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A Study on Land Development Policies in Planned Migration and Population Distribution

—A Comparative Analysis of Hokkaido and Malaysia—

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計画的人口移動と人口分布における土地開発政策に関する研究

——北海道とマレーシアの比較分析——

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I. The Study of Land Development, Migration and Population Redistribution

1. Introduction

Population redistribution within countries has attracted attention in recent years, especially in developing Third World countries where urbanization and rapid growth of larger cities has resulted in burgeoning squatter communities, unemployment and lack of public facilities, that national governments and city administrations find hard to cope. Various programmes have been designed to keep back urban flow, to attract rural migrants by opening new lands, to resettle landless poor through highly capitalised agricultural settlements and to disperse activities through regional development.

Land development represents a practical solution to many land-rich developing countries. Various countries have evolved their own models through much trial and error and have achieved success at various levels. Given the wide disparities in factors responsible for a particular population distribution pattern and its inherent system of migratory flows as compared to another, the design and application of land development programmes to effectively influence these factors in order to achieve an ideal structure of population distribution, is no easy task.

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2. Objective

In spite of the new focus on the subject, there exist a serious dearth of inventory of theory, principles and literature on land development as an instrument for population redistribution.

In this context, an examination of the land development policies and implementation practices in two countries —Hokkaido and Malaysia— will enable us to unrevel the factors and variables that facilitate a program or policy in efficiently stimulating internal migration towards a spatial reorganization of population.

Our method of study involves the detail examination the land colonization and migration transition in Hokkaido from the Meiji Era, and the land development programmes of Malaysia, in particular, the Federal Land Development Authority (FELDA) schemes. Based on the observations we will attempt to formulate a model of land development and settlement as a practical approach to dispersing population through migration within a national boundary.

3. Justification for Comparison of Hokkaido and Malaysia

To examine two countries so disparate in population size, level and methods of development, a strict comparative analysis would be difficult. However, there are reasons to make such an effort worthwhile.

a) Population Redistribution

Both countries have mobilised large-scale migratory streams to sparsely populated and undeveloped areas successfully although not without failures, mistakes and need for regular reviewing of the systems. An interesting fact in both cases is that although the issue of population redistribution did not occupy the main set of national objectives in the initial stages, it nevertheless did produce such an effect. Indeed, whereas population distribution existed as a concomitant effect of rural development previously, it has today emerged as an instrument for economic, social and political policy in both countries.

b) New Land Development

Both countries although separated in time, exhibited strong governmental efforts for rural development and settlement being motivated by both similar and dissimilar objectives.

c) Towards an effective Land Settlement Model

Hokkaido has come through a long history of planned colonization and migration, its success reputedly unprecedented anywhere in the world. Its success and failures are lessons to be learnt. Malaysia's FELDA-model, though young in its operations have made commendable achievements, too, in spite of various teething problems. Is there a versatile model of planned land settlement and migration?

d) Hokkaido is a relatively young and agricultural country, so its developing

context form a good basis for comparison with a developing country like Malaysia.

4. Terminology

HOKKAIDO: refers to the prefecture of Hokkaido in the north of Japan

MALAYSIA: The nation of Malaysia is divided into two parts separated by the South China Sea. East Malaysia on the island of Borneo is made up of Sabah and Sarawak states; and Peninsular Malaysia consists of 11 states. Malaya is the old name used before its Independence in 1957. In this paper, the term Malaysia will be used throughout to refer to Peninsular Malaysia as the focus of study.

LAND DEVELOPMENT: This refers to the development of new land and previously uncultivated land in Hokkaido and Malaysia. It has no reference to improvement of existing landholdings or the provision of additional land on the fringe of already cultivated landholdings or any type of land reform, except otherwise stated. In situ development in Malaysia, which refers to the development of existing depressed agricultural areas is mentioned but will not be treated as part of the main theme.

LAND SETTLEMENT: refers to the entry, inhabitation and the pursuit of economic activities in a specific area of settlers on a permanent basis.

INTEGRATED SETTLEMENTS: a model of settlement in which a whole range of support services and land are provided to the settlers.

IN-MIGRATION/IN-MIGRANTS: an in-migrant is a person who is enumerated in a given state/prefecture at a particular census and born outside the state of enumeration but within national boundaries. IMMIGRATION is migration across national boundaries.

POPULATION DISTRIBUTION: Redistribution refers to the reorganization(usually disperse-oriented) of the existing state of spatial arrangement (distribution) of population in consonance with national objectives.

F. E. L. D. A.: Federal Land Development Authority (referred FELDA)

SAMURAI: A warrior in Feudal Japan

TONDENHEI: Farmer-soldiers

II. Land Settlement and Migration in Hokkaido

1. Historical Background—Hokkaido

"Hokkaido, in many respects, is a miniature model of the New World" was the image of Akira Watanabe to distinguish this newly developed island from the "Old Japan" or the mainland of Japan.

Prior to 1869, Hokkaido was called Ezo. Situated at the northernmost end

of the Japanese Archipelago, Hokkaido was physically and socially isolated from the rest of Japan. To the east lies the Sea of Okhotsk, and to the west, across the Sea of Japan, is Siberia. Winter weather conditions are severe as it is covered by the cold Okhotsk air mass and is swept by cold north-western seasonal winds from the Asian continent. Thus, the climate here differs substantially from that of mainland Japan. Physically, Hokkaido is composed mainly of mountains, leveling off in a few flat plains, the chief ones being Ishikari and Tokachi Plains. Due to the cold climate, most of the soil is organic containing much peat moss. This is also a land of volcanoes, such that most of the soil on plateaus and mountain slopes are acidic, covered by volcanic soil, thus hampering agricultural use.

Until the region was transformed by the Meiji Restoration in 1969 onwards, Hokkaido was mainly a land of the Ainu tribe whose primitive life depended primarily on hunting and fishing. However, warrior clans of the Japanese penetrated the coastal strip of the Oshima Peninsula and by the 16th century, settlements were consolidated under the Matsumae clan and legalised by the central government.

Private trade was known to exist between the Japanese and the Ainu, especially in herring, salmon and commercial seaweed which were abundant in the coastal waters. With the export of these products to Old Japan, Hokkaido thrived in this simple economy. The significance of this lies in the fact that Hokkaido is the only

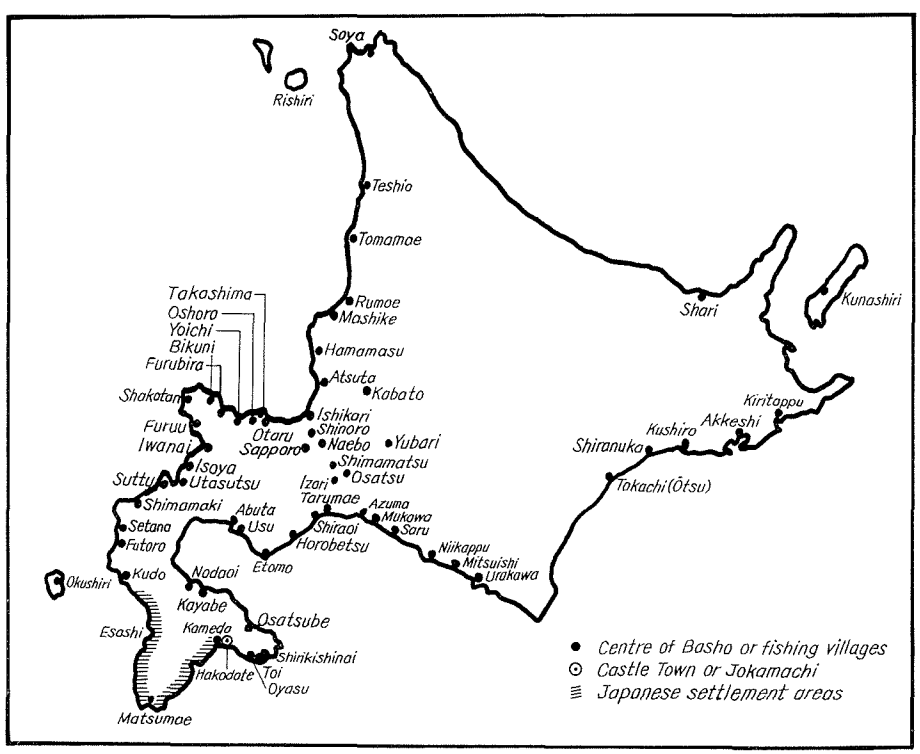


Fig. 1. Distribution of Settlement in Yedo Period
Source: Akira Watanabe, 1957.

fief in all Japan which do not have an agricultural base.

The above diagram shows the distribution of fishing villages before its colonization.

Hokkaido is a young country having a short demographic history through colonization of just over 110 years. Even today, although it accounts for about 21 per cent of the total area of Japan, it contains only 5 per cent of the population. The population density of Hokkaido is 68 persons per km2 in contrast to 381 person per km2 for the rest of Japan. This salient demographic feature owes its existence to 2 factors:

1) Environmental factor: one feature responsible for its frontier status is its extremely cold climate. Its accumulated annual minimum temperature distribution chart shows that the lowest temperature at inland basins reaches −35°C. Moreover, the volcanic nature and cold climate has robbed most of the limited plains and basins of agricultural land by producing organic soil such as peat bog. Efforts were made to overcome these two limitations, but agriculture today tends largely towards dairy farming and dry field farming of beans and sugar beet.

2) Social factor: While the demographic evolution of Japan has created complex social links and strong traditions, the short history of Hokkaido naturally has fostered a looser network of social relations and a shallower sense of community consciousness.

2. The Colonization — Objectives

It was only with the advent of the Meiji Restoration that Hokkaido was seriously considered as a target for permanent and large-scale colonization. Several motives existed for this:

(1) National Strategic motive.

Political tension with Russia in the north continued even with the shift in power from the Shogunate to the Imperial Government. National defense was thus singled out as a priority in this northern region. This urgency was demonstrated in the Imperial rescript promulgated in 1869 declaring the area for prompt colonization and settlement.

(2) Social and economic motives:

a) The modernization and reconstruction of Japan which dissolved the traditional feudal structure resulted in the major displacement of the old order. One major group radically affected was the former warrior class or the *samurai*. Being militarily competent and culturally endowed, these ex-warriors were to serve dual roles of farmer-soldiers in the frontier land.

b) Simultaneously, the development and settlement of Hokkaido would also relieve population and employment pressures in the mainland, especially in the greater urban areas. Land settlement and development would also open new opportunities for the landless poor of Honshu and one group which actually

benefited was the impoverished farmers from the Tohoku region in northern Honshu. Furthermore, as a rehabilitation measure, the Japanese government also took the opportunity to resettle criminal prisoners by organising them into agricultural life.

3. The Frontier Land of Hokkaido

The strategic motives were well reverberated in the initial moves into the island. In Meiji 2 (1869), the Colonization Agency was opened in Hakodate but was later moved to Sapporo, which became the headquarters. The first group of in-migrants were expectedly, the *samurai* group aimed at establishing a secure base on the island. This militia system or the *tondenhei* system was to play a major role in colonization. There were roughly three stages of militia settlement:

1) the first concentration was placed on the Ishikari Plain, obviously aimed at the defense of Sapporo.
2) the second stage started in 1886 with the settlement of Nemuro, Akkeshi and Muroran on the Pacific Coast, also as a defensive move.

3) the third stage falls around 1890 when the program was revised to include non- *samurai* and professional farmers.

In simultaneous efforts with the militia colonization, the Colonization Agency was established in Sapporo in 1869, and in 1872 a 10-year Plan was adopted and directed at the exploitation of mineral resources, land reclamation and the processing of primary materials. Topographic, geologic and pedologic surveys were made of the island. New plants and animals were introduced along with modern agricultural methods. Natural resources especially coal were exploited and mobilised by the first railroad infrastructure in Hokkaido.

The successful development of Manchuria by Japan, which began in 1931, dealt a crushing blow to the economy of Hokkaido. This was further accentuated by 4 years of bad harvests which followed shortly after. Conditions further degenerated when soybeans production in the Hokkaido Tokachi Plains could not compete with imports from Manchuria. National emphasis and migration shifted away from Hokkaido to Honshu. With the termination of World War II, the great influx of repatriates created a new view of Hokkaido. The importance of the island's role in helping solve national population and economic problems increased substantially. From then on, Hokkaido had continued to flourish as a major economic and social region, with its population steadily increasing to its thriving 5.5 million today.

In order to examine the process of growth and the administrative plans responsible for it, the following summary of measures, influencing events and population trends are prepared for each stage.

