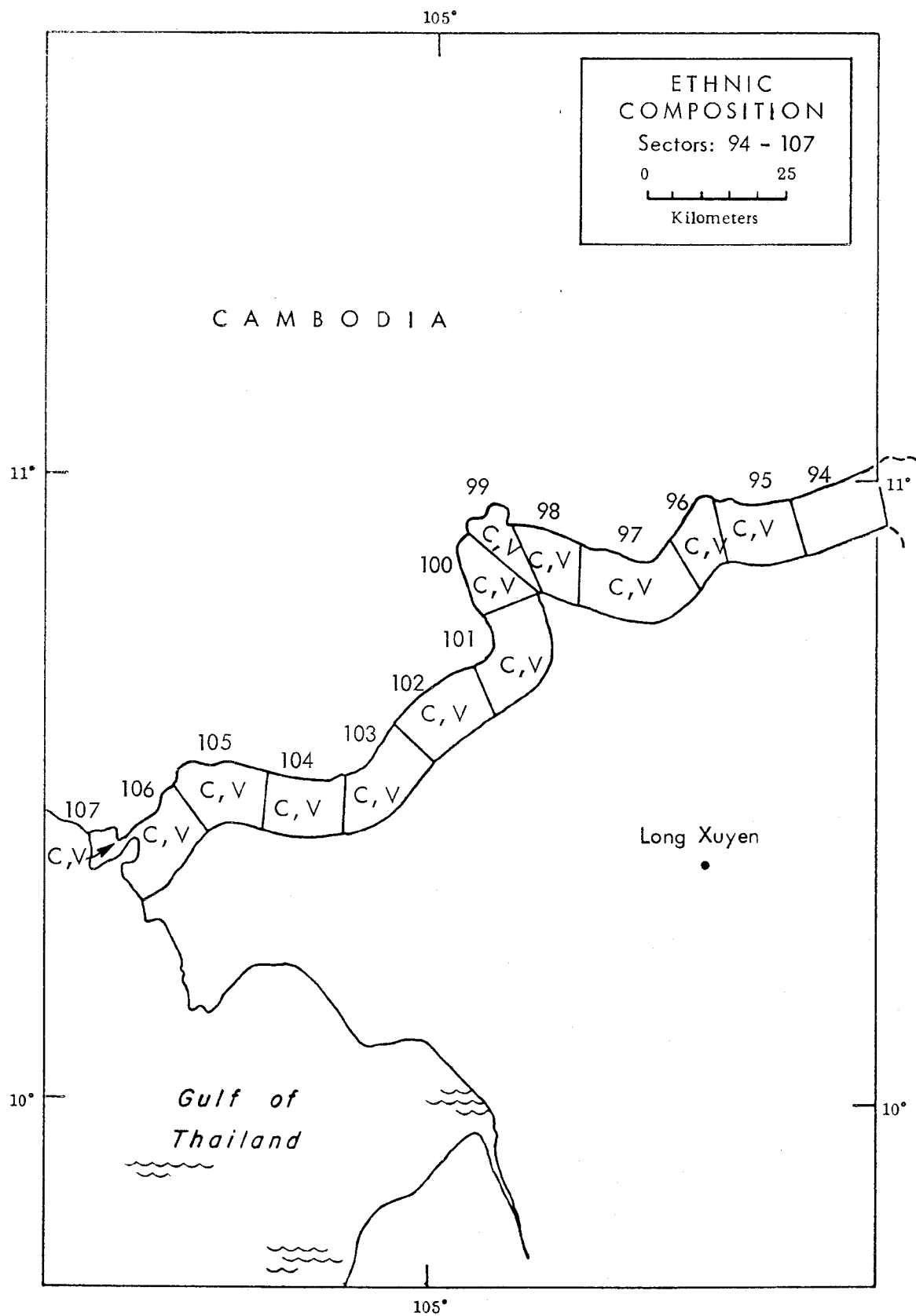


Fig. 27—Ethnic composition of Sectors 94 - 107

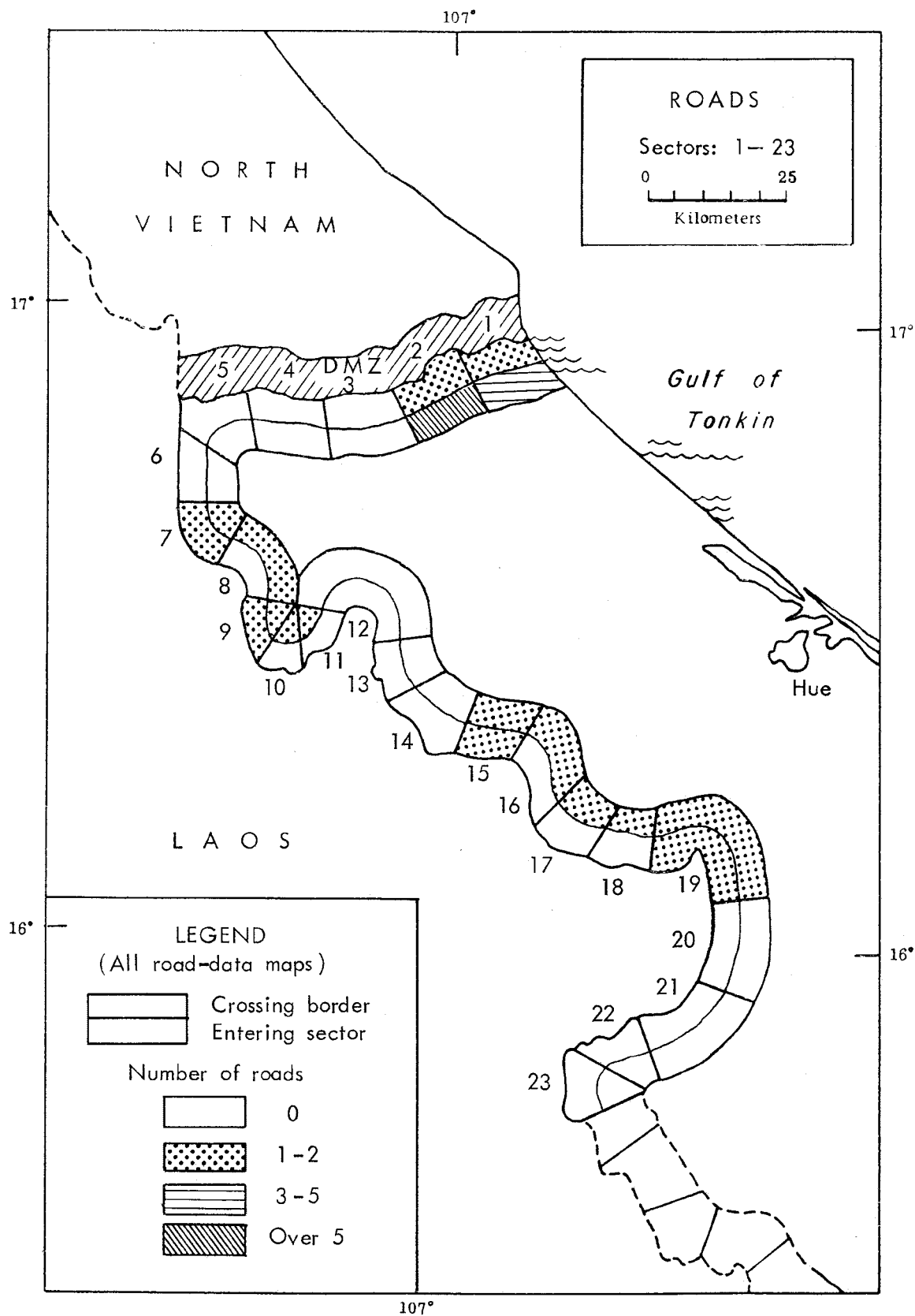


Fig. 28—Road data for Sectors 1 - 23

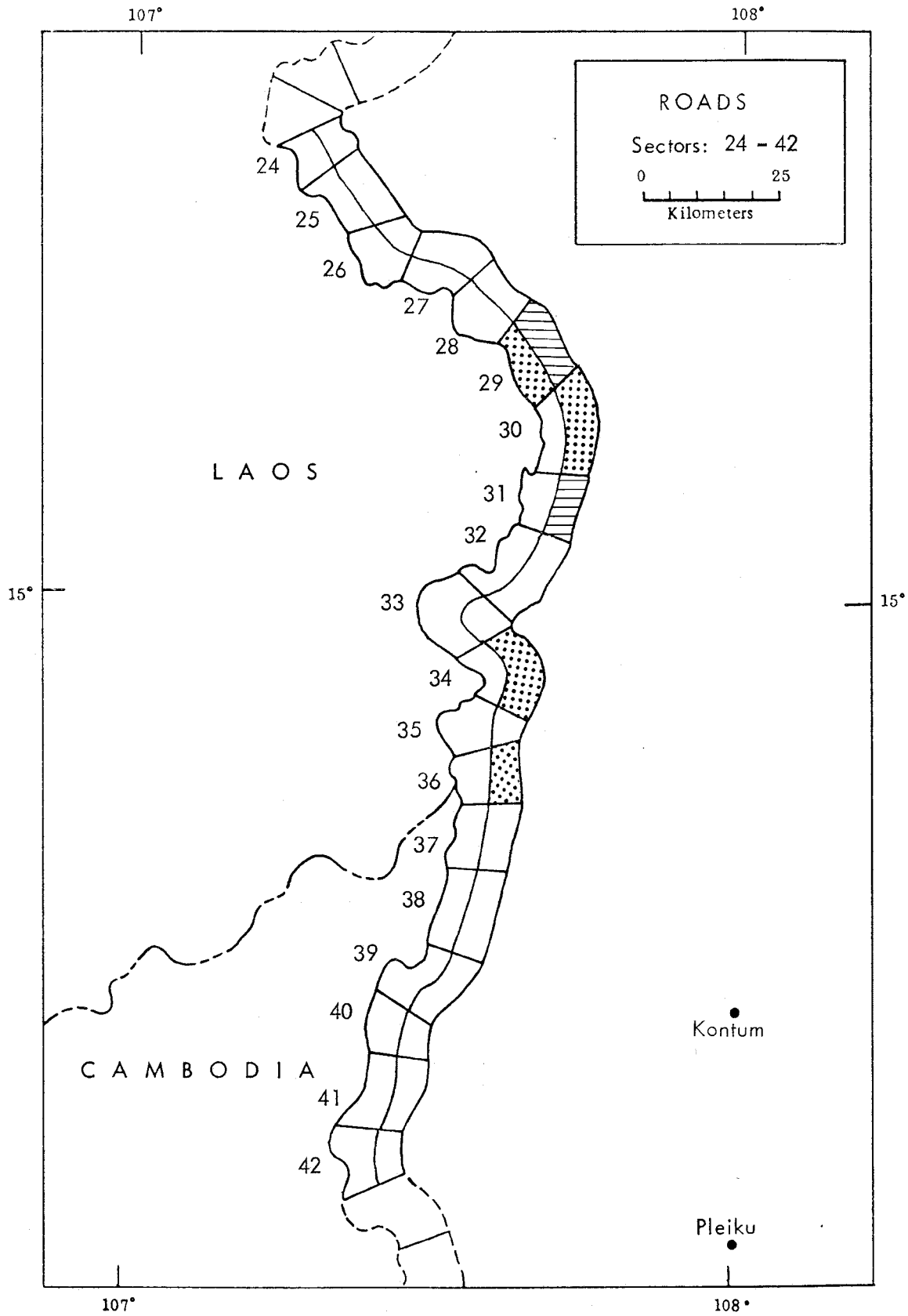


Fig. 29—Road data for Sectors 24 - 42

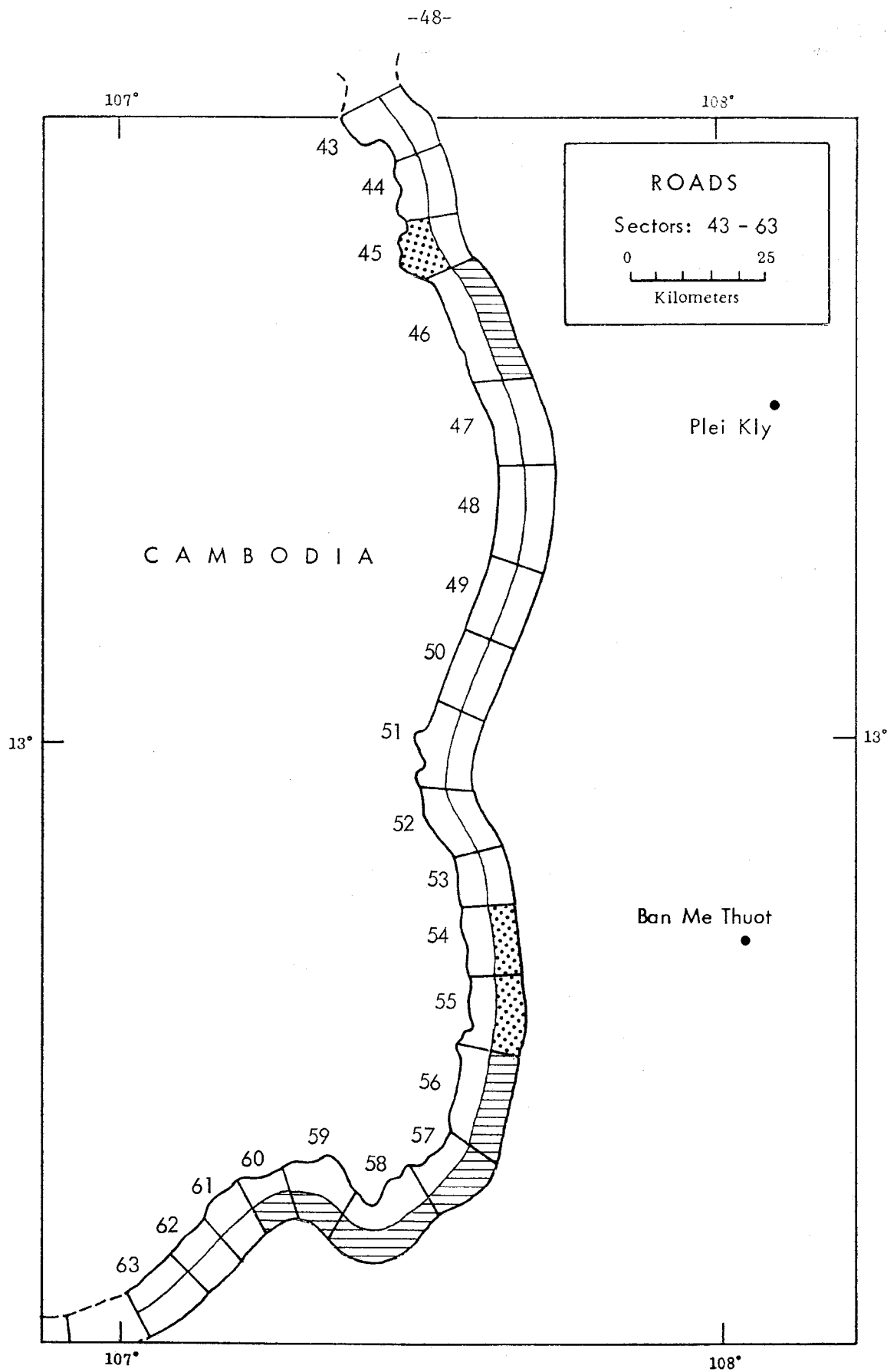


Fig. 30—Road data for Sectors 43 - 63

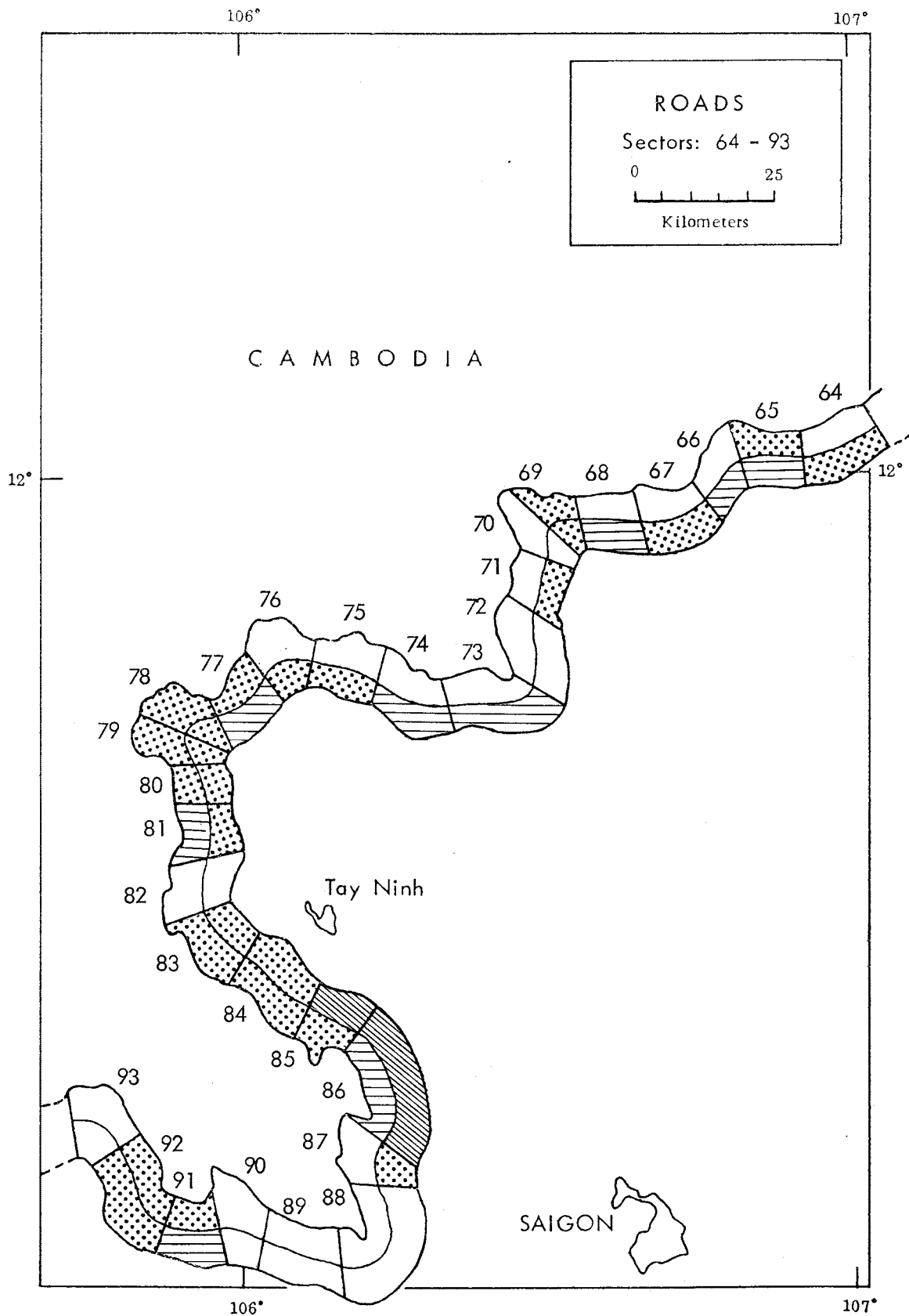


Fig. 31—Road data for Sectors 64 - 93

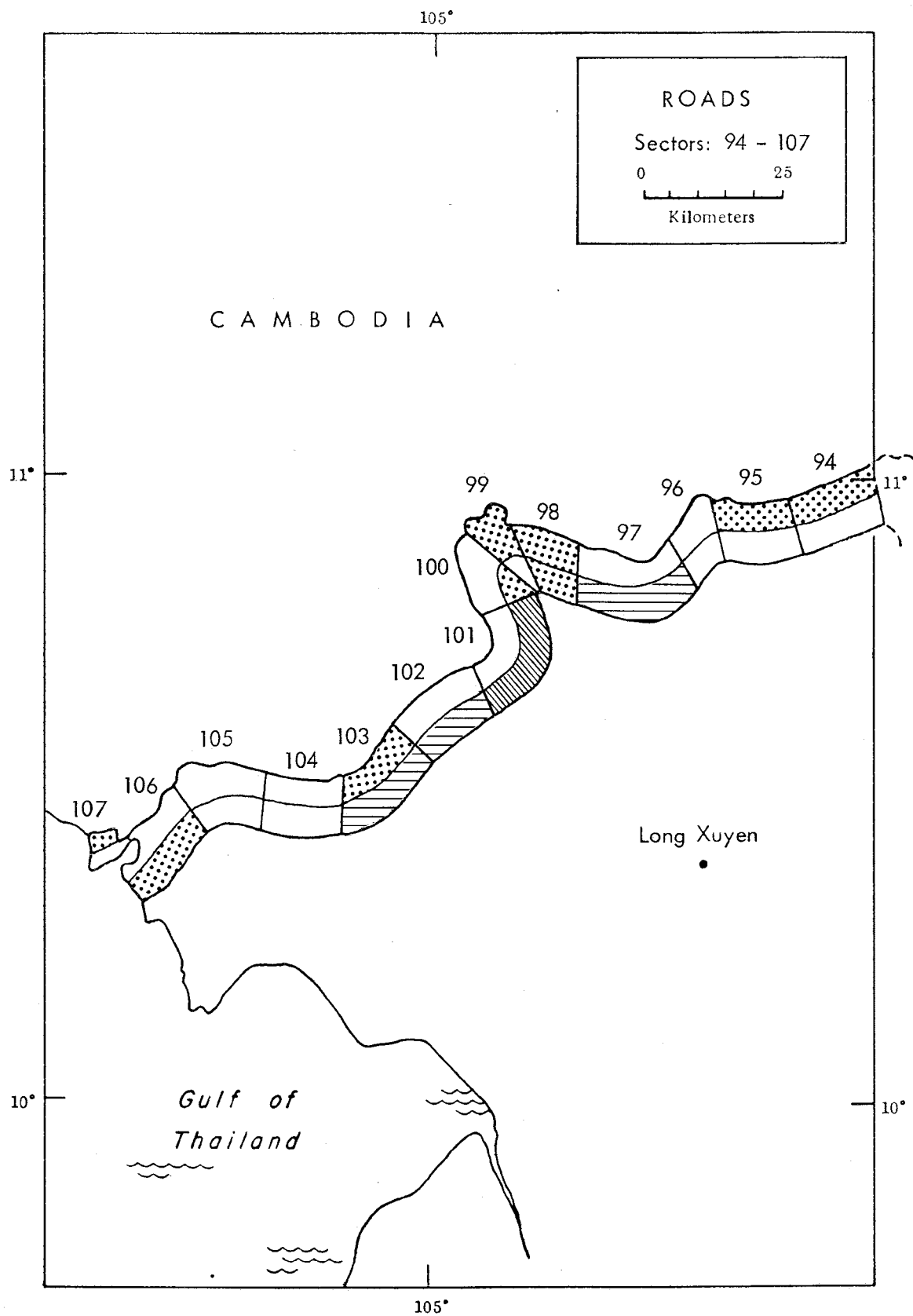


Fig. 32—Road data for Sectors 94 - 107

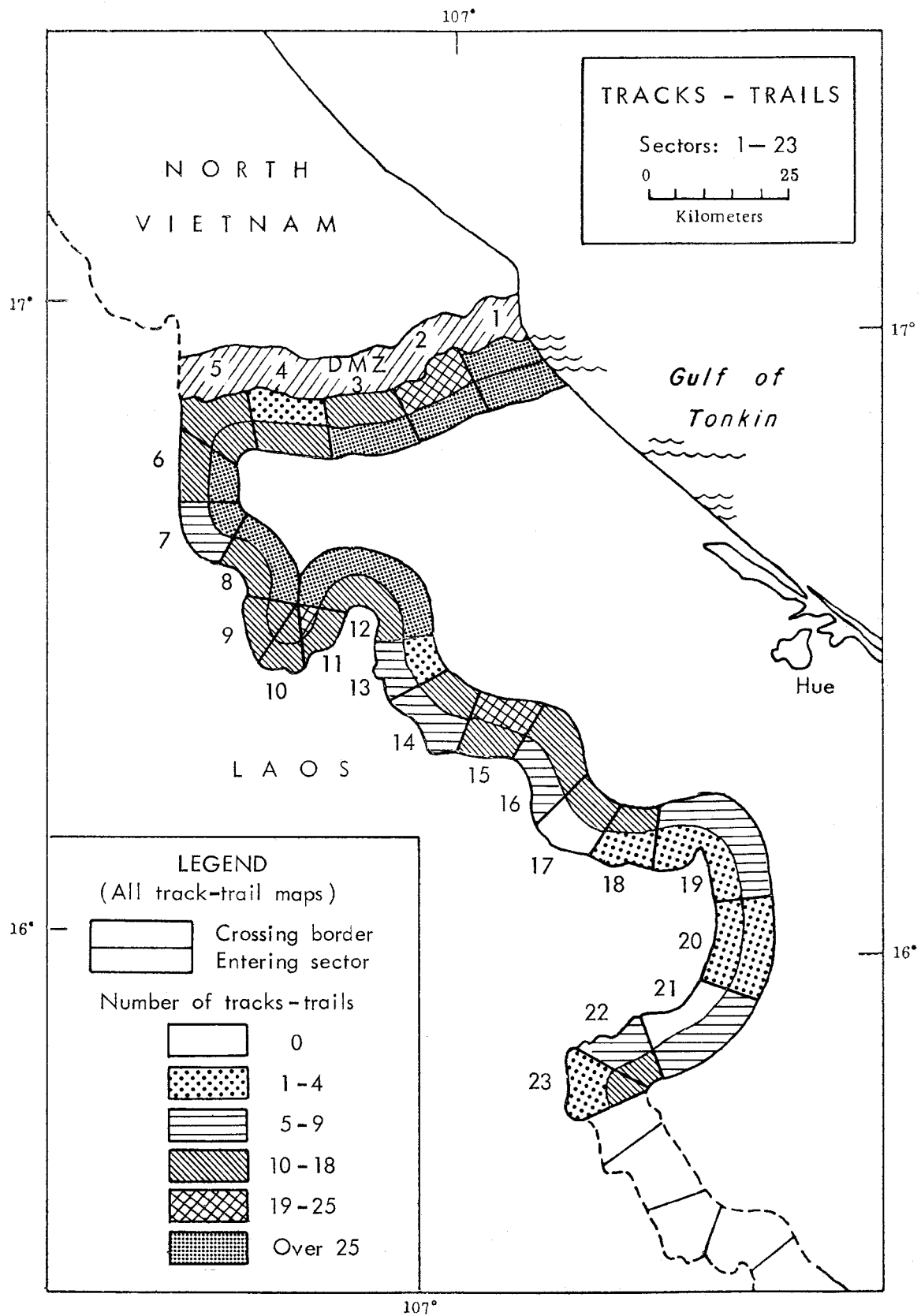


Fig. 33—Tracks-trails data for Sectors 1 - 23

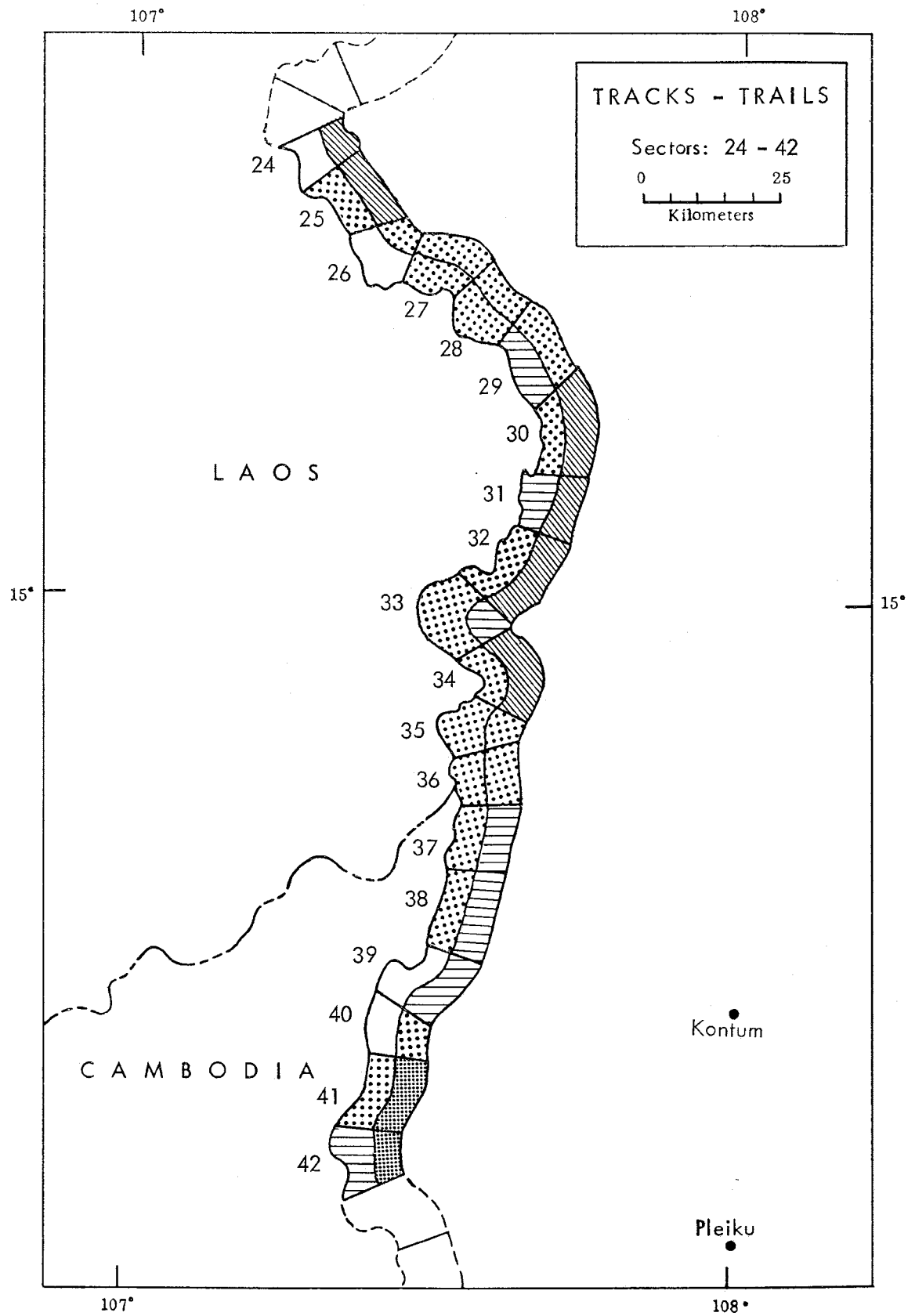


Fig. 34—Tracks-trails data for Sectors 24 - 42

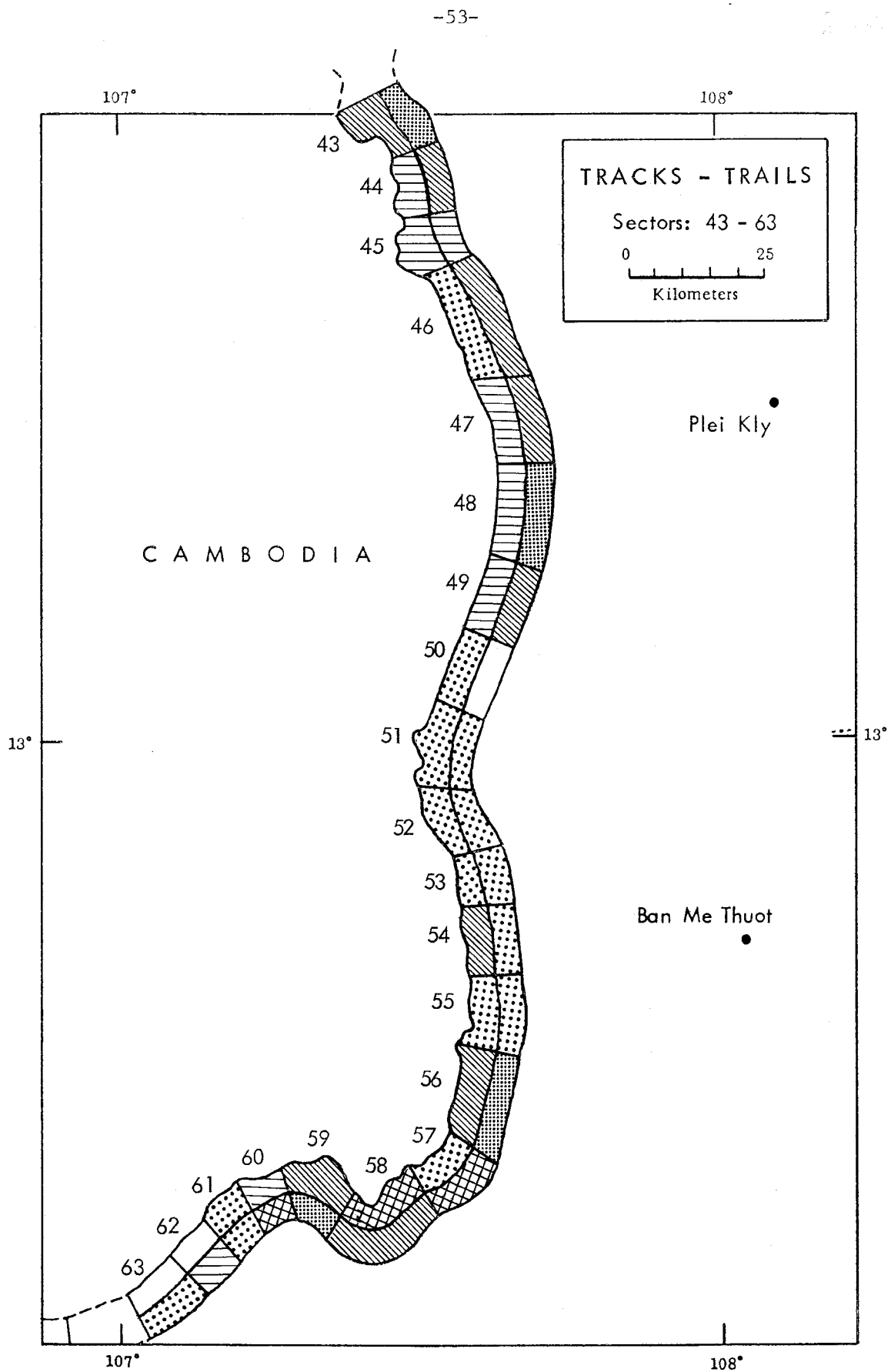


Fig. 35—Tracks-trails data for Sectors 43 - 63