4. Historical Outline of Hokkaido's Development

COLONIZATION AGENCY PERIOD 1869-1881

Features of Development	Employment of *samurai* clans (Direct Aid)
Administrative Agency	Colonization Agency (est. 1869)
Population	1869: 58,000 1881: 240,000
Development Plans and Main Measures	1869–1873 No Development Plan Colonization Funds i. Appropriation of annual revenue ii. Fixed cash amount iii. Fixed rice amount —Measures— Construction of Sapporo headguarters Protection of migrants (Migrant Regulations) Invitation of colonization consultants 1874–1881 Colonization 10-year Plan Colonization funds i. Fixed amount ¥ 10 m ii. Fixed amount of rice iii. Utilization of tax revenue —Measures— Layout of land and sea roads Development of coalfields in Sapporo Railroad construction Regulations of *Tondenhei* enacted Construction of Sapporo Agricultural College. Establishment of Agency-managed factory Hokkaido Land Control Enactment: 1. Hok. Land Sale & Lease Regulation (1872) 2. Real Estate Regulation (1872) 3. Land Tax Revision Law (1873) 4. Hok. Land Deed Law (1877) 5. Sale of Undeveloped Land Reg. (1877) Expenditure: 1869–1871 ¥ 1,859,000 10-year Plan ¥ 20,660,000
Related Items	1869 Est. Colonization Agency 1869 Ezo name changed to Hokkaido 1872 Initiation of *Tondenhei* system

THREE PREFECTURES, ONE BUREAU PERIOD 1882-1885

Features of Development	Employment of *samurai* clans (Direct Aid)
Administrative Agency	Hok. Administration Bureau, Ministry of Agriculture and Commerce, 3 Prefectures
Population	1885: 276,000

Development Plans and Main Measures	No Development Plan —Measures— *Samurai* migration intensified (Regulation for Management of Immigrant *Samurai*, 1883) No concrete measures due to abolishment of Colonization Agency Expenditure: ¥ 11,870,000
Related Items	1882 Abolishment of Colonization Agency. Hakodate, Sapporo and Nemuro Prefectures established 1883 Establishment of Hokkaido Project Administration Bureau with the Ministry of Agriculture and Commerce

INITIAL TERM OF HOKKAIDO PREFECTURAL GOVERNMENT 1886-1901

Features of Development	Provisions of infrastructural conditions for colonization (Indirect Aid)
Administrative Agency	Cabinet, later Ministry of Interior, Colonization Ministry, Hokkaido Government
Population	1900: 985,000
Development Plan and Main Measures	No Development Plan —Measures— Enactment of Hokkaido Land Disposal Regulation, 1886 Designation of settlement land Sale of government-run factories Survey of wild land (Ishikari, Iburi) Layout of roads Construction and improvement of ports Railroad construction Land survey/measurement Enactment of the Hokkaido Public Undeveloped Land Allocation Act 1897 Establishment of the Hokkaido Colonization Bank
Related Items	1886 Establishment of the Hokkaido Prefectural Government Abolishment of the 3 Prefectures system 1894 Sino-Japanese War 1900 Largest producer in agricultural production and fishery 1900 Revision of the *Tondenhei* system to include non-*samurai* migrants

HOKKAIDO 10-YEAR PLAN PERIOD 1901-1909

Features of Development	Provisions of infrastructural conditions for colonization (Indirect Aid)
Administrative Agency	Ministry of Interior (Hokkaido Prefectural Government)

Population	1909: 1,537,000
Development Plans and Main measures	Hokkaido 10-year Plan 1901–1909 Expected colonization cost ¥ 21.61 m (85% of cost allocated to infrastructure) 9-year period implementation —Measures— Layout of roads Construction of ports—Otaru & Kushiro Air routes opened Agricultural experiments Survey of rivers and ports Development of iron & steel works, power Expenditure: ¥ 13,219,000
Related Items	1901 Hokkaido Local Finance Act Hokkaido Society Act 1902 Hokkaido Land Development Association Law-to promote rice cultivation 1904 Russo-Japanese War 1908 Start construction of national air route from Aomori to Hakodate 1903 Abolition of *Tondenhei* system

FIRST LAND SETTLEMENT PLAN PERIOD 1910-1926

Features of Development	Management of Undeveloped Land & Financial Self-sufficiency
Administrative Agency	Ministry of Interior (Hokkaido Prefectural Government)
Population	1926: 2,437,000
Development Plan and Main Measures	First Term Colonization Plan 1910–1926 Colonization cost ¥70 m Management of Undeveloped land 1.65 m ha. Projected population 3,000,000 Later, financial source increased —Measures— Geological Survey Designation of colonized land, ward division Management of national undeveloped land Protection of settlers, inducements Construction and improvement of bridges and roads Development of ricefields Flood control of Ishikari River, Survey of rivers Survey & renewal of ports & harbours Hokkaido Dairy Production and Marketing Cooperative Expenditure: ¥ 161.593 m

Related Items	1914 World War I 1920 Agriculture overtook industries as leading producer 1926 Telephone connection between Tokyo and Sapporo 1920 Economic recession 1923 Great Kanto Earthquake

SECOND LAND SETTLEMENT PLAN PERIOD 1927-1946

Features of Development	Cultivation of agricultural arable land
Administrative Agency	Ministry of Interior (Hokkaido Prefectural Government)
Population	1946: 3,484,000
Development Plans and Main Measures	Second Term Colonization Plan 1927–1946 Cultivation of arable land 1.58 m ha. Revision of agricultural management-1 m. cattle and horses Accomodation of 1,970,000 settlers Projected population 6,000,000 Expenditure: ¥ 963.7 m —Measures— Establishment of self-production and self-agriculture (cultivation subsidy, land purchase financing, small farmer protection, etc) Felling of national forest, reforestation Promotion of rice cultivation Construction and improvement of roads Flood control, river embankments, layout of new canals (Due to war outbreaks, economic slump and poor harvests, objectives were not achieved as planned) Amendment of Agriculture Admin. Law Expenditure: ¥ 1728,990,000
Related Items	1931 Manchuria Incident Hokkaido Great Frost 1922 Manchuria Colonization settling started 1930 World Economic Depression 1937 Sino-Japanese Incident 1941 Pacific War 1945 End of World War II

POST-WAR URGENT COLONIZATION PERIOD

Features of Development	Urgent Colonization and Increase in Food Production
Administrative Agency	All Ministries (Hokkaido)
Population	1951: ¥ 4,375,000

Development Plans and Main Measures	No development Plan —Measures— Urgent colonization implementation-cultivation of 730,000 ha. of land, settlement of 200,000 households Cost of public works: ¥ 19512.39 m Fundamental National Land Planning Policy Emergency Land Reclamation Projects Policy Fundamental War Damage Recovery plan
Related Items	1947 Enforcement of Local Government Act Abolition of Hokkaido Prefectural Government Establishment of Hokkaido 1949 Establishment of Hokkaido Comprehensive Development Commission in Cabinet 1950 Gazettement of Hokkaido Development Act 1951 Establishment of Hokkaido Development Agency Establishment of Hokkaido Development Bureau

FIRST TERM OF COMPREHENSIVE DEVELOPMENT PLAN PERIOD —FIRST FIVE YEAR PLAN 1952-1956—

Features of Development	Resource Development
Administrative Agency	Hokkaido Development Agency (Hokkaido Development Bureau)
Population	1957: 4,879,000
Development Plans and Main Measures	Hokkaido Comprehensive Development First 5-year Plan 1952-1956 Development of electric power Expansion of roads, ports and rivers Five year food production plan, 1952 Fundamental survey in development Population projected 6,000,000 Expenditure: ¥433.5 billion
Related Items	1952 Tokachi Sea Earthquake 1952 Peace Treaty Enforcement 1954 Typhoon 15 1956 Development of Nemuro & Kushiro region in agriculture 1956 Construction of the Hokkaido Development Warehouse 1956 Hokkaido Great Frost

—*SECOND FIVE YEAR PLAN 1958-1962*—

Features of Development	Promotion of Agriculture
Administrative Agency	Hokkaido Development Agency (Hokkaido Development Bureau)
Population	1962: 5,101,000
Development Plans and Main Measures	Hokkaido Comprehensive Development 5-year Plan 1958–1962 Strengthening of roads, ports and production infrastructure Development of electric power Provision of National Land Conservation Facilities Expansion of Agriculture Production Infrastructure Increase in productivity of agriculture, forestry and fishery industries Constructive development of mineral industries Provision of culture and welfare labour facilities Population projected 5,500,000 Expenditure: ¥ 193.4 m
Related Items	1960 Establishment of Hokkaido Industrial Development Research Institute

SECOND TERM OF COMPREHENSIVE DEVELOPMENT PLAN PERIOD 1963-1970

Features of Development	Consolidation of Industrial Structure
Administrative Agency	Hokkaido Development Agency (Hokkaido Development Bureau)
Population	1970: 5,184,000
Development Plans and Main Measures	Second Term Hokkaido Comprehensive Development Plan 1963–1970 Modernization of agriculture and fishery industries Promotion of mining industries Establishment of comprehensive transportation and telecommunications system Comprehensive progress in national land conservation and water utilization Expansion in provision of social living environment facilities, etc Development of industrial technology, technical education, intensification of training, streamlining with labour inmigration Promotion of Development Nodes Population 5,860,000 projected Expenditure: ¥ 9204,830 b
Related Items	1963 Opening of Tomakomai Industrial Port 1964 Start excavation investigation of Aomori–Hakodate Tunnel 1968 Hokkaido Centennial Ceremony

THIRD TERM OF COMPREHENSIVE DEVELOPMENT PLAN 1971-1980

Features of Development	High Productivity, creation of a high standard welfare society
Administrative Agency	Hokkaido Development Agency (Hokkaido Development Bureau)
Population	1977: 5,443,000
Development Plans and Main Measures	Third Term of Hokkaido Comprehensive Development Plan 1971–1980 Promotion of modern industry Strenghthening of social living infrastructure Establishment of new transport, telecommunications, & energy transportation Development of national land conservation and water resource Protection and conservation of nature & tourist development Creation of central urban zones and designation of wider activity zones Population projected 6,000,000
Related Items	1972 Sapporo Winter Olympics Meet 1973 Construction of Ishikari New Port 1974 Start construction of Nemuro new dairy farms Establishment of Agriculture Land Development Corporation 1976 Start construction of East Tomakomai Industrial Port

NEW COMPREHENSIVE DEVELOPMENT PLAN PERIOD 1978-1987

Features of Development	Creation of a Safe Integrated environment
Administrative Agency	Hokkaido Development Agency (Hokkaido Development Bureau)
Population	1980 5,576,000 (National Census)
Development Plans and Main Measures	New Hokkaido Comprehensive Development Plan 1978–1987 Provision of development infrastructure of core industries Creation of central administrative points Provision of city and country environment Provision of nucleic transportation and communication system Provision of facilities for water resource development, etc Protection of national land conservation and safety infrastructure Creation of a Northern Region social and cultural environment Opening up of regional integrative environmental zones Population projected 6.200,000
Related Items	1980 Opening up of Tomakomai East Port 1981 "Northern Territories Day" declared to be on Feb. 7 by Government

5. The Role of Foreign Expertise

In 1869, the *Kaitakushi* or Colonization Agency was established to take charge of the defense and colonization of Hokkaido. The headquarters, located at Hakodate was later moved to Ishikari. Kiyotaka Kuroda, the then under-secretary of the *Kaitakushi* during the 1870–82 period was the highest active official in this field and is merited for laying the foundations of today's Hokkaido. Kuroda came from the Satsumae clan which not only brought Western arms and military systems into Japan in the earlier days, but also tried to manufacture weapons, glass and cotton-spinners, and even factory-building.

Realising the inadequacies of local technology, Kuroda forwarded a suggestion to the central government in Tokyo to invite foreign experts and engineers, especially from those countries exhibiting common climatic flora and fauna traits to Hokkaido. Kuroda's suggestion was accepted and in 1870, Horace Capron, then Secretary of Agriculture of the United States Federal Government was recommended by President Ulysses S. Grant. As advisor of the Agency, he carried out rigorous investigations and drew up plans, and invited more engineers. The Agency finally employed a total of 62 foreigners, including 13 Chinese from the Ching Dynasty Government and 45 Americans.

Initial tasks of the foreigners were the overall survey of the island as the piecemeal exploration of earlier pioneers were insufficient or inaccurate. Trigonometrical, underground resources, geological features and topographical surveys were executed in detail.

The second urgent task of the time was the good organisation of transportation facilities. After the movement of the *Kaitakushi* headquarters to Sapporo, a road was opened from Hakodate. On the coast of Mori and Muroran, a road and wharf was built, a steamship service started and an iron bridge constructed across the Toyohira River near Sapporo. With 10 way-stations along the roads, coaches were introduced from America and horse sleighs from the Russians. Later, communication lines were stretched to Tokyo facilitating regular communication.

As rice and vegetables in those days were not climatically suitable to Hokkaido, crops were introduced from other countries. Flowers and fruits such as apples, grapes, cherries, cabbages and potatoes were promoted and dairy farm animals like horses and cattle were introduced.

As many of the farmers were not adapted to these unfamiliar products, it was left to the *Kaitakushi* to purchase all products and to process them in more than 30 factories all over Hokkaido. Specialist in confectionery, beer-kegs and fish and meat canning were invited from abroad.

The *Kaitakushi* was most concerned over the exploitation of coal and so railway lines and river transport facilities were constructed for that purpose.

In the promotion of education and training of students, Capron also sought to expand facilities. In 1876, William Smith Clark, Dean of the State Agricultural College of Massachusetts was invited to be the vice-president of a temporary school

built by the *Kaitakushi*. Clark came with other experts and established the Sapporo Agricultural College, which was the first agricultural college in Japan, and is the foundations of the Hokkaido University today. Clark was to have left his mark in Hokkaido as a leader of "strong and dynamic personality and had a profound effect upon the minds of the younger generation" (Akira Watanabe, 1957).

Capron's suggestions concerning virgin land was that they should be given to farmers for cultivation under generous terms. Though this proposal was not immediately accepted, the Prefectural Office decided on a system in 1980 that would give farmers free of charge, land divided under the American grid system. This was the Undeveloped Land Disposal Act, a replica of the American Homestead Act, which at the start of farming gave the land free to the cultivators.

The aim of this section is to show the importance of the roles played by foreign expertise in the early developmental stages of Hokkaido. Being different in many fundamental ways to the Old Japan, technological know-how and experience had to be imported that was suited to the environment.

Other notable personalities who helped mould todays Hokkaido were Edwin Dunn (USA), a protagonist in the realization of major farms in Hokkaido, Benjamin Lyman (USA), a mining specialist, and John Bachelor, a missionary who was active in social work connected with the Ainu people.

6. Types of In-migration

(1) *Tondenhei* system

This system can be divided into :

a) *samurai tondenhei* from 1875–1889
b) non-*samurai tondenhei* from 1890–1903

This farmer-soldier system represents the most salient and systematic form of mass migration. Besides their role in the national defense of Hokkaido, the *tondenhei* worked also as farmers in the initial stages of colonization. This strategy was enforced by the government from 1800 to 1903 in preparation of a possible invasion into Hokkaido and Sakhalin.

The *tondenhei* system was started in 1876. The purposes of the system included the defense of Hokkaido, the acculturation of the Hokkaido to the ways of Honshu, and the rehabilitation of the displaced *samurai* class by granting them land for settlement.

Qualification into the *tondenhei* system was highly selective and its organization and management regimentally regularised. In principle, the system incorporated the following conditions :

1) Participants must be young and healthy *samurai*s between age 18–35.
2) Each *tondenhei* was to be provided with land, plus a specific amount of money, salt, rice and tea every month.
3) Two family members who could provide help had to accompany the soldier.
4) Under the leadership of a commander, life at the *tonden* villages was com-

munal and controlled.

5) Much assistance was provided for in-migration.
6) Villages were completely planned and constructed before anyone moved in.
7) The operation of farms at the villages was based on a military system. Due to the simultaneous role of defense, military units of regiment, battalion and company were organised.

In the settlement process, each *tondenhei* was provided with 5000 tsubos (1.67 ha) of land between 1875 and 1878, 10,000 tsubos (3.3 ha) between 1879 and 1890, and 15,000 tsubos (5 ha) between 1896 and 1899. In 1875, the first of the *tondenhei*, 208 families from the Tohoku area moved into Kotoni village. The Government planned to settle 1,500 families between 1875 and 1882. In reality, however, only 586 families settled in. Based on this experience, the second in-migration project was planned. Due to a combination of the efforts of the authorities and the demands of the times, the results were better than expected, with number of actual inmigrants much higher than the number planned.

Each *tondenhei* village consisted of 160–240 households that had passed a rigorous procedure. Each village also received closed assistance from the government who allotted communal properties which functioned as a physical bond between the villages. Site selection of settlement as well as allocation of agricultural fields, shelter belts, parade grounds, schools and communal workshops were all well planned in advance. An initial concentration pattern of village settlement later gave way to a more 'scattered' diverse pattern of village formation.

As this was still an experimental stage, agricultural activities were also tested with. Under close government supervision, mulberry, helm and other products were cultivated and schoolchildren were taught weaving, net-making and silk-worm raising. From about 1880, American agricultural methods were experimented with. Western housing styles, like glass windows and stoves, and other modes of living were adopted and assimilated. To this day, such Western attributes has given that Hokkaido sense of consciousness and a 'Northern' identity unfound in the Old Japan.

Another feature is the strong pride the *tondenhei* inmigrants attached to their *samurai* origins. Their basic values of discipline and social solidarity endured them through the hardships. Well-endowed with resourcefulness, spiritual strength and technical creativity, some *tondenhei* villages became models for other pioneer villages in their respective areas. (Seki, 1980). Though uprooted from their land of origin, they seem to have brought along with them their hereditary system and their descendants have ingrained a frontier spirit stronger than other pioneer groups.

During the time between the establishment of the system in 1873 and 1903, when the system was abolished, 39, 911 people consisting of 7,337 families were mobilised.

In 1890, the *tondenhei* system was revised to include not only *samurai*'s but common people as well. At the same time, the priority of national defense in Hokkaido's colonization shifted to that of development of land.

During this age of Japanese capitalism and shift to modernization, economic depressions resulting in business failures, food shortages and the rise of migration provided an inconsistency. The impoverished agricultural villages found an outlet in Hokkaido as the *tondenhei* system was revised and thus Hokkaido flourished as an 'intra-state colony'.

(2) Industry Inmigrants

These were more spontaneous migration streams motivated by economic prospects. They are classified into:

a) agricultural inmigrants
b) fishing industry inmigrants
c) commerical-industrial inmigrants (businessmen)

The first group of agricultural farmer inmigrants were the most significant group making up 27% of all inmigrants in 1892, 57% in 1899 and 58% in 1907.

The level of organization for migration of these groups were varied. There were mainly three levels:

i) government sponsored
ii) private organizations sponsored
iii) self-sponsored migrants

Of these the most important were those undertaken by private organizations under the direct protection of the government. The success or failure of an agricultural settlement largely depended on whether they could secure political and financial support from the outside.

These private inmigrant programs were further pursued in place of the more restrictive government programs, as Hokkaido became more developed and socially stabilised in a quarter of a century after the Meiji Restoration in 1868. Major private inmigration projects were those undertaken by private companies and by large plantation owners.

With support from government policies designed to encourage private inmigration, those with necessary capital established companies and received vast land grants from the government. They recruited *samurai* (*shizoku*) and farmers from the mainland Japan and brought them to Hokkaido. The sponsors of those companies were mainly former dairies, *samurai* volunteers and emergent capitalists. The recruitment generally took place in the sponsor's native clan, so that recruits were usually from the same locality. Most of the sponsors were ideallists devoted to the establishment of a new society in frontier Hokkaido. They tried to ensure agricultural successors by organising *Samurai* Youth Clubs (17-25 years old) and Boys Group (11-14 Years) (Seki, 1980).

Although the number of inmigrants to Hokkaido declined by 1872 it started to increase again after 1878. This was because many inmigrants who were recruited by private inmigration organizations came to Hokkaido. The government provided direct assistance to these inmigrants by leasing them land, much more than that

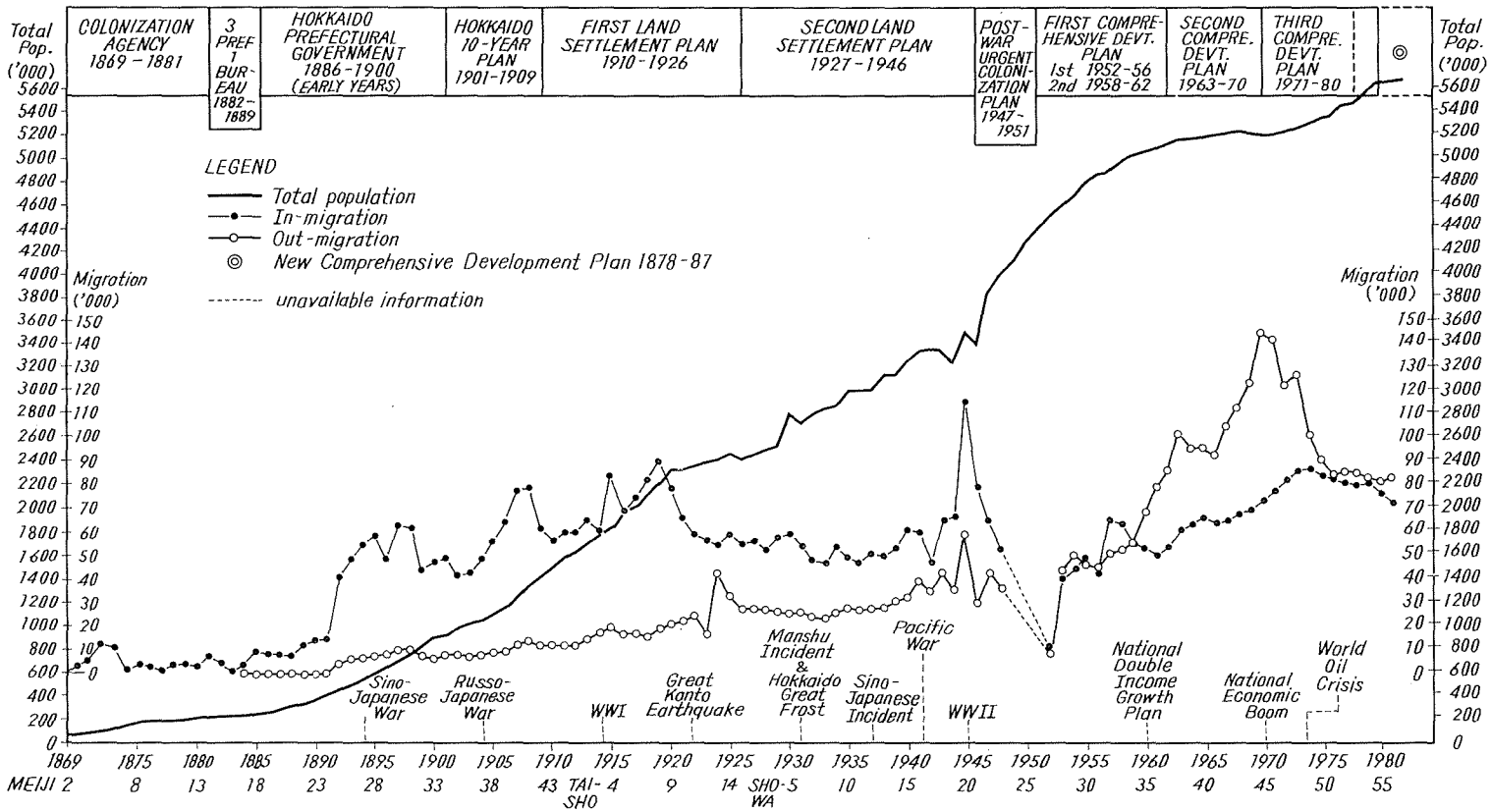


Fig. 2. HOKKAIDO: ADMINISTRATION & MIGRATION TRENDS.

stipulated by rules and sometimes without fees.

Perhaps the turning point in the history of migration comes with the establishment of the Hokkaido Prefectural Government. (see Fig. 2) Until then, inmigrants were mainly poor, hence direct protective policies were being implemented. As these policies did not turn out to be very effective, however, wealthy people were recruited rather than the poor. At the same time, industrial investment were sought and promoted. Thus a change occurred from a direct assistance, welfare policy for aiding the poor to an indirect assistance, economically rational policy for facilitating entrepreneurial development.

This move represents an important adjustment as the highest sustaining records of inmigration comes after this change. (see Fig. 2) Until 1887 (when the Direct Aid policy was changed to Indirect Aid policy) the annual increase in the number of inmigrants was about 20,000. The figure reached about 60,000 in 1894 and exceeded 70,000 in 1897. As part of the new policy, the Prefectural Government selected inmigration sites, revised the Land Disposal Law and constructed new roads and railroads. The emphasis was on expansion of infrastructure necessary for further development.

(3) Other inmigrants

This group included miners, construction workers for exploitation of underground natural resources and construction of railways, ports, factories and houses. In forestry, villages of a peculiar form called "forest settlements" were established in national forests.

Religious organizations as another form of inmigration and influential Buddhist temples obtained vast lands and attempted at agriculture. Similar attempts were made by Christian and *Tenri-Shinto* groups, all motivated by missionary ambitions, but failed as agricultural settlements.

7. Migration and Land Development

In order to examine the relation of development plans to actual migratory outcomes, Fig. 2 has been plotted. The migrational history of Hokkaido can be divided into two periods:

1) Pre-war positive in-migration period
2) Post-war negative in-migration period

In this paper, we will discussed only on the pre-war period.

Pre-war positive in-migration period

This can further divided into 4 stages:

1) 1869-1890—stage of low in-migration and low out-migration resulting in low net migration
2) 1891-1922—stage of high in-migration and low out-migration resulting in high net migration
3) 1923-1940—stage of high in-migration and high out-migration resulting in

moderate net-migration

4) 1940–1948—stage of highly unstable transition

Undoubtedly, the fluctuating migration rates of Hokkaido may be said to be a function of the endogenous factors of physical environment, local conditions and administration, as well as exogenous factors of national and international economic and political changes.