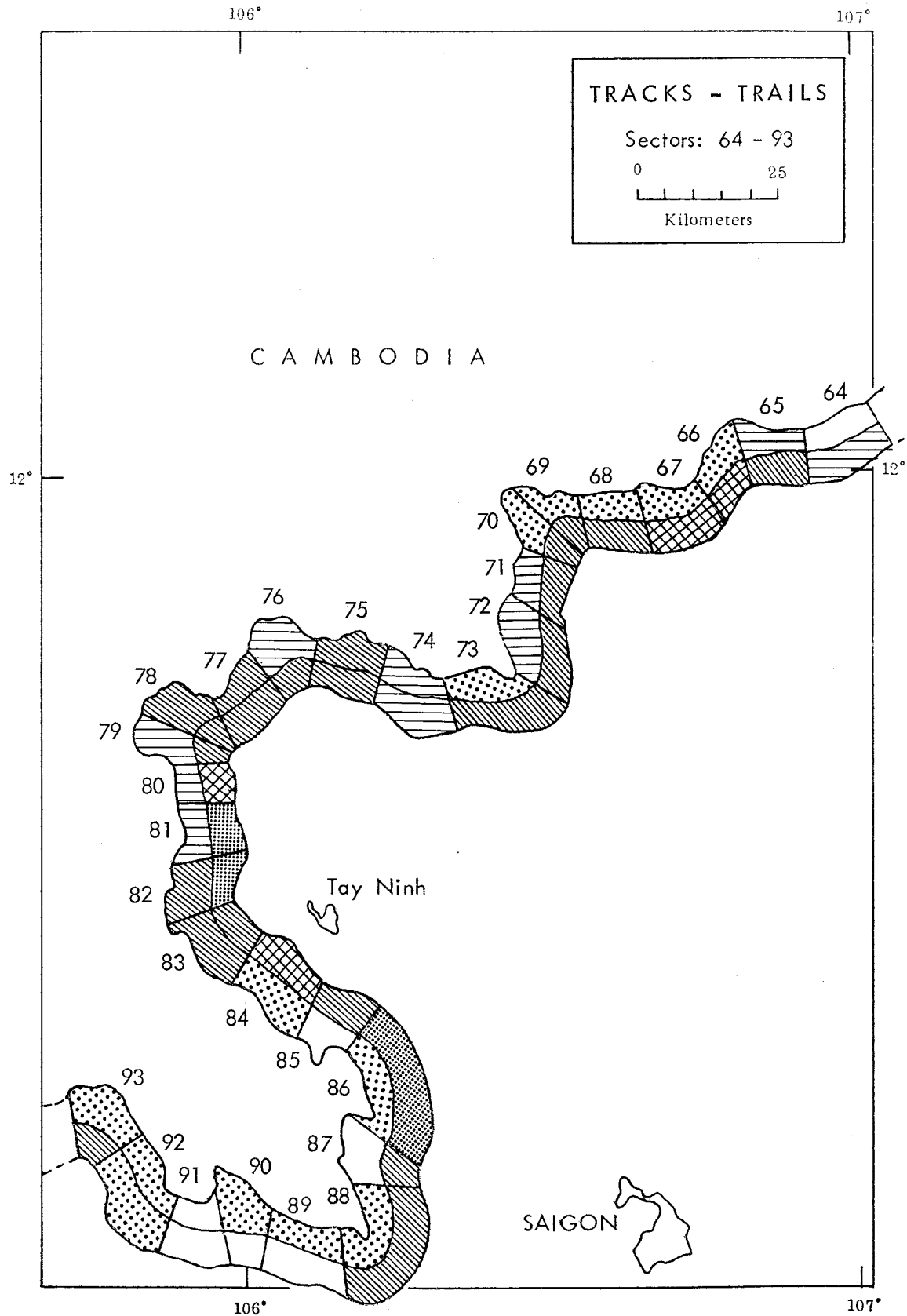


Fig. 36—Tracks-trails data for Sectors 64 - 93

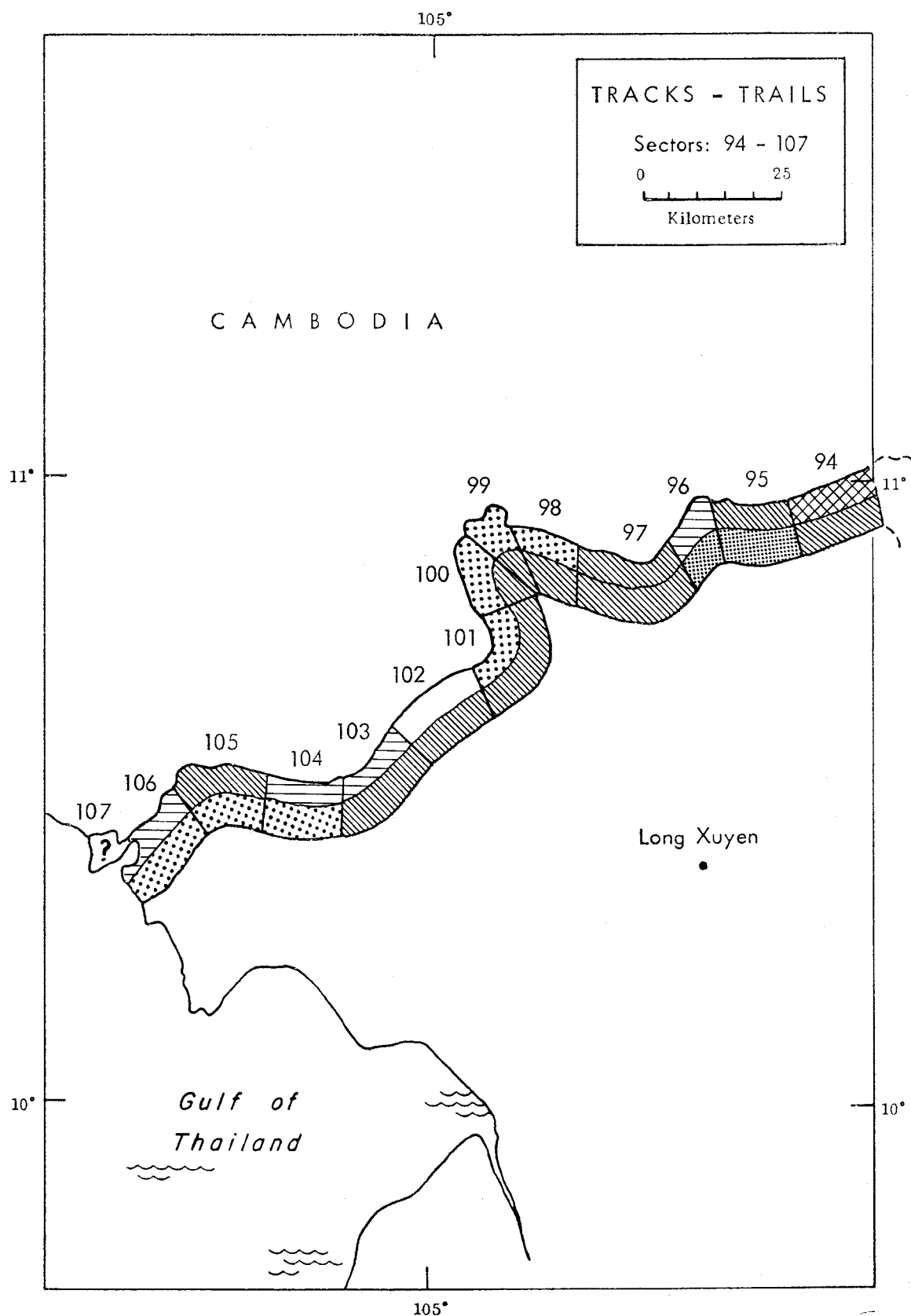


Fig. 37—Tracks-trails data for Sectors 94 - 107

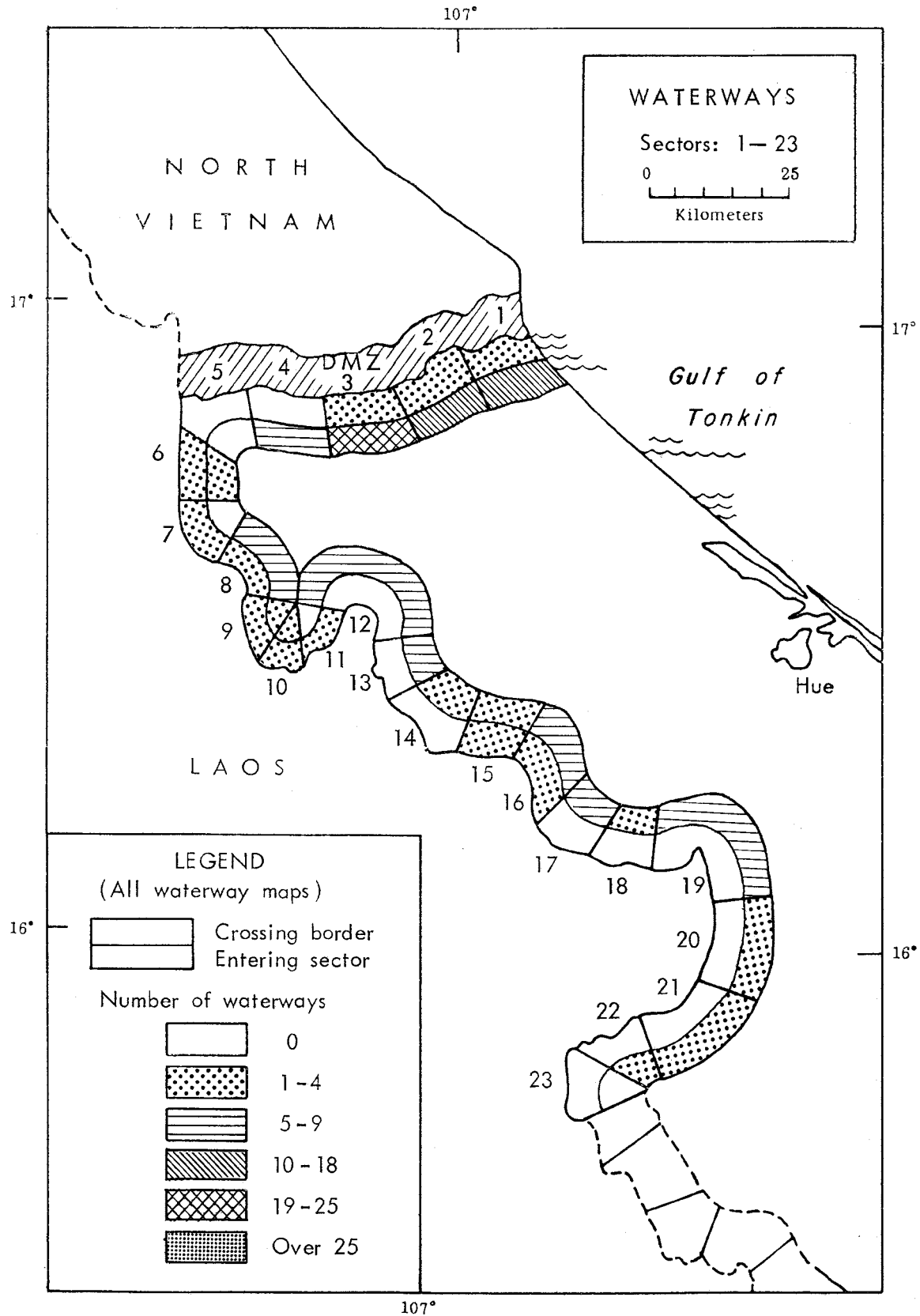


Fig. 38—Waterways in Sectors 1 - 23

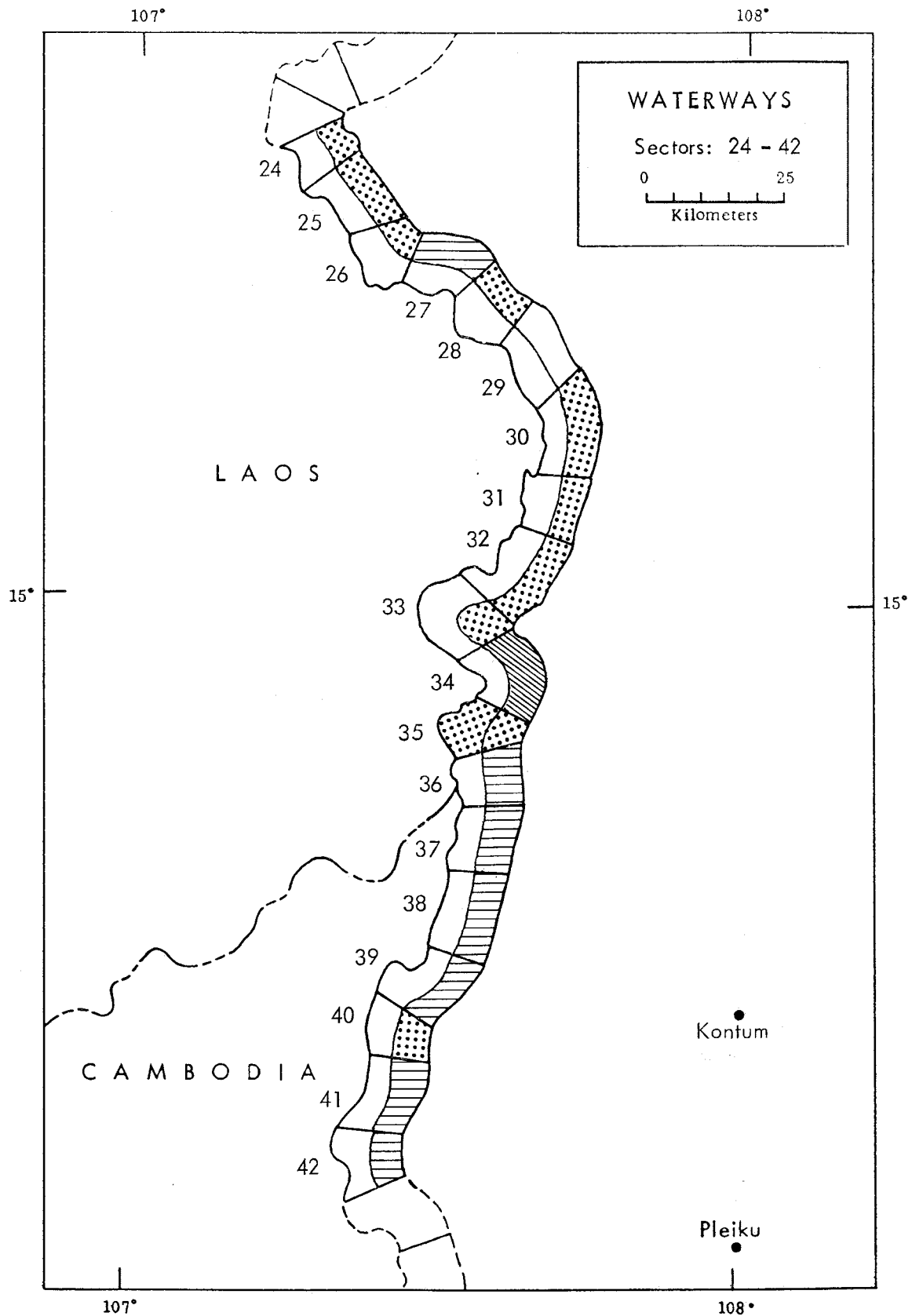


Fig. 39—Waterways in Sectors 24 - 42

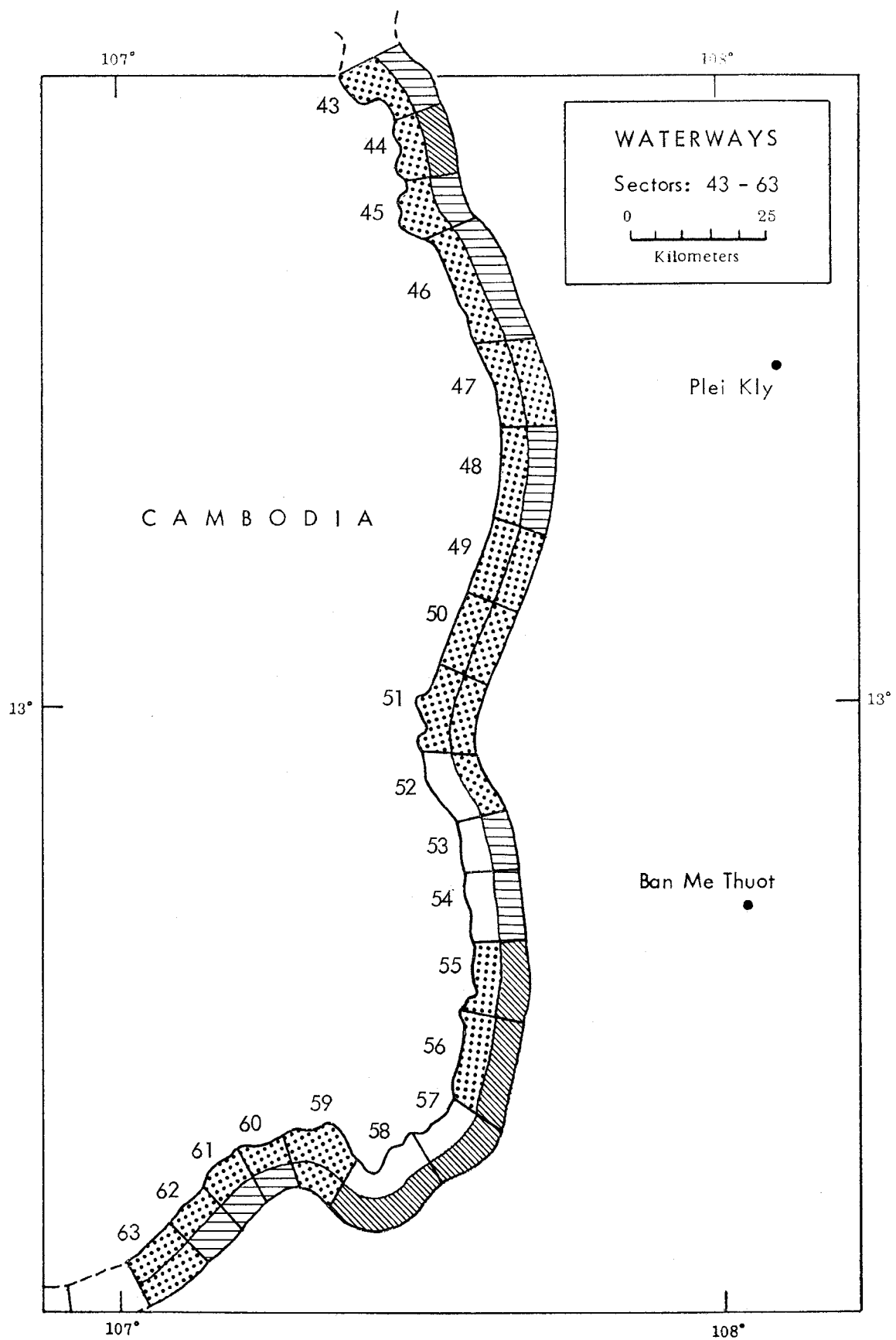


Fig. 40—Waterways in Sectors 43 - 63

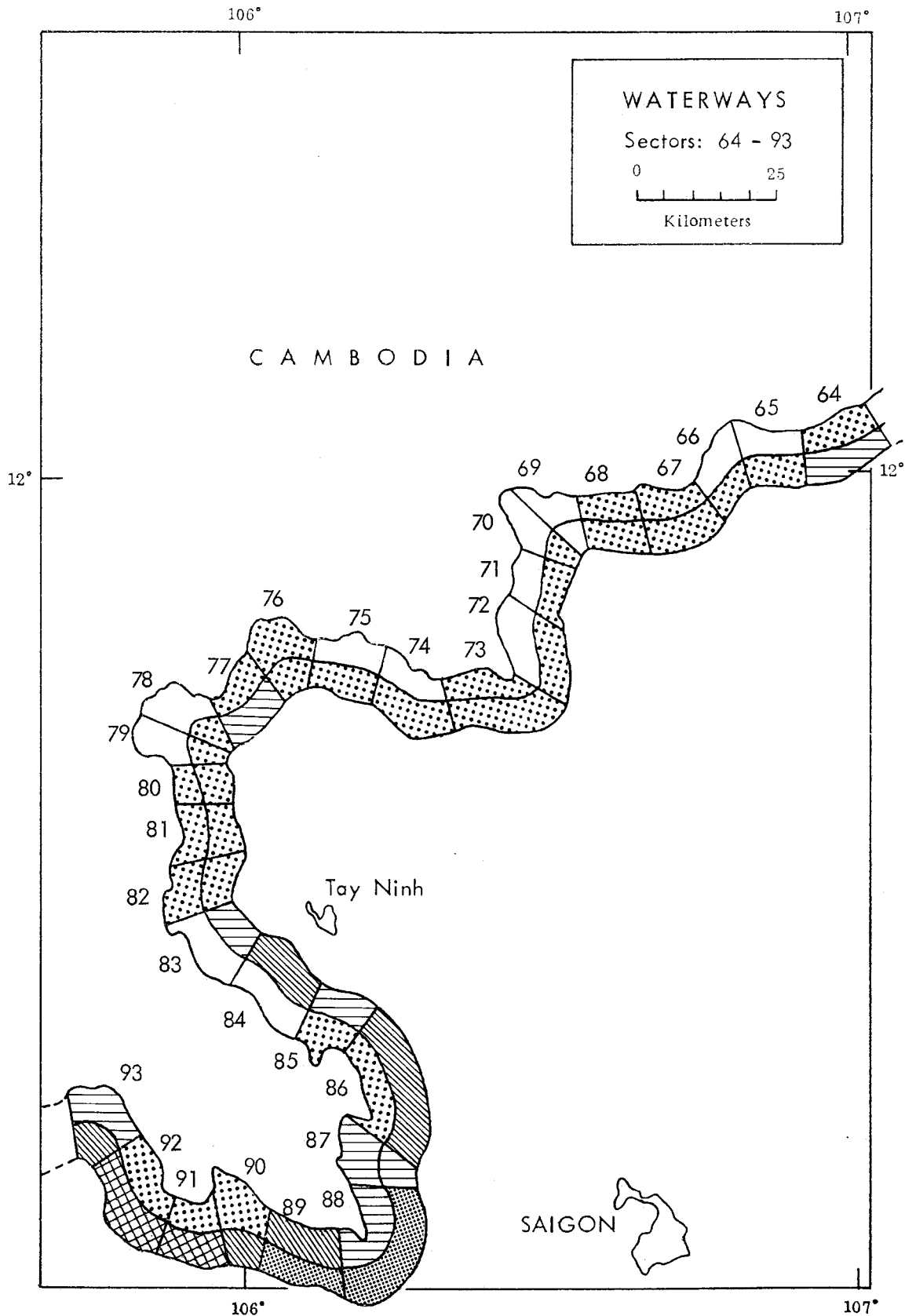


Fig. 41—Waterways in Sectors 64 - 93

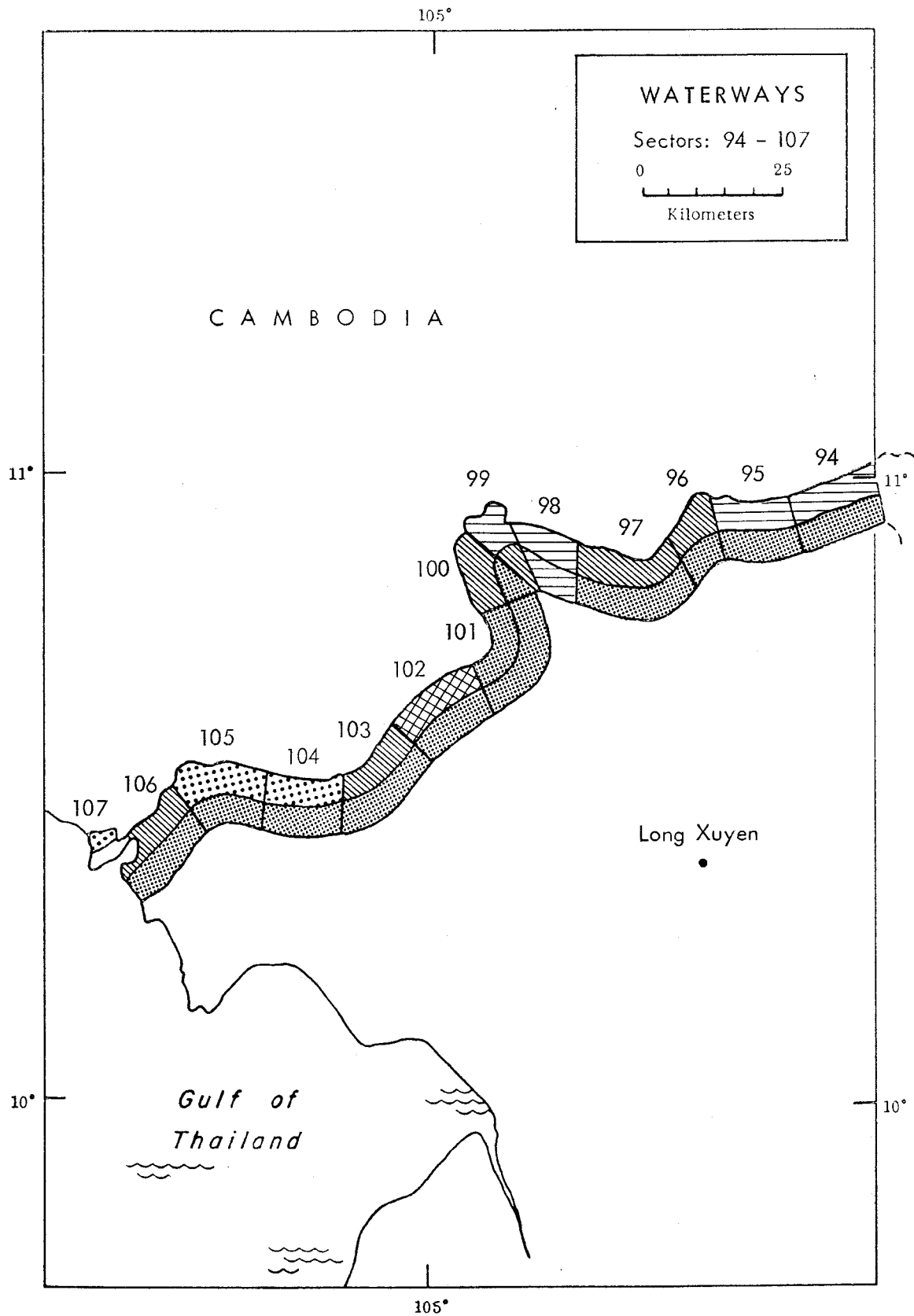


Fig. 42—Waterways in Sectors 94 - 107

III. SUMMARY OF CHARACTERISTICS

For convenience in analytical studies (e.g., analyses of counter-infiltration systems), the data presented in Section II are summarized below.