In order to see the relation of the 4 stages with these endogenous and exogenous factors, we will examine each stage here:

Stage 1—This period represents the launching of the determinative efforts of the central government to open up vast tracts of virgin land. No formal plan was drawn up. Various land laws were passed to facilitate easy land acquisition and direct aid was rendered to disenfranchised *samurai*'s, but no concrete programs were formulated for comprehensive development. Pioneer settlers endured harsh conditions. Migration could not gather momentum.

Stage 2—The establishment of the Hokkaido Prefectural government and the change in policy on migration towards the provision of infrastructure and entrepreneurial activities exerted a positive effect on migration into Hokkaido. The breakout of the Russo-Japanese War in 1904 saw a gradual rise in inmigration as the 10-year Plan boost efforts to populate the frontier region.

Stage 3—The cultivation of agricultural arable land was employed as a development policy. Although large investments were pumped into Hokkaido's development of civil construction and new lands were opened, this stage represents a relatively lower but sustaining level of migration rates than the previous stage. This 'depression' in in-migration is caused by several factors. The successful development of Manchuria by Japan, which began in 1931, dealt a crushing blow to the economy of Hokkaido. This was further accentuated by 4 years of poor harvest. National policy as well as public interest were more oriented towards the mainland as the government concentrated on national emergency relief and disaster recovery programmes. Influx of new settlers halted and at the same time emigration to Manchuria was initiated from Hokkaido. As a result, implementation of the scheduled plans were not fully realised and a revision of the plan modified the over-ambitious plans.

Stage 4—With the termination of the war, the great influx of repatriates compelled a new view of Hokkaido. The importance of the island's role in helping solve national population and economic problems increased substantially. However, after the initial stage, migration trends seem to take a opposite turn, reaching its floor in 1952.

8. In-migration population

A distinctive feature of the in-migration trends into Hokkaido is the relatively low rate of in-migration during the period of direct aid (1869–1886) and the higher rate during the period of indirect aid (1886–1923). During the 60-year period between 1870 and 1930, the population of Hokkaido increased more than 16-fold from 150,000 to 2.45 million. (Kuroda, 1980). This is indeed a remarkable achievement considering the short span of time and the nature of the frontier land. Kobayashi (1980) estimates that 88–98% of the actual increase in population between the period 1874–1920 were in-migrants.

As we have seen before, the *tondenhei* system played an important role in the establishment of viable communities. The other type of in-migration — private organizations should be noted too. Privately sponsored groups — the Banseisha, Hokkosha (Yamamura. 1980) — with outstanding personalities like Benzo Yoda, Komaji Maeda and Kusuya Sawamoto contributed significantly though not always successfully to the development.

Many of the projects failed because of the lack of proper scientific planning necessary for such undertakings. Some reasons for failure have been noted by Seki, K:

— inexperience of managers in decision making
— failure to collect necessary funds
— economic fluctuations leading to business failures
— lack of capable leaders at settlement site
— incompetent and weak in-migrants
— misfortunes and natural calamities

9. Industrialization and In-migration

In order to create self-sufficiency of production in Hokkaido, the Development Agency tried to promote industries for an export market in industries as agro-based processed goods, marine products and lumber goods. To bring in modern industries, the government established model experimental plants which were later sold to private sector. Other attempts at establishing private industries included the lending of funds to start businesses, adoption of a subsidy system, and the opening of technical schools to promote technical education. One important concentration of industries started in Tomakomai City with the advent of the paper manufacturing industry called the Oji Paper Company. (Katoh, 1980)

The industrialization policy is concomitant with the revision from direct to indirect aid and seeks to stimulate not only "labour migration" but "capital migration" as well. Large-scale capital were mainly obtained from the mainland *zaibatsu* or giant corporations while local capital were concentrated in small factories.

III. Land Settlement and Migration in Malaysia

1. Historical Background — Malaysia

Throughout history, the Malay Peninsula has been the scene of vast human migrations. As C. A. Vlieland of the Federal Secretariat in Kuala Lumpur (1954) noted, since "it is essentially focal in relation to the archipelago, (it became) a natural cradle of seafaring races".

Today, the Peninsula cradles a unique mixture of ethnic communities consisting of Malays and other indigenous people (53.2%), Chinese (35.3%), Indians (10.6%) and others (0.8%). Though this paper is not concerned with international migration, it is nevertheless important to understand the significant role that migration has played in the demographic evolution, the present pattern of population distribution and migration behaviour of the country.

In constitutional theory and political practice, the Malay Peninsula is the country of the Malay. In actual fact, however it is a kind of no man's land in which geographic controls have produced, through the medium of migration, a population of unique characteristics and a civilization that is essentially alien. The real home of the Malay is Sumatra. Their settlement in the land prior to other groups have secured them constitutionally protected status of *Bumiputra* or 'sons of the soil'.

The next numerically largest group is the Chinese. A stream of migration between southern China and Malaysia (then called Malaya) had existed for centuries. The Chinese population of British Malaya at the 1921 census was nearly 1,175,000. It is estimated that for every hundred arrivals, there were over 80 departures — indicating the high turnover rate of migration during the 1930 decade. A bad harvest or political upset in south China tend to stimulate the flow Malayawards, as does a boom in the rubber or tin. A slump in Malayan produce or an improvement in conditions in Kwangtung will have a reverse effect. They engaged themselves mostly in the tin industry or the commercial urban sector, thereby settling down largely along the West Coast where these activities concentrate.

The rapid development of the Peninsula and the growth of the rubber plantation industry necessitated the importation of labour and this demand was met from India. In 1931, there were 624,000 Indians. Besides the rubber industry,, the Indians were largely employed in mercantile and security services.

Immigration rise and fell with the peninsula's trade fluctuations but the peak year of prosperity was 1926 when the value per capita of exports exceeded that of any other country in the world. This year was also the peak year of immigration.

Early migrants naturally settled on the West Coast of the Peninsula partly because of the existing colonies there, but also partly because of the "tin belt". Reference to the population map below shows a fairly continuous belt of population of a general density of about 150 persons to the square mile, over the whole of the western lowlands.

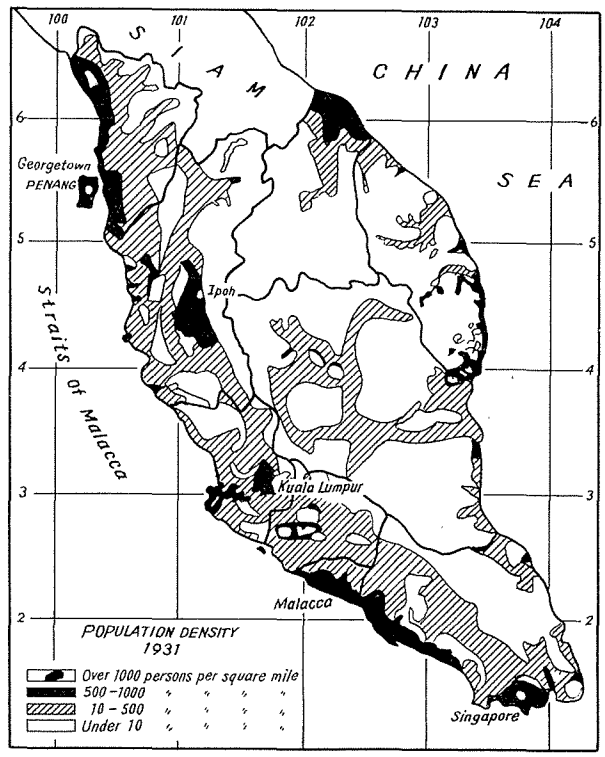


Fig. 3. Population Density in British Malaya
Source: Official Report 1931 Census.

Major urban concentrations were Kuala Lumpur (the central administrative point), Penang Island (the port outlet), Malacca (the historically strategic town of the colonialist), Singapore (the southern entrepot port) and Ipoh (the tin-miners paradise). Throughout the peninsula the urban population is overwhelmingly Chinese.

Thus, we have a system inherited from the economic and political aims of the colonialists. Economic because the strategic location and development of infrastructure and activities were all to serve the export trade at that time. And political because through the policy of 'divide and rule', they could preserve the rural life of the indigenous people, exploit the Chinese immigrant in the tin industry, and channel Indian labourers into the rubber industry, in order to maximise trade profits and secure their position.

2. Determinants of Population Distribution

Various factors that have played their role in determining the pattern of population distribution in Malaysia will be briefly discussed here. As will be discussed in greater detail later on, the issue of population distribution have never been a key topic in national planning objectives but rather as an accomodative process of changes in other sectors. It was not until the Second Malaysia Plan 1971-76 that greater redistributional and dispersal forms of policies were taken seriously.

Table 1. Ethnic Proportion in Urban Areas by Size of urban centre 1957

Size of Urban Centre	Malay	Chinese	Indian	others	Total
Above 100,000	15.4	65.4	14.7	4.3	100.0
50,000-100,000	29.4	56.6	10.4	3.6	100.0
20,000- 50,000	15.6	72.1	10.3	2.0	100.0
10,000- 20,000	37.9	50.5	9.6	2.0	100.0

Prior to this until 1970, Malaysia's distributional pattern has been controlled by:

1) History: The strategic location of towns like Malacca, Penang and Singapore (then part of Malaysia) gave them the advantage to be developed first to serve the international trade.

2) Immigration: Stimulated by British policy of mass labour importation, Chinese and Indians arrived en masse into the rich tin-fields and rubber plantations, respectively, along the west coast as towns rapidly grew with prosperity. Meanwhile the indigenous group remained in the agricultural areas. The following table shows the urbanity of each ethnic group.

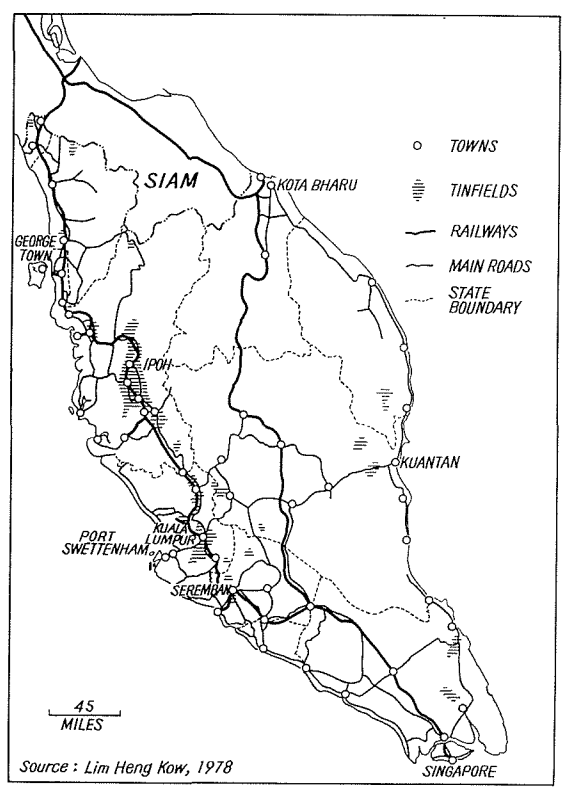


Fig. 4. Malaysia 1957: Map showing east-west disparity in infrastructure.

Table 2. Population Changes in Urban Centres in east and west coasts, 1911–57

Urban Centre	Population in thousands				
	1957	1947	1931	1921	1911
Kuala Lumpur	316.2	176.0	111.4	80.4	46.7
Georgetown	234.9	189.1	149.4	123.1	101.2
Ipoh	125.8	80.9	53.2	36.9	24.0
Johore Bahru	75.1	38.8	21.5	15.3	9.4
Klang	75.6	33.5	20.9	11.7	7.7
Malacca	69.9	54.5	38.0	30.7	21.2
Alor Star	52.9	32.4	18.6	11.6	6.3
Seremban	52.0	35.3	21.5	17.3	8.7
Taiping	48.2	41.4	30.1	21.1	19.6
Butterworth	42.5	21.3	13.5	4.1	4.0
Batu Pahat	40.0	26.5	13.3	6.4	3.2
Muar	39.1	32.2	20.3	13.3	5.0
△Kota Bharu	38.1	22.8	14.8	10.8	12.5
Telok Anson	37.0	23.1	14.7	10.9	6.9
Kluang	31.2	16.0	6.5	1.4	—
Kuala Trengganu	29.4	27.0	14.0	12.5	14.0
Bukit Mertajam	24.7	12.3	5.3	3.9	4.4
Kampar	24.6	17.5	15.3	12.3	11.6
△Kuantan	23.1	8.1	5.5	2.5	2.1
Sungei Patani	22.9	13.2	7.7	4.6	—
Ayer Itam	22.4	13.5	2.3	1.2	—
△Bentong	18.8	7.1	4.0	4.1	—
Segamat	18.5	7.3	4.3	1.3	—
Kulim	17.6	9.5	5.8	3.6	—
Jinjang	16.7	—	—	—	—
Petaling Jaya	16.6	1.5	—	—	—
△Raub	15.4	3.6	2.2	1.4	1.2
Sungei Siput	15.3	6.0	3.2	2.5	2.0
Kuala Kangsar	15.3	8.4	6.0	3.4	2.2
Guntong	15.1	—	—	—	—
Pasir Pinji	14.0	4.3	—	—	—
△Dungun	12.5	4.3	—	—	—
△Temerloh	12.3	5.2	1.1	—	—
Kuala Pilah	12.0	7.3	4.0	3.0	1.7
Batu Gajah	10.1	7.5	6.8	5.1	3.8
Serdang Bahru	10.0	—	—	—	—

Sources: *Census Reports*, 1911, 1921, 1931, 1947 & 1957.
△ East coast states.