Based on the two major physical characteristics, topography and vegetation, the approximately 1700 km of South Vietnam's land border can be divided into ten regions, which are delineated in Fig. 43.

Region 1 (Sectors 1 and 2) extends approximately 32 km from the eastern end of the DMZ to the foothills near the old Agricultural Development Center, west of Con Thien. This region has essentially flat terrain, with rice-growing areas in the eastern portion and the start of single-canopy forest on the western edge.

Region 2 (Sectors 3 through 6) extends from Region 1 approximately 65 km to the point at which the Xe Pon River turns west into Laos. It includes the western end of the DMZ and Route 9, which goes from the border toward the seacoast. Region 2 has rugged terrain, largely covered by multicanopy forest.

Region 3 (Sectors 7 through 11) extends approximately 80 km south from Region 2. It is bounded almost entirely by the Xe Pon River, from the point at which the river comes out of Laos to a point south of where it reenters Laos. The terrain of Region 3 is essentially rolling, covered by single-canopy forest.

Region 4 (Sectors 12 through 38) extends approximately 435 km from Region 3 to the boundary of the Kontum and Dakto districts of Kontum province. This region has almost entirely rough terrain with elevations of from 200 to 2000 m and is covered with multicanopy forest. It includes the entrances to the A Shau Valley.

Region 5 (Sectors 39 through 47) extends from Region 4 approximately 45 km to the boundary line between Pleiku and Darlac provinces, just south of where the Ya Lop River enters Cambodia. The terrain in the region is moderately rolling, with multicanopy forest at elevations from 100 to 1000 m.

Region 6 (Sectors 48 through 53) extends from Region 5 along the border of Darlac province to a point just north of the boundary between Darlac and Quang Duc provinces, a distance of approximately 97 km. The terrain is moderately rolling, covered with single-canopy forest, and has elevations ranging from 100 to 500 m.

Region 7 (Sectors 54 through 64) extends from Region 6 approximately 177 km to the point where South Vietnam Route 14A reaches the border. It has moderately rolling terrain, with multicanopy forest.

Region 8 (Sectors 65 through 81) extends from Region 7 approximately 274 km to the intersection of South Vietnam Interprovisional Route 13 (LTL 13) and the border. This region has essentially flat terrain with elevations of less than 200 m and is largely covered with multicanopy forest.

Region 9 (Sectors 82 through 98) extends from Region 8 approximately 274 km to a point just east of where the Mekong River enters South Vietnam. Region 9 is part of the Mekong Delta and has generally flat terrain with elevations of less than 50 m. Much of the area is subject to inundation, and a major part of the region is marshland or riceland.

Region 10 (Sectors 99 through 107) extends from Region 9 to the Gulf of Thailand, approximately 145 km. It includes the area where the Mekong Channel and the Bassac River enter South Vietnam. The terrain of Region 10 is generally flat, except for isolated highlands reaching elevations of up to 600 m. It is largely a rice-growing area.

Data on population level and movement routes (particularly the numbers of tracks and trails crossing the border) are also of great value in studies of counterinfiltration systems. Table 10 summarizes the major characteristics of the ten border regions--their border lengths, approximate geographical limits, predominant topography and vegetation, estimated population, and numbers of tracks and trails that cross the border.

Table 10

SUMMARY OF CHARACTERISTICS OF REGIONS IN SOUTH VIETNAMESE BORDER ZONE

Region	Sectors in Region	Approximate Limits of Region		Border Length ^a (km)	Topography	Vegetation	Population ^b	Tracks & Trails Crossing Border ^c
		North	South					
1	1-2	Gulf of Tonkin	Foothills west of Con Thien	32	Flat to rolling	Rice, single crop; single-canopy forest, dry crops	6,174	48
2	3-6	Foothills west of Con Thien	Exit of Xe Pon River	65	Rough	Multicanopy forest; brushwoods	1,650	48
3	7-11	Exit of Xe Pon River	Entrance of Xe Pon River	80	Rolling	Brushwoods; multi-canopy forest	6,500	55
4	12-38	Entrance of Xe Pon River	Kontum-Dakto district boundary	435	Rough	Multicanopy forest; brushwoods	15,202	103
5	39-47	Kontum-Dakto district boundary	Ya Lop River	145	Rolling	Multicanopy forest; single-canopy forest	6,700	51
6	48-53	Ya Lop River	Darlac-Quang Duc boundary	97	Rolling	Single-canopy forest	300	19
7	54-64	Darlac-Quang Duc boundary	Route 14A	177	Rolling	Multicanopy forest; single-canopy forest	15,364	76
8	65-81	Route 14A	Route LTL 13	274	Flat	Multicanopy forest; single-canopy forest	10,028	101
9	82-98	Route LTL 13	Mekong River	274	Flat, subject to inundation	Rice, single crop; marsh	196,982	104
10	99-107	Mekong River	Gulf of Thailand	145	Flat, subject to inundation	Rice, single crop; marsh	223,253	43

^aTotal border length = 1,724 km.

^bIncludes ethnic Vietnamese, Cambodians, and tribal groups; total border-zone population = 482,153.

^cTotal tracks/trails crossing border = 648.

Appendix A

DETAILED DATA ON BORDER-ZONE SECTORS

This appendix presents the detailed data on physical and cultural characteristics of the 107 sectors of the border zone. The locations and general outlines of the sectors are indicated by maps (Figs. 44 through 79) which include reference geographical coordinates. The sectors are outlined in groups of three on 1:250,000 scale maps; small-scale inserts are also given for each outline map to show sector locations with respect to the total border zone.

An environmental-detail summary is given for the three sectors depicted by each map. These summaries provide the following data, reduced to numerical form (as much as possible), for each sector.

1. Sector number
2. Map reference (the sheet number(s) of the Army Map Service Series L-7014 maps for the sector)
3. Total area (the area of the sector, in square kilometers, based on planimeter measurements)
4. Border in waterway (the percentage of the sector's border that is composed of waterways)
5. Topographic class (flat; flat, subject to inundation; rolling; rough)
6. Elevation (the maximum and minimum elevation points of the sector, measured to the nearest 50 m)
7. Vegetation type (the percentage of the sector covered by the various vegetation classes described in Section II, based on planimeter measurement)

8. Foot trafficability (the percentage of the sector that falls into each of the classes of trafficability during the wet and dry seasons, based on planimeter measurement)
9. Movement routes (the number of tracks and trails, roads, and waterways crossing the border and entering the other sides of the sector)
10. Population (the estimated ethnic Vietnamese and Cambodian population, and its approximate density per square kilometer; the name of the principal ethnic group (or tribe), and the estimated population of that group^{*})

^{*}Some sectors are labeled "Uninhabited," although they are, in fact, nominally occupied. These are sectors that were shown in Ref. 6 to have a population of 0, but in many cases a visual examination of topographic maps indicated that this may be inaccurate. Other sectors are shown in this appendix to have no population, yet are given tribal designations. This indicates that the tribal group shown considers the area to be their territory and may occasionally enter the sector. Where there are no tribal groups in a sector, the ethnic designation (Vietnamese or Cambodian) is given in the space labeled "TRIBES." In these cases, the total population (taken solely from Ref. 6) and the "tribal" population are identical and are not to be considered additive.

DATA SUMMARIES

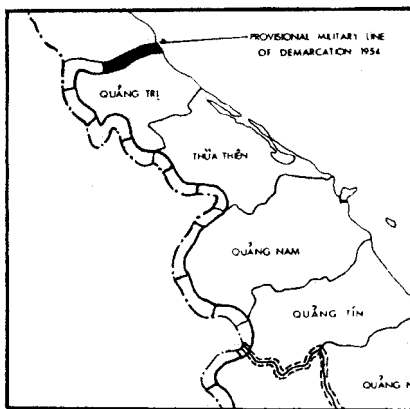
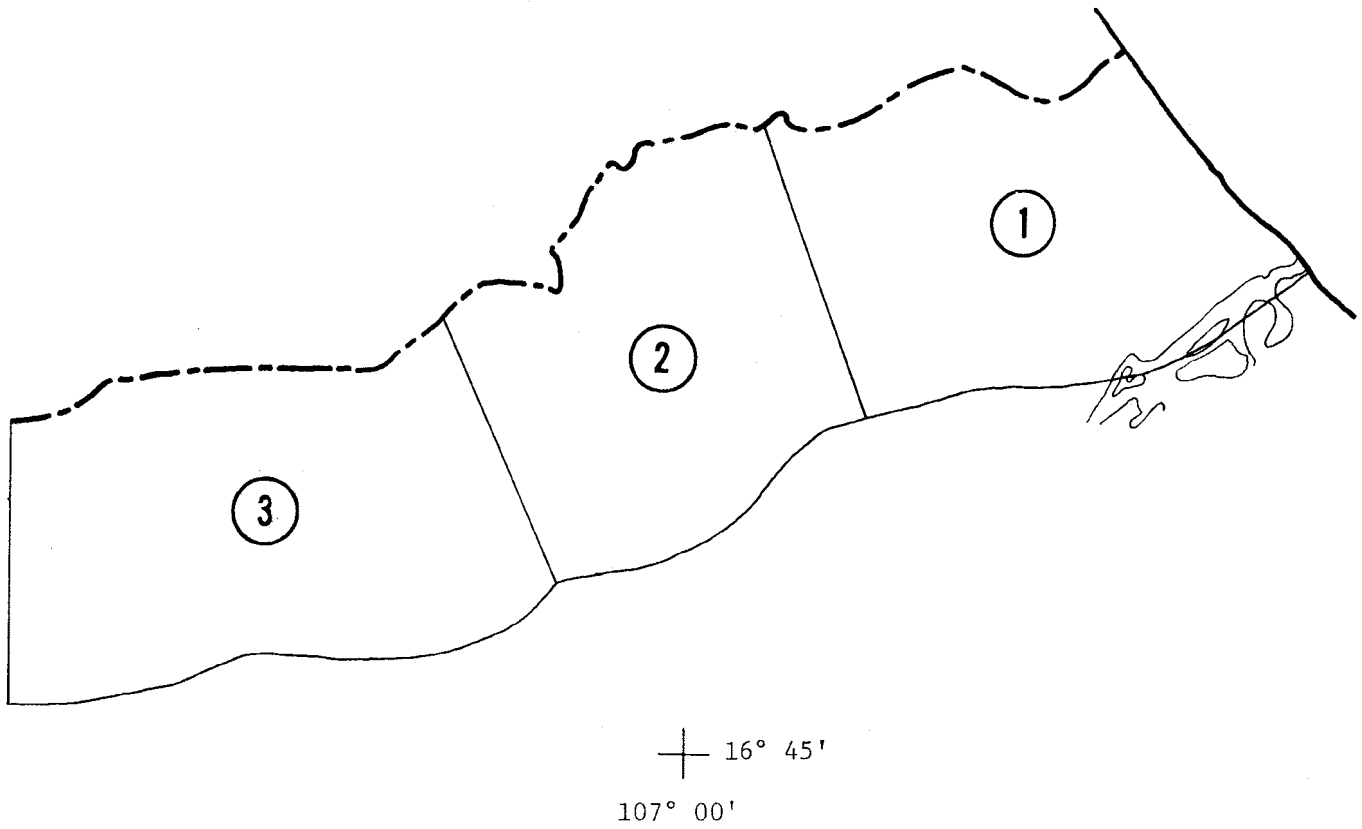


Fig. 44—Configuration and location of Sectors 1 - 3

SUMMARY OF CHARACTERISTICS OF SECTORS 1 - 3

SECTOR NO: 1 MAP REF: 6442 IV, _____, _____
TOTAL AREA (SQ KM): 152 BORDER IN WATERWAY (%): 52
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 15 1 28 1 8 47
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 27 / 2 27 / 98 46 / 0 0 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 29 / 40 2 / 5 0 / 3 2 / 8
POPULATION: 4,574^a PER SQ KM: 30 TRIBES: Ethnic Vietnamese POP: 4,574^a

^aDoes not include 25,650 refugees.

SECTOR NO: 2 MAP REF: 6342 I, 6442 IV, _____, _____
TOTAL AREA (SQ KM): 146 BORDER IN WATERWAY (%): 64
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 150 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 15 30 16 22 3 14
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 19 69 / 65 15 / 16 16 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 19 / 72 1 / 6 0 / 1 3 / 13
POPULATION: 1,600 PER SQ KM: 11 TRIBES: Ethnic Vietnamese POP: 1,600

SECTOR NO: 3 MAP REF: 6342 I, _____, _____
TOTAL AREA (SQ KM): 185 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 750 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 69 11 19 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 24 / 27 6 / 5 70 / 68
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 15 / 54 0 / 0 0 / 1 2 / 18
POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 300

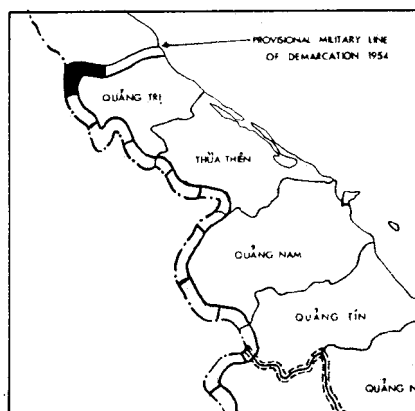
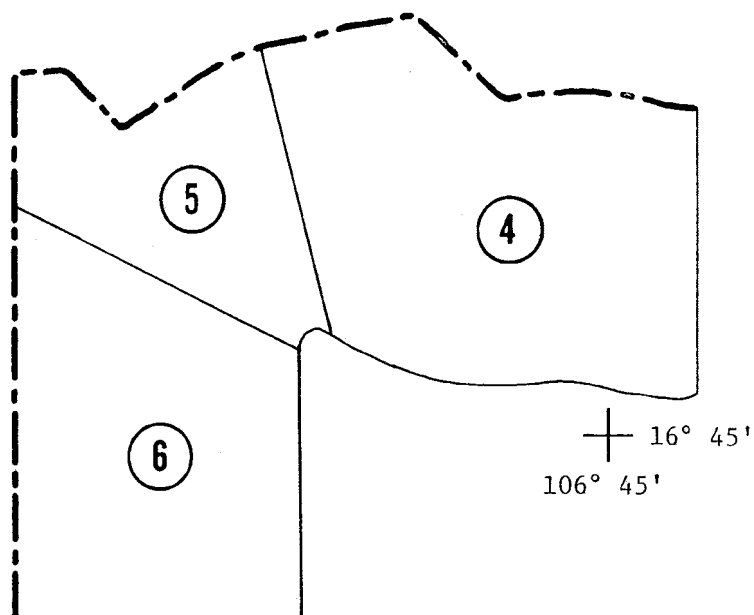


Fig. 45—Configuration and location of Sectors 4 - 6

SUMMARY OF CHARACTERISTICS OF SECTORS 4 - 6

SECTOR NO: 4 MAP REF: 6342 I, 6342 IV,
TOTAL AREA (SQ KM): 150 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1500 MIN: 100
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 94 1 2 3 < 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 3 / 3 0 / 0 97 / 97
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 3 / 16 0 / 0 0 / 0 1 / 19
POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 350

SECTOR NO: 5 MAP REF: 6342 III, 6342 IV,
TOTAL AREA (SQ KM): 68 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1600 MIN: 400
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 84 2 14 < 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 10 / 10 1 / 2 89 / 88
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 15 / 12 0 / 0 0 / 0 0 / 0
POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 300

SECTOR NO: 6 MAP REF: 6342 III, 6342 IV,
TOTAL AREA (SQ KM): 124 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1350 MIN: 600
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 30 2 < 1 1 67 < 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 38 / 40 4 / 3 58 / 57
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 15 / 34 0 / 0 0 / 0 2 / 2
POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 700

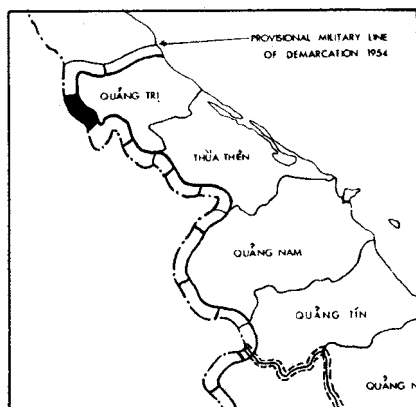
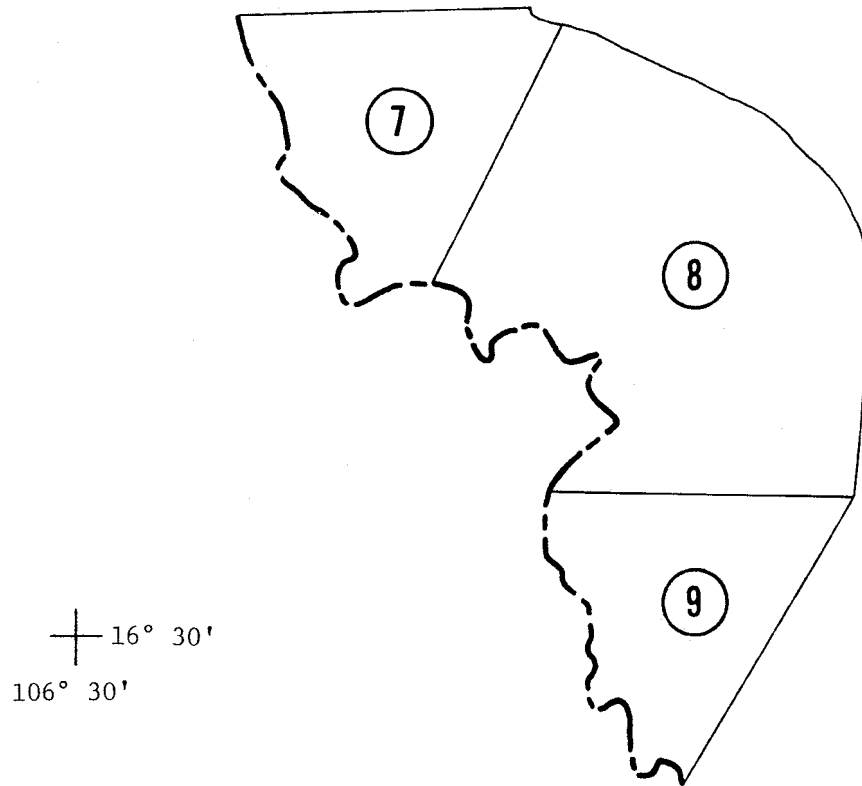


Fig. 46—Configuration and location of Sectors 7 - 9

SUMMARY OF CHARACTERISTICS OF SECTORS 7 - 9

SECTOR NO: 7 MAP REF: 6342 III, _____, _____

TOTAL AREA (SQ KM): 67 BORDER IN WATERWAY (%): 35

TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 1000 MIN: 200

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 1 73 1 25

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 12 / 12 0 / 0 88 / 88

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 5 / 28 1 / 1 0 / 0 4 / 0

POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 600

SECTOR NO: 8 MAP REF: 6342 III, _____, _____

TOTAL AREA (SQ KM): 174 BORDER IN WATERWAY (%): 100

TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 900 MIN: 200

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 65 4 1 1 29

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 18 / 18 2 / 2 80 / 80

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 15 / 46 0 / 2 0 / 0 2 / 6

POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 2800

SECTOR NO: 9 MAP REF: 6341 IV, 6342 III, _____, _____

TOTAL AREA (SQ KM): 67 BORDER IN WATERWAY (%): 100

TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 750 MIN: 200

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 3 96 1

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 90 / 90 0 / 0 10 / 10

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 11 / 16 1 / 1 0 / 0 1 / 3

POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 1100

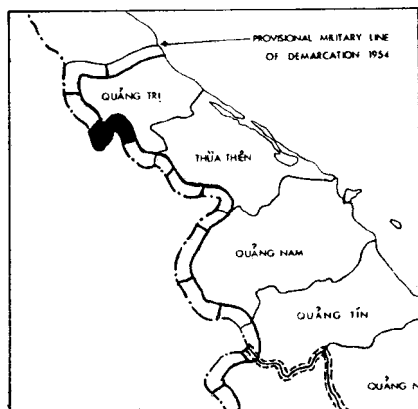
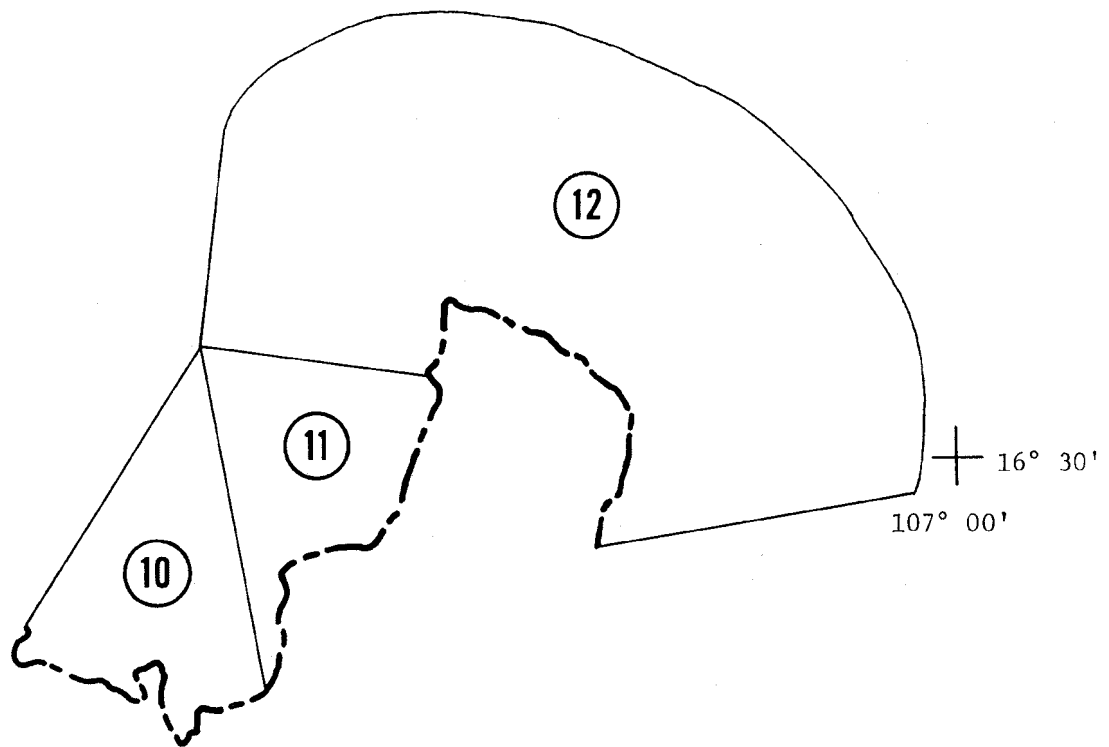


Fig. 47—Configuration and location of Sectors 10 - 12

SUMMARY OF CHARACTERISTICS OF SECTORS 10 - 12

SECTOR NO: 10 MAP REF: 6341 I, 6341 IV, _____
TOTAL AREA (SQ KM): 57 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 200
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 1 98 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0/0 83/83 0/0 7/7
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 10/10 0/2 0/0 2/1
POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 1200

SECTOR NO: 11 MAP REF: 6341 I, 6342 II, _____
TOTAL AREA (SQ KM): 48 BORDER IN WATERWAY (%): 24
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 200
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 3 13 84
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0/0 49/49 0/8 51/43
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 14/19 0/1 0/0 1/0
POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 800

SECTOR NO: 12 MAP REF: 6341 I, 6342 II, _____
TOTAL AREA (SQ KM): 309 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 900 MIN: 200
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 44 1 6 1 48
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0/0 1/5 4/1 95/94
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 13/30 0/0 0/2 0/6
POPULATION: 0 PER SQ KM: 0 TRIBES: Brou POP: 1500

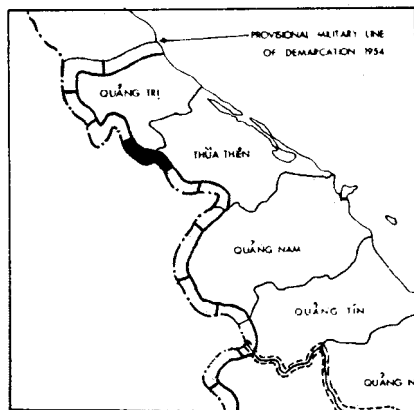
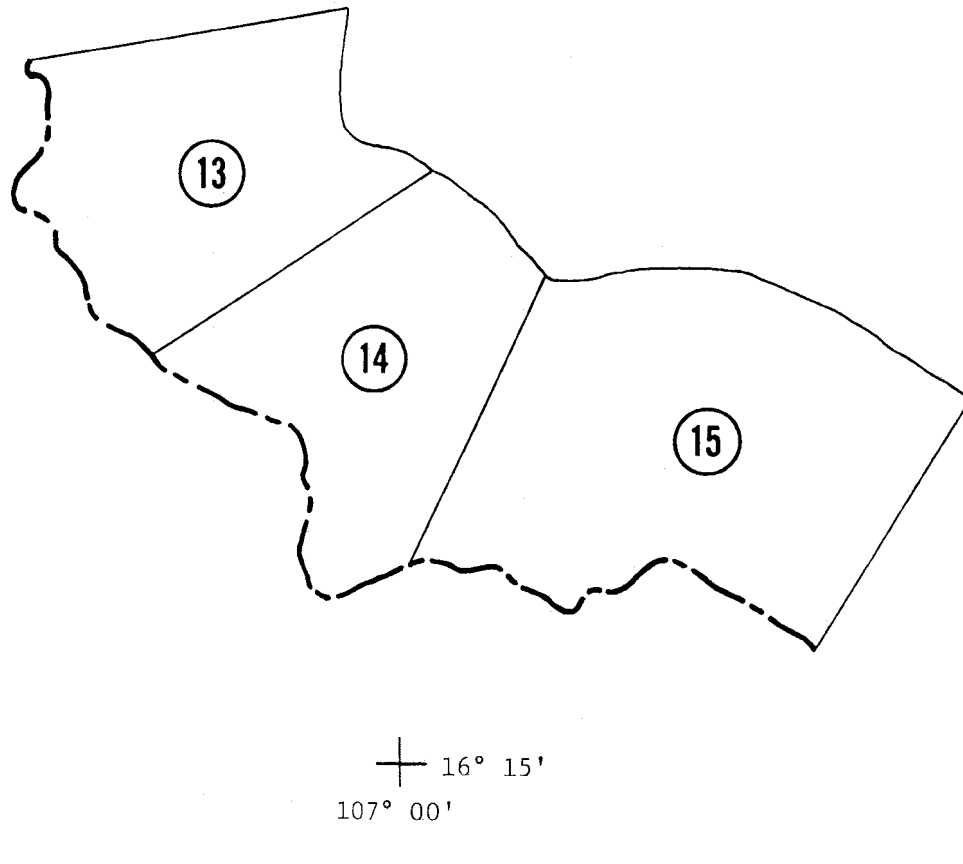