3) Infrastructure: The transport network were originally constructed to collect export products at specific nodal points to be taken to the distributive ports. With reference to the maps below, roads and railways had always concentrated along the west coast. Though a east-west road was completed in 1911, it came too late to stimulate any major economic development or structural development in the east. No incentives existed for rubber-planters or entrepreneurs to go east when the west offered more in terms of cost-benefits and cumulative spiral advantages.

4) Urban Growth: As Table 2 shows, rapidly growing urban centres are largely found in the west. In contrast, the relatively isolated east coast states were temporarily insulated from the impact of the so-called colonial-immigrant complex (Lim Heng Kow, 1878).

5) Early migration: Early interregional migration consisted of temporary agricultural type, migrations due to marriage and forced movements, the latter arising from at least 4 reasons: escape from debt-bondage and obligatory labour; civil wars and other internal unrest; famines resulting in movements to the west coast from Kelantan in 1887,; and natural disasters, including floods and crop failure. Between 1948 and 1960, the most important factor generatng population distribution was the outbreak of the Communist Insurgency (called the Emergency Period) when the British and Malayan Governments joined forces to combat the attempt by the Malayan Communist Party to overthrow the government. This gave rise

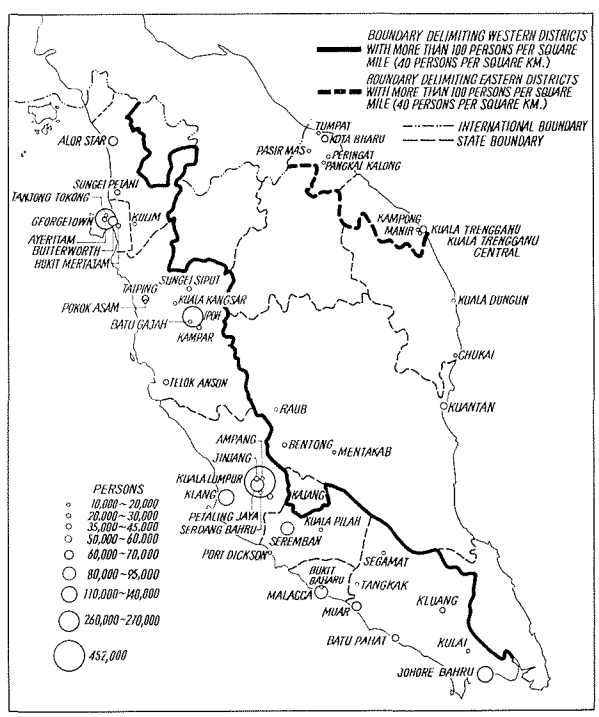


Fig. 5. Major Towns by size and the East-West Disparity in Population Concentration, 1970.

Source: Ooi Jin Bee, 1975.

to the resettlement scheme where 600,000 persons, 86% of them Chinese, were settled in over 600 centres to prevent them from sympathizing with the communist guerillas. This transformed the settlement pattern of the peninsula from rural dwellings to urban 'new villages'.

6) Socio-economic structure: Some generalizations can be drawn from the discussions above. The Malay community are mainly a rural traditional community and a large section of them are engaged in low productivity agricultural activities. Though poverty knows no ethnic barriers, the other ethnic groups are largely engaged in relatively more lucrative activities and are concentrated in urban areas.

In this section, we have discussed integrative forces that determined the population settlement pattern in Malaysia and the resulting east-west disparity which remained quite intact even up to 1970, is represented in the map below. (Fig. 5)

3. Land Development — Objectives

We have just seen how the distribution of settlement and economic activities was an inheritance of the colonial system of administration and production. Out of this inherited structure, various forces and tension were at play calling for a restructuring of the socio-economic system and a new direction of political orientation. Thus, as Malaysia had an abundance of undeveloped, cultivable land, land development was singled out as a agent of change, and its objectives, explicit or implicit in national objectives, are classified as follows:

I SOCIAL

a) *Modernization of Rural Life*

75% of the population of Malaysia was rural when the country gained independence in 1957. Economic dualism, characterised by a modern urban sector and a traditional rural sector so characteristic of post-colonial societies, created a perpetuating economic imbalance. Lack of employment opportunities, social and educational facilities and increasing population, rural-urban migration became rife. This equilibrium and the sheer size of the population involved diverted national attention towards the most neglected section of the population, that is, the rural poor.

b) *Eradication of Poverty*

As a predominantly agricultural country, the agricultural sector in Malaysia accounts for 49.3% of the working population earning about 45.5% of the total foreign exchange and providing about 29.8% of the gross domestic product. (Nor Laily Aziz, 1980) Playing a significant role in the economy it nevertheless accounts for the highest incidence of poverty, estimated at 69% of all households in the segment. This issue of poverty initiated in Post-colonial era is resounded in all successive plans. In the Second Malaysia Plan 1971-1975, the New Economic Policy consist of two prongs. One of them is the eradication of proverty by raising the GNP and income levels. Through rural develop-

ment programmes like the FELDA, the rural landless will be provided with economic agricultural holdings which will become the source of monetary returns leading to improvement of their income status.

II ECONOMIC

a) *Economic Development*

In the immediate pre-independence years, the Malaysian economy became gravely over-dependent on 2 primary commodities — rubber and tin. Rural poverty was widespread in spite of rapid growth. Both these industries were largely dominated by foreign-owned commercial estate sector and they provided the main impetus to growth, especially in the years of the Korean War. As it was felt that profit-maximizing private enterprises could not be relied on to achieve the objectives of poverty eradication, the government took it into their own hands to assist rural agricultural smallholders.

b) *Distribution of Land*

Land hunger reached a serious scale in the predominantly Malay rural areas at Independence in 1957 owing to a number of factors including the holding up of the processing of land allocations due initially to the War and then the Emergency from 1948–1960. As a result at least 100,000 land applications lied unprocessed at Independence. Pressures and dissatisfaction arose calling for more efficiency and land development with eventual individual ownership became a method of land distribution.

III POLITICAL

a) *Restructuring of Society*

As the colonial-immigrant complex created a noticeable pattern where settlement and occupation were identifiable with ethnic communities, the growth of Nationalistic sentiments in the post-Independence years call for socio-economic reform, taking on political overtones. The native rights of the Malay became constitutionalised. Political pressure was exerted on the government to eliminate unemployment and poverty. This was especially strong in the rural areas and the less-developed areas where the Malay community predominates. In the circumstance of the existing of a weighting system in the allocation of seats which heavily favours the rural areas, the Malay voter is a person of considerable political influence in the policies of a predominantly Malay Government. Thus, the government was faced with the task of correcting imbalances to eventually eliminate the identification of race with economic function. The second prong of the New Economic Policy (NEP) seeks:

> ". . to achieve by 1990 a community where all racial groups will participate as full partners in the socio-economic development of the country in consonance with the multi-racial composition of the population";

and further adds,

Table 3. Typology of Main Strategies for Population Redistribution

POPULATION REDISTRIBUTION STRATEGIES		SCHEME TYPES	ADMINISTRATIVE BODY	MAIN FUNCTION/S	PROJECT LOCATION
GENERAL LAND AND REGIONAL DEVELOPMENT STRATEGIES	1. New Land Development	1) Federal Land Development Authority Schemes	FELDA (1956)	1) Integrated land development and settlement in uncultivated areas	All states except Penang and Perlis
		2) Fringe Alienation Schemes	State & Federal Govt.	2) Development of agricultural land within 3-4 miles from villages	Respective states
		3) Controlled Alienation Schemes	State Govt.	3) Provisions of large blocks of land to smallholders for development	
		4) Youth Schemes	State Govt.	4) Allocation of land to unemployed youths with eventual ownership	
		5) State Schemes	i. SEDC* & Fed. ii. SEDC & private sector	5) i. Public sector schemes ii. Joint-ventures	
		6) Group Settlement or Block Replanting Schemes	i. State Govt. ii. RIRB**	6) i. Land for agriculture/settlement ii. low-cost housing	
		7) Regional Development —Pahang Tenggara Development authority —Trengganu Tengah Development Authority —Johore Tenggara Development Authority —Kelantan Selatan Development Authority —Jengka Triangle	DARA KETENGAH KEJORA KESEDAR JENGKA	Development of new lands for agriculture, industry, settlement	—South-east Pahang —Central Trengganu —South-east Johore —South Kelantan —Pahang
	2. In Situ Development	1) Federal Land Consolidation and Rehabilitation Schemes	FELCRA (1966)	1) Provision of land and assistance for smallholders	Depressed areas in all states
		2) Rubber Industry Smallholders Development	RISDA (1973)	2) Research, replanting, collect statistics provide extensions, assist smallholders	
		3) Muda Agricultural Development Authority	MADA (1970)	3) Muda irrigation and drainage project	Muda Project in Kedah & Perlis
OTHER DISTRIBUTIONAL STRATEGIES	3. Forestry Development 4. Mineral Resources Development 5. Industry Dispersal 6. Location of New Urban Centres 7. Rural Human Resource Development				

N. B. * *State Economic Development Corporations*

** *Rubber Industry Replanting Board*

"(the) policies and programmes are to be implemented through equitable distribution of dynamic growth, so that no particular group experiences any loss or feel any sense of deprivation in the process". (Mid-Term Review, 1979)

IV POPULATION REDISTRIBUTION

Population redistribution is to be treated a classification by itself here as the extent to which population can be distributed is a function of the outcome of the other objectives. In other words, population redistribution is a concomitant effect of integrated changes in the socio-economic and rural-urban structure.

In Malaysia, the need to redistribute population has never been explicitly stated in the objectives of national plans and policies, until its significance was recognised in the Mid-Term Review of the Second Malaysia Plan (1971-1975). Prior to this, only mild references were made to the role of population variables in economic development. However, effects of population growth and distribution on economic growth, education and social services took on stronger tones in the early 70's. At the same time, there was a shift in emphasis from purely sectoral planning to a greater stress on regional planning, and from a rural-oriented planning to an integrated rural-urban approach. This has important implications for population distribution and migration. With the shift, population redistribution and migration no longer came to be regarded as an adjustment process arising from an interplay of economic forces of change, but rather as a manipulative tool in socio-economic planning.

Since then, population and migration variables came to be incorporated into development policies. The following figure shows a typology of main strategies for initiating population redistribution and migration. Only land development strategies will be focussed on.

4. The Federal Land Development Authority (FELDA)

The FELDA is in many ways like the Hokkaido Prefectural Government in that they are both autonomous agencies commissioned by the Federal Government to open up new land for human settlement. Though FELDA has a short history compared to the Hokkaido Prefectural Government, their achievements in social mobilization are comparably remarkable.

In Malaysia, FELDA represents the largest in scale and the most successful of all land development and settlement programmes. Considering its short history of 25 years, it has managed to clear vast tracts of virgin land (about 300,000 ha. in 1975), built infrastructure, resettled landless farmers, improve socio-economic conditions of settlers through assisted agriculture and increased productivity of agriculture in the country.

But with all the acclaimed success and achievement, how does the performance of FELDA compare to the Hokkaido case. To answer this question, let us examine the FELDA programme carefully.

The Establishment

With the pressing problem of land hunger triggered by the holding back of land applications in the immediate pre-Independence years, the newly established government committed itself to raising the living standards of the Malay community in particular. In August 1955, a working committee was set up to assess the needs of various states for assistance from the Federal Government in land development, and to make recommendations regarding the administration of this financial assistance. In a positive evaluation, the Federal Land Development Authority was established. Since its inception, the FELDA has gone through 3 stages of evolution of policies and functions, from 1956.

First Stage: Financial Board —1957-1960

FELDA's establishment was initiated in order to "promote and assist the investigation, formation and carrying out of projects for development and settlement of land in the Federation" (The Land Development Ordinance, 1956). It was therefore mainly a financial organization or a loans board, acting as a supplier of funds to the State Governments to start land schemes, except for the case of the Bilut Valley scheme, which it administered directly. Therefore, state governments could obtain grants or loans from the Federal Government under the Rubber Fund Ordinance as well as from the commercial market.

Pilot schemes financed by FELDA very often ran into deep waters as contractors broke work schedules; settler recruits not turning up at jungle clearing projects; and other initial hardships caused by lack of accomodation. In 1958, a corporation was established by the Authority to implement the scheme in Bilut Valley in Pahang. Unfortunately, this scheme came to be branded a 'disaster' and even up to today continue to present problems for the Authority. Its failure, pointed out by Colin MacAndrews (1977) can be explained by two factors.

(1) The first is the non-integrated nature of the scheme. Early hardships characterised settlers who had to clear the jungle, plant the rubber, and build the houses themselves. The lack of amenities, too, disillusioned the initially enthusiastic settlers. Though FELDA introduced the facilities in the mid-sixties, the effects of these early years left them bitter. There were little organizational activity due to lack of interest, nor any desire to move into business or more lucrative side occupations. This lack of enterprise was shown in the lack of centralization in commercial shopping areas that was characteristic of later FELDA schemes.

(2) The mixed ethnic composition of the settlers also hindered the success of the scheme. Lack of cooperation and participation was rife among these communities (65.1% Malay, 26.6% Chinese and 8.3% Indians) who lived in separate areas of the scheme, an initial shortsightness of the Authority. This resulted in a lack of morale among settlers. However, FELDA was to change this segregative pattern later on.

(3) The inexperience of early implementors may have been demonstrated in the teething problems of the Bilut Valley case.

In 1959, the Ministry of Rural Land Development was set up pushing the drive for rural development forward. This body could exert sufficient influence in incorporating the issue of rural development into the Second Malaysia Plan at the time. In 1960, FELDA was reorganised towards a new direction. FELDA moved into a more active role as a direct administrator of land schemes.

Second Stage: Integrated Land Development —1961-1968

With a change in direction and scope, FELDA received substantial additional funds under the Second Malaysia Plan, with the objective of opening up of a greater number of land schemes and resettling more families. It took over the responsibility of land clearance, building settlers' houses, planting crops and laying out infrastructure. Furthermore, the Ministry of Rural Development also decided that FELDA should bear all administrative and organizational costs from 1962. The results were higher cost per acre but schemes made more attractive to settlers.

One point that should be noted here is the presence of bottlenecks to land acquirement by the Federal Authorities as land has traditionally been a state prerogative. The Constitution rest all unallocated land in the State Sultans' hands and as State property, it is a major source of State revenue. As such, resistance to land takeover or delaying negotiations were not uncommon.

Third Stage: Social Development —from 1969

This stage represents radical developments in FELDA as it launched into large-scale regional developments (with 3 major schemes in Pahang and Johor of 700,000 acres), moved into expanding marketing and processing divisions, went through a structural reorganization of the Authority, and finally, took on the role of socializing and modernizing settlers by creating the FELDA Social Development Service Department.

With this metamorphosis, the period marks the approach of a 'package deal' (Alladin, 1980) concept that now popularly characterise the FELDA-model of land development.

The FELDA formula for land settlement is in one sense a reflection of the private sector, in that it strives to attain the same standards of agricultural efficiency, of field management and economies of scale through modern large-scale estate management. However, a radical twist has been added. Profits of the efficiency arising from the earnings of the value of the settler manual input are circulated back to himself. It is based on the social objectives of communalism rather than capitalistic maximization of profits.

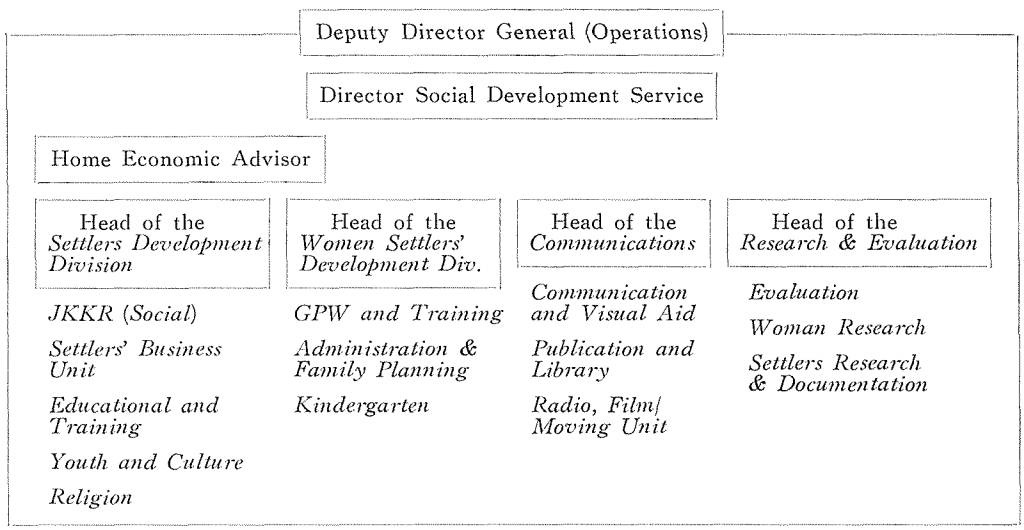
Thus agricultural holdings planted with efficient yields of rubber, oil plam, sugar cane and cocoa provide settlers with the solid base for economic activity and livelihood. Credit, processing and marketing facilities are provided by the Authority. A community development programme accompanies the package deal to ensure settlers a smooth adaptation along the socializing and modernization process.

The Settler Social Development Division

This division was set up in 1969 to be responsible for the planning, develop-

ment, promotion and implementation and subsequent evaluation of community development projects through extension, education and training of both staff and settlers. It fulfills a whole range of functions of stimulating individual initiative, good working relations, offer advice, organise activities, family counseling, etc. The organization is structured at both regional and individual scheme levels. The following outline shows the general organization of the division.

Fig. 6. FELDA SOCIAL DEVELOPMENT SERVICE DEPARTMENT



Source: FELDA records 1975.

5. Establishing a FELDA Scheme

The start of a FELDA scheme involves the selection of a suitable site. Its suitability is determined through highly technical investigation and is a careful process involving the cooperation of not less than 12 Governments and Agencies responsible to 8 Ministries. The jungle clearing work is carried out by contractors who have been successful in making competitive bids to undertake the projects initial development task.

The size of land is important and through experience, the Authority has decided on an ideal size of ±5000 acres (2040 ha.) capable of settling ±400 families. The size of holding per settler family (about 10 acres) is governed by the income and employment factors. A quarter-acre house lot is also carved out. Each land scheme is self-sufficient, being provided with the basic infrastructure and amenities as roads, water supply, a school, health clinic, a community hall, a mosque, shop-houses, transportation and communication services.

Planting of crops proceeds according to a pre-planned schedule, laying the foundation for subsequent socio-economic development of the new settlement. As agricultural development is carried on, a central position of the newly developed

area is picked out for settlement-residential area. Staff quarters and settler houses are constructed, roads and water pipes laid, together with the provision of other public and social amenities.

Newly recruited settlers who then move into the area are able to occupy the houses and start their training and orientation to work and life on the FELDA scheme. They take over and continue the maintenance and development of the agricultural area through its maturity. Meanwhile, he receives a monthly subsistence allowance based on work performance (MS125 minimum income a month if he fulfills a 25 day monthly work obligation).

Orientation involves on-the-job-training to discipline settlers to a new system of work and a new way of life. Work is organised on a block basis consisting of 20-24 settlers through their elected leaders.

Once the crop matures, the settler start making payments towards the development cost of the scheme and the subsistence credit. The agricultural product of the scheme and the subsistence credit. The agricultural product of the settler is brought to a central collecting and processing centre where the produce is measured and valued. Deductions are made from their monthly income towards their loan repayment over a 15 year period, with the prospect of eventual ownership of land.

As for individual characteristics of selected settlers, the candidate, in principle has to be married, aged between 18-35 (40 in the case of ex-servicemen), Malaysian nationals and physically fit. The selection process is also weighted towards applicants who have an agricultural background.

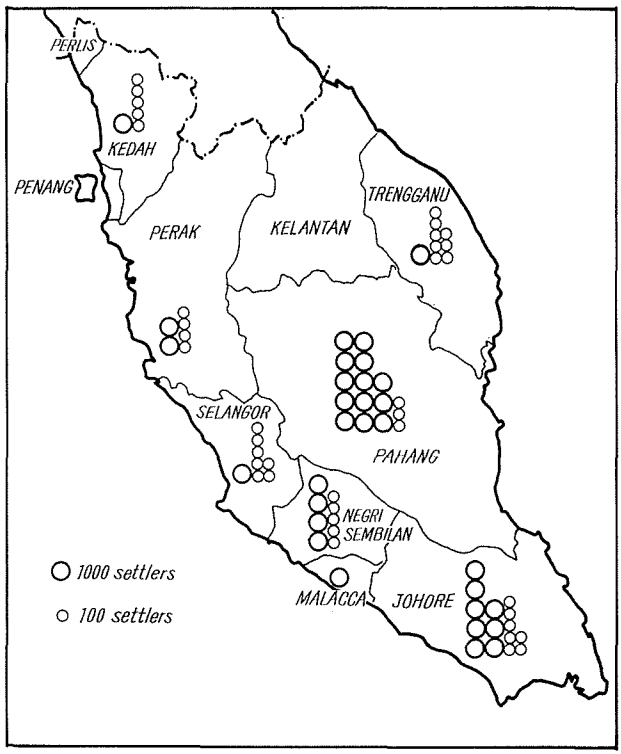
6. FELDA and Internal Migration

A glance at the volume of settlers mobilised by FELDA schemes in Malaysia shows a total of 35,389 persons in the period from 1957-76.

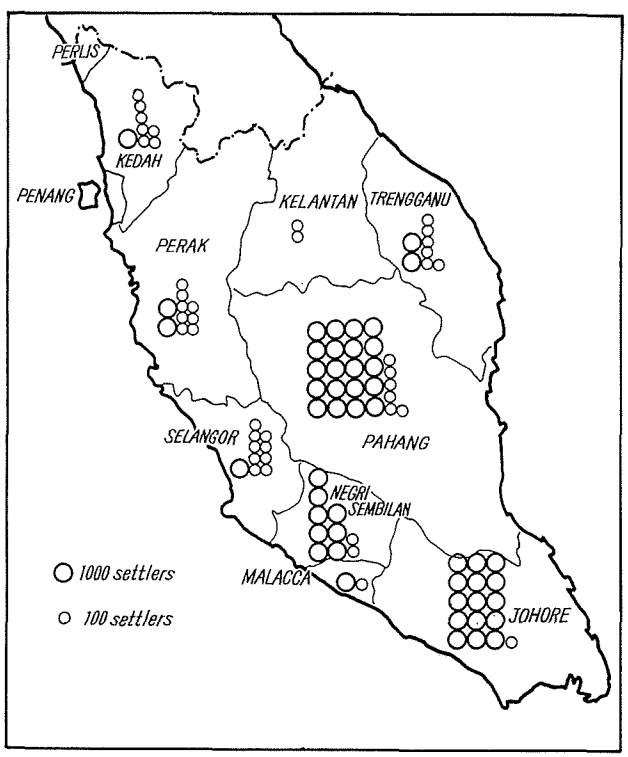
Table 4. Settlers in FELDA Schemes by State 1957-76, 1977-80

State of Settlement	No. of Schemes	Total No. of Settlers		Total 1957-80	Intra-state %	
		1957-76	1977-80		1957-76	1977-80
Johore	20	8,783	6,390	15,173	91.3	98.1
Kedah	6	1,506	262	1,768	96.3	100.0
Kelantan	—	—	294	294	—	100.0
Malacca	4	1,084	41	1,125	90.6	12.2
Negri Sembilan	10	4,591	3,624	8,215	79.0	92.9
Pahang	30	13,380	7,317	20,697	33.1	79.4
Perak	7	2,441	456	2,897	90.5	100.0
Perlis	—	—	454	454	—	100.0
Selangor	4	1,774	131	1,905	77.1	100.0
Trengganu	7	1,830	829	2,632	88.8	99.0
Total	90	35,389	19,798	55,187	Av. 680	90.3

Source: FELDA settler Census 1976.
FELDA Headquarters Records.



← **Fig. 7.** FELDA Settlers by State. 1957–76.



← **Fig. 8.** FELDA Settlers by State 1977–80.