Fig. 48—Configuration and location of Sectors 13 - 15

SUMMARY OF CHARACTERISTICS OF SECTORS 13 - 15

SECTOR NO: 13 MAP REF: 6341 I, _____, _____

TOTAL AREA (SQ KM): 97 BORDER IN WATERWAY (%): 0

TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1000 MIN: 300

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 30 6 64

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 3 / 3 0 / 0 97 / 97

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 9 / 4 0 / 0 0 / 2 0 / 6

POPULATION: 0 PER SQ KM: 0 TRIBES: Pacoh POP: 1400

SECTOR NO: 14 MAP REF: 6341 I, 6441 IV, _____, _____

TOTAL AREA (SQ KM): 101 BORDER IN WATERWAY (%): 0

TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1300 MIN: 300

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 46 51 3

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 00 11 / 11 0 / 0 89 / 89

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 7 / 13 0 / 0 0 / 0 0 / 4

POPULATION: 0 PER SQ KM: 0 TRIBES: Pacoh POP: 500

SECTOR NO: 15 MAP REF: 6441 IV, _____, _____

TOTAL AREA (SQ KM): 161 BORDER IN WATERWAY (%): 0

TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1200 MIN: 400

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 54 4 1 3 37 1

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 5 / 5 0 / 0 95 / 95

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 18 / 19 1 / 1 0 / 0 1 / 4

POPULATION: 0 PER SQ KM: 0 TRIBES: Pacoh POP: 500

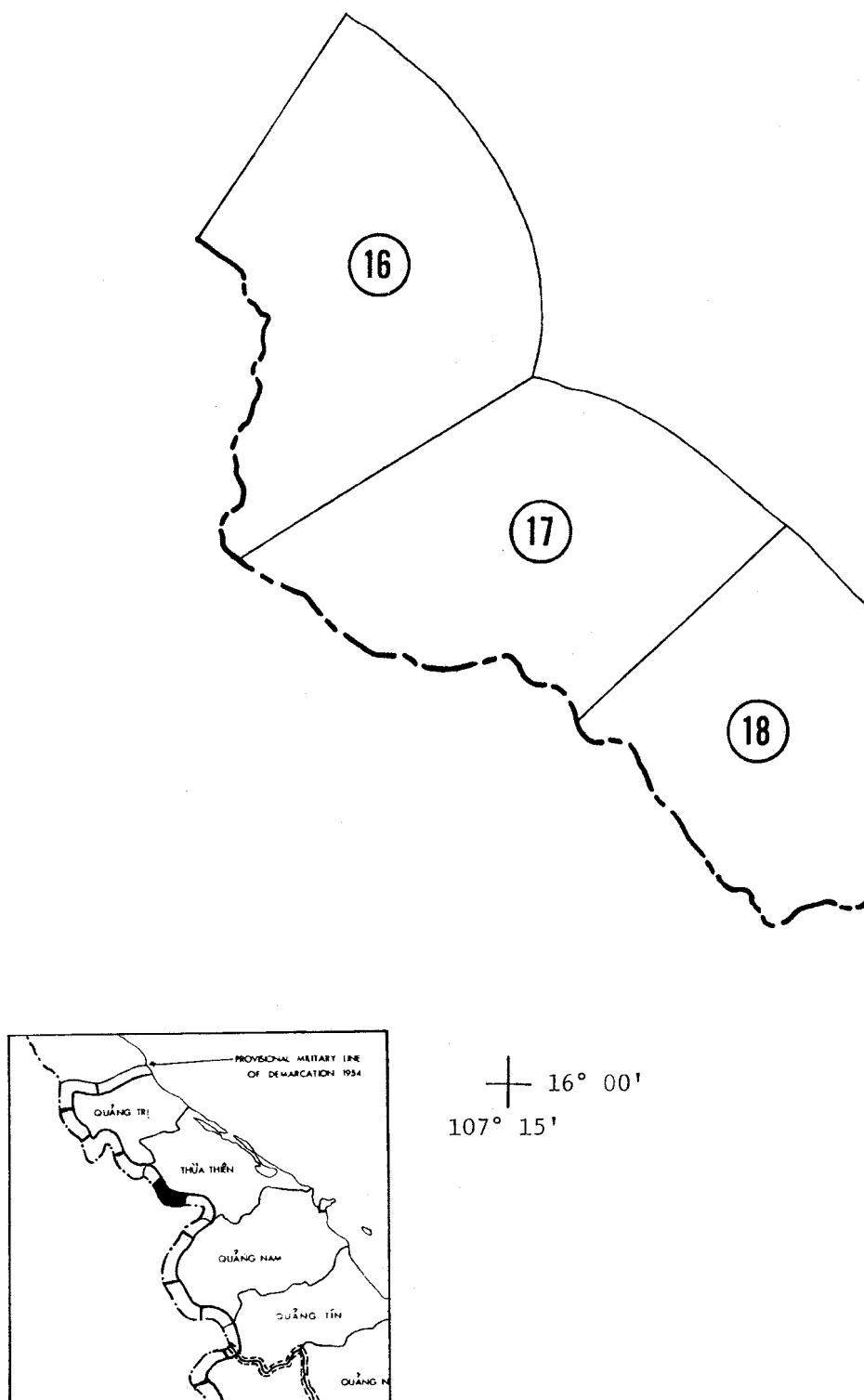


Fig. 49—Configuration and location of Sectors 16 - 18

SUMMARY OF CHARACTERISTICS OF SECTORS 16 - 18

SECTOR NO: 16 MAP REF: 6441 III, 6441 IV, _____
TOTAL AREA (SQ KM): 160 BORDER IN WATERWAY (%): 24
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1500 MIN: 500
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 57 4 39
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 15 / 15 0 / 6 85 / 79
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 8 / 12 0 / 2 2 / 2 0 / 3
POPULATION: 0 PER SQ KM: 0 TRIBES: Pacoh POP: 500

SECTOR NO: 17 MAP REF: 6441 II, 6441 III, _____
TOTAL AREA (SQ KM): 133 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1400 MIN: 500
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 74 12 14
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 17 / 17 1 / 2 82 / 81
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 0 / 16 0 / 2 0 / 2 0 / 3
POPULATION: 0 PER SQ KM: 0 TRIBES: Phuong POP: 200

SECTOR NO: 18 MAP REF: 6441 II, _____
TOTAL AREA (SQ KM): 107 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1600 MIN: 500
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 64 10 14 12
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 20 / 20 1 / 1 79 / 79
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 12 0 / 2 0 / 1 0 / 3
POPULATION: 0 PER SQ KM: 0 TRIBES: Phuong POP: 400

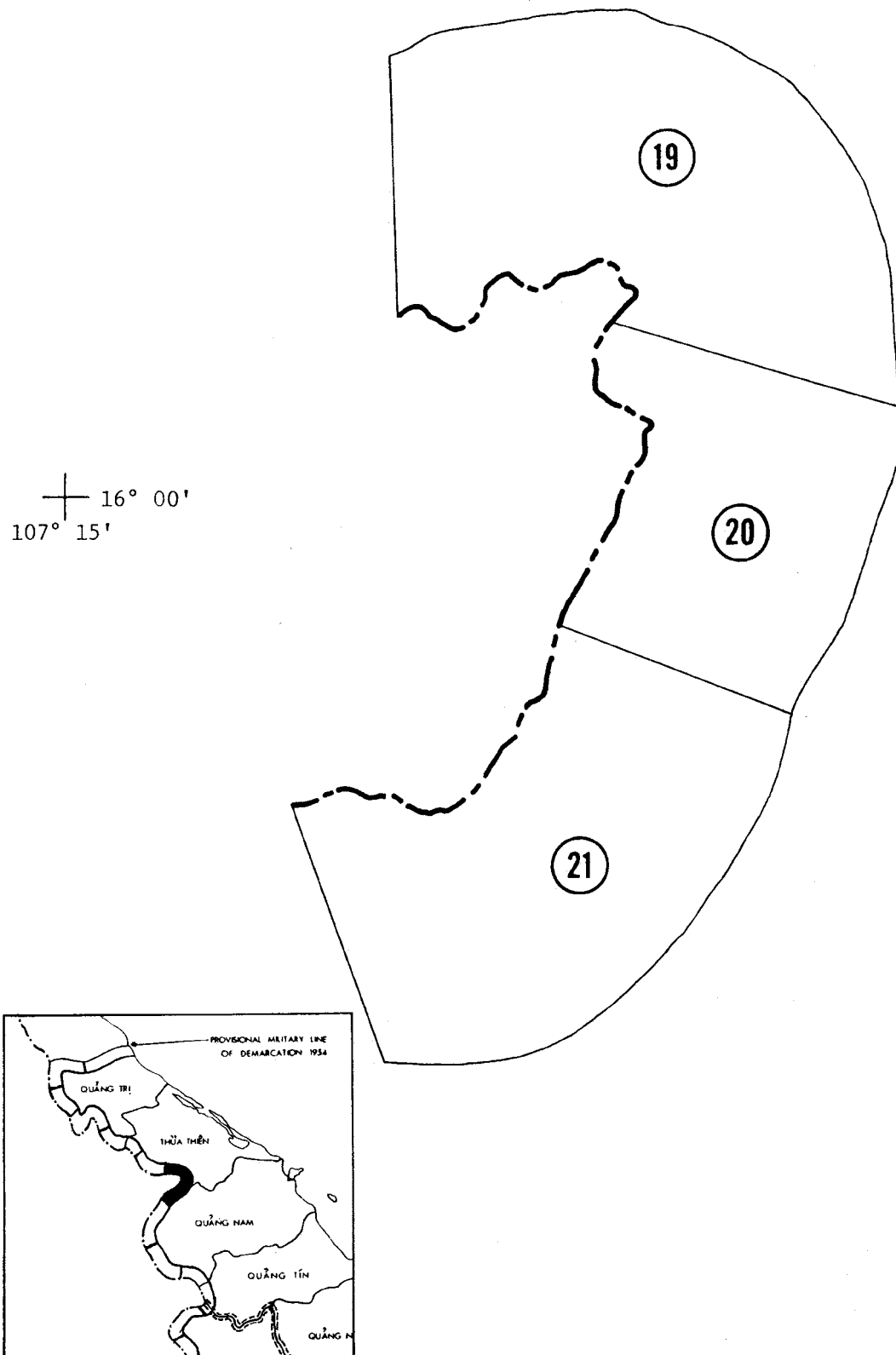


Fig. 50—Configuration and location of Sectors 19 - 21

SUMMARY OF CHARACTERISTICS OF SECTORS 19 - 21

SECTOR NO: 19 MAP REF: 6441 II , 6541 III , _____
 TOTAL AREA (SQ KM): 236 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1200 MIN: 200
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 88 3 9
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0/0 4/5 1/0 95/95
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 3/7 1/1 0/0 0/8
 POPULATION: 0 PER SQ KM: 0 TRIBES: Phuong POP: 400

SECTOR NO: 20 MAP REF: 6440 I , 6441 II , 6540 IV , 6541 III
 TOTAL AREA (SQ KM): 154 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1500 MIN: 300
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 69 6 12 10 3
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0/0 0/0 0/0 100/100
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 1/3 0/0 0/0 0/4
 POPULATION: 0 PER SQ KM: 0 TRIBES: Phuong POP: 100

SECTOR NO: 21 MAP REF: 6440 I , _____ , _____
 TOTAL AREA (SQ KM): 213 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1900 MIN: 600
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 87 1 3 4 5
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0/0 0/0 0/0 100/100
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 0/9 0/0 0/0 0/3
 POPULATION: 0 PER SQ KM: 0 TRIBES: Phuong POP: 400

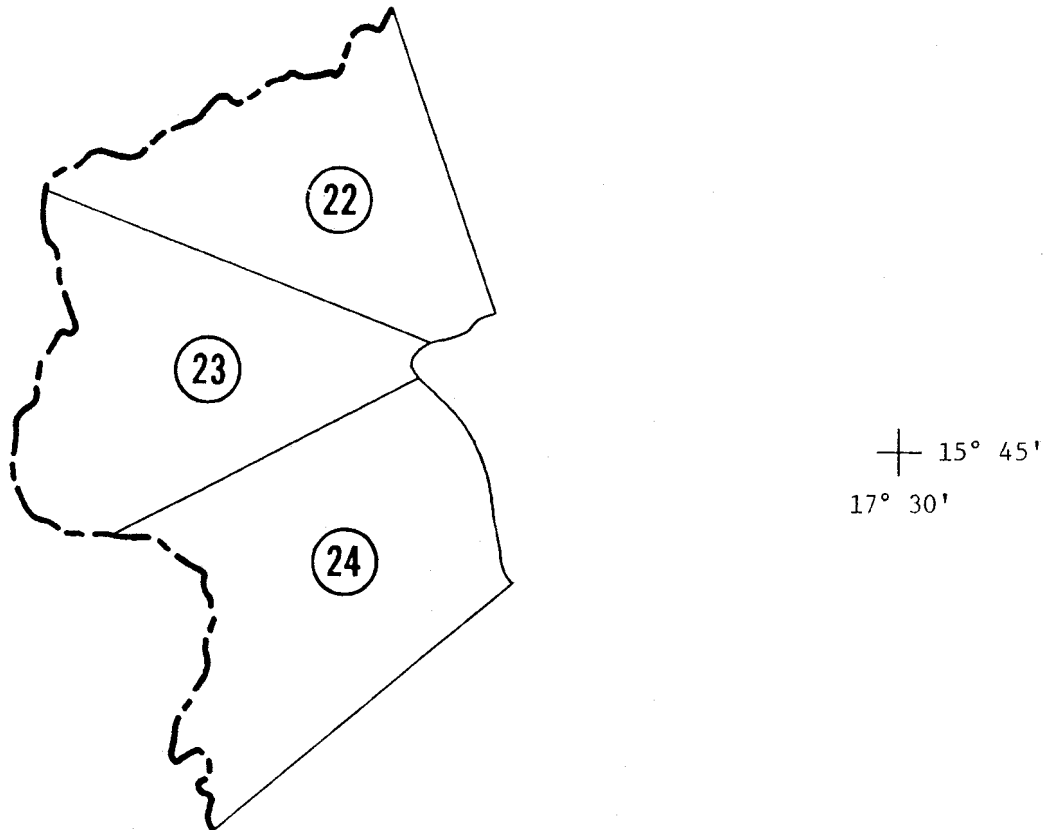


Fig. 51—Configuration and location of Sectors 22 - 24

SUMMARY OF CHARACTERISTICS OF SECTORS 22 - 24

SECTOR NO: 22 MAP REF: 6440 I, _____, _____
TOTAL AREA (SQ KM): 83 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1800 MIN: 800
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 62 24 14
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 0 0 / 0 100 / 100
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 6 / 11 0 / 0 0 / 0 0 / 1
POPULATION: 0 PER SQ KM: 0 TRIBES: Phuong POP: 600

SECTOR NO: 23 MAP REF: 6440 I, 6440 II, 6440 III, 6440 IV
TOTAL AREA (SQ KM): 91 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1700 MIN: 800
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 71 17 12
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 0 0 / 0 100 / 100
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 4 / 10 0 / 0 0 / 0 0 / 0
POPULATION: 0 PER SQ KM: 0 TRIBES: Phuong POP: 700

SECTOR NO: 24 MAP REF: 6440 I, 6440 II, _____, _____
TOTAL AREA (SQ KM): 104 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1500 MIN: 800
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 79 5 16
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 0 0 / 0 100 / 100
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 0 / 13 0 / 0 0 / 0 0 / 2
POPULATION: 0 PER SQ KM: 0 TRIBES: Katu POP: 500

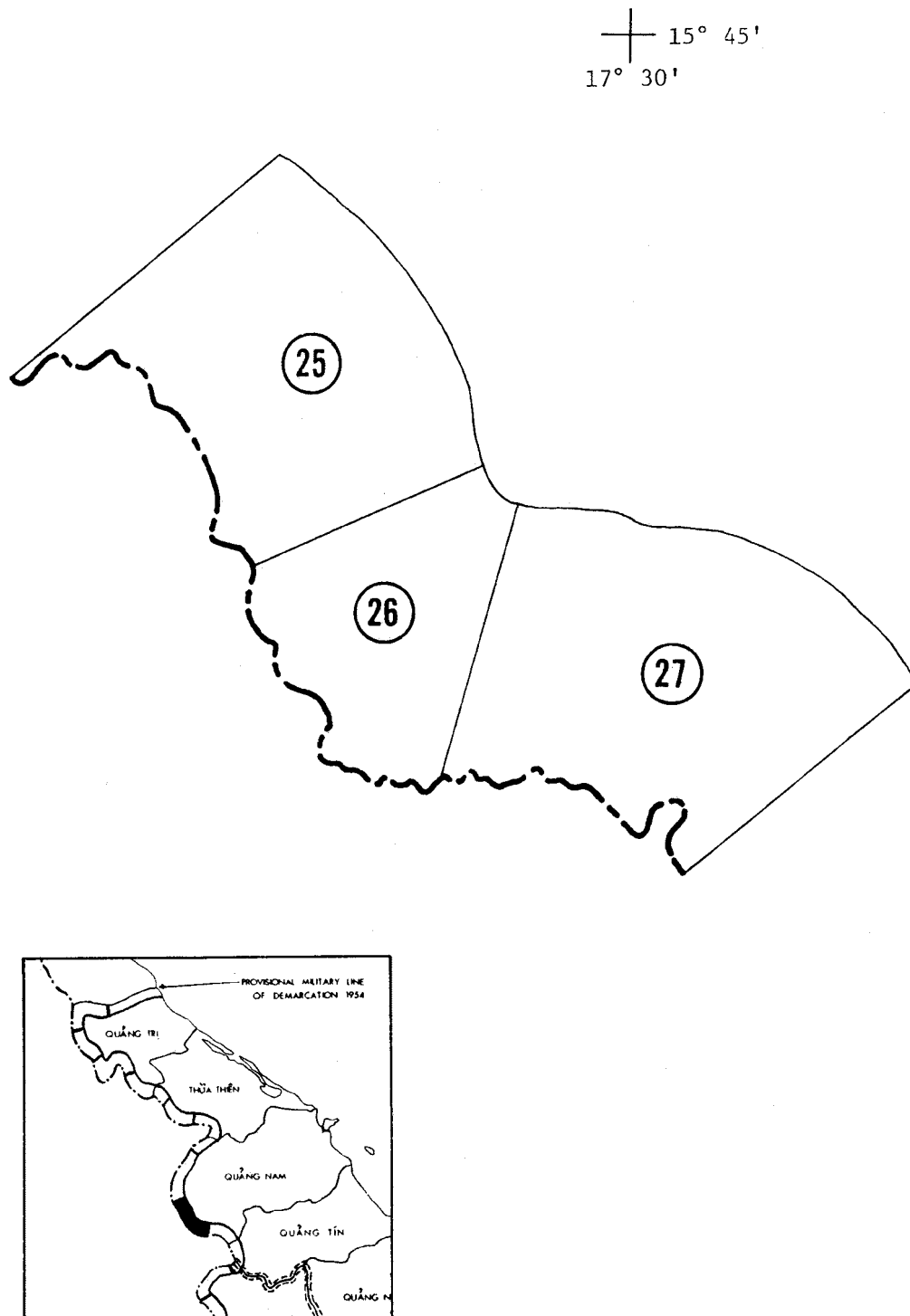


Fig. 52—Configuration and location of Sectors 25 - 27

SUMMARY OF CHARACTERISTICS OF SECTORS 25 - 27

SECTOR NO: 25 MAP REF: 6440 II, _____, _____
 TOTAL AREA (SQ KM): 139 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1400 MIN: 400
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 62 10 28
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 0 0 / 0 100 / 100
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 1 / 10 0 / 0 0 / 0 0 / 2
 POPULATION: 0 PER SQ KM: 0 TRIBES: Katu POP: 1200

SECTOR NO: 26 MAP MAP REF: 6439 I, 6440 II, _____, _____
 TOTAL AREA (SQ KM): 78 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1400 MIN: 400
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 88 9 3
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 0 0 / 0 100 / 100
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 0 / 4 0 / 0 0 / 0 0 / 3
 POPULATION: 0 PER SQ KM: 0 TRIBES: Katu POP: 0

SECTOR NO: 27 MAP REF: 6439 I, 6440 II, 6539 IV, 6540 III
 TOTAL AREA (SQ KM): 170 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1400 MIN: 400
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 95 1 4
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 0 1 / 1 99 / 99
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 2 / 2 0 / 0 0 / 0 0 / 5
 POPULATION: 0 PER SQ KM: 0 TRIBES: Katu POP: 200

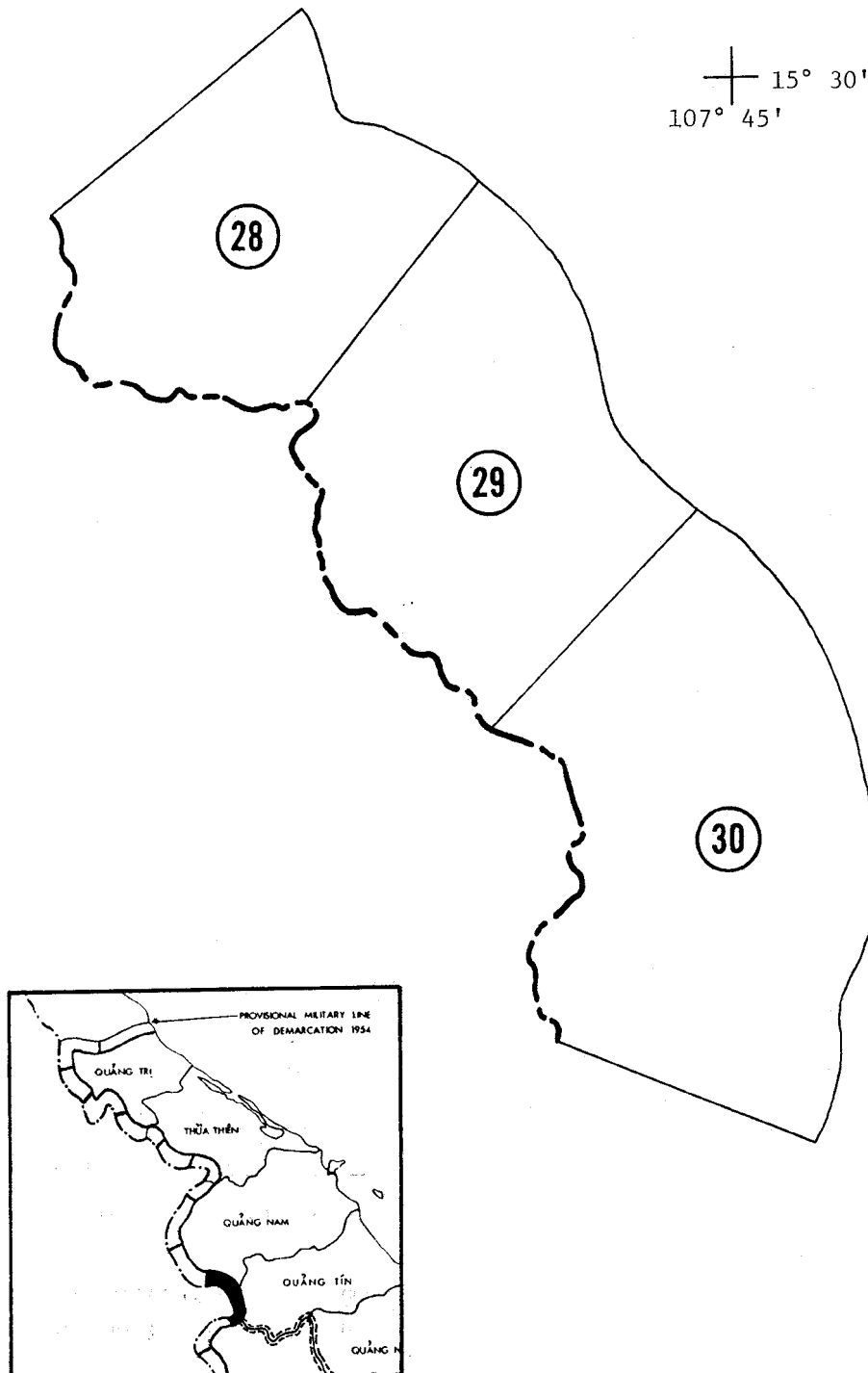


Fig. 53—Configuration and location of Sectors 28 - 30

SUMMARY OF CHARACTERISTICS OF SECTORS 28 - 30

SECTOR NO: 28 MAP REF: 6539 IV, _____, _____
 TOTAL AREA (SQ KM): 126 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1600 MIN: 500
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 74 2 22 2
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 2 2 / 21 21 / 0 77 / 77
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 2 / 1 0 / 0 0 / 0 0 / 1
 POPULATION: 0 PER SQ KM: 0 TRIBES: Unknown POP: 200

SECTOR NO: 29 MAP REF: 6539 IV, _____, _____
 TOTAL AREA (SQ KM): 161 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1600 MIN: 400
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 85 14 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / < 1 < 1 / 14 14 / 0 85 / 85
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 5 / 3 2 / 0 0 / 0 0 / 0
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 30 MAP REF: 6539 I, 6539 II, 6539 III, 6539 IV
 TOTAL AREA (SQ KM): 207 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 2000 MIN: 400
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 79 1 5 12 3
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 2 2 / 0 98 / 98
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 3 / 14 0 / 2 0 / 0 0 / 4
 POPULATION: 0 PER SQ KM: 0 TRIBES: Unknown POP: 300

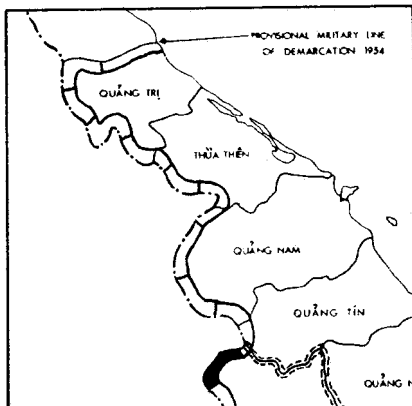
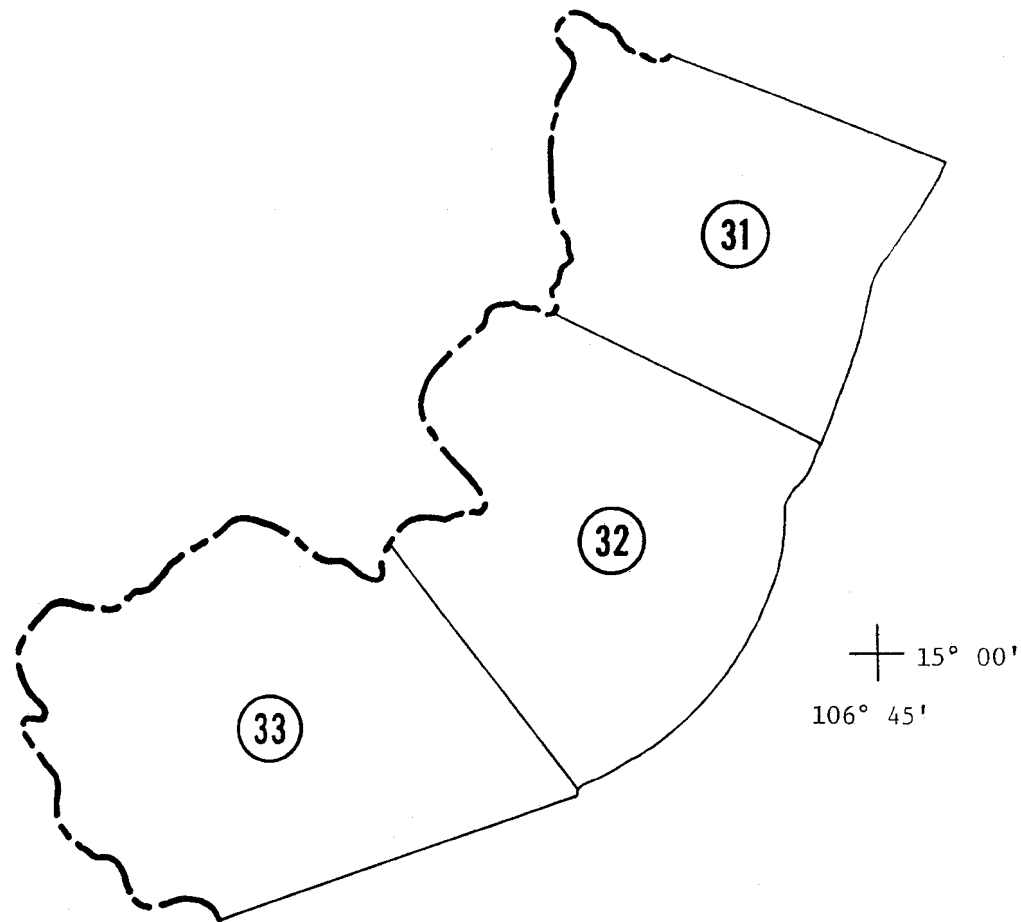


Fig. 54—Configuration and location of Sectors 31 - 33

SUMMARY OF CHARACTERISTICS OF SECTORS 31 - 33

SECTOR NO: 31 MAP REF: 6539 II , 6539 III , _____
TOTAL AREA (SQ KM): 124 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1599 MIN: 600
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 11 2 46 39 2
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 2 2 / 0 98 / 98
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 7 / 14 0 / 3 0 / 0 0 / 4
POPULATION: 1802 PER SQ KM: 14 TRIBES: Jeh POP: 600

SECTOR NO: 32 MAP REF: 6538 IV , 6539 III , _____
TOTAL AREA (SQ KM): 150 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1900 MIN: 700
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 38 1 13 39 6 3
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 6 6 / 0 94 / 94
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 11 0 / 0 0 / 0 0 / 1
POPULATION: 0 PER SQ KM: 0 TRIBES: Jeh POP: 400

SECTOR NO: 33 MAP REF: 6438 I , 6439 II , 6439 III , 6538 IV
TOTAL AREA (SQ KM): 174 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 2000 MIN: 800
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 79 2 4 5 10
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 10 10 / 0 90 / 90
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 9 0 / 0 0 / 0 0 / 2
POPULATION: 0 PER SQ KM: 0 TRIBES: Jeh POP: 900

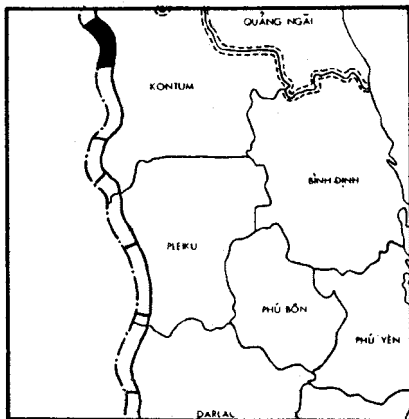
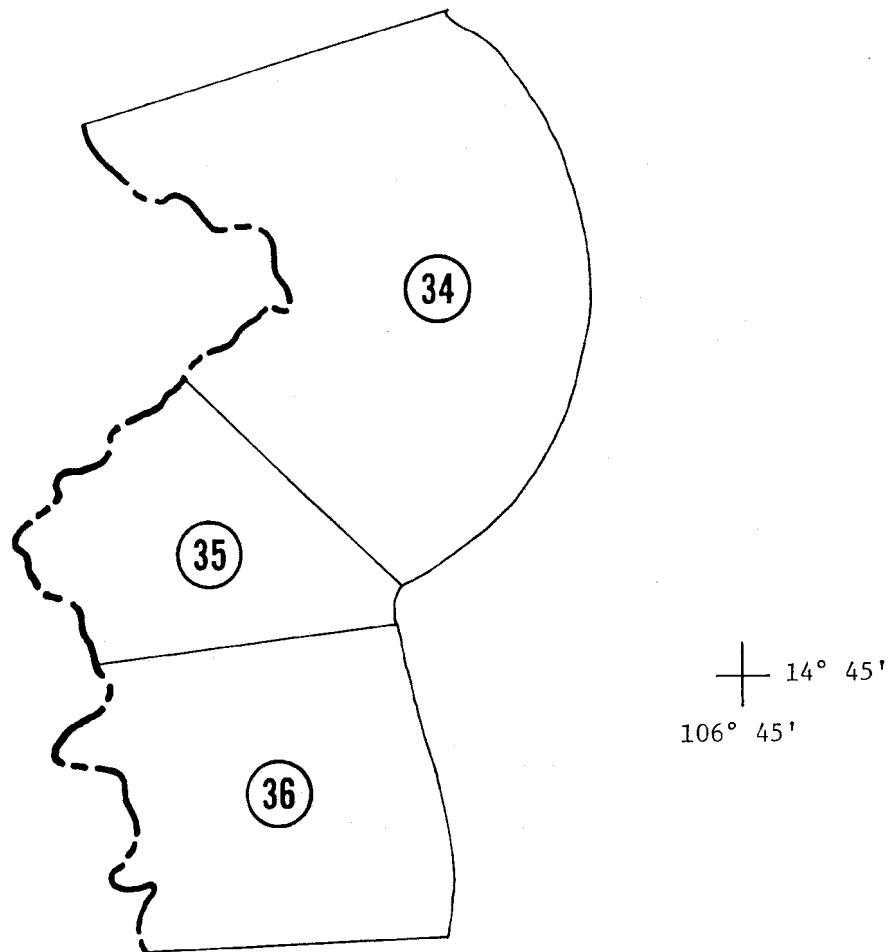