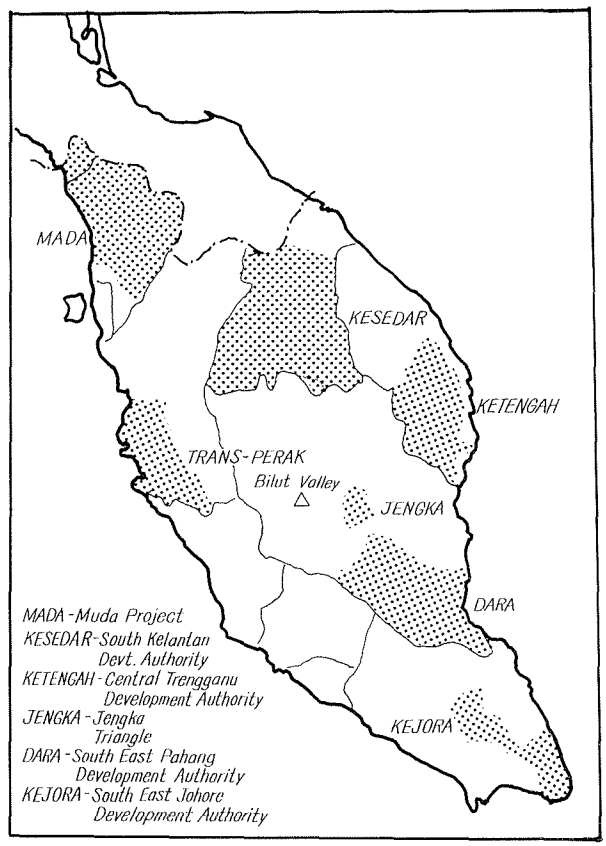


Fig. 9. Major Land Development Schemes, including FELDA Schemes.

Firstly, a highly marked degree of intra-state migration can be observed, with percentages running up to more than 90 in Kedah, Johore, Malacca and Perak. This indicates the generally short distance nature of FELDA-instigated migration.

Secondly, Pahang is the highest recipient state of in-migrants, but the intra-state migration accounts for only 33.1%. This indicates the long-distance nature of migrants to Pahang.

Thirdly, Johore and Pahang citizens have overall enjoyed 62% of FELDA places up to 1976 and the combined states of Pahang, Johore, Negri Sembilan and Perak alone accounts for 82% of the total in-migrants.

This trend can be better understood by plotted maps. From these statistics, we can generally conclude that FELDA schemes has been an efficient agent for the distribution of settlement towards east coast states of Malaysia.

IV. A Comparative Analysis

We will now test the cases of Hokkaido and Malaysia for similarities and differences of characteristics in various aspects.

Table 5. Federal Government Outstanding Loans to Public Authorities, State Governments, etc.

	Total	Public Authorities								
		Sub-total	*Federal Land Development Authority*	*National Electricity Board*	*Malayan Railway*	*Port Klang Authority*	*Majlis Amanah Rakyat*	*Urban Development Authority*	*National Padi and Rice Authority*	*Others*
1970 ··· ···	1,181	687	266	86	75	61	30	—	—	169
% Share	100%	58%	23%	7%	6%	5%	3%	—	—	14%
1971 ··· ···	1,530	828	342	84	90	83	44	5	—	180
1972 ··· ···	2,045	1,094	460	96	96	103	69	15	29	226
1973 ··· ···	2,462	1,326	571	98	97	107	80	56	61	256
1974 ··· ···	3,277	1,691	716	110	105	131	122	103	102	302
1975 ··· ···	4,162	2,124	921	160	105	171	151	159	113	344
1976 ··· ···	5,074	2,624	1,093	243	128	216	182	204	60	498
1977 ··· ···	6,334	3,101	1,284	268	128	238	229	286	135	533
1978 ··· ···	7,212	3,784	1,531	380	143	246	273	352	135	724
% Share	100%	52%	21%	5%	2%	3%	4%	5%	2%	10%
1997 ··· ···	8,452	4,559	1,771	498	233	248	288	422	138	961

	Companies						State Governments	Housing loans to Government officers	Others
	Sub-total	*Pernas*	*Malaysian Industrial Development Finance*	*Malaysian International Shipping Corporation*	*Malaysia Shipyard and Engineering Sdn. Bhd.*	*Others*			
1970 ··· ···	66	5	38	12	—	11	302	—	126
% Share	6%	0.4%	3%	1%	—	1%	26%	—	11%
1971 ··· ···	213	80	95	23	—	15	341	18	130
1972 ··· ···	322	105	145	42	—	30	436	71	122
1973 ··· ···	367	105	152	62	—	48	552	100	117
1974 ··· ···	516	130	130	94	39	123	815	141	114
1975 ··· ···	645	73	135	150	97	189	1,107	176	110
1976 ··· ···	774	141	136	165	116	206	1,284	214	188
1977 ··· ···	1,016	275	129	238	117	267	1,643	282	292
1978 ··· ···	1,078	265	119	280	117	297	1,804	314	232
% Share	15%	4%	1.5%	4%	1.5%	4%	25%	4%	3%
1997 ··· ···	1,203	295	124	325	142	317	2,004	374	312

Table 6. Public Development Expenditure for Agricultural, Land & Rural Devt.

Expenditure category	Second Malaysia Plan 1971–75	Third Malaysia Plan 1976–80	Fourth Malaysia Plan allocation 1981–85
Agricultural and Rural Development	1,793.53	4,672.41	8,359.09
Land and Regional Development	1,071.66	2,751.88	3,732.57
FELDA	678.41	1,732.71	2,040.96
FELCRA	50.96	192.80	472.08
Regional Development Authorities:			
Pen. Malaysia	238.19	711.22	1,049.03
East Malaysia	37.73	102.50	142.50
Others	66.37	12.65	28.00
Land and Regional Development/ Agriculture and Rural Development (%)	59.75	58.90	44.65
FELDA/Land and Regional Development (%)	63.30	62.96	54.68
Regional Development Authority/ Land and Regional Development (%)	25.75	29.57	31.92

1. History

One obvious fact is the difference in the span of operation as well as occurrence in historical time. In Hokkaido, land colonization history stretches over a 77-year period from the establishment of the Colonization Agency (*Kaitakushi*) in 1869 to the end of Second Land Settlement Plan in 1946. The FELDA attempt is relatively young with a short history of only 24 years up to 1980. This separation in time implies the differences in level of technology, the ability to design programmes based on other past experiences; and that the propensity to migrate to land schemes will be counteracted by contemporary industrialization and urbanization forces of attracting migrants.

Another difference is the existence of colonial rule in the Malaysian history. This has far-reaching implications as the entire structure of physical, economic and social organization before 1957 was a product of the colonial administration which was concerned mainly with exploitation, production and export of primary commodities. This resulted in the marked east-west disparity that exist till today, though land development and dispersal directions have been taken. In Hokkaido the non-inhabitation before the Meiji Era was due to the harsh conditions. The regional isolation of the east coast states in Malaysia was due partly to natural (mountainous) barriers but more to the lack of interest in or need to develop them as far as the colonial regime was concerned.

Furthermore, Hokkaido's development was set in the prewar period while land development schemes were post-war events. Thus, Hokkaido's development efforts and migration rates were frequently shaken by international wars, disputes, natural calamities and economic fluctuations. However, as land development in Malaysia

is totally government-sponsored and land is systematically distributed, migration rates are determined by the absorptive capacity of the schemes.

2. Objectives

Hokkaido's consideration as a target for colonization was triggered firstly by the military strategic motive, and simultaneously, the sub-motives of social and economic development and population dispersal were incorporated into a multi-objective programme. On the other hand, Malaysia's objectives were originally guided by socio-economic aims (with politically-strategic overtones of assisting the Malay community) by eradicating poverty and modernizing rural life to erase the race-occupation identification.

It is interesting to note that population redistribution was not explicitly the main objective. It was more of an accomodative process, a concomitant outcome of the settlement programmes. Nevertheless, the extent to which population is affected has a positive relation to the success or failure of the land development schemes. In both cases, undeveloped areas have been changed into built settlements.

In terms of fulfilment of objectives, Hokkaido has successfully established points of settlement on a militarily organised system. Mobilisation for military action were readily available and at the same time Hokkaido was able to promote in-migration in the period 1874–1920 that accounted for 88–98% of the population increase in Hokkaido. Poverty-stricken migrants and disenfranchised *samurais* were accomodated and criminal prisoners were rehabilitated.

In Malaysia, 1976 census data shows income levels of in-migrants increased substantially compared to the previous levels of income. It was also shown that income levels varied positively with duration of settlement in FELDA schemes.

Table 7. Settlers Average Monthly Income by Age and Duration of Stay in FELDA, 1976

(1) Age Group	(2) Average Monthly Income Before Settler Entry for Those Entered in 1976 only. ($M)	Settlers' Average Present Monthly Income In 1976 By Number of Years in FELDA ($M)				(7) Percentage Increases in Real Income After 10 Years
		(3) 1–3 yrs	(4) 4–5 yrs	(5) 7–9 yrs	(6) 10–12 yrs	
20–24 yrs	113.37	106.06	174.28	*	*	—
25–29 yrs	149.05	115.90	186.39	230.46	*	—
30–34 yrs	162.05	115.32	186.79	249.78	243.50	50.3
35–39 yrs	164.41	108.19	185.82	268.34	285.87	73.9
40–44 yrs	184.22	116.18	192.92	287.52	286.38	62.2
TOTAL	171.72	115.40	187.95	276.26	278.53	55.5

Source: Land Development Digest, 1981.

3. Organization and Policies

As we have seen from the observation of administrative agencies and the trends of in-migration, the change in policy in Hokkaido from direct aid of giving land, cash, agricultural tools to migrants to indirect aid of investing in infrastructure. and inviting entrepreneurs represented a positive move towards attracting in-migrants

In Malaysia, too, the change in basic function of FELDA—from that of a loans board to active implementor— demonstrates a remarkably similar move in giving impetus to the programme's achievements. Instead of just financing State programmes which usually lack experience, scientific planning methods and funds, FELDA's takeover of the functions enable a more systematic and comprehensive approach to providing infrastructure as well as direct aid to the settlers. In both cases, large-scale national inputs for physical environment and employment have been vital elements for inducing change.

An advantage that the Hokkaido Government enjoyed is its autonomy in decision-making concerning the development of Hokkaido. One important aspect is land acquirement. With the abolition of feudal clans and establishment of prefectures (*haihan chiken*) in Meiji 4 (1871) in Japan, the nationaliziation of land enabled the Hokkaido Government complete jurisdiction over the land.

In the case of Malaysia, FELDA operates in conjunction with various Agencies and Ministries in opening up new land and on top of that have to handle negotiations for land acquirement with the state Sultans.

Another comparison involves the role of private sector in the organization of migration groups and entrepreneurial activities of Hokkaido. Government policies under the indirect aid policy provided various incentives to private businessmen to stimulate economic growth.

On the other hand, the entire FELDA programme is government sponsored. Though land clearance projects are tendered to private contractors, in-migration and selection of settlers are all managed by FELDA. Even intermediary industries for processing, collecting, etc as well as distribution are all run by the Authority.

4. Organization of Schemes and Land Tenure

It is interesting to note the similarity in age and acreage in both cases. The challenge of frontier lands require highly selected people with the capabilities, endurance, health and with agricultural background. In the case of FELDA, the applicant must be married while the settler in the *Tondenhei* system must have an able person accompanying. Both schemes ensure consistency and stability of settlers.

In Hokkaido, each family were provided 1.6 ha. (1875-78), 3.3 ha (1879-90), and finally 5 ha (1896-99). In Malaysia, the FELDA package consist of 4.8 ha of rubber or 5.7 ha of oil palm per settler, figures strikingly close to the Hokkaido case.

As we have seen, while free land and basic provisions and tools were given to

the Hokkaido settlers and infrastructure constructed, FELDA settlers were given cultivated land, housing migration to Hokkaido and the failure of FELDA's first Bilut Valley scheme was due to the initial non-integratedness of the scheme. Hardships were met due to the difficulties of land clearance, severe environment, lack of accomodation and lack of community consciousness or external support. The administrative staff were inexperienced. In Hokkaido, foreign experts were then invited to demonstrate foreign agricultural technology. In FELDA sites, on-the-job training schedules were arranged.

The success of any scheme should not be evaluated by just the establishment of schemes and settlement of in-migrants, but should include properties for population retention. In other words, it should be designed to accomodate the employment demands of an inevitably growing population.

In this aspect lies a major difference between Hokkaido and Malaysia. While the drop-out rate of FELDA schemes was only 5%, the out-migration rate of Hokkaido during the 1891-1922 period of high in-migration and low out-migration varied from about 20-30 %. This may be due to the methods of migration. Hokkaido's migration were either sponsored or private and the latter's inability to engage financial support, plus the streams of seasonal temporary migrants increase the out-migration rates.

On the other hand, a second generation out-migration phenomenon was observed in the FELDA case. Concern has been expressed as the leavers are mostly young people. According to FELDA scheme regulations, the settler lot cannot be subdivided and must be inherited by one particular offspring after the death of both parents. This stipulation along with the physical infrastructure and marketing facilities. But the latter provisions were not free but subsidised since repayment of a major portion has to be made. It is a 'discounted' package sold on credit.

In both cases, the main incentive for migrants is the economic prospects of land ownership which includes employment and better livelihood.

The organization of work on group bases with selected and qualified leaders in both cases were also important for systematic operation of the farms.

5. Industrialization

The industrialization of Hokkaido was an important impetus for further growth after the establishment of the farms. While Government-runned factories were gradually transferred to private hands, FELDA transfers integrated package farms to settlers. This form of assistance could possibly include transfering processing and collecting plants to FELDA settlers.

As land is a limited resource, further growth in population will have to the absorbed in the secondary and tertiary sectors of industry. The experience of Hokkaido's industrial policy and promotion of entrepreneurship illustrates this fact.

6. Problems of Settlement

Failure in both projects have been inevitable. Initial failures were mainly due

to the lack of experience and inability for anticipation of future outcomes. The initial failure to induce contradicts the traditional Muslim inheritance whereby properties are to be shared among all offsprings. Consequently, the noninheriting members are compelled to seek alternative employment. It has been observed that a major portion of these leavers has relatively higher secondary education. Long term planning is necessary to retain the productive labour on the sites to maintain the age structure balance. Otherwise, the flow of rural-urban migration will have been postponed rather than controlled.

Another problem found only in the Malaysian case is the multi-ethnicity of settlers. Careful organization and allocation of resources must be ensured to mitigate any friction.

7. Sociology of in-migrants

One of the most important elements of land settlement and the retention of settlers is the social sense of solidarity and community consciousness. In any land settlement, new villages consisting of a mixture of peoples from varying origins are grouped together for common reasons. Human relationships are naturally simple, devoid of complex kinship ties, rigid familial hierarchies or social network systems. In Hokkaido, community consciousness was either non-existent or weak in the initial stages among the villages, although social network existed throughout the *Buraku*, the lowest level of administrative organ, as well as agricultural cooperatives. Stronger ties existed on the basis of similar origins, thus binding them together (Seki, 1980). The layout of settlement patterns using scattered villages adjoined by local commercial centres maintained a close functional relationship within a region.

In FELDA schemes, housing lots and commercial centres are centralised. A difference here is the existence of the Social Development Service which is highly organised and is aimed towards community development.

8. In-migration

The volume of in-migration streams to Hokkaido is inversely related to economic conditions in mainland Japan. A poor harvest due to adverse climatic conditions, natural calamities or economic slumps in the mainland would improve the view of Hokkaido. Local conditions of land ownership prospects, government assistance policies job prospects and facilities for living were major factors.

In Malaysia, poor economic conditions and the prospect of land ownership in the schemes provided the attraction.

By comparing the migration volumes at the same stage of scheme operation, that is 24 years after, it was found that Hokkaido's programmes settled approximately 3.4% of the total national population in 1910, while FELDA schemes settled 3.6% of the total population in 1980.

V. Conclusion

We have examined in detail the 2 cases of Hokkaido and Malaysia in land development and migration. Similarities and differences have been discussed. In spite of the short history of FELDA schemes, it has succeeded in mobilising as many settlers to total population as that mobilised by the Hokkaido Government at the same stage of time. We can conclude that through these two cases that there are certain requirements for an effective land development programme for inducing migration.

1) Provision of direct assistance to settlers in the form of cash, land, tools, etc is insufficient for land settlement,. Large-scale government investment in the initial stages and sustained support is necessary for firm establishment of new settlements.
2) Land development process consist of two stages — the settlement process and the industrialization stage that creates and maintain growth and population retention in the schemes.
3) "Capital migration" was found to be important for private enterprise and growth of regional centres.
4) Selection of settlers must be based on strict criteria to minimise drop-out rates.
5) A single central body with wide-ranging powers of planning, execution and land acquirement is necessary for efficient implementation.
6) It is important to understand the factors that influence migration rates. Migration to new lands are very often stimulated by poor harvests, economic depressions, disasters, etc that is 'push' factors in the origin areas, and if this is accompanied by attractive 'pull' factors like land ownership, good infrastructure and good life prospects, migration rates would easily increase.

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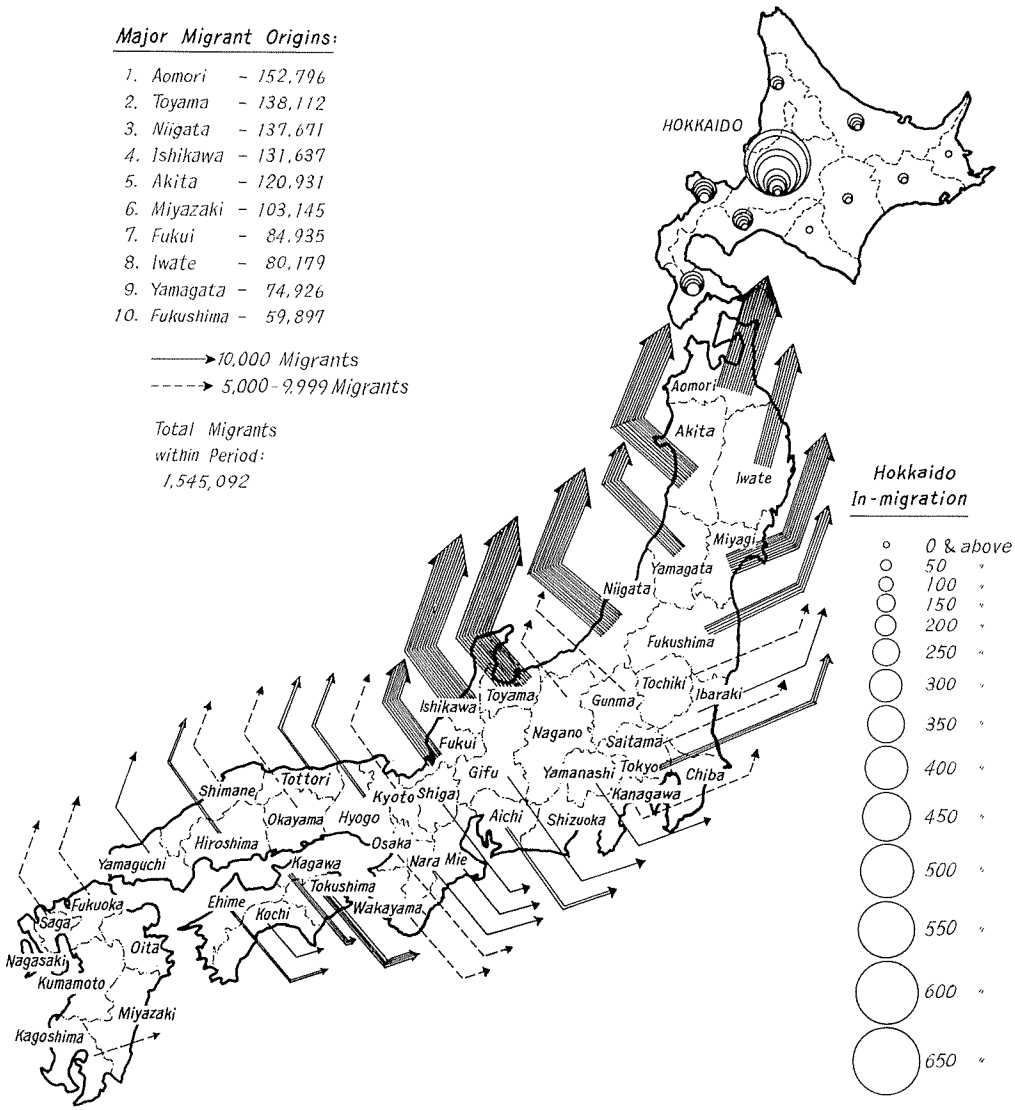
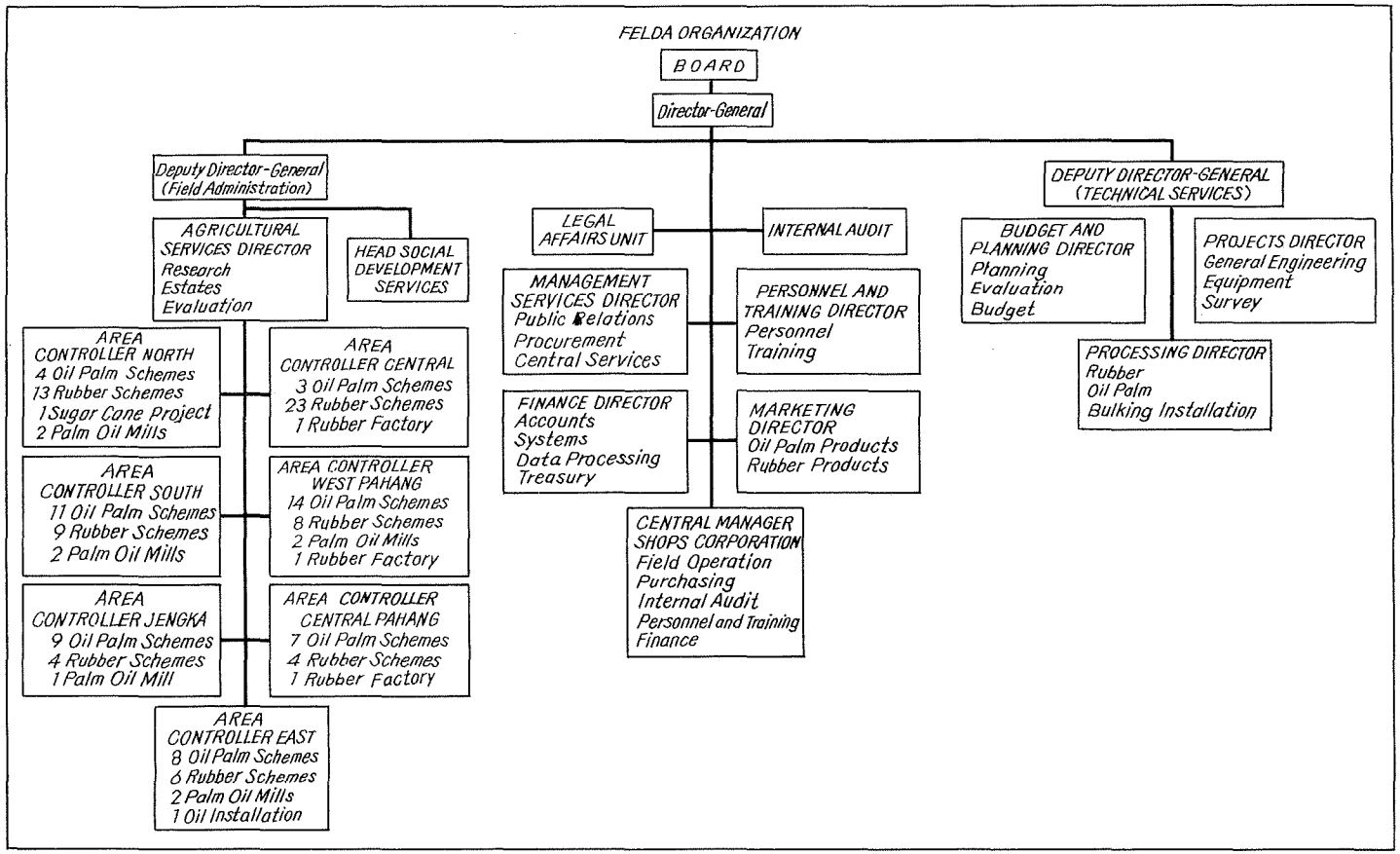
Summary

Increasing concern has been expressed towards the severity of problems associated with an inadequate spatial distribution of population and with the constraints that such an inadequacy places upon achievement of development objectives. Land development, as a planned migration and population distribution strategy were therefore examined in 2 case studies — Hokkaido and Malaysia (in particular FELDA) and compared. Similarities and differences were observed. The programmes in both countries has been found to have a similar proportion of settlers to total population settled in the first 24 years years of operation. Initial failures in both cases to attract migrants were due to hardships in frontier land, the lack of experience of implementors, and the lack of basic facilities and supportive community on the site. However, the change in government policy to indirect assistance (infrastructure and capital migration promotion) in Hokkaido; and the designation of comprehensive integrated settlements in Malaysia triggered large streams of migration. In both cases, migrants were either disoriented or less privileged sector of the population. So conditions or prospects in the destination settlement sites must be better than the origin settlement areas. Candidates were carefully selected to minimise dropout rates and ensure scheme success. Age of settlers, size of farms and the highly structured organization of activities were also found to be similar. A very important element in population retention was the existence of community solidarity and cooperativeness. However, while the role of private enterprise in in-migration as well as the industrialization of Hokkaido was a significant dimension, the FELDA-model of a package deal was totally government-managed. Both organizations were autonomous bodies in their operations, although FELDA works in cooperation with other Agencies. An outstanding point is that FELDA's powers are limited in the acquisition of land which is a State prerogative, whereas the Hokkaido government has full jurisdiction over the land. Furthermore, where land and tools were given free to cultivators in Hokkaido, FELDA integrated schemes are developed and transferred to settlers after which the costs are gradually repaid.



Appendix 1. Prefectural Origin of Migrants to Hokkaido 1885–1916.



Appendix 2. FELDA ORGANIZATION.