Fig. 55—Configuration and location of Sectors 34 - 36

SUMMARY OF CHARACTERISTICS OF SECTORS 34 - 36

SECTOR NO: 34 MAP REF: 6538 IV, _____, _____
TOTAL AREA (SQ KM): 213 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1500 MIN: 600
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 67 4 14 8 7
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 7 7 / 0 93 / 93
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 11 0 / 2 0 / 1 0 / 10
POPULATION: 0 PER SQ KM: 0 TRIBES: Kayong POP: 900

SECTOR NO: 35 MAP REF: 6538 IV, _____, _____
TOTAL AREA (SQ KM): 80 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1100 MIN: 300
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 94 5 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 6 6 / 0 94 / 94
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 1 / 1 0 / 0 0 / 0 1 / 1
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 36 MAP REF: 6538 III, 6538 IV, _____, _____
TOTAL AREA (SQ KM): 115 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1100 MIN: 500
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 98 1 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: < 1 / < 1 < 1 / 2 2 / < 1 97 / 97
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 1 / 1 0 / 1 0 / 0 0 / 6
POPULATION: 0 PER SQ KM: 0 TRIBES: Kayong POP: 300

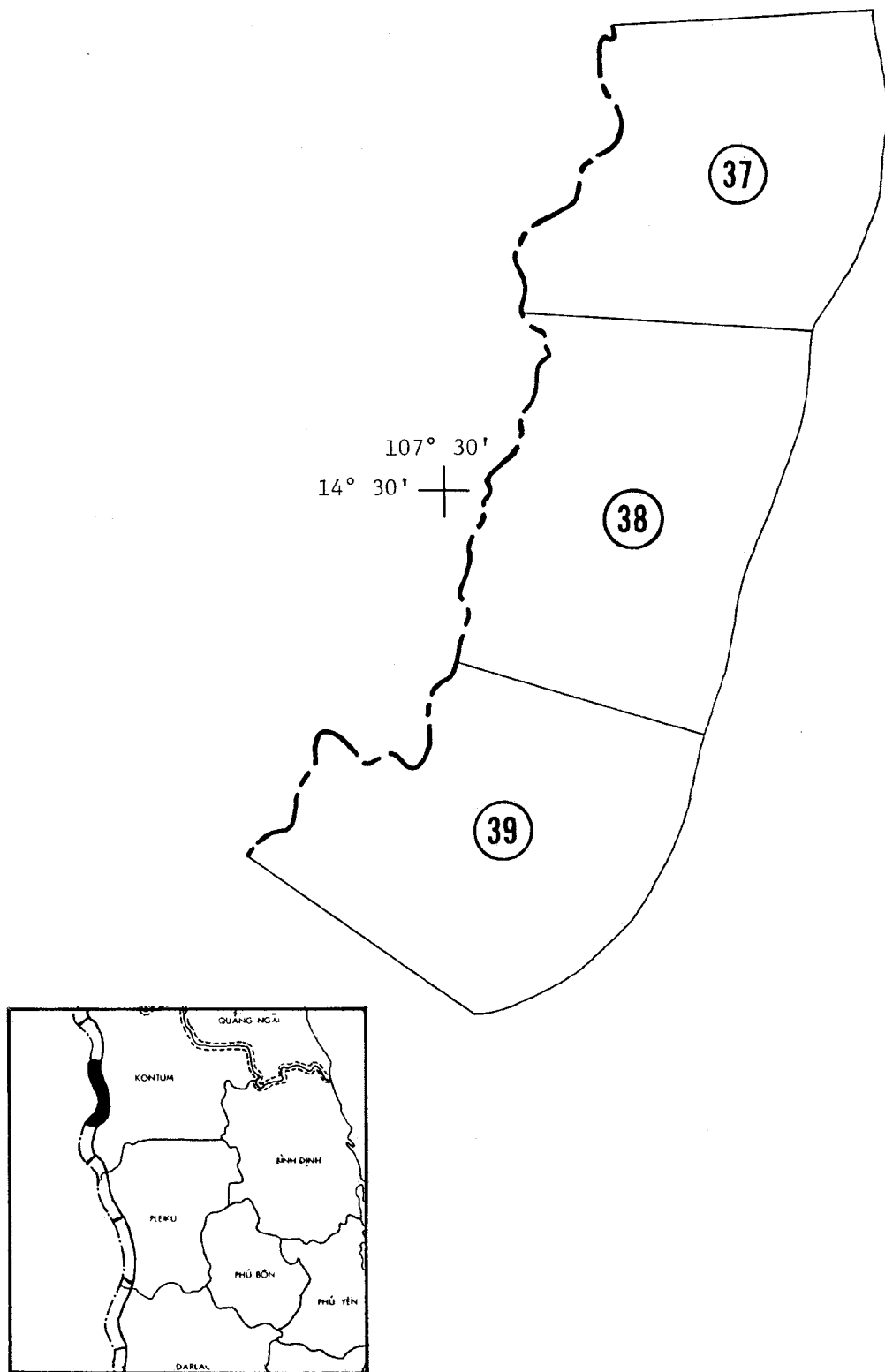


Fig. 56—Configuration and location of Sectors 37 - 39

SUMMARY OF CHARACTERISTICS OF SECTORS 37 - 39

SECTOR NO: 37 MAP REF: 6538 III, _____, _____
TOTAL AREA (SQ KM): 148 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1100 MIN: 600
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 97 3
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: < 1 / < 1 0 / 3 3 / 0 96 / 96
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 6 0 / 0 0 / 0 0 / 6
POPULATION: 0 PER SQ KM: 0 TRIBES: Kayong POP: 400

SECTOR NO: 38 MAP REF: 6537 IV, 6538 III, _____, _____
TOTAL AREA (SQ KM): 165 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rough ELEVATION (M) MAX: 1100 MIN: 300
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 92 8
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 1 / 8 16 / 9 83 / 83
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 9 0 / 0 0 / 0 0 / 8
POPULATION: 0 PER SQ KM: 0 TRIBES: Unknown POP: 300

SECTOR NO: 39 MAP REF: 6437 I, 6537 IV, _____, _____
TOTAL AREA (SQ KM): 139 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 1100 MIN: 200
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 88 12
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 12 / 12 33 / 82 55 / 6
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 0 / 8 0 / 0 0 / 1 0 / 8
POPULATION: 0 PER SQ KM: 0 TRIBES: Unknown POP: 100

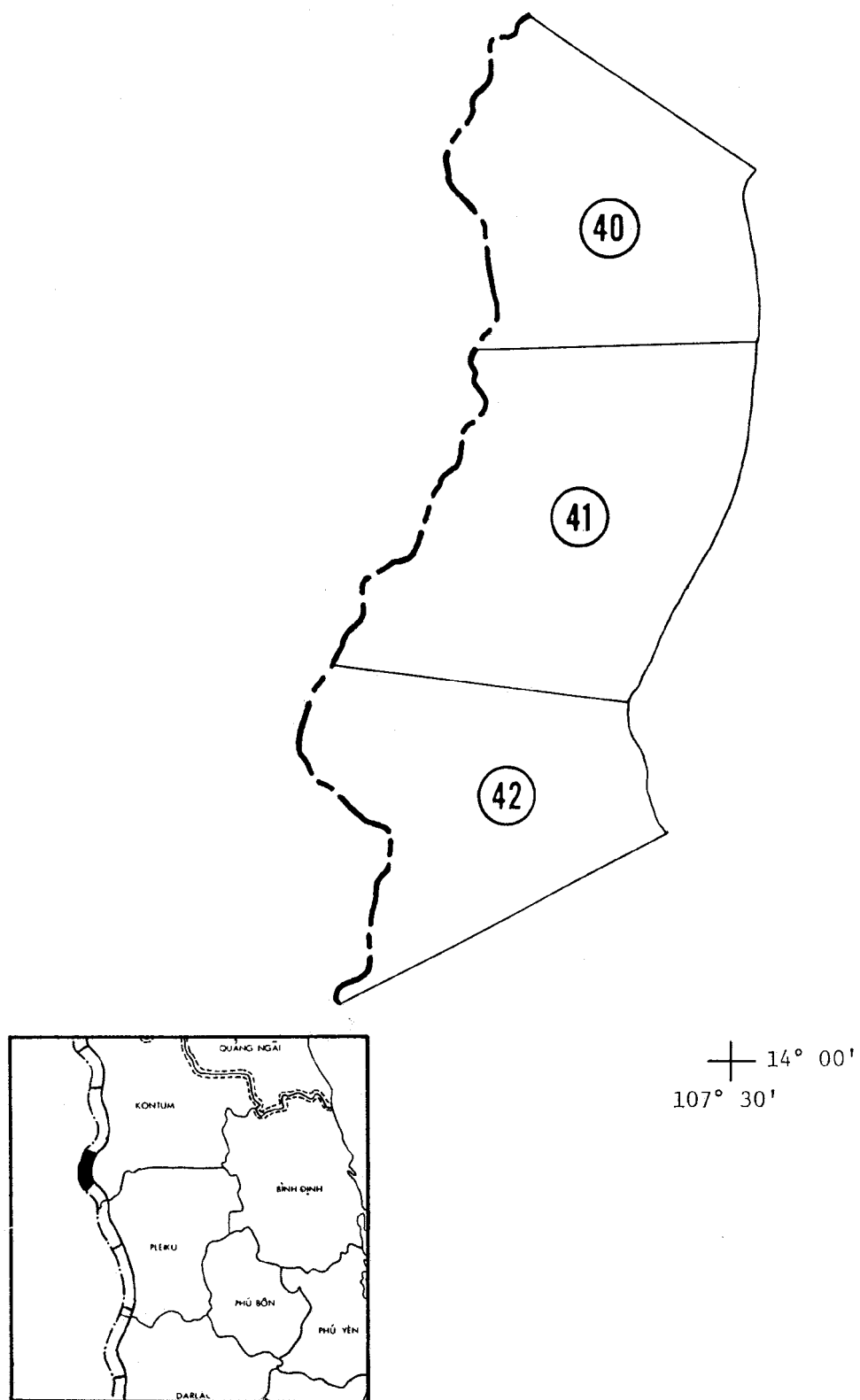


Fig. 57—Configuration and location of Sectors 40 - 42

SUMMARY OF CHARACTERISTICS OF SECTORS 40 - 42

SECTOR NO: 40 MAP REF: 6437 I, _____, _____, _____
 TOTAL AREA (SQ KM): 115 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 1000 MIN: 2000
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 98 2
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 3 / 3 57 / 70 40 / 27
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 0 / 2 0 / 0 0 / 2 0 / 1
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 0

SECTOR NO: 41 MAP REF: 6437 II, _____, _____, _____
 TOTAL AREA (SQ KM): 161 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 1000 MIN: 200
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 100
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 0 19 / 58 81 / 42
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 2 / 41 0 / 0 0 / 2 0 / 4
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 0

SECTOR NO: 42 MAP REF: 6437 II, _____, _____, _____
 TOTAL AREA (SQ KM): 120 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 700 MIN: 200
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 97 1 2
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 2 / 2 1 / < 1 57 / 60 40 / 37
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 8 / 48 0 / 0 0 / 2 0 / 4
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 400

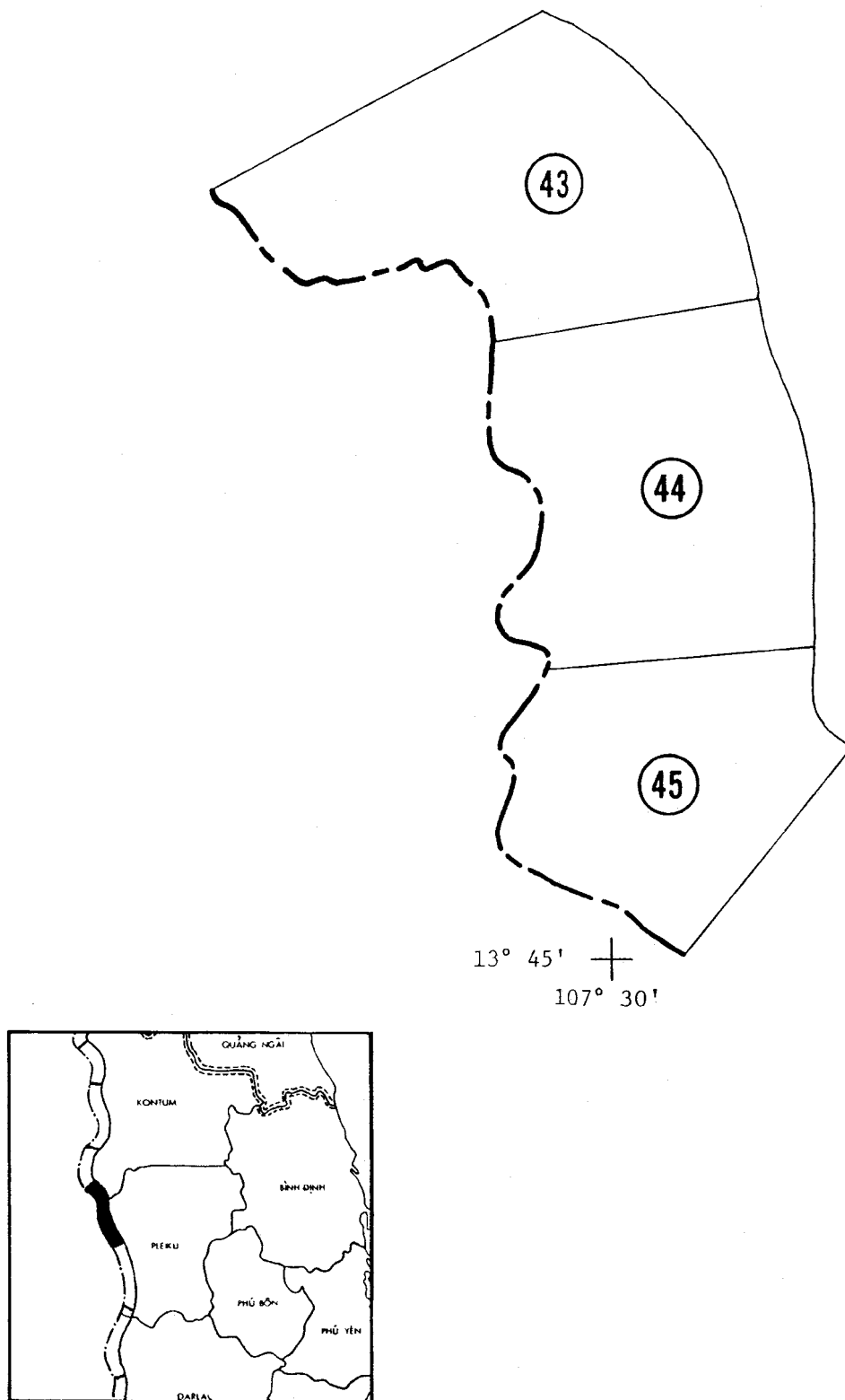


Fig. 58—Configuration and location of Sectors 43 - 45

SUMMARY OF CHARACTERISTICS OF SECTORS 43 - 45

SECTOR NO: 43 MAP REF: 6436 I, 6437 II, 6536 IV, 6537 III
 TOTAL AREA (SQ KM): 165 BORDER IN WATERWAY (%): 69
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 600 MIN: 200
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 91 6 3
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: < 1 / 4 8 / 6 35 / 83 57 / 7
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 15 / 36 0 / 0 1 / 3 2 / 6
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 200

SECTOR NO: 44 MAP REF: 6436 I, 6536 IV, _____, _____
 TOTAL AREA (SQ KM): 148 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 600 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 82 11 7
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 15 16 / 5 5 / 74 79 / 6
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 7 / 13 0 / 0 1 / 1 2 / 9
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 500

SECTOR NO: 45 MAP REF: 6436 I, 6536 IV, _____, _____
 TOTAL AREA (SQ KM): 108 BORDER IN WATERWAY (%): 48
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 700 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 88 11 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: < 1 / 15 14 / 1 1 / 63 86 / 21
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 7 / 7 1 / 0 1 / 0 0 / 6
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 200

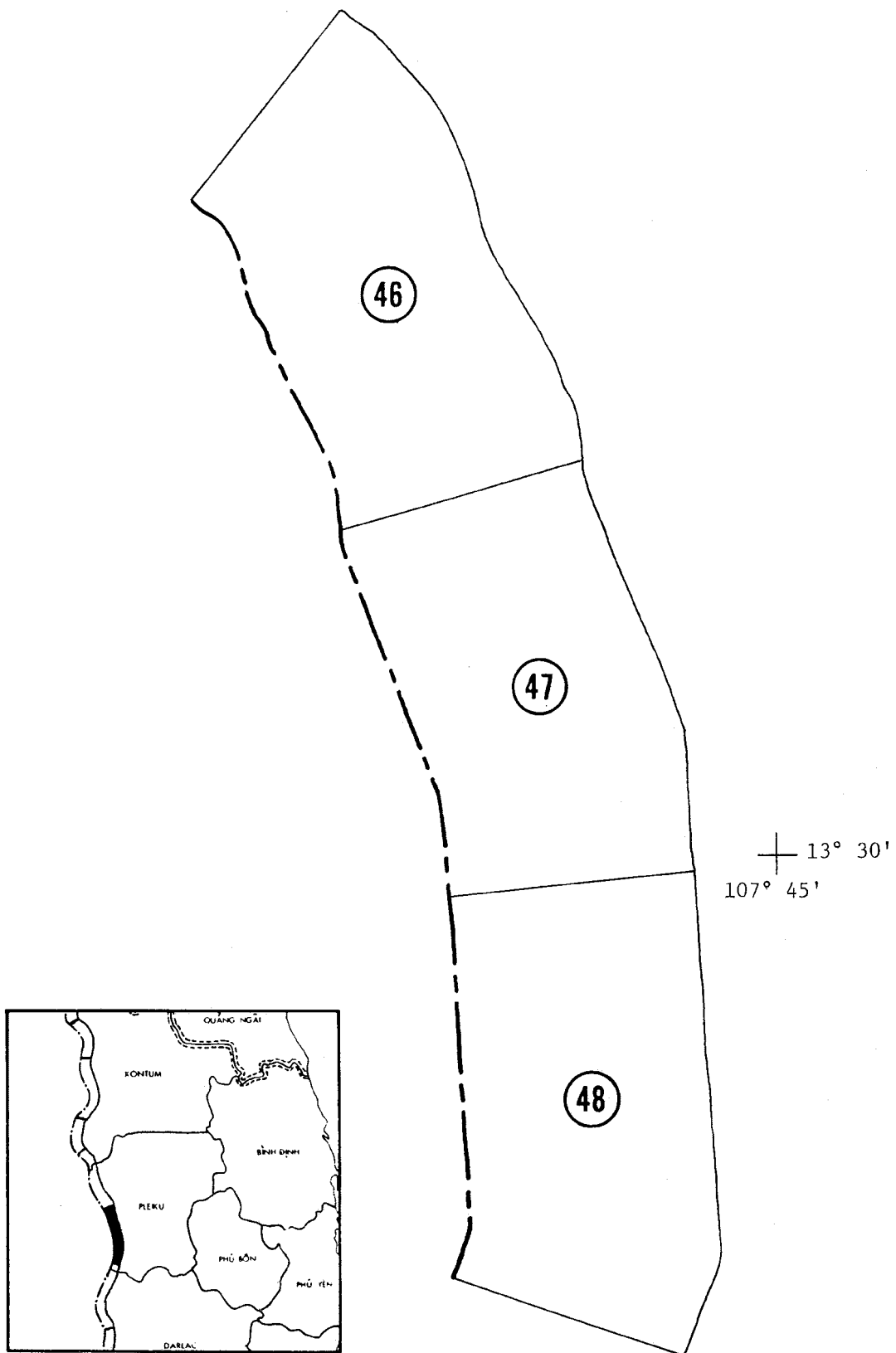


Fig. 59—Configuration and location of Sectors 46 - 48

SUMMARY OF CHARACTERISTICS OF SECTORS 46 - 48

SECTOR NO: 46 MAP REF: 6536 III , 6536 IV , _____
 TOTAL AREA (SQ KM): 198 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 400 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 37 1 35 13 11 3
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 3 / 58 56 / 4 3 / 36 38/2
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 3 / 13 0 / 3 0 / 0 4 / 6
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 5000

SECTOR NO: 47 MAP REF: 6535 IV , 6536 III , _____
 TOTAL AREA (SQ KM): 189 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 800 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 60 2 33 5
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: < 1 / 32 34/ 6 4 / 27 63/ 36
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 9 / 11 0 / 0 0 / 0 3 / 1
 POPULATION: 0 PER SQ KM: 0 TRIBES: Jarai POP: 300

SECTOR NO: 48 MAP REF: 6535 IV , _____
 TOTAL AREA (SQ KM): 197 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 400 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 7 4 85 3 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / < 1 88 / 88 0 / 7 12 / 5
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 8 / 37 0 / 0 0 / 2 2 / 3
 POPULATION: 0 PER SQ KM: 0 TRIBES: Rhade POP: 200

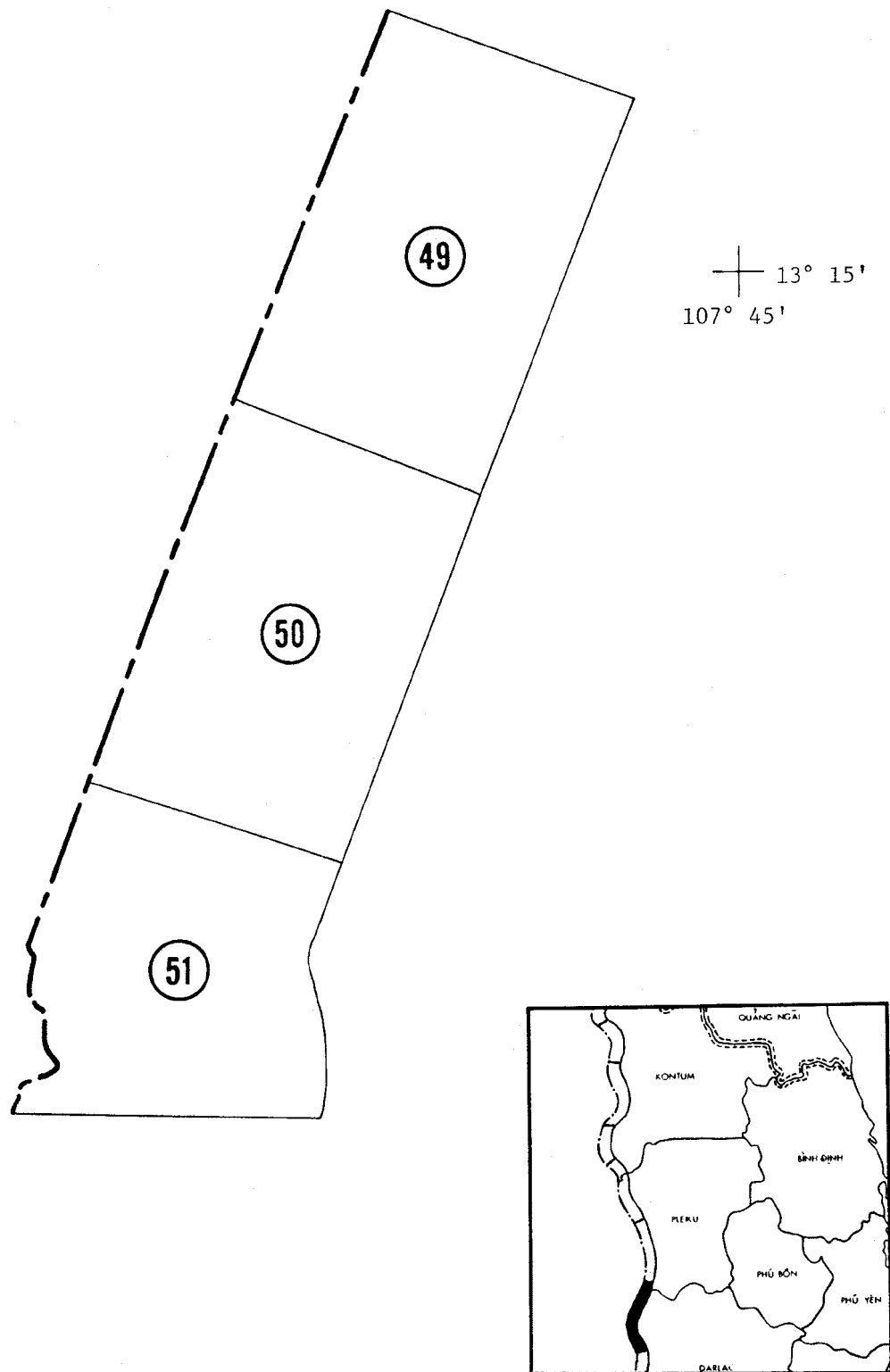


Fig. 60—Configuration and location of Sectors 49 - 51

SUMMARY OF CHARACTERISTICS OF SECTORS 49 - 51

SECTOR NO: 49 MAP REF: 6535 III, 6535 IV, _____
 TOTAL AREA (SQ KM): 174 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 200 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 1 5 93 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 94 / 94 < 1 / 1 6 / 5
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 6 / 17 0 / 0 1 / 2 1 / 2
 POPULATION: 0 PER SQ KM: 0 TRIBES: Rhade POP: 0

SECTOR NO: 50 MAP REF: 6535 III, _____, _____
 TOTAL AREA (SQ KM): 175 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 9 1 89 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 85 / 86 0 / 1 15 / 13
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 1 / 0 0 / 0 0 / 0 3 / 4
 POPULATION: 0 PER SQ KM: 0 TRIBES: Rhade POP: 0

SECTOR NO: 51 MAP REF: 6534 IV, 6535 III, _____
 TOTAL AREA (SQ KM): 130 BORDER IN WATERWAY (%): 57
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 100
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 7 1 92
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 86 / 86 0 / 0 14 / 14
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 1 / 2 0 / 0 1 / 1 0 / 3
 POPULATION: 0 PER SQ KM: 0 TRIBES: Rhade POP: 0

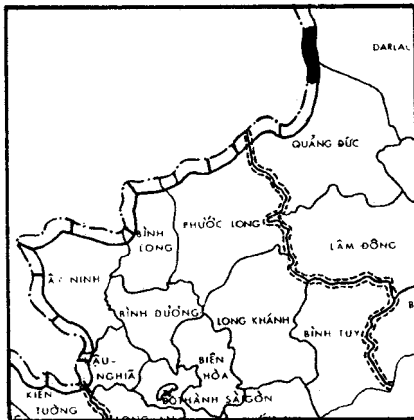
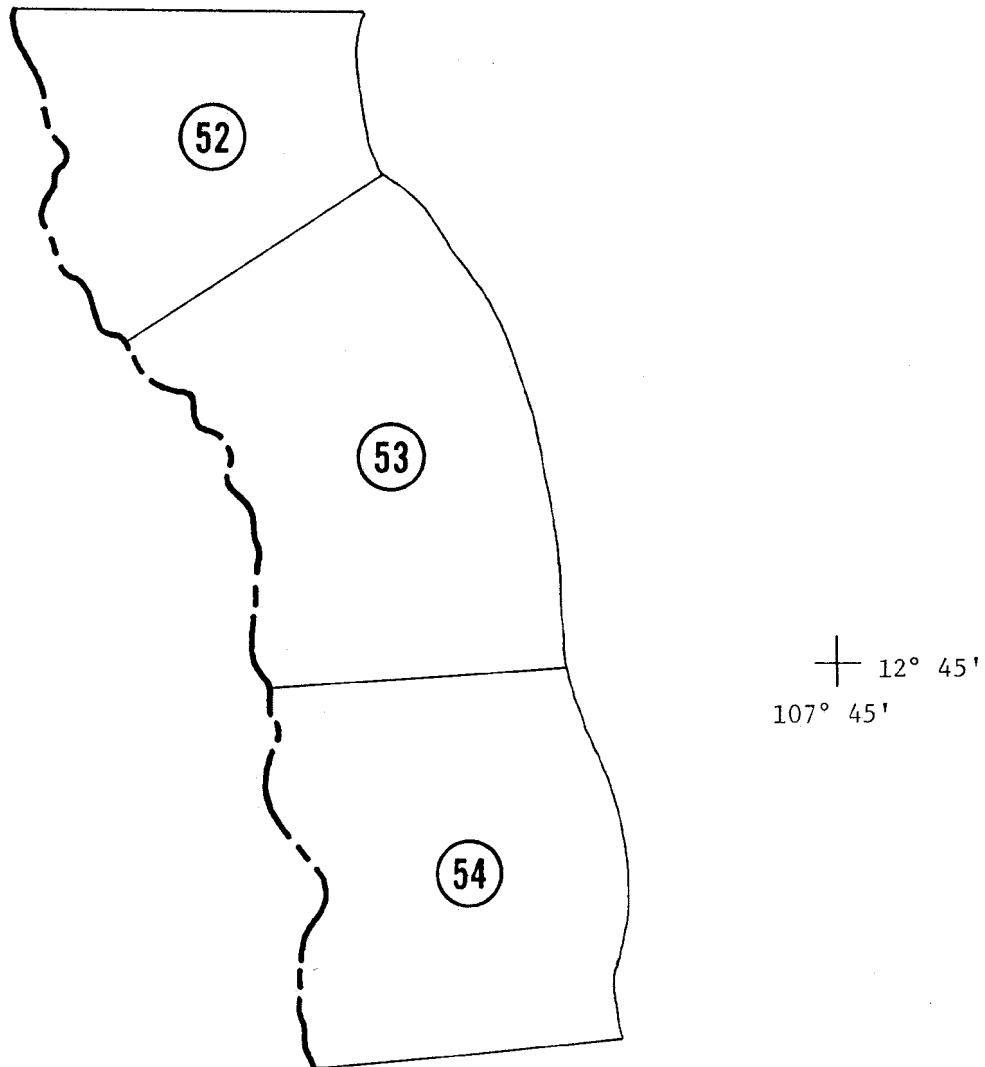


Fig. 61—Configuration and location of Sectors 52 - 54

SUMMARY OF CHARACTERISTICS OF SECTORS 52 - 54

SECTOR NO: 52 MAP REF: 6534 IV, _____, _____
TOTAL AREA (SQ KM): 109 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 100
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 100
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 98/98 0 / 0 2/2
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 1/ 1 0 / 0 0 / 0 0 / 4
POPULATION: 0 PER SQ KM: 0 TRIBES: Rhade POP: 0

SECTOR NO: 53 MAP REF: 6534 III, 6534 IV, _____, _____
TOTAL AREA (SQ KM): 174 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 100
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 1 95 4
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 99 / 99 0 / 0 1 / 1
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 4 0 / 0 0 / 0 0 / 6
POPULATION: 0 PER SQ KM: 0 TRIBES: Rhade POP: 100

SECTOR NO: 54 MAP REF: 6534 III, _____, _____
TOTAL AREA (SQ KM): 154 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 200
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 52 48
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 48/48 0 / 51 52/1
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 13/2 0 / 1 0 / 0 0/5
POPULATION: 0 PER SQ KM: 0 TRIBES: Rhade POP: 200

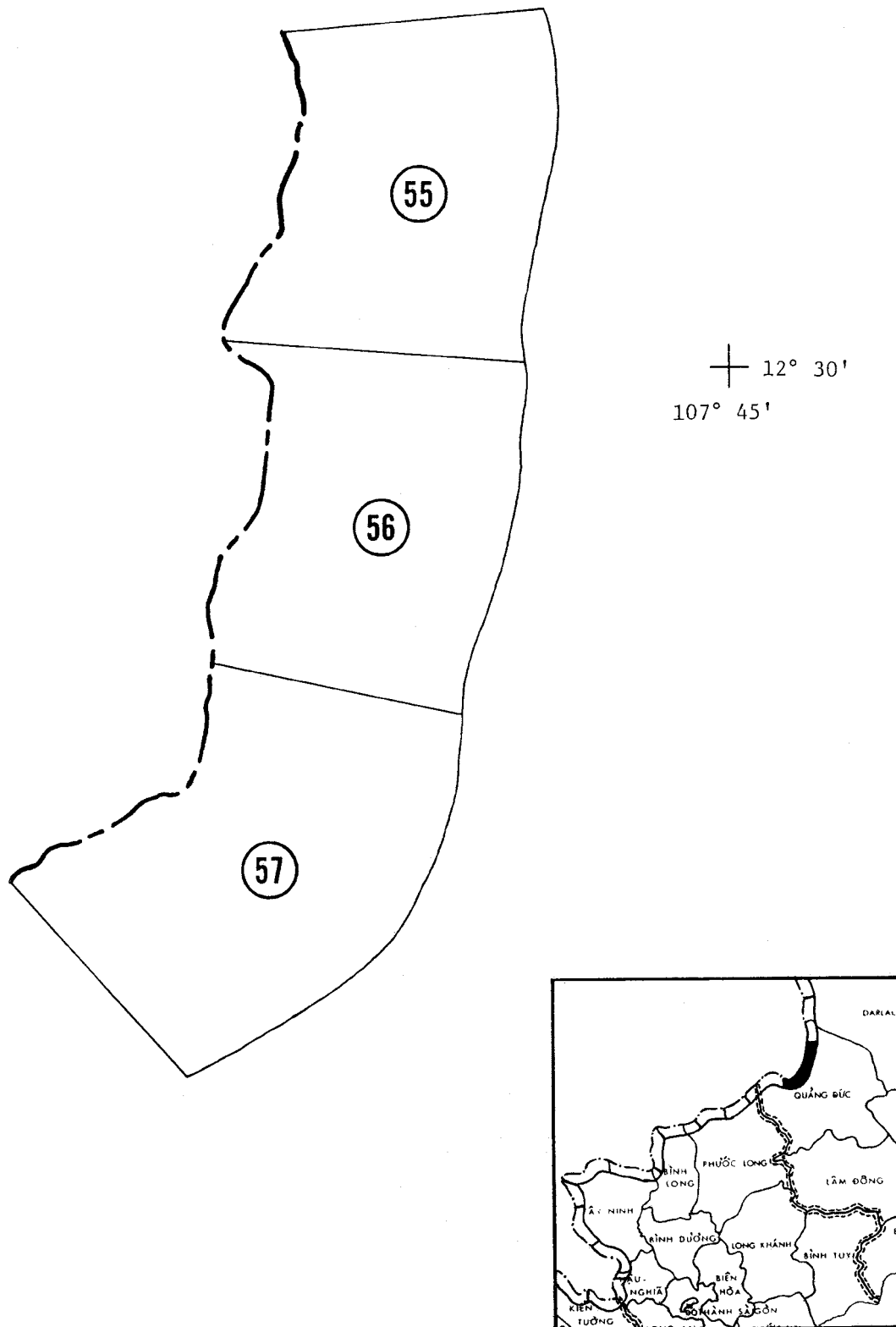


Fig. 62—Configuration and location of Sectors 55 - 57

SUMMARY OF CHARACTERISTICS OF SECTORS 55 - 57

SECTOR NO: 55 MAP REF: 6534 III, _____, _____
TOTAL AREA (SQ KM): 154 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 700 MIN: 300
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 51 49
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 47 / 47 0 / 43 53 / 10
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 3 / 3 0 / 2 0 / 0 1 / 10
POPULATION: 0 PER SQ KM: 0 TRIBES: Mnong POP: 300

SECTOR NO: 56 MAP REF: 6533 IV, 6534 III, _____, _____
TOTAL AREA (SQ KM): 148 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 900 MIN: 500
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 66 6 11 12 2 2 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 2 / 2 29 / 31 2 / 64 67 / 3
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 14 / 27 0 / 4 0 / 0 2 / 12
POPULATION: 7964 PER SQ KM: 54 TRIBES: Mnong POP: 2600

SECTOR NO: 57 MAP REF: 6533 IV, _____, _____, _____
TOTAL AREA (SQ KM): 187 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 1000 MIN: 800
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 87 3 6 2 2
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: <1 / < 1 11 / 11 <1 / 87 89 / 2
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 3 / 19 0 / 3 0 / 0 2 / 13
POPULATION: 0 PER SQ KM: 0 TRIBES: Mnong POP: 400

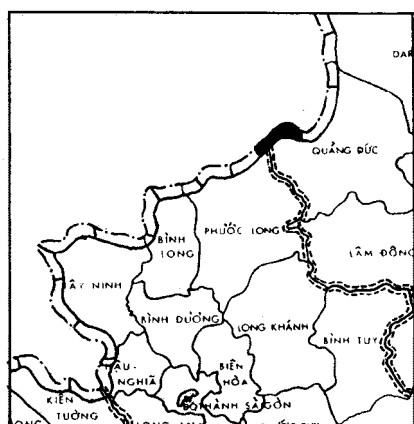
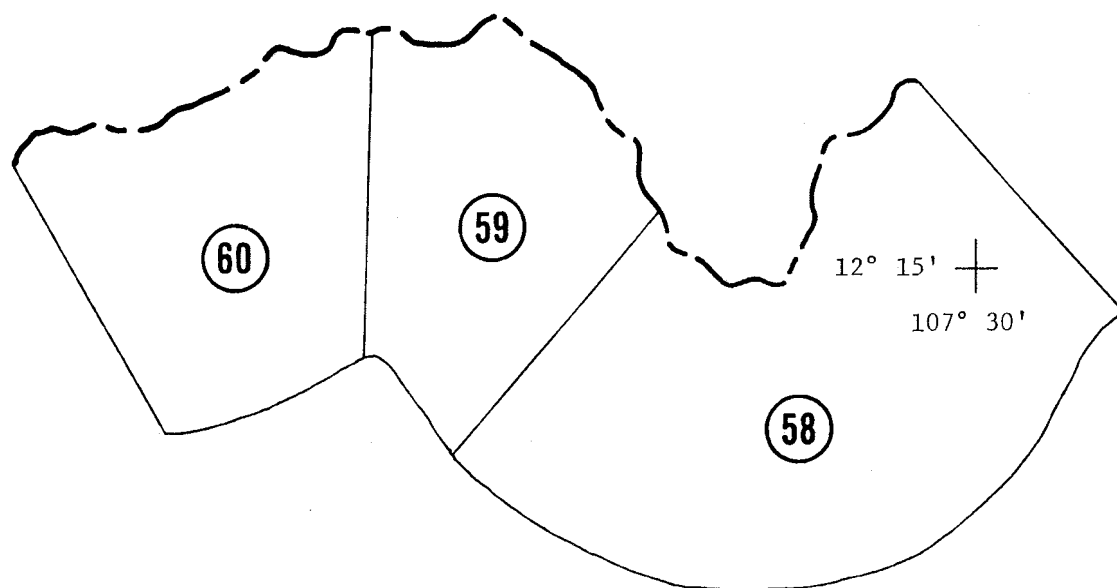


Fig. 63—Configuration and location of Sectors 58 - 60

SUMMARY OF CHARACTERISTICS OF SECTORS 58 - 60

SECTOR NO: 58 MAP REF: 6433 I , 6433 II , 6533 III , 6533 IV
TOTAL AREA (SQ KM): 239 BORDER IN WATERWAY (%): 58
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 1000 MIN: 700
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 72 7 3 18
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 27 / 27 <1 / 70 73 / 3
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 19 / 14 0 / 3 0 / 0 0 / 15
POPULATION: 0 PER SQ KM: 0 TRIBES: Mnong POP: 1200

SECTOR NO: 59 MAP REF: 6433 I , 6433 II , _____ , _____
TOTAL AREA (SQ KM): 104 BORDER IN WATERWAY (%): 76
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 1000 MIN: 600
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 42 26 7 25
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 58 / 58 < 1 / 41 42 / 1
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 13 / 34 0 / 3 0 / 0 1 / 4
POPULATION: 0 PER SQ KM: 0 TRIBES: Mnong POP: 300

SECTOR NO: 60 MAP REF: 6433 I , 6433 II , 6433 III , 6433 IV
TOTAL AREA (SQ KM): 110 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 900 MIN: 400
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 87 2 1 10
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 12 / 12 1 / 37 87 / 51
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 9 / 19 0 / 3 0 / 0 3 / 7
POPULATION: 0 PER SQ KM: 0 TRIBES: Mnong POP: 300

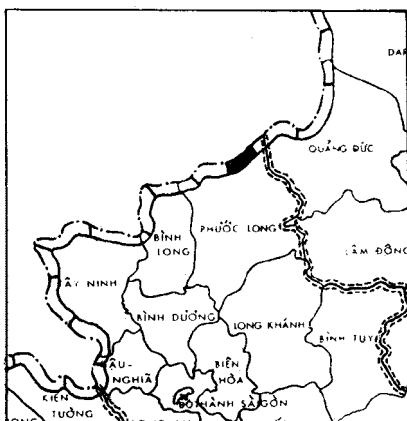
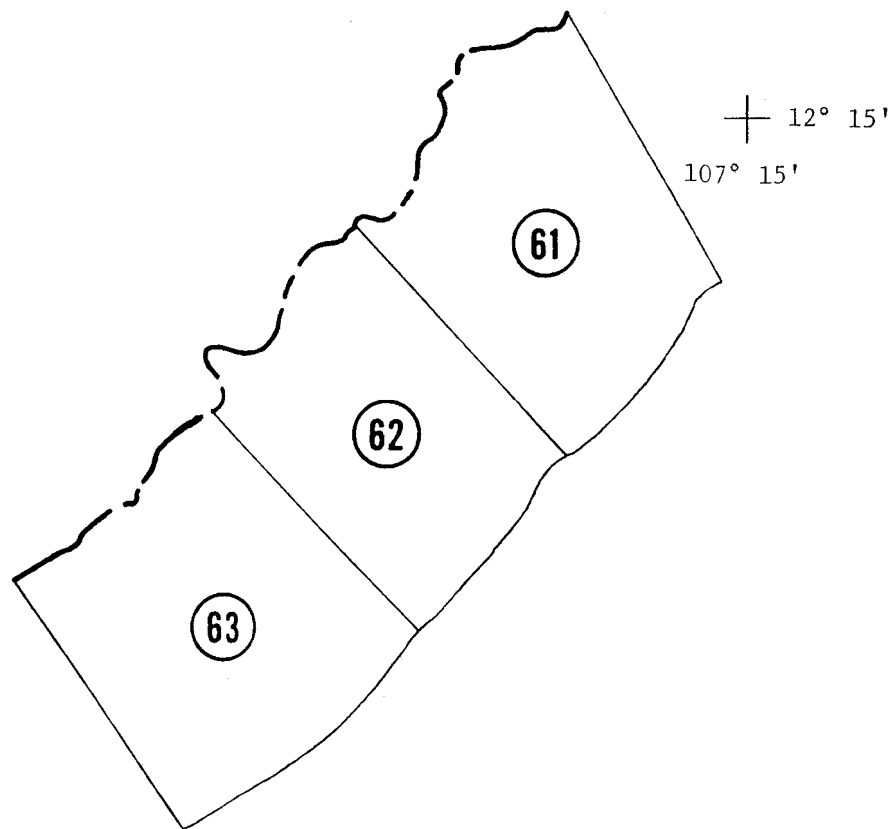


Fig. 64—Configuration and location of Sectors 61 - 63

SUMMARY OF CHARACTERISTICS OF SECTORS 61 - 63

SECTOR NO: 61 MAP REF: 6433 III , 6433 IV , _____
 TOTAL AREA (SQ KM): 104 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 800 MIN: 300
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 95 4 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 3 / 3 0 / 0 97 / 97
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 2 / 3 0 / 0 0 / 0 3 / 8
 POPULATION: 0 PER SQ KM: 0 TRIBES: Stieng POP: 100

SECTOR NO: 62 MAP REF: 6433 III , _____
 TOTAL AREA (SQ KM): 87 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 700 MIN: 200
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 98 1 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 1 2 / 2 0 / 3 98 / 94
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 0 / 5 0 / 0 0 / 0 3 / 6
 POPULATION: 0 PER SQ KM: 0 TRIBES: Stieng POP: 100

SECTOR NO: 63 MAP REF: 6433 III , _____
 TOTAL AREA (SQ KM): 109 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 500 MIN: 200
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 99 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 0 0 / 23 100 / 77
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 0 / 4 0 / 0 0 / 0 1 / 4
 POPULATION: 0 PER SQ KM: 0 TRIBES: Stieng POP: 1500

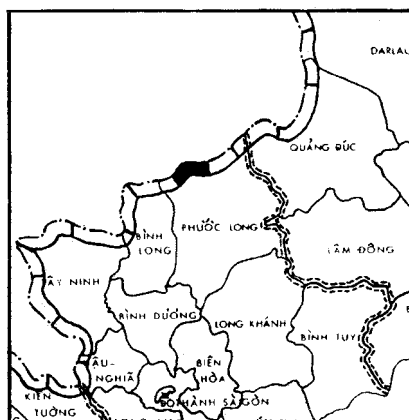
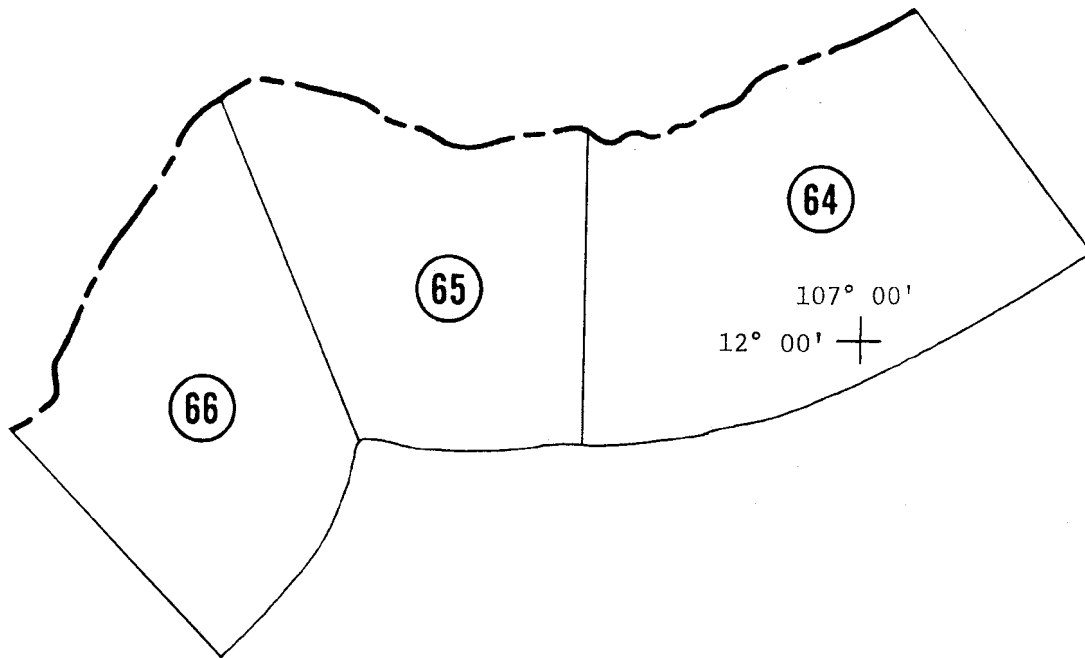


Fig. 65—Configuration and location of Sectors 64 – 66

SUMMARY OF CHARACTERISTICS OF SECTORS 64 - 66

SECTOR NO: 64 MAP REF: 6332 I, 6332 II, 6433 III,
TOTAL AREA (SQ KM): 170 BORDER IN WATERWAY (%): 38
TOPOGRAPHIC CLASS: Rolling ELEVATION (M) MAX: 400 MIN: 200
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 37 52 11
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 4 / 4 0 / 8 96 / 88
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 0 / 6 0 / 2 0 / 1 1 / 6
POPULATION: 0 PER SQ KM: 0 TRIBES: Stieng POP: 400

SECTOR NO: 65 MAP REF: 6332 I, 6333 II,
TOTAL AREA (SQ KM): 122 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 200 MIN: 100
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 39 12 7 41 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: <1 / <1 43 / 43 0 / 43 57 / 14
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 6 / 15 1 / 3 0 / 2 0 / 2
POPULATION: 102 PER SQ KM: < 1 TRIBES: Stieng POP: 1000

SECTOR NO: 66 MAP REF: 6332 I, 6332 IV, 6333 II,
TOTAL AREA (SQ KM): 124 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 200 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 52 2 12 21 4 5 4
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 5 / 5 21 / 25 4 / 65 70 / 5
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 3 / 19 0 / 4 0 / 0 0 / 3
POPULATION: 4494 PER SQ KM: 36 TRIBES: Stieng POP: 1400

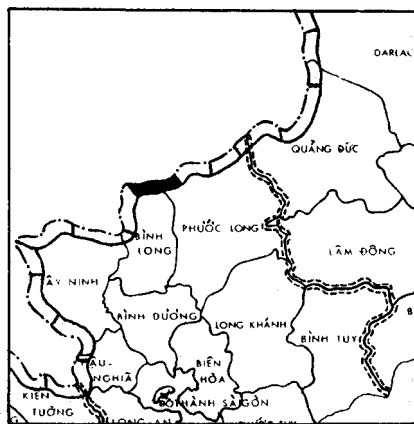
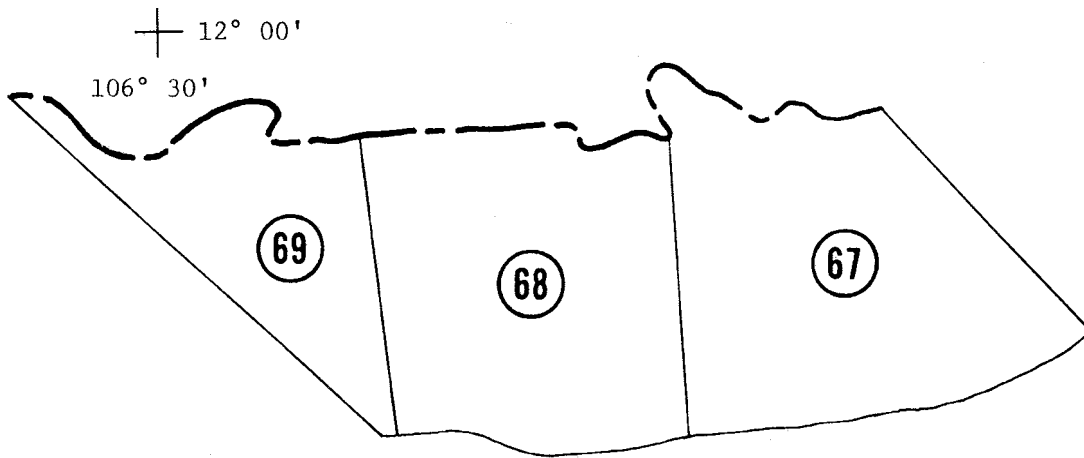


Fig. 66—Configuration and location of Sectors 67 - 69

SUMMARY OF CHARACTERISTICS OF SECTORS 67 - 69

SECTOR NO: 67 MAP REF: 6332 I, 6332 IV, _____
 TOTAL AREA (SQ KM): 124 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 200 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 79 4 4 1 1 3 8
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 1 5 / 4 0 / 94 95 / 1
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 2 / 19 0 / 2 0 / 2 2 / 2
 POPULATION: 132 PER SQ KM: 1 TRIBES: Stieng POP: 400

SECTOR NO: 68 MAP REF: 6332 IV, _____
 TOTAL AREA (SQ KM): 113 BORDER IN WATERWAY (%): 52
 TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 200 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 13 30 52 2 3
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 2 / 2 52 / 52 0 / 23 46 / 23
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 4 / 18 0 / 4 0 / 0 2 / 3
 POPULATION: 1600^a PER SQ KM: 14 TRIBES: Cambodians POP: 1600

^a Does not include 2000 VC (HES).

SECTOR NO: 69 MAP REF: 6232 I, 6332 IV, _____
 TOTAL AREA (SQ KM): 67 BORDER IN WATERWAY (%): 40
 TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 200 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 8 17 74 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: < 1 / < 1 75 / 75 0 / 25 25 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 2 / 12 1 / 2 0 / 0 0 / 0
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

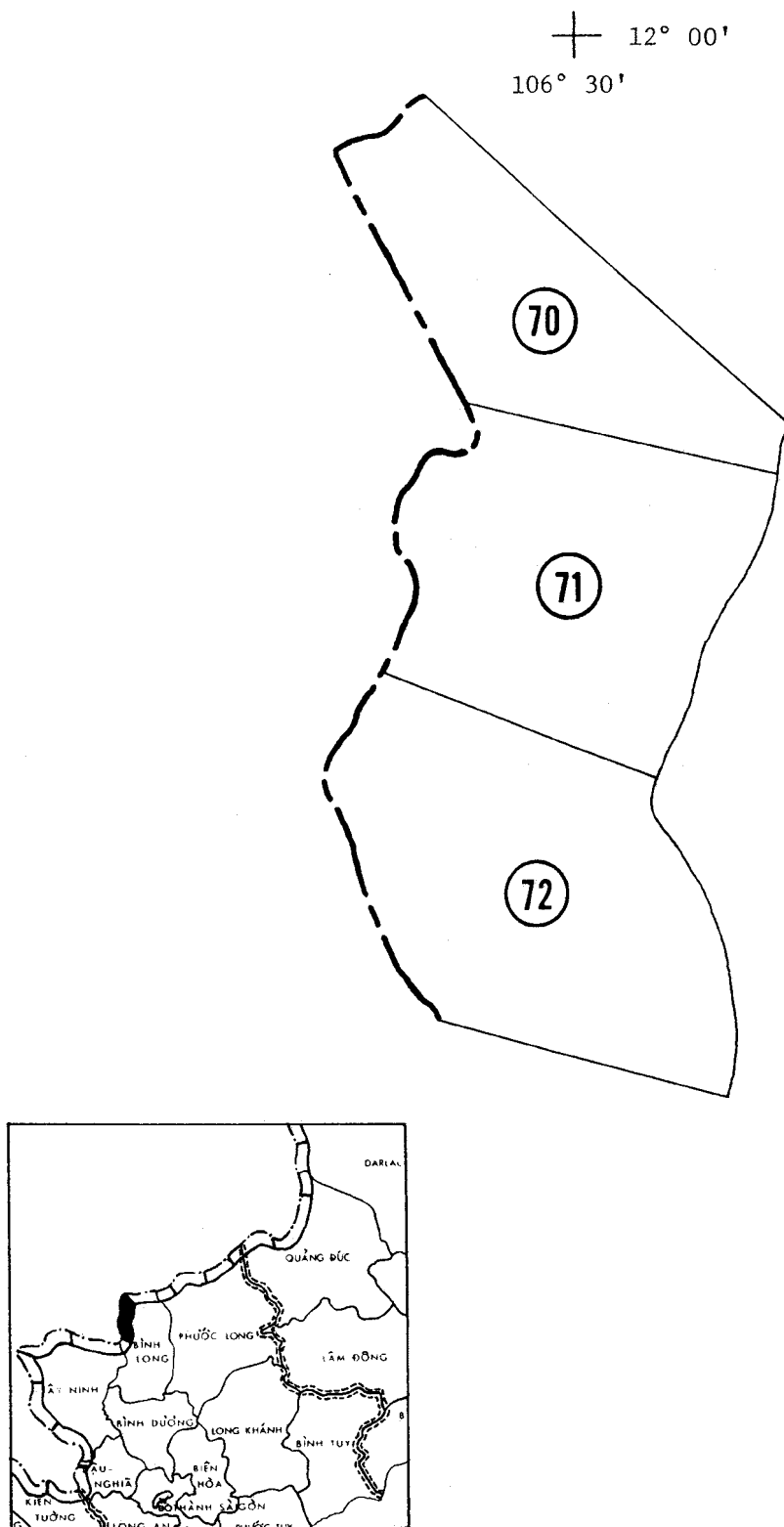


Fig. 67—Configuration and location of Sectors 70 - 72

SUMMARY OF CHARACTERISTICS OF SECTORS 70 - 72

SECTOR NO: 70 MAP REF: 6232 I, 6332 IV, _____
TOTAL AREA (SQ KM): 152 BORDER IN WATERWAY (%): 34
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 200 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 20 4 73 3
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 76 / 76 0 / 20 24 / 4
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 4 / 11 0 / 0 0 / 0 0 / 2
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 71 MAP REF: 6232 I, 6332 IV, _____
TOTAL AREA (SQ KM): 124 BORDER IN WATERWAY (%): 83
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 200 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 44 3 50 3
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: < 1 / < 1 53 / 53 0 / 46 46 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 5 / 17 0 / 2 0 / 0 0 / 3
POPULATION: 400 PER SQ KM: 3 TRIBES: Cambodians POP: 400

SECTOR NO: 72 MAP REF: 6232 I, 6232 II, 6232 III, 6332 IV
TOTAL AREA (SQ KM): 139 BORDER IN WATERWAY (%): 100
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 100 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 72 1 19 4 2 1 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 2 25 / 24 1 / 74 74 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 6 / 15 0 / 0 0 / 0 0 / 4
POPULATION: 500 PER SQ KM: 4 TRIBES: Cambodians POP: 500

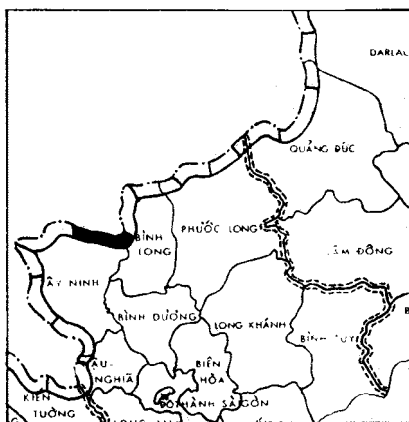
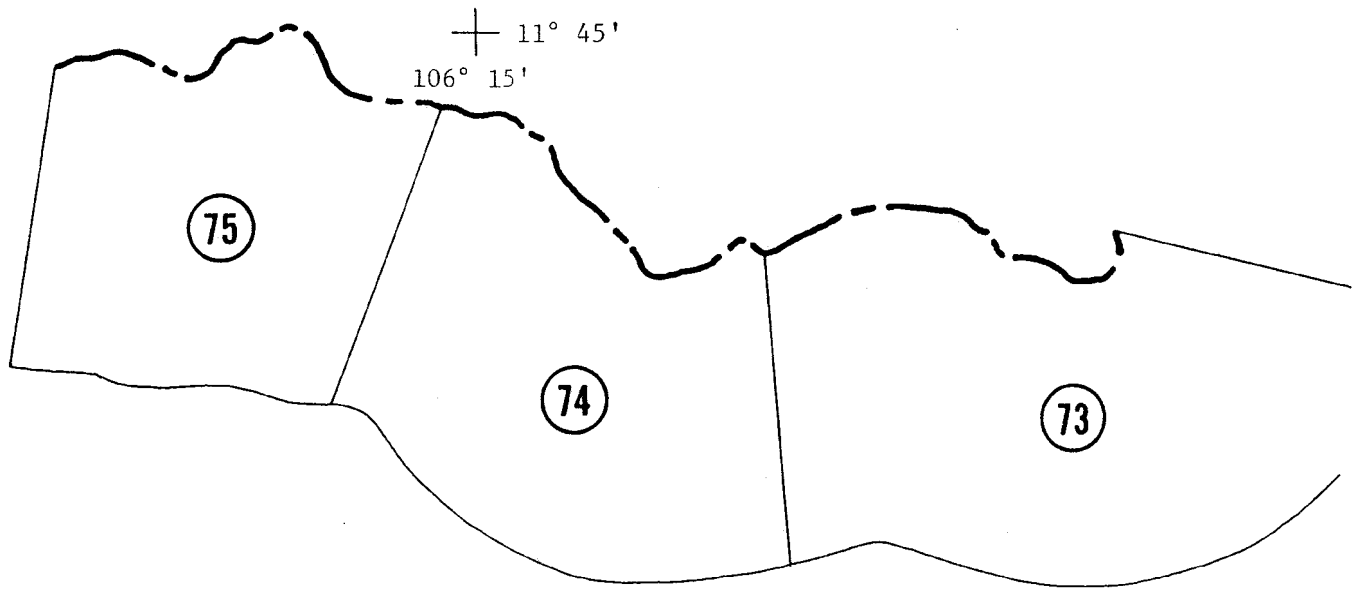


Fig. 68—Configuration and location of Sectors 73 - 75

SUMMARY OF CHARACTERISTICS OF SECTORS 73 - 75

SECTOR NO: 73 MAP REF: 6232 II, 6332 III, _____, _____
TOTAL AREA (SQ KM): 189 BORDER IN WATERWAY (%): 12
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 100 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 83 1 12 3 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / <1 15 / 15 < 1 / 83 85 / 2
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 3 / 18 0 / 5 0 / 0 1 / 4
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 74 MAP REF: 6232 II, 6232 III, _____, _____
TOTAL AREA (SQ KM): 176 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 100 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 57 16 10 4 5 4 3 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 4 14 / 13 3 / 67 83 / 16
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 8 / 8 0 / 3 0 / 0 0 / 4
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 75 MAP REF: 6232 IV, _____, _____, _____
TOTAL AREA (SQ KM): 143 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 100 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 40 16 9 19 7 9
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 19 49 / 32 3 / 49 48 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 10 / 12 0 / 2 0 / 0 0 / 1
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SUMMARY OF CHARACTERISTICS OF SECTORS 76 - 78

SECTOR NO: 76 MAP REF: 6232 III, _____, _____
TOTAL AREA (SQ KM): 96 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 100 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 78 3 3 14 1 1
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 14 21 / 7 0 / 79 79 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 5 / 16 0 / 2 0 / 0 1 / 3
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 77 MAP REF: 6132 II, 6232 III, _____, _____
TOTAL AREA (SQ KM): 164 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 89 2 2 2 5
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 2 6 / 4 0 / 94 94 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 13 / 17 1 / 3 0 / 0 1 / 5
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 78 MAP REF: 6132 II, _____, _____
TOTAL AREA (SQ KM): 102 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 79 8 1 2 10
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 10 / 12 2 / 88 88 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 11 / 10 2 / 2 0 / 0 0 / 2
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

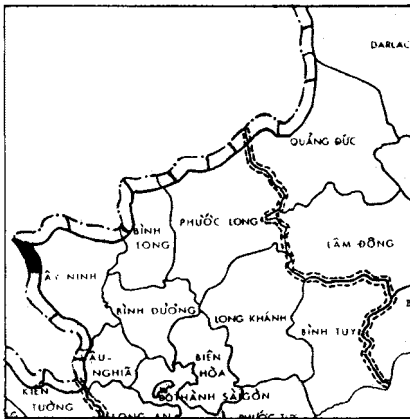
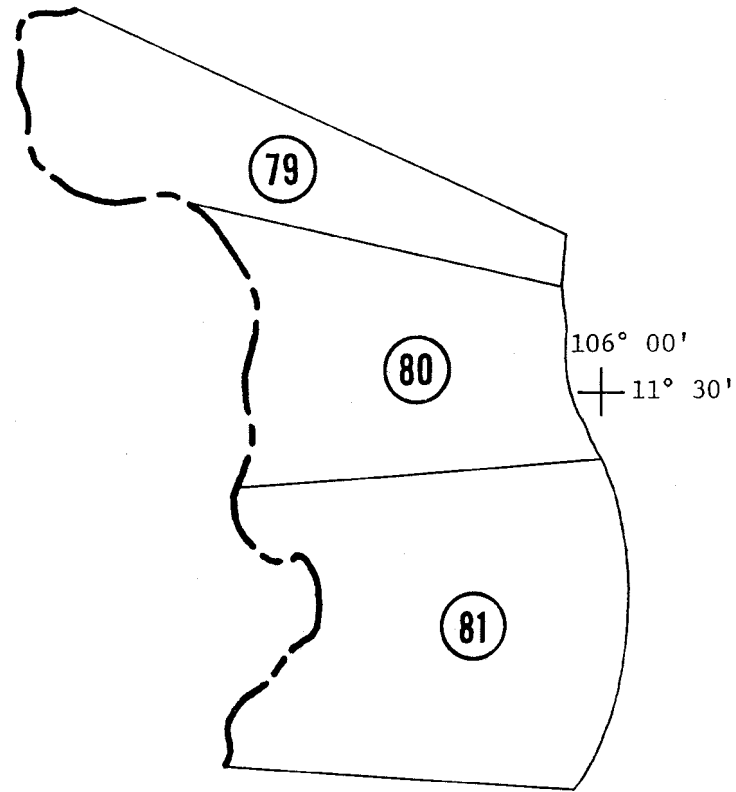


Fig. 70—Configuration and location of Sectors 79 - 81

SUMMARY OF CHARACTERISTICS OF SECTORS 79 - 81

SECTOR NO: 79 MAP REF: 6132 II, _____, _____
 TOTAL AREA (SQ KM): 74 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 86 7 3 1 3
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 3 10 / 8 < 1 / 89 89 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 5 / 11 2 / 2 0 / 0 0 / 2
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 80 MAP REF: 6131 I, 6132 II, _____, _____
 TOTAL AREA (SQ KM): 87 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 87 3 3 7
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 6 / 6 0 / 94 94 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 8 / 24 1 / 2 0 / 0 1 / 3
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 81 MAP REF: 6131 I, _____, _____
 TOTAL AREA (SQ KM): 128 BORDER IN WATERWAY (%): 80
 TOPOGRAPHIC CLASS: Flat ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 66 6 11 6 11
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 17 / 23 6 / 77 77 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 6 / 42 3 / 2 1 / 2 1 / 1
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

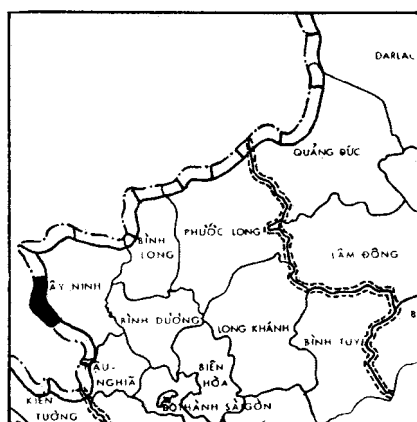
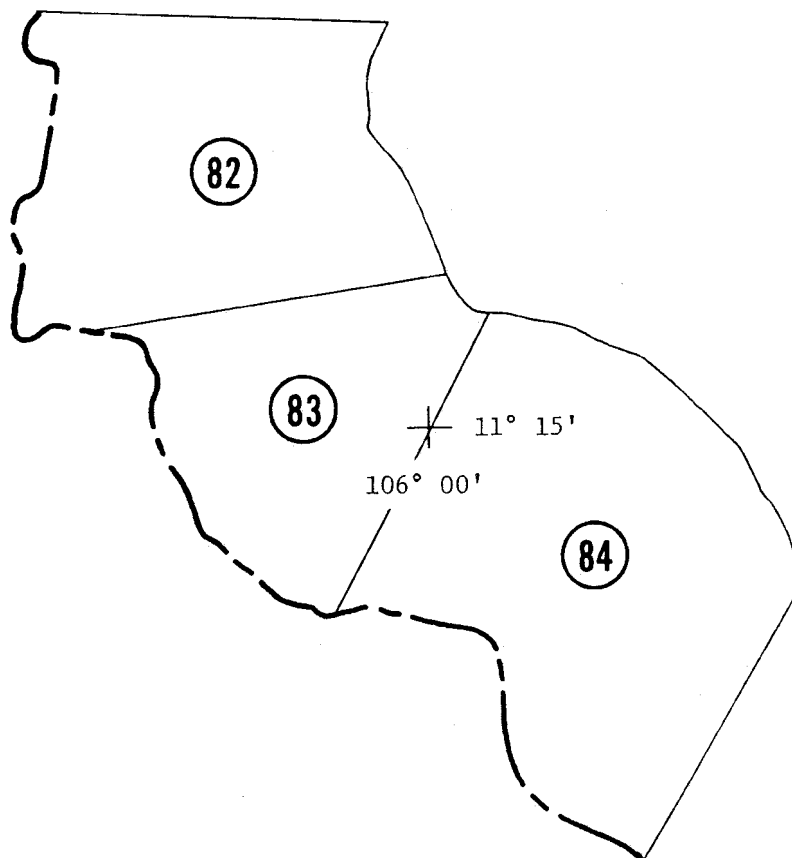


Fig. 71—Configuration and location of Sectors 82 – 84

SUMMARY OF CHARACTERISTICS OF SECTORS 82 - 84

SECTOR NO: 82 MAP REF: 6131 I, _____, _____
 TOTAL AREA (SQ KM): 126 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 21 8 13 24 34
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 22 / 45 24 / 55 54 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 16 / 33 0 / 0 1 / 4 1 / 0
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 83 MAP REF: 6131 I, 6131 II, 6231 III, 6231 IV
 TOTAL AREA (SQ KM): 91 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 20 2 20 1 17 40
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 1 22 / 38 17 / 61 61 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 11 / 14 1 / 2 0 / 3 0 / 4
 POPULATION: 4100 PER SQ KM: 45 TRIBES: Cambodians, ethnic Vietnamese POP: 4100

SECTOR NO: 84 MAP REF: 6131 II, 6231 III, 6231 IV, _____
 TOTAL AREA (SQ KM): 174 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 37 1 4 4 6 30 18
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 10 14 / 34 30 / 56 56 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 1 / 25 1 / 1 0 / 2 0 / 15
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

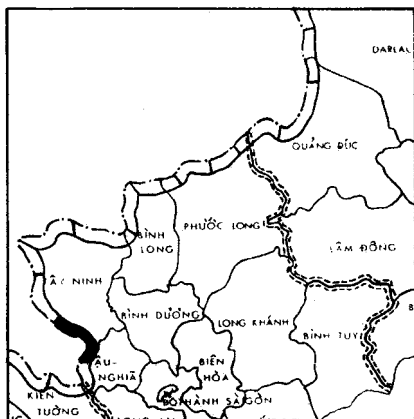
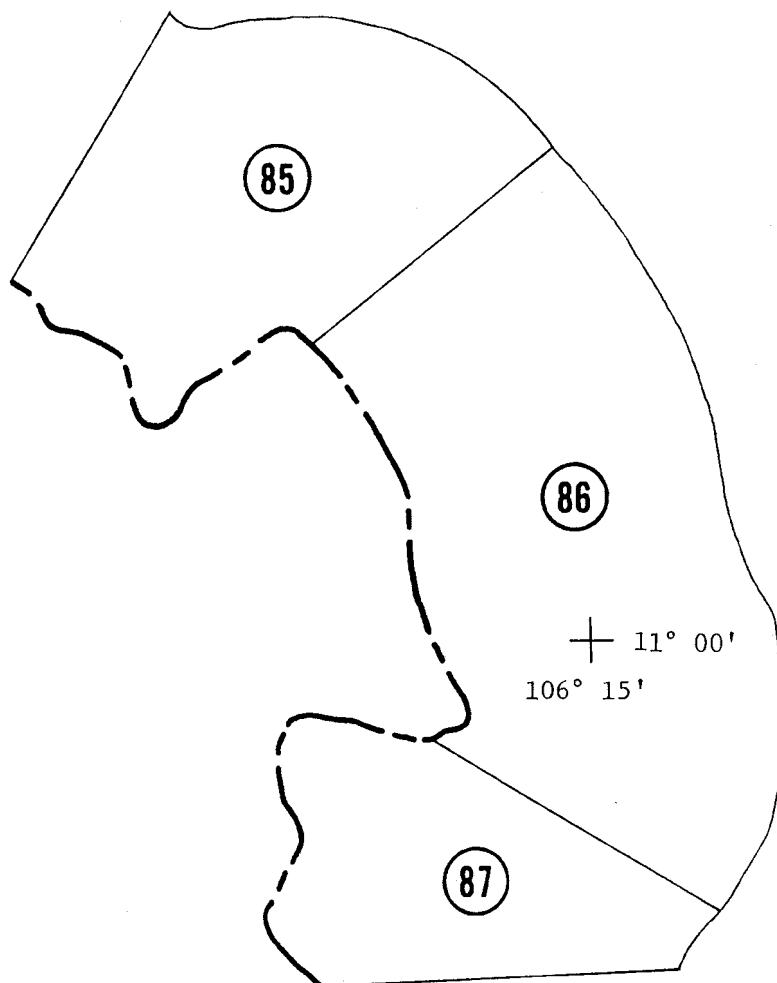


Fig. 72—Configuration and location of Sectors 85 - 87

SUMMARY OF CHARACTERISTICS OF SECTORS 85 - 87

SECTOR NO: 85 MAP REF: 6231 III, _____, _____
TOTAL AREA (SQ KM): 157 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 4 2 2 3 78 11
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 3 / 4 4 / 80 78 / 16 15 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 0 / 10 1 / 6 0 / 2 2 / 4
POPULATION: 18,090 PER SQ KM: 115 TRIBES: Cambodians, ethnic Vietnamese POP: 18,090

SECTOR NO: 86 MAP REF: 6230 I, 6230 IV, 6231 II, 6231 III
TOTAL AREA (SQ KM): 250 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 3 3 62 32
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 3 / 3 3 / 65 62 / 32 32 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 32 3 / 7 0 / 4 4 / 11
POPULATION: 52,563^a PER SQ KM: 203 TRIBES: Cambodians, ethnic Vietnamese POP: 52,563

^aDoes not include 840 VC.

SECTOR NO: 87 MAP REF: 6230 I, 6230 IV, _____, _____
TOTAL AREA (SQ KM): 91 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 2 26 72
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 29 29 / 71 71 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 0 / 11 0 / 1 0 / 0 7 / 9
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

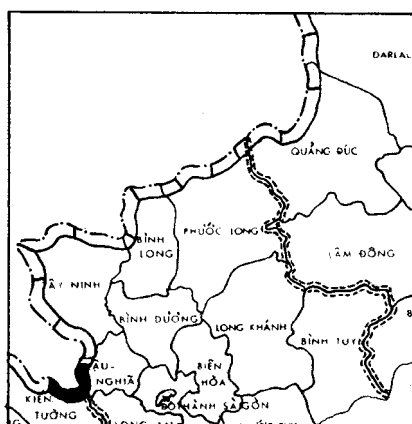
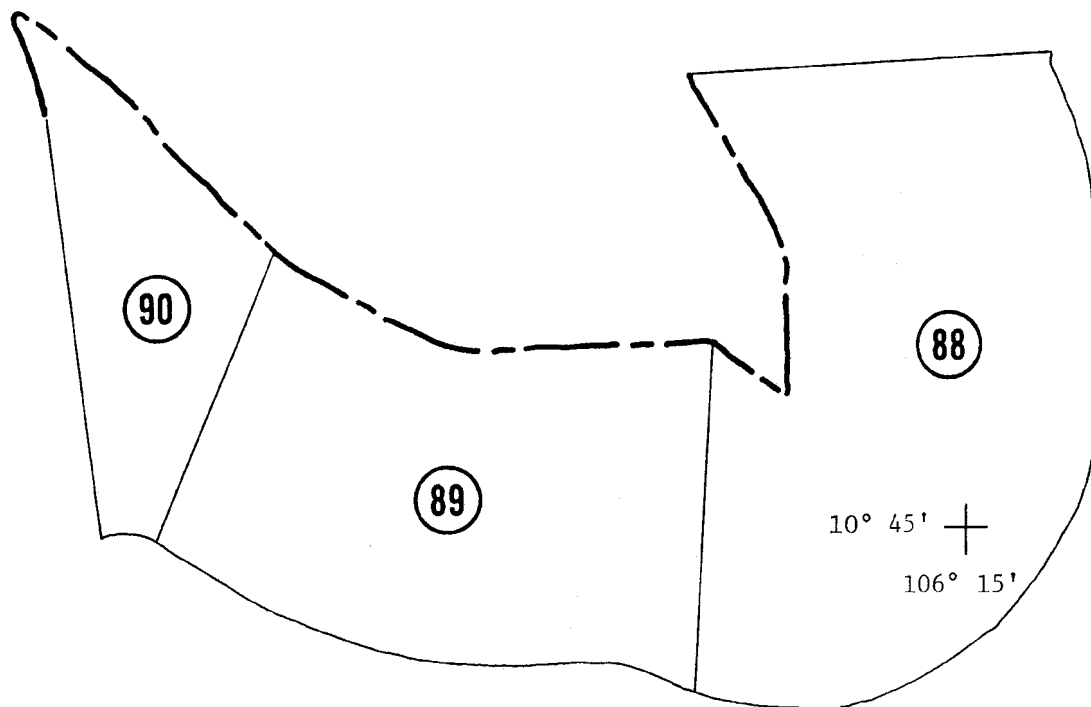


Fig. 73—Configuration and location of Sectors 88 - 90

SUMMARY OF CHARACTERISTICS OF SECTORS 88 - 90

SECTOR NO: 88 MAP REF: 6230 I, 6230 III, 6230 II,
TOTAL AREA (SQ KM): 267 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 8 92
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 8 8 / 92 92 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 1 / 18 0 / 0 0 / 4 9 / 46
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 89 MAP REF: 6230 III, 6230 IV,
TOTAL AREA (SQ KM): 197 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 6 31 7 1 55
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 31 37 / 13 7 / 55 56 / 1
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 1 / 0 0 / 0 0 / 2 10 / 30
POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 90 MAP REF: 6130 I, 6230 IV,
TOTAL AREA (SQ KM): 80 BORDER IN WATERWAY (%): 26
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 9 29 62
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 9 9 / 29 29 / 62 62 / 0
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 1 / 0 0 / 0 1 / 1 2 / 12
POPULATION: 535 PER SQ KM: 7 TRIBES: Cambodians, ethnic Vietnamese POP: 535

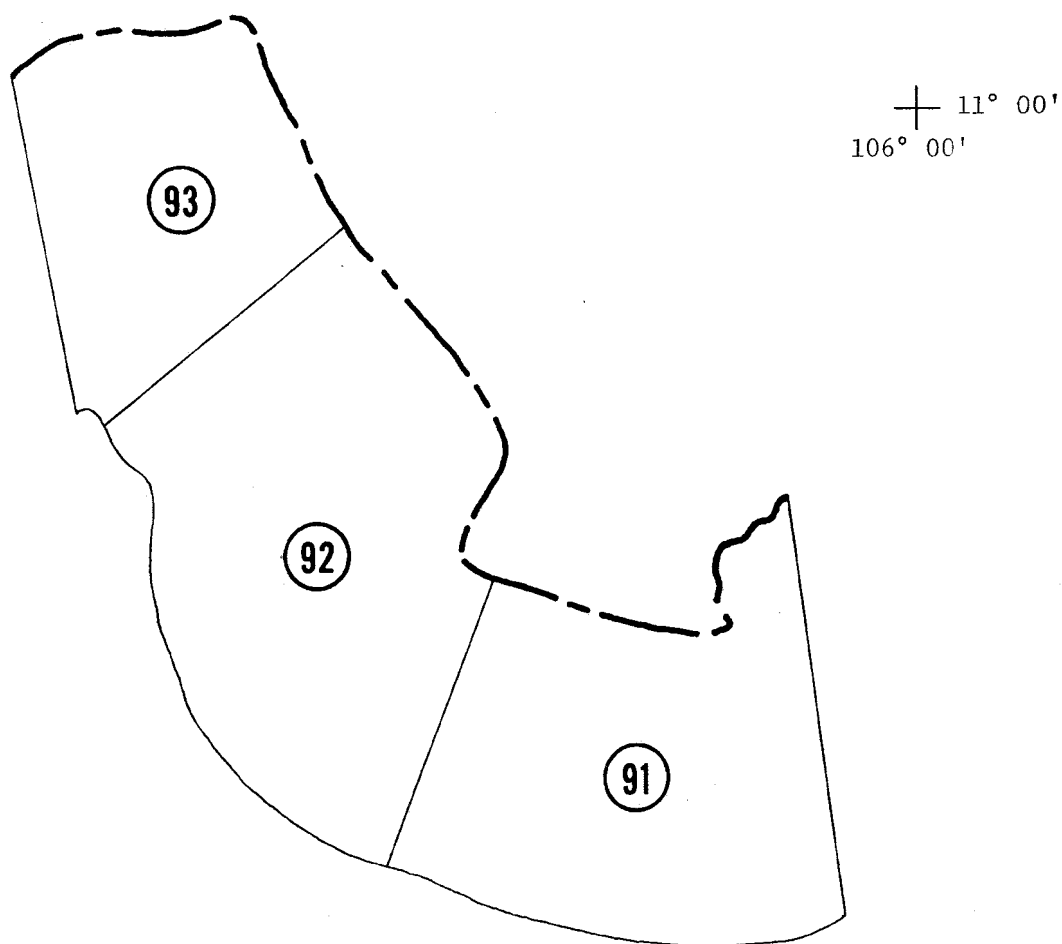


Fig. 74—Configuration and location of Sectors 91 - 93

SUMMARY OF CHARACTERISTICS OF SECTORS 91 - 93

SECTOR NO: 91 MAP REF: 6130 I, _____, _____, _____
 TOTAL AREA (SQ KM): 202 BORDER IN WATERWAY (%): 48
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 2 2 1 55 40
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 1 / 2 2 / 57 57 / 41 41 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 0 / 0 1 / 3 2 / 2 2 / 19
 POPULATION: 15,323 PER SQ KM: 76 TRIBES: Cambodians, ethnic Vietnamese POP: 15,323

SECTOR NO: 92 MAP REF: 6130 I, _____, _____, _____
 TOTAL AREA (SQ KM): 193 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 2 2 1 22 73
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 3 5 / 24 21 / 73 74 / 0
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 4 / 4 1 / 1 2 / 5 2 / 18
 POPULATION: 6503 PER SQ KM: 34 TRIBES: Cambodians, ethnic Vietnamese POP: 6503

SECTOR NO: 93 MAP REF: 6130 I, 6130 IV, _____, _____
 TOTAL AREA (SQ KM): 109 BORDER IN WATERWAY (%): 0
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 2 69 28 1
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 2 2 / 11 11 / 86 87 / 1
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 4 / 13 0 / 0 3 / 1 4 / 14
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

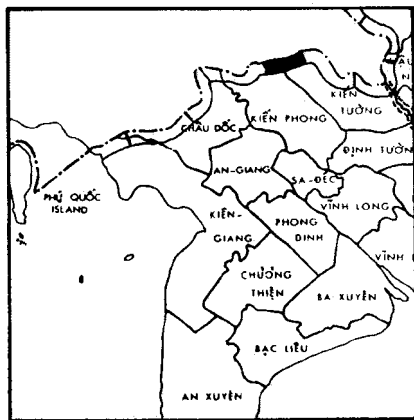
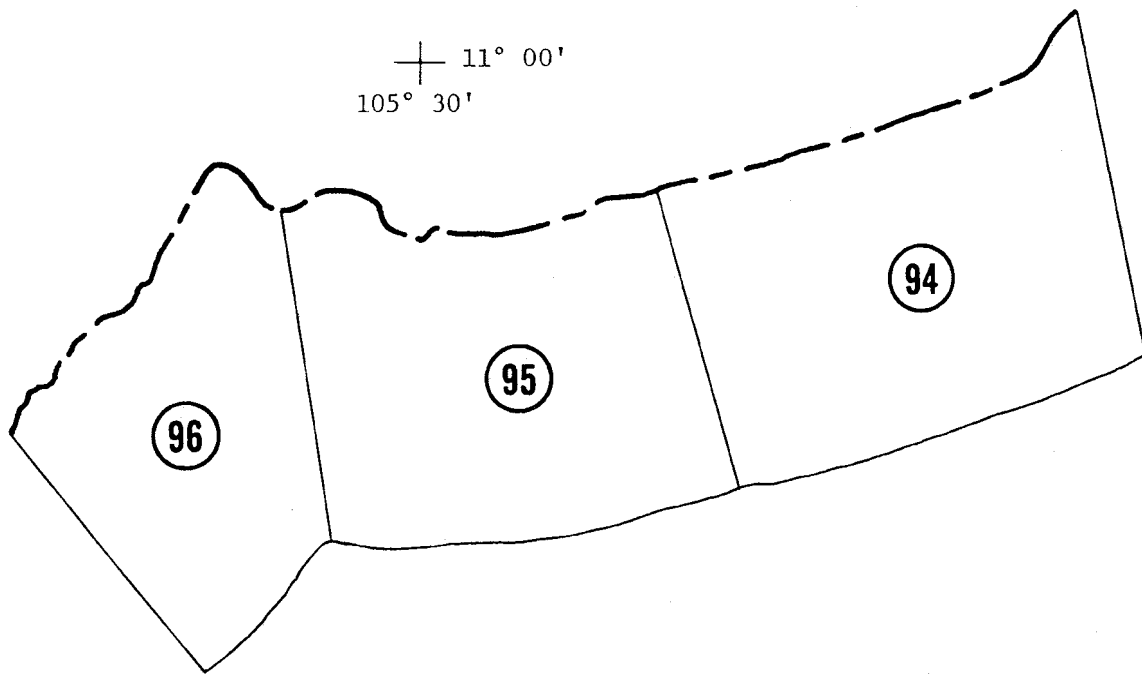


Fig. 75—Configuration and location of Sectors 94 - 96

SUMMARY OF CHARACTERISTICS OF SECTORS 94 - 96

SECTOR NO: 94 MAP REF: 6130 IV, _____, _____
 TOTAL AREA (SQ KM): 180 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 3 95 2
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 98 5 / 0 95 / 2
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 24 / 11 1 / 0 2 / 0 4 / 32
 POPULATION: 0 PER SQ KM: 0 TRIBES: Uninhabited POP: 0

SECTOR NO: 95 MAP REF: 6030 I, 6130 IV, _____, _____
 TOTAL AREA (SQ KM): 159 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 84 1 15
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 84 6 / 0 94 / 16
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 16 / 30 2 / 0 0 / 1 5 / 25
 POPULATION: 4857^a PER SQ KM: 31 TRIBES: Cambodians, ethnic Vietnamese POP: 4857^a

^aDoes not include 492 VC.

SECTOR NO: 96 MAP REF: 6030 I, _____, _____
 TOTAL AREA (SQ KM): 111 BORDER IN WATERWAY (%): 100
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 92 8
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 92 7 / 0 93 / 8
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 6 / 26 0 / 0 2 / 0 8 / 27
 POPULATION: 6056^a PER SQ KM: 55 TRIBES: Cambodians, ethnic Vietnamese POP: 6056^a

^aDoes not include 596 VC

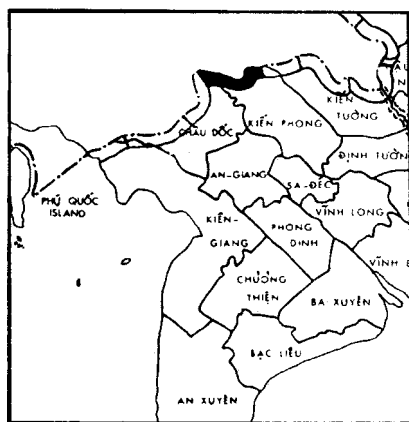
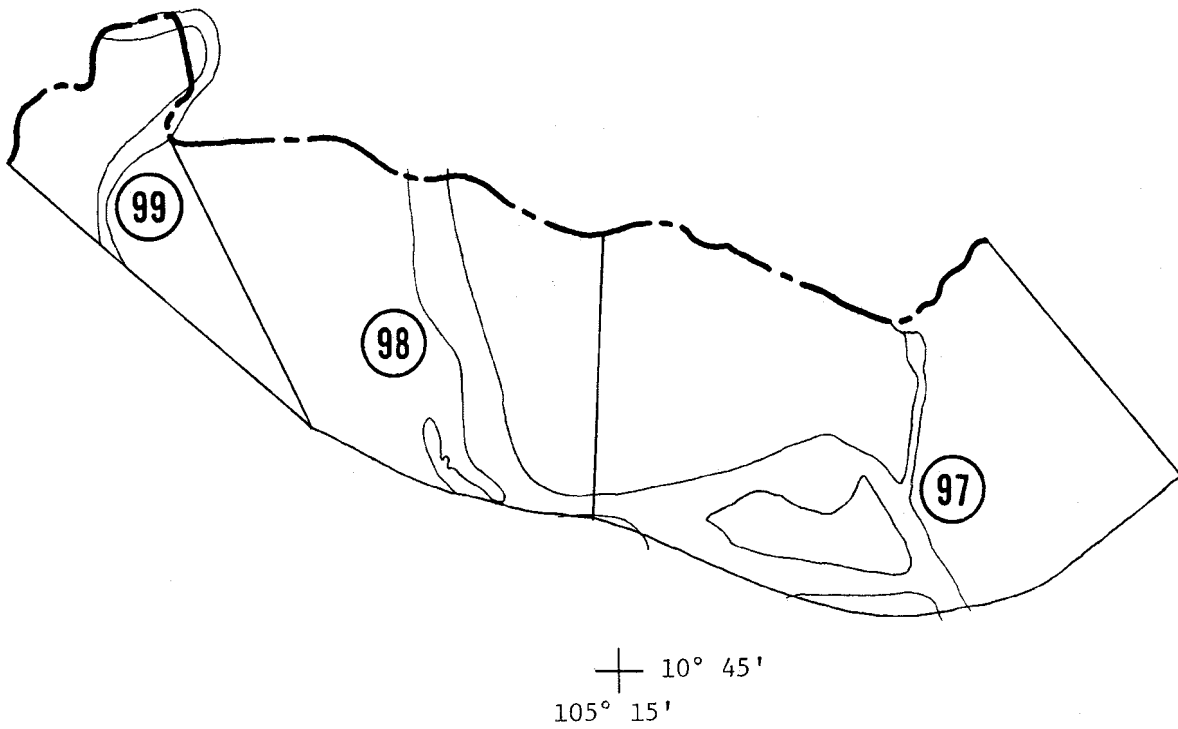


Fig. 76—Configuration and location of Sectors 97 - 99

SUMMARY OF CHARACTERISTICS OF SECTORS 97 - 99

SECTOR NO: 97 MAP REF: 6030 I, _____, _____
 TOTAL AREA (SQ KM): 195 BORDER IN WATERWAY (%): 67
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Water
 %: 5 63 17 15
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 63 43 / 5 57 / 32
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 13 / 16 0 / 4 1 / 2 16 / 34
 POPULATION: 56,175 PER SQ KM: 288 TRIBES: Cambodians, ethnic Vietnamese POP: 56,175

SECTOR NO: 98 MAP REF: 6030 IV, _____, _____
 TOTAL AREA (SQ KM): 141 BORDER IN WATERWAY (%): 8
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Water
 %: 5 2 41 1 38 13
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 39 34 / 7 66 / 54
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 4 / 14 2 / 2 1 / 1 6 / 8
 POPULATION: 32,780 PER SQ KM: 232 TRIBES: Cambodians, ethnic Vietnamese POP: 32,780

SECTOR NO: 99 MAP REF: 6030 IV, _____, _____
 TOTAL AREA (SQ KM): 54 BORDER IN WATERWAY (%): 72
 TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
 VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Water
 %: 12 63 17 8
 FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 0 / 63 63 / 12 37 / 25
 MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 3 / 13 1 / 0 1 / 2 4 / 14
 POPULATION: 17,836 PER SQ KM: 330 TRIBES: Cambodians, ethnic Vietnamese POP: 17,836

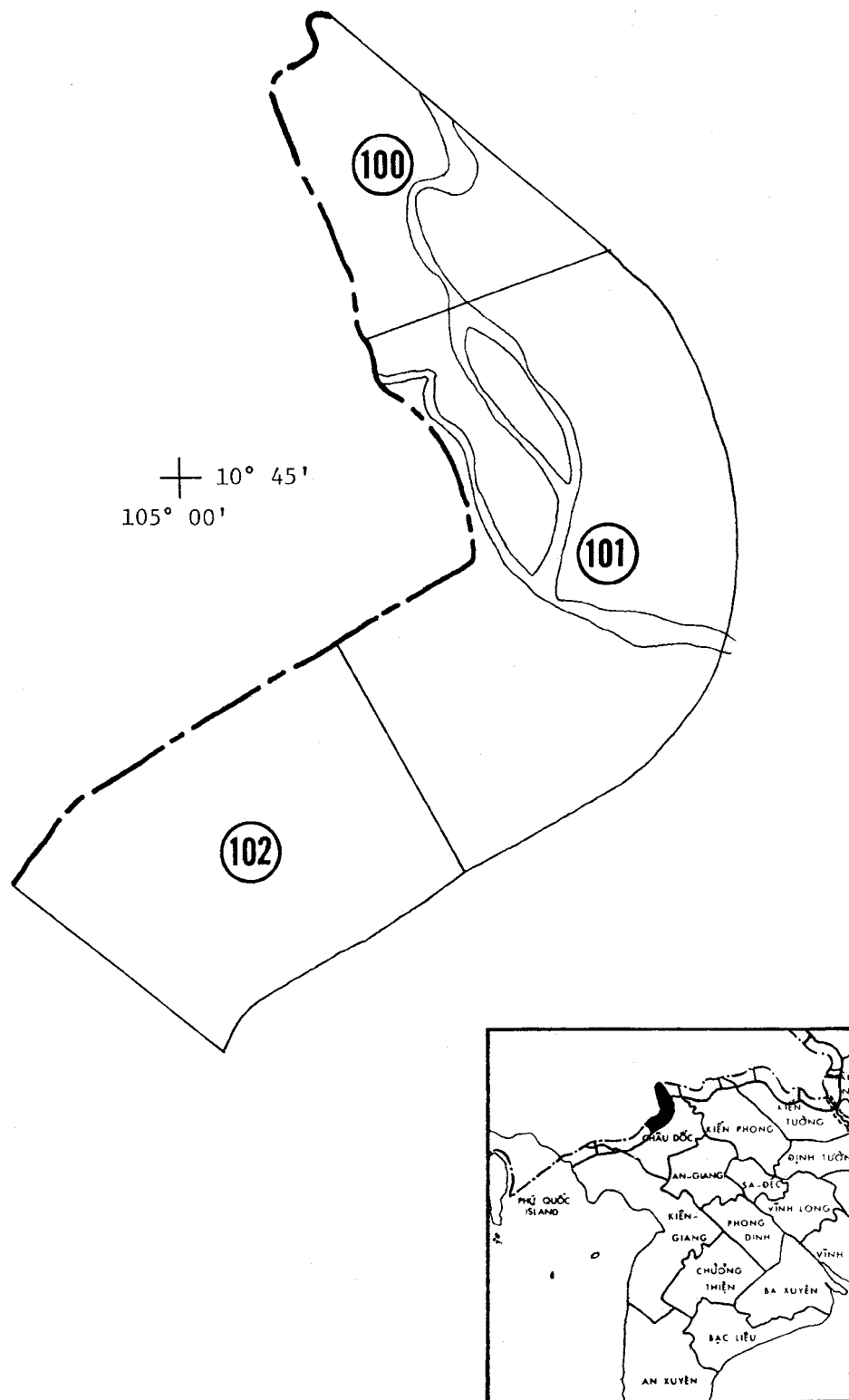


Fig. 77—Configuration and location of Sectors 100 - 102

SUMMARY OF CHARACTERISTICS OF SECTORS 100 - 102

SECTOR NO: 100 MAP REF: 6030 IV, _____, _____
TOTAL AREA (SQ KM): 80 BORDER IN WATERWAY (%): 8
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Water
%: 8 86 3 3
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 86 82 / 8 18 / 6
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 2 / 11 0 / 1 2 / 4 15 / 25
POPULATION: 20,128 PER SQ KM: 252 TRIBES: Cambodians, ethnic Vietnamese POP: 20,128

SECTOR NO: 101 MAP REF: 6030 III, 6030 IV, _____, _____
TOTAL AREA (SQ KM): 243 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 300 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Water
%: 5 1 82 2 10
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 2 / 84 86 / 4 12 / 12
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 1 / 13 0 / 8 0 / 6 40 / 58
POPULATION: 105,275 PER SQ KM: 433 TRIBES: Cambodians, ethnic Vietnamese POP: 105,275

SECTOR NO: 102 MAP REF: 5930 II, 6030 III, _____, _____
TOTAL AREA (SQ KM): 141 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 200 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 8 3 6 58 25
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 6 / 6 11 / 68 58 / 0 25 / 26
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 0 / 13 0 / 3 0 / 1 19 / 41
POPULATION: 27,904 PER SQ KM: 198 TRIBES: Cambodians, ethnic Vietnamese POP: 27,904



SUMMARY OF CHARACTERISTICS OF SECTORS 103 - 105

SECTOR NO: 103 MAP REF: 5929 I, 5930 II, _____
TOTAL AREA (SQ KM): 222 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 600 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 6 5 5 7 60 17
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 4 / 5 12 / 70 61 / 2 23 / 23
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 6 / 17 1 / 4 0 / 1 4 / 27
POPULATION: 30,734 PER SQ KM: 138 TRIBES: Cambodians, ethnic Vietnamese POP: 30,734

SECTOR NO: 104 MAP REF: 5929 I, 5929 IV, 5930 II, 5930 III
TOTAL AREA (SQ KM): 167 BORDER IN WATERWAY (%): 0
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 11 7 82
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 11 11 / 8 89 / 81
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 9 / 4 0 / 0 0 / 0 4 / 57
POPULATION: 4,895 PER SQ KM: 29 TRIBES: Cambodians, ethnic Vietnamese POP: 4,895

SECTOR NO: 105 MAP REF: 5929 IV, 5930 III, _____
TOTAL AREA (SQ KM): 102 BORDER IN WATERWAY (%): 32
TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 50 MIN: SL
VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
%: 17 8 75
FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
WET/DRY SEASON: 0 / 0 0 / 17 17 / 8 83 / 75
MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
CROSSING BORDER/ENTER SECTOR: 13 / 3 0 / 0 1 / 1 4 / 32
POPULATION: 259 PER SQ KM: 3 TRIBES: Cambodians, ethnic Vietnamese POP: 259

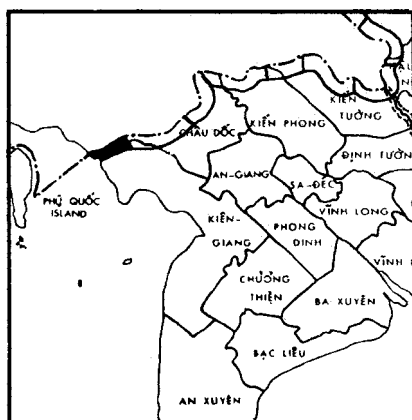
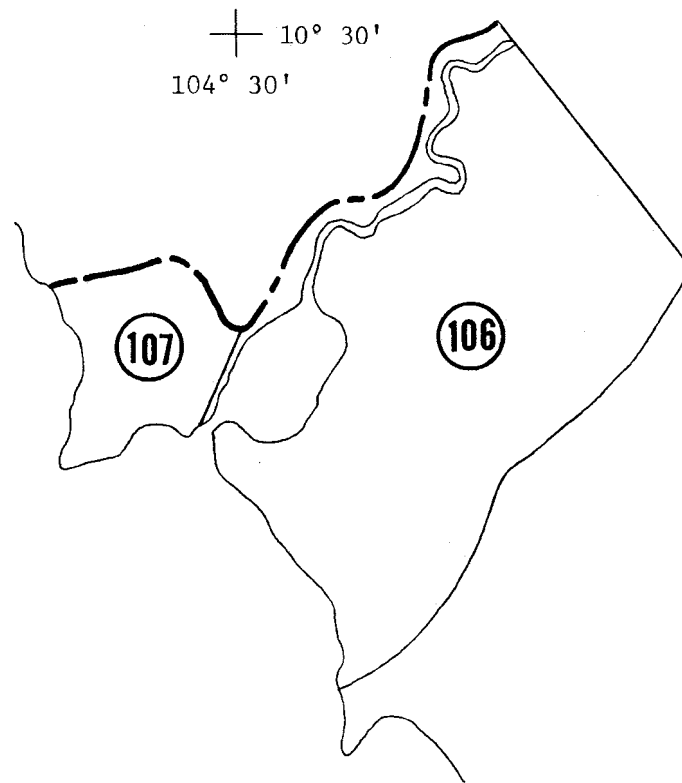


Fig. 79—Configuration and location of Sectors 106 and 107

SUMMARY OF CHARACTERISTICS OF SECTORS 106 AND 107

SECTOR NO: 106 MAP REF: 5929 IV, _____, _____

TOTAL AREA (SQ KM): 202 BORDER IN WATERWAY (%): 0

TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 200 MIN: SL

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 Water
 %: 2 8 26 57 7

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 1 / 8 8 / 26 91 / 66

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 9 / 2 0 / 1 0 / 2 15 / 34

POPULATION: 8,264 PER SQ KM: 41 TRIBES: Cambodians, ethnic Vietnamese POP: 8,264

SECTOR NO: 107 MAP REF: 5842 II, (L7011), _____

TOTAL AREA (SQ KM): 35 BORDER IN WATERWAY (%): ^b 0

TOPOGRAPHIC CLASS: Flat, subject to inundation ELEVATION (M) MAX: 200 MIN: SL

VEGETATION-TYPE: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15
 %: 13 3 37 7 40

FOOT TRAFFICABILITY (%): GOOD FAIR POOR UNSUITED
 WET/DRY SEASON: 0 / 0 3 / 37 37 / 9 60 / 54

MOVEMENT ROUTES: TRACKS, TRAILS ROADS LARGE WATERWAYS SMALL WATERWAYS
 CROSSING BORDER/ENTER SECTOR: 0 / 0 1 / 0 0 / 0 2 / 0

POPULATION: 7,958 PER SQ KM: 227 TRIBES: Cambodians, ethnic Vietnamese POP: 7,958

^a Not available. Data was abstracted from Map Series L7011, 1:50,000.

^b 8 km border length. 17 km consisting of access coastline.

Appendix B

CLIMATOLOGY ALONG THE LAND BORDER OF SOUTH VIETNAM

This appendix presents a general picture of climatological conditions along the land border of South Vietnam.* Major climatological factors of this area are the monsoon seasons, the intermonsoon months, and the topography of the land.

The two great monsoons of Southeast Asia, and of South Vietnam in particular, are driven principally by annually varying high- and low-pressure systems in East Asia (China) and Australia. These macroscale pressure changes follow the sun, whose warmth modifies the winter highs into thermally induced summer lows, resulting in a 180-deg shift of monsoonal wind flow. During the southwest, or "wet" monsoon of summer, air flows into the low-pressure area over East Asia, bringing moist tropical, maritime, and equatorial air across the South Vietnamese border. The Annam Range,** however, shelters the downwind portions of the border between Laos and South Vietnam and along the eastern DMZ, putting these areas in a rain shadow, thereby making them relatively dry during this wet season.

In winter, the "dry" northeast monsoon airflow from China covers peninsular Southeast Asia with dry polar continental air moving out of the Siberian high that develops over East Asia during the winter southward toward the low which becomes established over Australia. Though

* The data presented here are drawn from Ref. 7, which also includes a bibliography of studies of climatological conditions in Southeast Asia.

** The mountain range running the length of the northern two-thirds of South Vietnam.

the northeast monsoon is related to South Vietnam's "dry" period, passage of the polar continental air mass over the Gulf of Tonkin and the South China Sea adds moisture to the lower levels. This moisture is dropped on the upwind eastern portion of the DMZ and on the area between the east coast of South Vietnam and the east slopes of the Annam Range, making this one of the wettest times of the year at these locations.

Table 11 shows the average rainfall in each sector of the border zone for each season of the year.

The Southwest Monsoon

Along 97 percent of the land border of South Vietnam, the greatest annual precipitation is recorded during the southwest monsoon, which lasts approximately from May to September. The average precipitation along the Cambodian border during the summer months (June through August) ranges from 5 to 10 in. per month from the Mekong River northward to the southern tip of the Annam Range (12°N), and from 20 to 30 in. per month along the mountainous section in the north. Through Laos, the Annam Range extends well into the southern panhandle, giving the area the highest average annual precipitation west of the South Vietnamese border. Along the DMZ, the annual rainfall decreases dramatically near the coast, where the eastern 35 km have only 1 to 5 in. per month during the summer, due to the blocking effect of the mountains and the resulting rainshadow.

The Northeast Monsoon

South Vietnam, Laos, and Cambodia are comparatively dry during the northeast monsoon, which lasts, roughly, from November to March. Most of the land border has 1 in. or less of precipitation per month during the winter (December through February). The rainiest portions of the border are just north of the Gulf of Thailand, where the average rainfall is 1 to 5 in. per month, and over the eastern portion

Table 11

AVERAGE SEASONAL RAINFALL ALONG THE BORDER OF SOUTH VIETNAM

Sector	Average Monthly Precipitation (in.)				Sector	Average Monthly Precipitation (in.)			
	Winter (Dec - Feb) ^a	Spring (Mar - May) ^{a, b}	Summer (June - Aug) ^b	Fall (Sept - Nov) ^b		Winter (Dec - Feb) ^a	Spring (Mar - May) ^{a, b}	Summer (June - Aug) ^b	Fall (Sept - Nov) ^b
Sectors 1 - 23					Sectors 43 - 63 (Cont.)				
1	5 - 10	1 - 5	1 - 5	10 - 20	55	0.25 - 0.5	5 - 10	20 - 30	10 - 20
2	5 - 10	1 - 5	1 - 5	10 - 20	56	0.25 - 0.5	5 - 10	20 - 30	10 - 20
3	1 - 5	1 - 5	1 - 5	10 - 20	57	0.25 - 0.5	5 - 10	20 - 30	10 - 20
4	1 - 5	1 - 5	5 - 10	10 - 20	58	0.25 - 0.5	5 - 10	20 - 30	10 - 20
5	1 - 5	1 - 5	5 - 10	10 - 20	59	0.25 - 0.5	5 - 10	20 - 30	10 - 20
6	0.5 - 1	1 - 5	10 - 20	10 - 20	60	0.25 - 0.5	5 - 10	20 - 30	10 - 20
7	0.5 - 1	1 - 5	10 - 20	10 - 20	61	0.25 - 0.5	5 - 10	10 - 20	10 - 20
8	0.5 - 1	1 - 5	10 - 20	10 - 20	62	0.25 - 0.5	5 - 10	10 - 20	10 - 20
9	1 - 5	1 - 5	10 - 20	10 - 20	63	0.25 - 0.5	5 - 10	10 - 20	10 - 20
10	1 - 5	1 - 5	10 - 20	10 - 20	Sectors 64 - 93				
11	1 - 5	1 - 5	5 - 10	10 - 20	64	0.25 - 0.5	5 - 10	10 - 20	10 - 20
12	1 - 5	1 - 5	5 - 10	10 - 20	65	0.25 - 0.5	5 - 10	10 - 20	10 - 20
13	1 - 5	1 - 5	5 - 10	10 - 20	66	0.25 - 0.5	5 - 10	10 - 20	10 - 20
14	1 - 5	1 - 5	5 - 10	10 - 20	67	0.25 - 0.5	5 - 10	10 - 20	10 - 20
15	1 - 5	1 - 5	5 - 10	20 - 30	68	0.25 - 0.5	1 - 5	10 - 20	5 - 10
16	1 - 5	1 - 5	5 - 10	20 - 30	69	0.25 - 0.5	1 - 5	10 - 20	5 - 10
17	1 - 5	1 - 5	5 - 10	20 - 30	70	0.5 - 1	1 - 5	10 - 20	5 - 10
18	1 - 5	1 - 5	5 - 10	20 - 30	71	0.5 - 1	1 - 5	10 - 20	10 - 20
19	1 - 5	1 - 5	5 - 10	20 - 30	72	0.5 - 1	1 - 5	10 - 20	10 - 20
20	1 - 5	1 - 5	5 - 10	20 - 30	73	0.5 - 1	1 - 5	10 - 20	10 - 20
21	1 - 5	1 - 5	5 - 10	20 - 30	74	0.5 - 1	1 - 5	10 - 20	10 - 20
22	1 - 5	1 - 5	5 - 10	20 - 30	75	0.5 - 1	1 - 5	5 - 10	5 - 10
23	1 - 5	1 - 5	5 - 10	20 - 30	76	0.5 - 1	1 - 5	5 - 10	5 - 10
Sectors 24 - 42					77	0.5 - 1	1 - 5	5 - 10	5 - 10
24	1 - 5	1 - 5	10 - 20	10 - 20	78	0.5 - 1	1 - 5	5 - 10	5 - 10
25	1 - 5	1 - 5	10 - 20	10 - 20	79	0.5 - 1	1 - 5	5 - 10	5 - 10
26	1 - 5	1 - 5	10 - 20	10 - 20	80	0.5 - 1	1 - 5	5 - 10	5 - 10
27	1 - 5	1 - 5	10 - 20	10 - 20	81	0.5 - 1	1 - 5	5 - 10	10 - 20
28	1 - 5	1 - 5	10 - 20	10 - 20	82	0.5 - 1	1 - 5	5 - 10	10 - 20
29	0.5 - 1	1 - 5	10 - 20	10 - 20	83	0.5 - 1	1 - 5	5 - 10	10 - 20
30	0.5 - 1	1 - 5	10 - 20	10 - 20	84	0.5 - 1	1 - 5	5 - 10	10 - 20
31	0.5 - 1	1 - 5	10 - 20	10 - 20	85	0.5 - 1	1 - 5	5 - 10	10 - 20
32	0.5 - 1	1 - 5	10 - 20	10 - 20	86	0.5 - 1	1 - 5	10 - 20	10 - 20
33	0.5 - 1	1 - 5	10 - 20	5 - 10	87	0.5 - 1	1 - 5	10 - 20	10 - 20
34	0.25 - 0.5	1 - 5	10 - 20	5 - 10	88	0.5 - 1	1 - 5	10 - 20	10 - 20
35	0.25 - 0.5	1 - 5	10 - 20	5 - 10	89	0.5 - 1	1 - 5	10 - 20	10 - 20
36	0.25 - 0.5	1 - 5	10 - 20	5 - 10	90	0.5 - 1	1 - 5	5 - 10	10 - 20
37	0.25 - 0.5	1 - 5	10 - 20	5 - 10	91	1 - 5	1 - 5	5 - 10	10 - 20
38	0.25 - 0.5	1 - 5	10 - 20	5 - 10	92	1 - 5	1 - 5	5 - 10	10 - 20
39	0.25 - 0.5	1 - 5	10 - 20	5 - 10	93	1 - 5	1 - 5	5 - 10	10 - 20
40	0.25 - 0.5	1 - 5	10 - 20	5 - 10	Sectors 94 - 107				
41	0.25 - 0.5	1 - 5	10 - 20	10 - 20	94	1 - 5	1 - 5	5 - 10	10 - 20
42	0.25 - 0.5	1 - 5	10 - 20	10 - 20	95	1 - 5	1 - 5	5 - 10	5 - 10
Sectors 43 - 63					96	1 - 5	1 - 5	5 - 10	5 - 10
43	0.25 - 0.5	1 - 5	10 - 20	10 - 20	97	1 - 5	1 - 5	5 - 10	5 - 10
44	0.25 - 0.5	1 - 5	20 - 30	10 - 20	98	0.5 - 1	1 - 5	5 - 10	5 - 10
45	0.25 - 0.5	1 - 5	20 - 30	10 - 20	99	0.5 - 1	1 - 5	5 - 10	5 - 10
46	0.25 - 0.5	1 - 5	20 - 30	10 - 20	100	0.5 - 1	1 - 5	5 - 10	5 - 10
47	0.25 - 0.5	1 - 5	20 - 30	10 - 20	101	1 - 5	1 - 5	5 - 10	5 - 10
48	0.25 - 0.5	1 - 5	20 - 30	10 - 20	102	1 - 5	1 - 5	5 - 10	5 - 10
49	0.25 - 0.5	1 - 5	20 - 30	10 - 20	103	1 - 5	1 - 5	10 - 20	5 - 10
50	0.25 - 0.5	1 - 5	20 - 30	10 - 20	104	1 - 5	1 - 5	10 - 20	5 - 10
51	0.25 - 0.5	1 - 5	20 - 30	10 - 20	105	1 - 5	5 - 10	10 - 20	5 - 10
52	0.25 - 0.5	5 - 10	20 - 30	10 - 20	106	1 - 5	5 - 10	10 - 20	5 - 10
53	0.25 - 0.5	5 - 10	20 - 30	10 - 20	107	1 - 5	5 - 10	10 - 20	5 - 10
54	0.25 - 0.5	5 - 10	20 - 30	10 - 20					

^a Northeast monsoon occurs from December through March.

^b Southwest monsoon occurs from May through November.

of the DMZ, which has an average rainfall of 5 to 10 in. per month during the "dry" season. The rainfall in the 3 percent of the border terminating at the Gulf of Tonkin equals or exceeds, at this time, that during the southwest monsoon.

Between the Monsoons

April and October are generally the months during which the transition from one monsoon to the other occurs along the border. The spring transition, which is longer, is comparatively mild and can occur any time from mid-March to early May. It is heralded by an increase in rainshowers, with an occasional severe thunderstorm. The change from the full effects of the northeast monsoon to those of the southwest monsoon can, however, take place in as short a time as two days. Severe thunderstorms may develop at any time of the year, though they are more pronounced during the spring transition, which also brings an end to the winter precipitation along the northern coast of South Vietnam.

The fall transition occurs in October over South Vietnam, Laos, and Cambodia; during this time the weather changes abruptly, with more violent storms occurring. Heavy showers are the major factor; however, many types of weather, including typhoons, occur to varying degrees. The northern part of the land border receives most of its precipitation in the fall (September through November), due to the transition. The coastal area of South Vietnam, north of 12°N, receives about 61 percent of its annual rainfall during this time, compared with about 14 percent in the summer and about 17 percent in the winter.

Figure 80 shows the precipitation patterns for the four seasons of the year in South Vietnam and the contiguous areas, based on the indicated rainfall readings at selected sites.

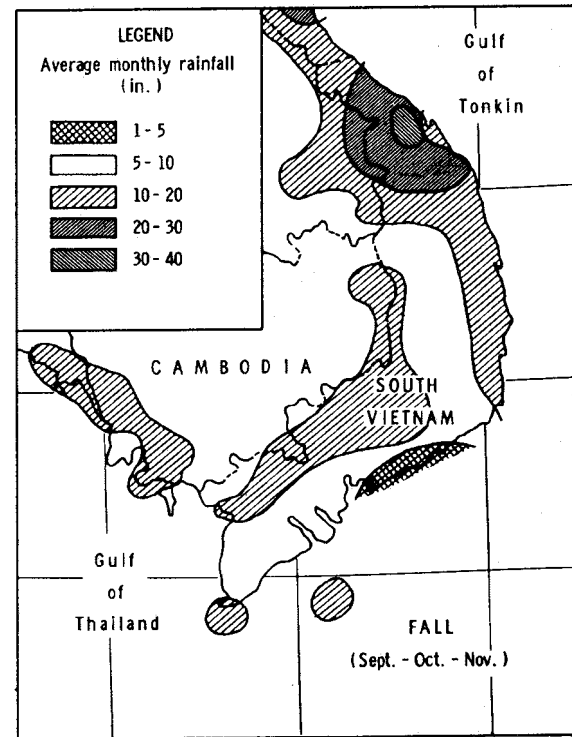
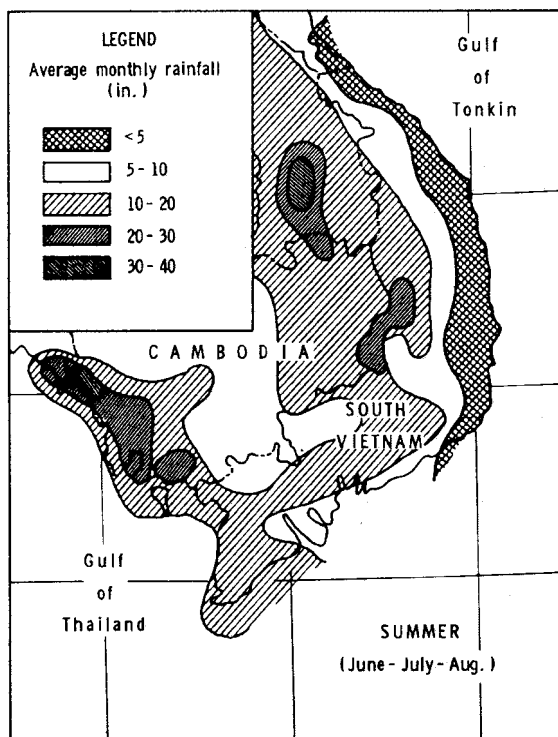
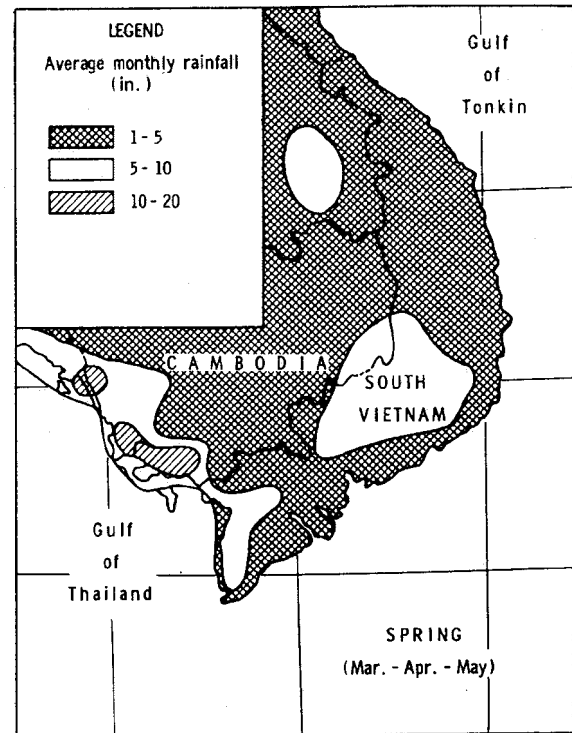
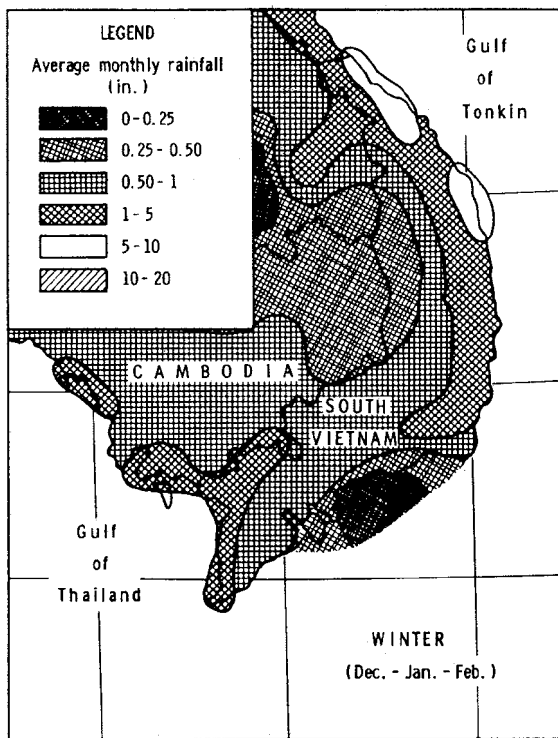


Fig. 80—Seasonal rainfall patterns

REFERENCES

1. *Army Map Series L-7014*, U.S. Army Map Service, 1965.
2. *Vietnam "Demarcation Line"*, International Boundary Study No. 19, Office of the Geographer, Department of State, Washington, D.C., 1962.
3. *Laos-Vietnam Boundary*, International Boundary Study No. 35, Office of the Geographer, Department of State, Washington, D.C., Revised 1966.
4. *Cambodia-Vietnam Boundary* (U), International Boundary Study No. 85, Office of the Geographer, Department of State, Washington, D.C., 1968 (Confidential).
5. *Tactical Scale Study* (U), Combined Intelligence Center Vietnam, Headquarters U.S. Military Assistance Command, Vietnam, various numbers and dates (Confidential).
6. *Hamlet Evaluation System* (U), Research and Analysis Division, Headquarters U.S. Military Assistance Command Vietnam (CORDS), 1969 (Confidential).
7. Schutz, C., *Monsoonal Influences on Wind, Rain, and Cloud Throughout Southeast Asia: A Study Covering the Peninsula and the Archipelago*, The Rand Corporation, RM-5418-PR, October 1967.
8. *Montagnard Tribal Groups of the Republic of South Vietnam*, U.S. Army Special Warfare School, Fort Bragg, North Carolina, 1964.
9. Hickey, G. C., *The Major Ethnic Groups of the South Vietnamese Highlands*, The Rand Corporation, RM-4041-ARPA, April 1964.
10. Hickey, G. C., *The Highland People of South Vietnam: Social and Economic Development*, The Rand Corporation, RM-5281-1-ARPA, August 1967.
11. *Vietnam Statistical Yearbook, Vol. 14*, National Institute of Statistics, South Vietnam, 1968.



Connors
Weiner
&
Wilson

The Land Border of South Vietnam:
Some Physical and Cultural Characteristics

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